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Original Research Article Outline:

ANALYSIS OF FACTORS RELATED TO MEDICATION ADHERENCE IN PATIENTS WITH DIABETES MELLITUS AT RSUI MADINAH KASEMBON

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ABSTRACT

Introduction. Diabetes mellitus is a metabolic disorder characterized by abnormal metabolism of carbohydrates, fats and proteins caused by decreased insulin secretion or decreased insulin sensitivity. Therefore, there is a need for monitoring in therapy management and the need for attention in medication compliance in order to achieve treatment success. The purpose of this study is to find out the analysis of factors related to medication adherence in patients with diabetes mellitus. **Methods.** This study uses a *descriptive correlative* cross *sectional approach.* The sampling technique used *purposive sampling* and obtained a sample of 142 respondents. The instrument used in the questionnaire. **Results and Analysis.** The study showed that multivariate analysis using simple linear regression showed that the most influential variable on medication adherence in DM patients was the role of health workers with the results of p = 0.010 and B = 0.553. The role of good health workers will increase compliance by 0.553 times, compared to the role of bad health workers. Adherence to medication is an important value in the success of DM therapy. One of the causes that affects patient compliance in undergoing treatment is poor communication between patients and health workers. **Discussion.** Health worker support has an important role, namely the delivery of information about health conditions and what patients should do. The attitude and behavior of health workers is a factor that strengthens or encourages the behavior of adherence to treatment in patients.

Keywords: Diabetes Mellitus, Drug Compliance, knowledge, role of health members

INTRODUCTION

Diabetes mellitus is a metabolic disorder characterized by abnormal metabolism of carbohydrates, fats and proteins caused by decreased insulin secretion or decreased insulin sensitivity. DM disease can be said to be a chronic disease because it can occur chronically and permanently so that many patients are saturated and do not comply with treatment. So that many cause uncontrolled blood sugar levels (Susanto et al., 2019) This high blood glucose has a bad impact on various organs of the body such as diabetic neuropathy, leg ulcers, diabetic retinopathy, and diabetic nephropathy, failure of various

organs and vascular disorders. Therefore, there is a need for monitoring in therapy management and the need for attention in medication compliance in order to achieve treatment success. In addition, the level of knowledge, attitude and family support is very necessary in achieving successful treatment (Yusnita, Djafar, & Tuharea, 2021).

The number of people with diabetes mellitus in Indonesia in 2014 has reached 9.1 million people and is expected to increase to 14.1 million people by 2035 (Susilo, Zulfian, & Artini, 2020) This makes Indonesia ranked 5th as the largest DM holder in the world. East Java is the fifth province in Indonesia with the highest prevalence of DM reaching 2.6% in 2018, an increase from 2013 by 2.1% (East Java Health Office, 2018). A preliminary survey was conducted by researchers at RSUI Madinah Malang on February 9, 2023, from the survey it was found that in January 2023 the number of DM cases was 263, in February 2023 to the 8th the number of DM cases was 53. The results of interviews conducted on several patients found that the management of patients with DM has not been optimal so that success in DM treatment has not been achieved. Some findings from the interviews showed that family support in treatment therapy was not optimal due to the lack of family and patient knowledge about treatment and the correct medication schedule in DM patients.

Complications of DM can occur due to uncontrolled blood sugar levels or what is called hyperglycemia. Hyperglycemia is a medical condition characterized by increased blood sugar levels that exceed normal limits and impaired peripheral glucose utilization. Chronic hyperglycemia causes microangiopathy and causes thickening and stiffness of the arteries, which will damage the vascular endothelium. In order for blood sugar levels to remain under control, it is necessary to control medication compliance with diseases (Intan, Dahlia, & Kurnia, 2022).

Patient adherence to medication plays a very important role in the success of therapy to keep blood glucose levels within the normal range. Medication adherence itself can be defined as a patient's behavior to carry out therapy or treatment regularly, follow the recommended diet and diet, and make lifestyle changes in accordance with the agreed recommendations of the health care provider (Yulianti & Ariasti, 2020). Low treatment adherence will certainly have a negative impact on the increase in various types of complication diseases, increase the risk of treatment costs, and the risk of hospitalization. Research on diabetic patients in Asia shows that 57% of patients do not adhere to medication. Research in Indonesia itself shows that the percentage of non-compliance with taking antidiabetic drugs ranges from 50-69.7% (Sasmita, 2021).

The success of the control process for diabetes mellitus is determined by high adherence to treatment, in order to prevent all complications caused by diabetes mellitus. The success of DM treatment also depends on the patient. One of the factors that affect adherence to medication in DM patients is the level of knowledge, if the patient has enough knowledge, this can change attitudes in dieting and medication (Ningrum, 2020) However, if knowledge is poor, it can have an impact on a poor attitude in carrying out medication compliance and can worsen the condition. Different attitudes in each individual regarding DM disease are also many

factors. There are many factors that affect treatment adherence in patients with diabetes mellitus (Anggraini & Dewi, 2020) Given the importance of knowing the various factors that affect medication adherence in diabetic mellitus patients, researchers want to conduct research on the factors that affect medication adherence in diabetic mellitus patients in preventing hyperglycemia. Based on this, the researcher is interested in researching "Analysis of Factors Related to Drug Adherence in Diabetic Mellitus Patients".

METHOD AND ANALYSIS

This study is a type of quantitative research that uses a cross sectional research design. In this study, it identifies factors related to medication adherence in patients with diabetes mellitus. The variables in this study are factors related to medication adherence (as an independent variable) and diabetes mellitus (as a bound variable). This study uses a sampling technique called purposive sampling, so that the sample obtained was 142 respondents. The results of multivariate analysis using simple linear regression. Data collection for this research was carried out from April 1 – 30, 2023 in RSUI Madinah Kasembon. Data collection using a questionnaire sheet given to respondents.

RESULT

Table 4.1 Distribution of respondent frequencies based on general data characteristics

No	General Data Respon-den	Classification	Frequency (n)	Prosen-tase (%)
1	Age	Age 25 – 30 years old	0	0%
		Age 31 – 40 years old	0	0%
		Age 41 – 50 years old	7	4.9%
		Age 51 – 60 years old	51	35. 9%
		Age 61 – 75 years old	84	59.2%
Sum			142	100%
2	Last Education	Elementary - Junior High School	47	33.1%
		SMA	75	52.8%
		College	20	14.1%
Sum			142	100%
3	Work	Housewives	25	17.6%
		Laborer	18	12.7%
		Farmer	35	24.6%
		Self employed	40	28.2%
		Private	17	12%
		Civil Servants/TNI/Polri	7	4.9%
Sum			142	100%
4	Long Time Suffering from DM	< 2 Years	12	8.5%
		2 – 5 Years	60	42.3%
		>5 years	70	49.3%
Sum			142	100%
5	Economic Status	< 1,000,000/month	29	20.4%
		1.000.000 – 2.500.000	53	37.3%
		>2,500,000 / month	60	42.3%
Sum			142	100%

Based on table 4.1, the results of the analysis of the research data above stated that the largest group was 61-75 years old with 84 respondents (59.2%). In high school education, the largest number is 75 respondents or (52.8%). In the most job category, the self-employed group had 40 respondents or (28.2%). Respondents who suffer from DM are categorized into 3 groups, the most groups > 5 years are 70 respondents or (49.3%). The economic status > 2,500,000 / month as many as 60 respondents or (42.3%).

Table 4.2 Results of bivariate analysis of knowledge, attitudes, motivations, family support, the role of health workers with medication adherence.

Variable	N	Sig.	Correlation Coefficient (r)

Knowledge	142	0.026	0.187
Attitude	142	0.400	0.071
Motivation	142	0.373	0.075
Family Support	142	0.545	0.051
The Role of Health Workers	142	0.018	0.199

Based on table 4.2 above, the results of the analysis show that knowledge has a significance value of 0.026 and the role of health workers has a significance value of 0.018, which means that the two variables, namely knowledge and the role of health workers, have a relationship with medication adherence in DM patients. Meanwhile, the close relationship shows that the knowledge variable has a correlation coefficient value of 0.187 and the health worker role variable has a correlation coefficient value of 0.199. Which means that the two variables have a strong relationship.

Table 4.3 Results of Analysis of Factors Related to Drug Adherence in Patients with Diabetes Mellitus

	Unstandard-dized Coefficients		**Std. Coef-fici-ents**	**t**	**Sig.**
	B	Std. Error	Beta		
(constant)	0.266	.870		-.306	,760
Knowledge	.130	.059	.193	2.217	,028
Attitude	-.026	.095	-.023	-.269	,788
Motivation	.120	.093	.106	1.292	,199
Family Support	.011	.043	.022	.254	,800
The Role of Health Workers	.553	.213	.215	2.601	,010

Based on Table 4.3, the results of linear regression analysis showed that there was no relationship between attitude and adherence to medication, with the results of p = 0.788 and B = 0.026. There was no relationship between motivation and medication adherence, with the results of p = 0.199 and B = 0.120. There was no association of family support with medication adherence, with results p = 0.800 and B = 0.011. The results of regression analysis showed that there was a relationship between the variables of knowledge and medication adherence in DM patients with p = 0.28 and B = 0.130. And the variables of the role of health workers showed linear regression results that there was a relationship with minimal drug compliance in DM patients with the results of p = 0.010 and B = 0.553. The results of linear regression analysis showed that the most influential variable on medication adherence in DM patients was the role of health workers with the results of p = 0.010 and B = 0.553. The role of good health workers will increase compliance by 0.553 times, compared to the role of bad health workers.

DISCUSSION

Identify a description of respondents' characteristics based on general data.

The results of the study showed that the age of the respondents was at most >60 years compared to the respondents who were <60 years old. Age is closely related to the increase in the number of blood sugar levels, the older you get, the higher the risk of developing diabetes mellitus and the aging process is one of the occurrences of an increase in diabetes mellitus (Gunawan & Rahmawati, 2021) In theory, increasing age has an increased risk of DM and glucose intolerance. Glucose intolerance is a condition that precedes the onset of diabetes mellitus. The increased risk of diabetes with age, especially at the age of 40, is caused by the aging process causing a decrease in the ability of pancreatic β cells to produce insulin (Pahlawati & Nugroho, 2019) Research conducted by Ida Ayu

(2019) states that the average age of DM patients is 46 – 55 years old. This is because as we age, the function of the body's organs decreases, thus the risk of developing diseases will increase. However, patients with DM aged > 45 years have a greater risk of developing DM because the body's physiological condition decreases and insulin secretion also decreases the body's ability to control blood glucose (Diantari & Sutarga, 2019).

The level of education has an influence on the incidence of type 2 diabetes mellitus. Education is closely related to knowledge. The higher a person's education, the higher a person's knowledge. So that awareness about health is getting higher. The level of education affects a person's way of thinking and in acting to face something (Pramestiyani et al., 2022) In the opinion of the researcher, a person's level of education affects a person's attitude and knowledge in receiving information and a person's way of thinking about actions in managing their health. In people with DM, lifestyle changes and health management are the main keys in controlling DM, if the level of education is high, the lifestyle and health management about DM will be controlled. However, in people with DM who have a low level of education, the lifestyle and health management about DM will be worse.

Work is defined as an activity that is carried out to earn income. According to the results of research conducted by Arania (2021), patients who are not working or who have self-employed jobs spend more time living a healthy lifestyle and are more compliant with their treatment. This is because patients do not have much to do, so they have time to go take their medication and remember the time to take the medicine (Arania, Triwahyuni, Prasetya, & Cahyani, 2021).

According to Ihwatun's research (2020), the longer a person has a disease, the more patients will tend to be disobedient because patients become desperate with long, complex therapies and do not produce a cure. In treatment therapy, it does not only require treatment, but also lifestyle changes, dietary adjustments, exercise, and others (Ihwatun, Ginandjar, Saraswati, & Udiyono, 2020) Based on the theory, it is stated that the length of suffering from DM is significantly related to the quality of life of DM patients. In general, the low quality of life is found in the long duration of suffering from DM, which affects the adherence to taking medication. Suffering from DM for a longer period of time can increase stress and boredom in taking medication. Research conducted by Ridayanti (2020) states that the longer suffering from DM, the lower the quality of life of sufferers. This is influenced by the long duration of diabetes, so that it has negative effects, one of which is physical health (Ridayanti, Arifin, & Rosida, 2019).

This research is in line with research conducted by Musdalifah (2020) which states that the economic level above MSEs is protective against diabetes mellitus, meaning that people whose income is above MSEs can prevent diabetes mellitus. This is because high-income people can meet their nutrients as needed and can continue to check or control blood sugar levels. Socioeconomic level is usually associated with the level of knowledge and education where the high level of education usually has more knowledge, especially about health, and thus they have awareness in maintaining their health, especially in terms

of preventing diabetes mellitus (Musdalifah & Nugroho, 2020).

Results of bivariate analysis of knowledge with medication adherence

Researchers say that adherence to taking antidiabetic drugs with high knowledge has an impact on preventing increased blood sugar levels in people with type II diabetes. In theory, Knowledge is the result of human sensing or the result of a person's knowledge of objects through the senses, or knowledge is various kinds of things obtained by a person through the five senses. Knowledge comes primarily through the eyes and ears (Purwanti, Mintarsih, & Sukoco, 2023) Patients with type 2 diabetes mellitus who have good knowledge are able to know the factors about diabetes mellitus and how to manage the treatment therapy and complications that arise as a result of uncontrolled blood sugar. Meanwhile, poor patient knowledge is marked by the fact that they do not know about diabetes mellitus and its treatment. So that sufferers have uncontrolled blood sugar levels and have complications that have emerged (Marito & Lestari, 2021).

The level of education can affect a person's ability and knowledge in implementing healthy living behaviors. Respondents with higher education will have a wider range of knowledge compared to respondents with lower education levels. The higher the level of education, the higher a person's ability to maintain a healthy lifestyle. The level of knowledge is not only determined based on formal education, knowledge can be obtained through counseling and from information media which is expected to be able to increase awareness of medication compliance. By getting socialization about treatment, it is hoped that it will be able to increase knowledge so that the compliance rate will be higher.

Results of bivariate analysis of attitudes with medication adherence

The attitude of the patient, which is the main reason for the failure of treatment, is that the patient does not want to take medication regularly for a long time. Patients are usually tired of having to take medication every day, therefore DM patients tend to stop treatment unilaterally (Purwandari & Wulandari, 2023).

In theory, attitude is a response or reaction that is still closed from an individual to an object or stimulus, which is accompanied by certain feelings and provides the basis for the individual to behave. Factors that affect a person's attitude are divided into internal factors, namely from within the individual, and external factors, namely external factors that can be direct or indirect. Attitude formation is influenced by external (experience, situation, norms, obstacles and drivers) and internal (physiological, psychological and motive) factors (Sammulia, Elfasyari, & Pratama, 2020) Attitude is one of the factors that shape behavior. This is in accordance with the results of the research obtained, where attitude has an influence on blood sugar levels. A positive attitude towards the management of DM, makes the behavior of DM sufferers in accordance with the rules in the management of DM so that blood sugar levels are controlled (Hirmawati, Masaong, & Syamsuddin, 2023).

Results of bivariate analysis of motivation with medication adherence

In theory, motivation is an impulse from within a person that causes the person to do certain activities to achieve a certain goal. Basically, motivation is a person's interaction with a certain situation they face. Inside a person there is a need or desire for objects outside of that person. Therefore, motivation is a reason for a person to act in order to meet his or her life needs (Ningrum, 2020) Lack of motivation from within for the treatment that should be carried out, patients who have a stigma against DM disease can be relieved by only taking medication prescribed by a doctor and maintaining a diet, and doing activities is important to keep blood glucose under control (Syaftriani, Kaban, Siregar, & Butar-Butar, 2023).

Results of bivariate analysis of family support with medication adherence

In theory, family support is an attitude, action, and acceptance of a sick patient. DM is a disease that requires lifelong treatment so it requires support from others in undergoing treatment. Lack of family support can lead to forgetting when to take medication. Family support in this study is to encourage respondents to take medication ((Damayanti, 2021) The willingness of family members to escort and accompany consultation respondents is a form of family support. Family support has an influence on medication compliance, because a person's behavior can be influenced by the family environment. The greater the family support given, the higher the level of compliance in taking medication (Ningrum, 2020).

Results of bivariate analysis of the role of health workers with medication adherence

In theory, the role of health workers as health service providers, educators and counselors, namely doctors, nurses, and pharmacists, have their own duties. The role of nurses is to conduct assessments on DM patients, remind controls, provide education on taking medication, and advise to check blood sugar. The role and support of health workers is very large for patients, where health workers are the managers of patients because officers are the ones who interact most often, so that the understanding of physical and psychological conditions becomes better and can affect the trust and acceptance of the presence of health workers can be grown in patients well (Permatasari, 2020). The support of health workers is urgently needed to improve compliance, for example with communication. This is in accordance with the existing theory, where health workers are the first people to know about the patient's health condition so that they have a big role in conveying information about the health condition and the things that must be done by the patient for the healing process (Anggi & Rahayu, 2020).

Results of Analysis of Factors Related to Drug Adherence in Patients with Diabetes Mellitus

Drug adherence is defined as patients taking medication according to the prescription. Adherence to medication use is related to the consistency and amount of medication taken. DM disease therapy is a long-term therapy that does not cure but only to control blood sugar levels and to prevent complications. Therefore, medication adherence is an important value in the success of DM therapy (Chairunisa, Arifin, & Rosida, 2019) Non-compliance occurs when patients do not replace their previous medication prescriptions with new

ones, do not apply medication recommendations, or do not stick with treatment. One of the causes that affects patient compliance in undergoing treatment is poor communication between patients and health workers (Saibi, Romadhon, & Nasir, 2020).

The support of health workers is urgently needed to improve compliance, for example with communication. This is in accordance with the existing theory, where health workers are the first people to know about the patient's health condition so that they have a big role in conveying information about the patient's health condition and the things that must be done by the patient for the healing process (Pratiwi & Widayati, 2021).

The role of health workers is closely related to the compliance of DM patients with treatment. Professional interaction between health workers and patients can provide good feedback after receiving information about the diagnosis, explaining the cause of the disease and treatment procedures. The better the service provided, the more often DM patients visit. Good communication can improve good relations between health workers and DM patients, so that patients get their satisfaction in receiving treatment, and tend to seek treatment regularly at health services (Puspitasari, Afiyanti, & Farida, 2021). The attitudes and behaviour of health workers are factors that strengthen or encourage compliant behaviour in patients. This happens because health workers provide good services. The behaviour of friendly health workers, communicating well with every patient who comes for treatment immediately treating patients without waiting long, explaining the treatment given to patients and conveying the importance of regular treatment is a form of support from health workers and can influence patient compliance attitudes (Sakinah, Utomo, & Agrina, 2021).

CONCLUSION

The results of multivariate analysis using simple linear regression obtained that the most influential variable on medication adherence in DM patients is the role of health workers. The role of good health workers will increase compliance.

REFERENCES

Anggi, Selvy Anggi, & Rahayu, Sri. (2020). Kepatuhan Diet Pada Pasien Diabetes Melitus Tipe II. *Jurnal Ilmiah Keperawatan, 15*(1), 124-138.

Anggraini, Truly Dian, & Dewi, Cahya Kusuma. (2020). Pengaruh Kepatuhan Terhadap Efektivitas Terapi Pasien Diabetes Mellitus Tipe II Di Rs. Dr Oen Solo Baru. *Indonesian Journal on Medical Science, 7*(2).

Arania, Resti, Triwahyuni, Tusy, Prasetya, Toni, & Cahyani, Sekar Dwi. (2021). Hubungan Antara Pekerjaan Dan Aktivitas Fisik Dengan Kejadian Diabetes Mellitus Di Klinik Mardi Waluyo Kabupaten Lampung Tengah. *Jurnal Medika Malahayati, 5*(3), 163-169.

Chairunisa, Cici, Arifin, Syamsul, & Rosida, Lena. (2019). Faktor-Faktor yang Berhubungan dengan Perilaku Kepatuhan Minum Obat Anti Diabetes pada Penderita Diabetes Melitus Tipe 2. *Homeostasis, 2*(1), 33-42.

Damayanti, Rika. (2021). Hubungan Dukungan Keluarga Dengan Kepatuhan Minum Obat Pasien Diabetes Melitus Tipe 2 Di Puskesmas Muara Wis. *Prosiding Sekolah Tinggi Ilmu Kesehatan Samarinda, 1*, 125-133.

Diantari, IAPM, & Sutarga, I Made. (2019). Kepatuhan Minum Obat Pada Pasien Diabetes Melitus Tipe 2 Di Wilayah Kerja Puskesmas Tabanan Ii Tahun 2019. *Arch. Community Heal*, *6*(2), 40.

Gunawan, Susilawati, & Rahmawati, R. (2021). Hubungan Usia, Jenis Kelamin dan Hipertensi dengan Kejadian Diabetes Mellitus Tipe 2 di Puskesmas Tugu Kecamatan Cimanggis Kota Depok Tahun 2019. *ARKESMAS (Arsip Kesehatan Masyarakat)*, *6*(1), 15-22.

Hirmawati, Hirmawati, Masaong, Abdul Kadim, & Syamsuddin, Fadli. (2023). KEPATUHAN DIET PENCEGAHAN DIABETES MELITUS PADA PASIEN DIABETES MELITUS DI PUSKESMAS TILAMUTA KABUPATEN BOALEMO. *Detector: Jurnal Inovasi Riset Ilmu Kesehatan*, *1*(2), 148-161.

Ihwatun, Siti, Ginandjar, Praba, Saraswati, Lintang Dian, & Udiyono, Ari. (2020). Faktor-faktor Yang Berhubungan Dengan Kepatuhan Pengobatan Pada penderita Hipertensi Di Wilayah Kerja Puskesmas Pudakpayung Kota Semarang Tahun 2019. *Jurnal Kesehatan Masyarakat (Undip)*, *8*(3), 352-359.

Intan, Neng, Dahlia, Debbie, & Kurnia, Dikha Ayu. (2022). Asuhan Keperawatan pada Pasien Diabetes Melitus Tipe 2, Fase Akut dengan Pendekatan Model Adaptasi Roy: Studi Kasus. *Jurnal Keperawatan Silampari*, *5*(2), 680-688.

Marito, Rezki, & Lestari, Ira Cinta. (2021). Hubungan Antara Tingkat Pengetahuan Dengan Tingkat Kepatuhan Minum Obat Pasien Diabetes Melitus Tipe 2. *Jurnal Kedokteran Ibnu Nafis*, *10*(2), 122-127.

Musdalifah, Musdalifah, & Nugroho, Purwo Setiyo. (2020). Hubungan Jenis Kelamin dan Tingkat Ekonomi dengan Kejadian Diabetes Melitus di Wilayah Kerja Puskesmas Palaran Kota Samarinda Tahun 2019. *Borneo Studies and Research*, *1*(2), 1238-1242.

Ningrum, Deskasari Kurniyawati. (2020). Kepatuhan Minum Obat pada Penderita Diabetes Melitus Tipe II. *HIGEIA (Journal of Public Health Research and Development)*, *4*(Special 3), 492-505.

Pahlawati, Annisa, & Nugroho, Purwo Setiyo. (2019). Hubungan tingkat pendidikan dan usia dengan kejadian diabetes melitus di wilayah kerja Puskesmas Palaran Kota Samarinda tahun 2019. *Borneo Studies and Research*, *1*(1), 1-5.

Permatasari, Suriyani Nengsih. (2020). HUBUNGAN PERAN FUNGSI PETUGAS KESEHATAN DENGAN KEPATUHAN MINUM OBAT PADA PASIEN DIABETES MELITUS TIPE 2 DI WILAYAH KERJA PUSKESMAS GANG SEHAT PONTIANAK. *Tanjungpura Journal of Nursing Practice and Education*, *2*(1).

Pramestiyani, Mustika, Oktavia, Swastika, Sulung, Neila, Wahyuni, Tri Putri, Safitri, Wahyuningsih, Lestari, Nana Citrawati, & Iriani, Fitriah Ardiawijianti. (2022). *Anatomi Fisiologi*: Global Eksekutif Teknologi.

Pratiwi, Fransiska Indah, & Widayati, Aris. (2021). Pengaruh Intervensi Tenaga Kesehatan terhadap Kepatuhan Minum Obat pada Pasien Diabetes Mellitus Tipe 2 di Indonesia: Kajian Literatur. *Jurnal Sains Farmasi & Klinis*, *8*(2), 107-115.

Purwandari, Kristiana Puji, & Wulandari, Isnur. (2023). PENGARUH PENDIDIKAN KESEHATAN TENTANG OHO TERHADAP TINGKAT PENGETAHUAN

DAN KEPATUHAN MINUM OBAT PASIEN DIABETES MELITUS PADA ERA PANDEMI COVID-19. *Jurnal Keperawatan GSH*, *12*(1), 43-49.

Purwanti, Endah, Mintarsih, Mimin, & Sukoco, Bekti. (2023). Pengetahuan dan Kepatuhan Minum Obat Antidiabetik pada Pasien Diabetes Melitus Tipe II. *Jurnal Keperawatan Silampari*, *6*(2), 1129-1138.

Puspitasari, Wahyu, Afiyanti, Yati, & Farida, Ida. (2021). Faktor Prediktor Yang Mempengaruhi Kepatuhan Minum Obat Pada Penderita Hipertensi Di Indonesia. *Nusantara Hasana Journal*, *1*(3), 20-29.

Ridayanti, Mida, Arifin, Syamsul, & Rosida, Lena. (2019). Faktor-Faktor yang Berhubungan dengan Perilaku Kepatuhan Kontrol pada Penderita Diabetes Melitus Tipe 2 di Puskesmas Cemapaka Banjarmasin. *Homeostasis*, *2*(1), 169-178.

Saibi, Yardi, Romadhon, Rizki, & Nasir, Narila Mutia. (2020). Kepatuhan Terhadap Pengobatan Pasien Diabetes Melitus Tipe 2 di Puskesmas Jakarta Timur. *Jurnal Farmasi Galenika (Galenika Journal of Pharmacy)(e-Journal)*, *6*(1), 94-103.

Sakinah, Annisa Sri, Utomo, Wasisto, & Agrina, Agrina. (2021). Hubungan Dukungan Keluarga dan Peran Tenaga Kesehatan dengan Kepatuhan Kontrol ke Pelayanan Kesehatan pada Lansia Penderita Hipertensi Selama Pandemi Covid-19. *BIMIKI (Berkala Ilmiah Mahasiswa Ilmu Keperawatan Indonesia)*, *9*(2), 99-108.

Sammulia, Suci Fitriani, Elfasyari, Trie Yuni, & Pratama, M Renaldy. (2020). Hubungan Karakteristik Pasien Diabetes Melitus dan Tingkat Kepatuhan Minum Obat di RSUD Embung Fatimah Kota Batam. *JUMANTIK (Jurnal Ilmiah Penelitian Kesehatan)*, *5*(2), 138-146.

Sasmita, Anggi Marta Dwi. (2021). Faktor-Faktor yang Mempengaruhi Tingkat Kepatuhan Berobat Pasien Diabetes Melitus. *Jurnal Medika Hutama*, *2*(04 Juli), 1105-1111.

Susanto, Yugo, Lailani, Fahma, Alfian, Riza, Rianto, Leonov, Febrianti, Dwi Rizki, Aryzki, Saftia, . . . Khairunnisa, Nurul Shadika. (2019). Pemanfaatan Media Sosial Untuk Meningkatkan Kepatuhan Minum Obat Pasien Diabetes Melitus Rawat Jalan Di RSUD Ulin Banjarmasin. *Jurnal Ilmiah Ibnu Sina*, *4*(1), 88-96.

Susilo, Ayu Sabrina, Zulfian, Zulfian, & Artini, Ika. (2020). Korelasi Nilai HbA1c dengan Kadar Kolesterol Total pada Pasien Diabetes Mellitus Tipe 2. *Jurnal Ilmiah Kesehatan Sandi Husada*, *9*(2), 640-645.

Syaftriani, Afina Muharani, Kaban, Ani Rahmadhani, Siregar, Maya Ardilla, & Butar-Butar, Maria Haryanti. (2023). HUBUNGAN MOTIVASI DIRI DENGAN KEPATUHAN MINUM OBAT PADA PASIEN DIABETES MELLITUS TIPE II DI RUMAH SAKIT UMUM MITRA MEDIKA MEDAN. *Journal Healthy Purpose*, *2*(1), 85-90.

Yulianti, Tunjung Sri, & Ariasti, Dinar %J KOSALA: Jurnal Ilmu Kesehatan. (2020). Analisis Faktor-Faktor Yang Mempengaruhi Kesehatan Mental Emosional Masyarakat Di Dukuh Gumuk Sari Dan Gerjen, Pucangan, Kartasura. *8*(2), 53-62.

Yusnita, Yusnita, Djafar, Monisa Hi A, & Tuharea, Rosmila. (2021). Risiko Gejala Komplikasi Diabetes Mellitus Tipe II di UPTD Diabetes Center Kota Ternate. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*, *4*(1), 60-73.