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Factors Affecting Adherence to Antiretroviral (ARV) Medication in HIV Positive Patients

Faktor Kepatuhan Minum Obat ARV (Antiretroviral) Pada Penderita HIV Positif

Christy Desmery [1*], Iskandar Arfan [2], Ismael Saleh [3]

[1,2,3] Universitas Muhammadiyah Pontianak, Pontianak, West Kalimantan, 78123, Indonesia

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***Correspondence:**
christydesmery30@gmail.com

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ABSTRACT

The adherence of HIV AIDS patients in ARV therapy is one of the important factors in the success of HIV AIDS treatment, because continuous and uninterrupted ARV will be able to suppress the progression of the virus, reduce viral resistance, improve the patient's quality of life and improve their general health. The purpose of this study is to analyze factors related to compliance with taking ARV drugs in HIV-positive patients at the Klinik Klinik Melati Hospital dr. Soedarso Pontianak. The sample is 62 respondents who have met the inclusion criteria. Research design: this study uses quantitative research, with a cross sectional design. The results of the study show that there is no relationship between education levels. employment, motivation, family support, drug side effects, health worker support with compliance with taking ARV drugs, while patient knowledge is related to compliance with taking ARV drugs. Suggestions for institutions to provide more education to increase the knowledge of HIV patients to know the importance of adherence to taking ARV drugs for the survival of ODHA.

Kata Kunci:
Kepatuhan Minum Obat ARV, HIV

ABSTRAK

Kepatuhan pasien HIV AIDS dalam terapi ARV merupakan salah faktor yang penting dalam keberhasilan pengobatan HIV AIDS, karena ARV yang berkelanjutan tanpa terputus akan mampu menekan perkembangan virus, mengurangi resistensi virus, memperbaiki kualitas hidup pasien dan memperbaiki kesehatannya secara umum. Tujuan dari penelitian ini adalah untuk menganalisa faktor-faktor yang berhubungan dengan kepatuhan minum obat ARV pada penderita HIV positif di Poli Kilinik Melati RSUD dr. Soedarso Pontianak. Sampel sebanyak 62 Responden yang sudah memenuhu kriteria inklusi. Desain penelitian: penelitian ini menggunakan penelitian kuantitatif, dengan desain cross sectional. Hasil Penelitian menunjukan bahwa tidak ada hubungan antara tingkat pendidikan. perkerjaan, motivasi, dukungan keluarga, efek samping obat, dukungan petugas kesehatan dengan kepatuhan minum obat ARV, sedangkan pengetahuan pasien mempunyai hubungan dengan kepatuhan minum obat ARV. Saran untuk institusi agar memberikan edukasi yang lebih untuk meningkatkan pengetahuan pasien HIV agar mengetahui pentingnya kepatuhan minum obat ARV untuk kelangsungan hidup ODHA.

1. INTRODUCTION

The Human Immunodeficiency Virus Acquired Immune Deficiency Syndrome ((HIV/AIDS) is currently a health problem that threatens Indonesia and many countries around the world. HIV is a virus that infects the cells of the immune system, destroying or impairing their function. HIV infection makes progressive damage to the immune system, thus causing AIDS[1]. The discovery of antiretroviral drugs (ARVs) is a breakthrough that drives a revolution in the treatment of ODHA. The success of HIV/AIDS management with ARV therapy is determined by adherence to taking ARV drugs. ARV therapy is given long-term and is said to be the optimal treatment if treatment adherence reaches more than 95% [2].

Based on the recapitulation of the health profile of districts/cities in 2017, there were 601 cases of HIV, while there were 531 cases of AIDS, with the number of deaths due to AIDS as many as 299 people. According to the report of the prevention and control section of infectious diseases of the West Kalimantan Provincial Health Office in 2018, there were 605 cases of HIV, while AIDS was 610 cases, with the number of deaths due to AIDS as many as 7 people [3].

People with HIV/AIDS need treatment with Antiretrovirals (ARVs) to reduce the amount of HIV virus in the body so that it does not enter the AIDS stage and to prevent opportunistic infections and complications [4]. Patients who receive treatment must be obedient in consuming ARV drugs for life, on time and discipline. Until now, ARV is still the most effective way and is able to reduce mortality and have an impact on improving the quality of life of people infected with HIV. HIV and AIDS have been accepted as controllable diseases such as diabetes, asthma or hypertension and are no longer considered a frightening killer disease [5].

The discovery of ARV drugs in 1996 spurred a revolution in the treatment of People With HIV/AIDS (ODHA) in developed countries. Antiretrovirals (ARVs) can be given to patients to stop viral activity, restore the immune system and reduce the occurrence of opportunistic infections, improve quality of life, and reduce disability [6].

Adherence in ARV therapy is one of the important factors in the success of HIV AIDS treatment, because continuous and uninterrupted ARVs will be able to suppress the progression of the virus, reduce viral resistance, improve the patient's quality of life and improve their general health. Conversely, patient non-compliance can be the cause of the failure of ARV therapy [7]. ARVs can save the lives of people with HIV AIDS if they are obedient during ART [8].

Based on previous research, it is known that adherence-related information includes accurate information a person has about the ARV regimen in terms of how and when doses should be taken, potential side effects, and decisions regarding adherence that may be inaccurate (believing that medication can be skipped if it feels good) and accurate (understanding that low levels of non-adherence can inhibit the suppression of the virus). Information related to basic knowledge about diseases, health conditions, and recommended preventive behaviors [5].

Adherence is a major factor in achieving successful treatment of HIV infection, such as taking medication according to the dose, never forgetting, on time, and never giving up. Adherence in taking ARVs is the most important factor in suppressing the amount of HIV virus in the human body. Suppressing the number of viruses for a long and stable time aims to keep the body's immune system high. Thus, people infected with the HIV virus will get a good quality of life and also prevent the occurrence of pain and death [9].

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Therapy can fail due to lack of compliance, so that the virus becomes resistant to the drug used [10]. Forgetting to take ARV medication once or twice a week can cause the purpose of the medication to fail, especially at the beginning of treatment. In the early years of the AIDS epidemic, opportunistic infections (IO) such as pulmonary tuberculosis, hepatitis, and pneumonia were the leading causes of death in people with HIV/AIDS [11]. The purpose of this study is to analyze factors related to compliance with taking ARV drugs in HIV-positive patients at the Klinik Klinik Melati Hospital dr. Soedarso Pontianak.

2. METHODS

The research design used is a quantitative research, with a cross sectional design. The time and place of the research were conducted from May to June. This research was conducted at the Melati Clinic Poly of dr. Soedarso Pontianak Hospital. The population in this study is outpatients at dr. Soedarso, who is medically HIV positive and has been carrying out active ARV therapy for 2 years from 2019-2020 at the Melati Clinic Poly of Soedarso Doctor's Hospital. The sampling technique in this study is total sampling, namely all patients who made repeat visits for medication collection from May to June 2021 totaling 62 people.

This study uses secondary data and primary data. Secondary data was taken from the document of dr. Soedarso, the medical records of HIV patients, and the visit cards of HIV patients, while primary data were taken directly to patients who had been diagnosed with HIV and were collected from May to June 2021. The research after receiving a letter is feasible to conduct research from the Ethics Committee of Dr. Soedarso Hospital with No.01/RSUD/KEPK-V/2021.

3. RESULTS

Univariate Analysis

Table 1 shows that the most gender is male out of a total of 62 respondents. The most respondents had married status as many as 34 respondents and those with unmarried status as many as 20 respondents out of a total of 62 respondents. The more dominant job of respondents is private employees and a small percentage have permanent jobs out of 62 total respondents. The most respondents were from 31-40 years old out of a total of 62 respondents.

The frequency distribution for the research variables based on table 1 shows that respondents have a small percentage of higher education and most have secondary education out of a total of 62 respondents. A small percentage of respondents were unemployed and most of the respondents had jobs out of a total of 62 respondents. Respondents with good motivation were more compared to those who had poor motivation out of a total of 62 respondents. Families who supported more than those who did not support out of a total of 62 respondents. The distribution of frequencies based on drug side effects was more than those who felt there were no side effects from a total of 62 respondents. Health workers who supported more than those who did not support out of a total of 62 respondents. Based on adherence to taking medications, there are more compliant than non-compliant ones out of a total of 62 respondents.

Table 1. Frequency Distribution of Respondent Characteristics and Research Variables

Characteristics	**n** = (62)	%
Gender		
Male	41	66,1
Women	21	33,9
Weddings		
Unmarried	20	32,3
Married	34	54,8
Divorce	8	12,9
Job Type		
Private Employees	23	37,1
SOE Employees	1	1,6
PNS	6	9,7
IRT	9	14,5
Farmer	2	3,2
Self-employed	11	17,7
TNI/POLRI	2	3,2
Not Working	8	12,9
Age Range		
21-30 years old	22	35,5
31-40 years old	23	37,1
41-50 years old	16	25,8
>50 Years	1	1,6
Education		
Intermediate	51	82,3
Height	11	17,7
Employment Status		
Not Working	17	27,4
Work	45	72,6
Knowledge		
Not Good	19	30,6
Good	43	69,4
Patient Motivation		
Not Good	21	33,9
Good	41	66,1
Family Support		
Not Supported	29	46,8
Support	33	53,2
Drug Side Effects		
There are side effects	22	35.5
No Side Effects	40	64.5
Healthcare Worker Support		
Not Supported	13	21

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Characteristics	**n** = (62)	%
Support	49	79
Compliance Behavior of Taking ARV Medication		
Obedient	43	69,4
Non-compliant	19	30,6
Obedient	43	69,4

Source: Primary Data, 2021

Bivariate Analysis

Table 2 shows that respondents with low education level tend to be non-compliant with taking medication (47.1%) more than respondents with higher education level (18.2%). Respondents who work tend to be non-compliant with taking medication (46.7%) more than respondents who do not work (29.4%). Respondents with poor knowledge were more likely to be non-compliant with taking medication (73.7%) than respondents with good knowledge (27.9%). Respondents who had poor motivation were more likely to be non-compliant with taking medication (47.6%) compared to respondents who had good motivation (22%). Respondents who did not receive support from their families tended to be non-compliant with taking medication (37.9%) more than respondents who received family support (24.2%). Respondents who felt there were side effects of ARV drugs tended to be non-compliant with taking the drug (40.9%) more than respondents who felt there were no side effects of ARV drugs (25%). Respondents who did not receive support from the PMO were more likely to be non-compliant with taking medication (38.5%) compared to respondents who received support from the PMO (28.6%).

From the results of the chi-square test of the education level variable, a p-value = 0.101 (> α=0.05) it can be concluded that there is no relationship between education level and ARV medication adherence behavior. With a PR score of 2,558, which means that respondents with low education levels tend to be non-compliant with taking ARV drugs compared to respondents with high education levels. The variable of employment status obtained a p-value = 0.347 (> α=0.05) it can be concluded that there is no relationship between employment status and compliance behavior of taking ARV drugs. With a PR value of 0.630, which means that respondents who work tend to be non-compliant in taking ARV drugs compared to respondents who do not work. The knowledge variable obtained p-value = 0.002 (< α=0.05) can be concluded that there is a relationship between knowledge and compliance behavior of taking ARV drugs. With a PR value of 2,640, which means that respondents who have poor knowledge tend not to be compliant with taking ARV drugs compared to respondents who have good knowledge. The patient motivation variable obtained a p-value = 0.074 (> α=0.05) it can be concluded that there is no relationship between patient motivation and ARV medication adherence behavior. With a PR value of 2.169, which means that the prevalence of ARV drug adherence behavior in the group with poor motivation is 2.169 greater than the prevalence of ARV drug compliance behavior in the group with good motivation.

Family support variable p-value = 0.373 (> α=0.05) can be concluded that there is no relationship between family support and drinking obedience behavior ARV drugs. With a PR value of 1.565, which means that the prevalence of ARV drug adherence behavior in the group that did not receive family support was 1.565 greater than the prevalence of

ARV drug compliance behavior in the group that received family support. The drug side effect variable was obtained with a p-value = 0.311 (> α=0.05) can be concluded that there is no relationship between drug side effects and ARV drug adherence behavior. With a PR value of 1.636, which means that the prevalence of ARV drug adherence behavior in the group that felt there were side effects of ARV drugs was 1.636 greater than the prevalence of ARV drug adherence behavior in the group that did not feel side effects of ARV drugs. The PMO variable obtained a p-value = 0.513 (> α=0.05) can be concluded that there is no relationship between drug administration supervisors and ARV drug compliance behavior. With a PR value of 1.346, which means that the prevalence of ARV drug adherence behavior in the group that did not receive PMO support was 1.346 greater than the prevalence of ARV drug compliance behavior in the group that received PMO support.

Table 2. Relationship of Independent Variables to Bound Variables

Variable	Compliance with ARV Medication				*p-value*	OR (95% CI)
	Non-compliant		Obedient			
	n	%	n	%		
Education Level						
Low	24	47,1	27	52,9	0,101	2,558 (0,715-9,374)
Height	2	18,2	9	81,8		
Employment Status						
Not Working	5	29,4	12	70,6	0,347	0.630 (0,283-1,403)
Work	21	46,7	24	53,3		
Knowledge						
Not Good	14	73,7	5	26,3	0,002	2,640 (1,523-4,578)
Good	12	27,9	31	72,1		
Patient Motivation						
Not Good	10	47,6	11	52,4	0,074	2,169 (1,044-4,506)
Good	9	22,0	32	78,0		
Family Support						
Not Supported	11	37,9	18	62,1	0,373	1,565 (0,730-3,352)
Support	8	24,2	25	75,8		
Drug Side Effects						
There are side effects	9	40,9	13	59,1	0,311	1,636 (0,785-3,413)
No Side Effects	10	25,0	30	75,0		
Healthcare Worker Support						
Not Supported	5	38,5	8	61,5	0,513	1,346 (0,594-3,050)
Support	14	28,6	35	71,4		

Source: Primary Data, 2021

4. DISCUSSIONS

1. The relationship between education level and ARV drug taking behavior at the Melati Polyclinic of Dr. Soedarso Pontianak Hospital

Bivariate analysis using the chi-square test showed that there was no significant relationship between education level and ARV drug adherence behavior, with a p-value of 0.101 > 0.05, with a PR of 2.588 which means that respondents with low education

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were less likely to be non-compliant with taking medication (47.1%) than respondents with higher education level (18.2%).

Education is a very important partner as a benchmark in determining a person's socioeconomic status. In addition, education also plays a role in the actions that will be taken by a person, including in efforts to prevent HIV/AIDS. A recent study found that a person who is highly educated is less vulnerable to the risk of being infected with HIV/AIDS than those who are poorly educated or drop out of school. Through education in school [5].

The results of this study are also supported by previous research conducted by Weaver (2014) showing that there is no significant relationship between adherence and education because education level does not determine adherence to taking ARV drugs [12]. In contrast to other studies that argue that education level is strongly related to compliance with ARV consumption, respondents with high education levels are more adherent to treatment compared to those with low education [13].

The practical implications of these findings suggest that although education level was not significantly related to adherence to taking ARV medications, respondents with low education tended to be less adherent. Therefore, there needs to be simpler and easier to understand educational efforts, such as using simple visual, video, and language materials. Education programs should be more intensive, especially for those with low education, and accompanied by social support through support groups and assistance from health cadres. Although education is not a major determining factor, improving patient understanding and motivation remains essential to improve adherence to ARV treatment.

2. The relationship between the patient's employment status and the behavior of taking ARV drugs at the Melati Clinic Poly of Dr. Soedarso Pontianak Hospital

Based on bivariate analysis using the chi-square test, it was shown that there was no significant relationship between employment status and ARV drug compliance behavior, with a p-value of 0.347 > 0.05, with a PR of 0.630 which means that working respondents tended to be non-compliant with taking medication (46.7%) greater than respondents who did not work (29.4%).

If it is associated with the results of the research, a person who already has his own income/work, and he is not married, then there is a tendency to be free to do risky behaviors that result in HIV/AIDS, especially those in the reproductive period at the high phase of sexual turmoil, if not balanced with faith and sufficient knowledge, they will have the potential to commit risky behaviors such as promiscuous sexual behavior, Free sex without using condoms and using injectable drugs [5].

Employment status is related to behavior patterns while undergoing ARV therapy, where working ODHA will be busy with their work routine so that it will affect compliance with ARV drug consumption [14]. The practical implications of these findings suggest that although there was no significant association between employment status and adherence to taking ARV medications, working respondents tended to be less compliant. This may be due to a work routine that interferes with the time of treatment. Therefore, a more flexible approach such as medication reminders or dosage schedule adjustments is essential for those who work. Education on timing and the positive impact of medication adherence needs to be tailored to the working conditions of the patient, as well as support from healthcare professionals or support groups to motivate their adherence.

3. The relationship between patient knowledge and ARV drug taking behavior at the Melati Polyclinic of Dr. Soedarso Pontianak Hospital

Based on bivariate analysis using the chi-square test, it was shown that there was a significant relationship between knowledge and compliance behavior of taking ARV drugs, with a p-value of 0.002 < 0.05, with a PR of 2.640 which means that respondents with poor knowledge were less likely to be non-compliant with taking medication (73.7%) than respondents with good knowledge (27.9%).

Some studies reveal patients with higher knowledge of HIV and its treatment tend to show better adherence to ARV therapy. For example, a study in Ethiopia found that knowledge of HIV and its treatment significantly increased the likelihood of adherence [15]. Similarly, other studies have shown that knowledge of ARV therapy is positively related to compliance rates [16]. Studies in Indonesia also show that there is a meaningful relationship between respondents' medical knowledge and adherence to taking ARV drugs [2]. Knowledgeable ODHA is quite more compliant in consuming ARV drugs than ODHA patients who are less knowledgeable [10]

Behaviors based on knowledge will be more meaningful than behaviors that are not based on knowledge. Before a person adopts a behavior, he must first know what the meaning and benefits of the behavior are for him, after knowing then he must understand, that is, being able to explain about the known object and being able to interpret the material correctly, so that he can carry out (application) the knowledge into a behavior [17].

These findings suggest that good knowledge of HIV and ARV therapy has a significant effect on patient adherence. Therefore, it is important to improve health education in a structured and routine manner in health facilities, using easy-to-understand materials such as leaflets, videos, or mobile applications. Healthcare workers need to be trained to provide clear information and understand the challenges patients face, including social stigma. Periodic evaluations of the patient's knowledge can help identify deficiencies and provide further explanations. By increasing knowledge and support, adherence to ARV therapy can be improved, which in turn improves the patient's quality of life.

4. The relationship between patient motivation and ARV drug behavior at Poli Kinik Melati Hospital Dr. Soedarso Pontianak

Based on bivariate analysis using the chi-square test, it was shown that there was no significant relationship between patient motivation and adherence behavior of taking ARV drugs, with a p-value of 0.074 > 0.05, with a PR of 2.169 which means that respondents who had poor motivation tended to be non-compliant with taking medication (47.6%) greater than respondents who had good motivation (22%).

In contrast to the results of other studies that there is a relationship between motivation and ARV drug taking behavior [18]. Motivation is a state filled with emotions that move and direct behavior, resulting from the interaction between internal needs and external incentives [19].

The practical implications of these findings suggest that although there is no significant relationship between patient motivation and adherence to ARV treatment, motivational factors remain important in the management of ARV therapy. Therefore, it is important to develop strategies that can increase patient motivation, such as a more personalized and in-depth approach to providing information about the importance of ARV therapy, as well as the long-term benefits that can be gained from adherence.

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Providing psychosocial support, such as counseling sessions or support groups, can help patients overcome internal barriers that affect their motivation. Additionally, external incentives, such as rewards or recognition for compliance achievements, can be an effective way to encourage motivation and strengthen a patient's commitment to treatment.

Overall, although motivation was not statistically significantly associated with adherence in this study, strengthening patient motivation through more intensive education and ongoing support remains critical to improving adherence to ARV treatment.

5. The relationship between family support and ARV medication behavior at the Melati Clinic Poly of Dr. Soedarso Pontianak Hospital

Family support is one of the factors that determine medication adherence. In general, most people with HIV/AIDS always experience psychological depression so they really need high motivation from the people around them, and the family is the closest people who contribute very much to provide motivation. Families take a role to provide support such as: reminding them to regularly take ARV medications, providing or seeking information related to HIV/AIDS and others. This closeness in the form of family support will be able to eliminate depression and feelings of isolation as well as the existence of status that leads to non-compliance with taking ARVs.

This study is in line with previous research which showed that there was no relationship between family support for ARV treatment adherence to ODHA in the Jumpandang Baru Health Center (p=0.652).19 It was reinforced by another study that stated that there was no relationship between family support and ARV treatment adherence (p=0.217) [19].

An important factor for compliance is because many HIV/AIDS patients have undergone therapy but still do not have a clear understanding of the treatment, low economic levels, and family support are needed to help decisions that will be taken in adherence to antiretroviral treatment. Compliance with antiretroviral treatment is very important for people with HIV/AIDS, this is so that the quality of life is better. Family support is one of the most important things for HIV patients but in reality HIV patients are not open with their families about their illness. It can be seen from the respondents who answered that the family did not know the disease that the patient suffered.

6. The relationship between drug side effects and ARV drug taking behavior at the Melati Polyclinic of Dr. Soedarso Pontianak Hospital

Based on bivariate analysis using the chi-square test, it was shown that there was no significant relationship between drug side effects and ARV drug adherence behavior, with a p-value of 0.311 > 0.05, with a PR of 1.636 which means that respondents who felt there were side effects from ARV drugs tended not to comply with taking drugs (40.9%) more than respondents who felt there were no side effects of ARV drugs (25%). Statistically, drug side effects and ODHA adherence do not have a relationship, but judging from the bivariate table, the compliance behavior of respondents who felt there were side effects of ARV drugs was greater than the percentage of respondents who felt there were no side effects of ARV drugs.

Side effects of antiretroviral drugs generally occur within the first three months, but not all ODHA will experience side effects after taking antiretroviral drugs.17 This statement is supported by research by experts in Nigeria who revealed that drug side effects are more likely to occur in patients who are on antiretrovirals in the first six

months of treatment, namely 6-12 months and 12-24 months compared to those who have been on antiretroviral therapy for a long time [21].

In line with previous studies that showed that there was no meaningful relationship between drug side effects and ODHA adherence in consuming ARVs with a p = 0.409 value. From the results of FGD with ODHA, 4 out of 6 ODHA experienced side effects such as blackish skin, severe anemia, dizziness, hallucinations and even some experienced side effects of Stevens Johnson Syndrome. From interviews with NGOs, there was a mentor who complained about side effects at the beginning of consuming ARVs, and decided to stop his ARV therapy. Judging from the distribution of patients who have just taken ARV drugs (<1 year), they have experienced more high side effects (64.7%) compared to those who have consumed ARVs for 1-3 years (40.7%), > 3 years (33.3%) [22].

The fact from the results of a study conducted by Fonsah at the University of Cameroon in 2017 that men are more likely to give up ART due to side effects, in addition to that patients who are significantly younger are more likely to be non-compliant for a longer duration, it is necessary to pay attention to male patients and younger patients in the intervention to improve adherence to taking ARV medications [23].

7. The relationship between health worker support and compliance behavior in taking ARV drugs at the Melati Clinic Poly of Dr. Soedarso Pontianak Hospital

Based on bivariate analysis using the chi-square test, it was shown that there was no significant relationship between health worker support and PMO and ARV medication compliance behavior, with a p-value of 0.513 > 0.05, with a PR of 1.346 which means that respondents who did not receive support from health workers tended not to comply with taking medication (38.5%) compared to respondents who received support from health workers (28.6%).

In contrast to other studies that suggest that there is a relationship between health worker support and adherence to taking ARV drugs, which means that patients who do not receive support do not comply with taking ARVs compared to HIV patients who receive support from health workers. Factors associated with low adherence to treatment can also be caused by inconsistent relationships between HIV patients and healthcare workers, the number of pills to take, forgetfulness, depression, education level, the patient's lack of understanding of the drugs to be swallowed and about the toxicity of the drug and the patient being too sick to swallow the drug [23].

The level of adherence to taking ARV drugs according to Metazodian et al. can be influenced by the patient's limited financial factors to achieve access to health services therefore, to improve adherence, patients should be exposed to motivational interventions for drug consumption and social and occupational support and information about medication and medical care should be widespread [25].

5. CONCLUSIONS

From the results of the study, it was stated that there was no significant relationship between the level of education, employment, family support, drug side effects and health worker support with medication taking behavior at the Melati Clinic Poly of Soedarso Doctor's Hospital, and based on multivariate analysis the most powerful factor in medication adherence is the patient's own knowledge, the strategy that must be used to increase patient knowledge about the importance of adherence to taking ARV drugs is by take a continuous approach to patients when they come to visit

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the Melati Clinic again so that patients get information about the importance of compliance with taking ARV drugs.

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Author's Contributions

CD: Designing research concepts, collecting data, and drafting manuscripts; IA: Designed methodologies, analyzed data, and drafted initial manuscripts and final revisions; IS: Assists in data collection, analysis, and provides input in the discussion section.

7. REFERENCES

1. World Health Organization. HIV and AIDS. 2020. Accessed August 10, 2020. https://www.who.int/news-room/fact-sheets/detail/hiv-aids
2. Keperawatan J, Debby C, Sianturi SR, et al. Factors Related to Compliance of ARV Medication in HIV Patients at RSCM Jakarta. *Jurnal Keperawatan*. 2019;10(1):15-22. doi: https://doi.org/10.22219/JK.V10I1.5886
3. Dinkes Provinsi Kalbar. *Profil Dinas Kesehatan Provinsi Kalimantan Barat Tahun 2018*. Dinas Kesehatan Provinsi Kalimantan Barat; 2019. Accessed July 9, 2022. https://datacloud.kalbarprov.go.id/index.php/s/6Gj9RFNC3XgyHmf?path=%2FProfil%20Kesehatan%2FProvinsi#pdfviewer
4. Kemenkes RI. *Peraturan Menteri Kesehatan Republik Indonesia Nomor 87 Tahun 2014 Tentang Pedoman Pengobatan Antiretroviral*.; 2015.
5. Jaemi J, Waluyo A, Jumaiyah W. Kepatuhan Orang dengan HIV/AIDS (ODHA) terhadap Pengobatan Anti Retroviral (ARV). *JHeS (Journal of Health Studies)*. 2020;4(2):72-84. doi: https://doi.org/10.31101/jhes.1007
6. Anok MR, Aniroh U, Wahyuni S. Hubungan Peran Kelompok Dukungan Sebaya dengan Kepatuhan ODHA dalam Mengkonsumsi ARV di Klinik VCT RSUD Ambarawa. *Jurnal Ilmu Keperawatan Maternitas*. 2018;1(2):26-33. Accessed April 14, 2022. https://journal.ppnjateng.org/index.php/jikm
7. Sari YK, Nurmawati T, Putri Hidayat A. Analisis Faktor Yang Mempengaruhi Kepatuhan Pasien HIV-AIDS Dalam Terapi Antiteroviral (ARV). *JURNAL CITRA KEPERAWATAN*. 2019;7(2):96-103. doi: https://doi.org/10.31964/JCK.V7I2.116
8. Parashar S, Collins AB, Montaner JSG, Hogg RS, Milloy MJ. Reducing rates of preventable HIV/AIDS-associated mortality among people living with HIV who inject drugs. *Curr Opin HIV AIDS*. 2016;11(5):507-513. doi: https://doi.org/10.1097/COH.0000000000000297

9. Pengobatan Antiretroviral Keberhasilan Pengobatan Antiretroviral Teguh Karyadi KH. Keberhasilan Pengobatan Antiretroviral (ARV). *Jurnal Penyakit Dalam Indonesia*. 2017;4(1):1. doi: https://doi.org/10.7454/jpdi.v4i1.105

10. Sasmita Aji H, Tulung P, Kesehatan Kabupaten Klaten D. Kepatuhan Pasien HIV Dan AIDS Terhadap Terapi Antiretroviral Di RSUP Dr. Kariadi Semarang. *Jurnal Promosi Kesehatan Indonesia*. 2010;5(1):58-67. doi: https://doi.org/10.14710/JPKI.5.1.58-67

11. Framasari DA, Flora R, Sitorus RJ. Infeksi Oportunistik Pada ODHA (Orang Dengan HIV/Aids) Terhadap Kepatuhan Minum ARV(Anti Retroviral) Di Kota Palembang. *Jambi Medical Journal : Jurnal Kedokteran dan Kesehatan*. 2020;8(1):67-74. doi: https://doi.org/10.22437/JMJ.V8I1.9374

12. Weaver ERN, Pane M, Wandra T, Windiyaningsih C, Herlina, Samaan G. Factors that Influence Adherence to Antiretroviral Treatment in an Urban Population, Jakarta, Indonesia. *PLoS One*. 2014;9(9):e107543. doi: https://doi.org/10.1371/JOURNAL.PONE.0107543

13. Th DA, Kheru A, Maulana DM. Hubungan Dukungan Keluarga Dan Tingkat Pendidikan Pasien Terhadap Kepatuhan Minum Obat Antiretroviral Pasien Hiv Aids Di Poli Rsud Dr. Drajat Prawiranegara Serang Banten. *MAHESA : Malahayati Health Student Journal*. 2021;1(2):82-91. doi: https://doi.org/10.33024/MAHESA.V1I2.3756

14. Masyarakat BK, Harahap Z, Arguni E, Rahayujati TB. Determinan ketidakpatuhan terapi antiretroviral pada ODHA dewasa. *Berita Kedokteran Masyarakat*. 2016;32(6):195-202. doi: https://doi.org/10.22146/bkm.9825

15. Abadiga M, Hasen T, Mosisa G, Abdisa E. Adherence to antiretroviral therapy and associated factors among Human immunodeficiency virus positive patients accessing treatment at Nekemte referral hospital, west Ethiopia, 2019. *PLoS One*. 2020;15(5). doi: https://doi.org/10.1371/JOURNAL.PONE.0232703

16. Putra DS, Atmadani RN, Hidayati IR. Relationship between knowledge level of HIV/AIDS patient with antiretroviral adherence in primary healthcare service in Malang City. *J HIV AIDS Soc Serv*. 2021;20(3):228-245. doi: https://doi.org/10.1080/15381501.2021.1961651

17. Dahoklory BM, Romeo P, Takaeb AEL. Hubungan Dukungan Keluarga ODHA dengan Kepatuhan Minum Obat Antiretroviral di Klinik VCT Sobat Kupang. *Timorese Journal of Public Health*. 2019;1(2):70-78. doi: https://doi.org/10.35508/TJPH.V1I2.2129

18. Sucerni, Sudirman, Afni N. Hubungan Informasi Dan Motivasi Dengan Kepatuhan Minum Obat Arv Pada Pasien HIV-AIDS Di Poli PDP RSUD Undata Provinsi Sulawesi Tengah. *Jurnal Kolaboratif Sains*. 2019;2(1). doi: https://doi.org/10.56338/JKS.V2I1.844

19. Schultheiss OC, Strasser A, Rösch AG, Kordik A, Graham SCC. Motivation. *Encyclopedia of Human Behavior: Second Edition*. Published online January 1, 2012:650-656. doi: https://doi.org/10.1016/B978-0-12-375000-6.00238-X

20. Supriyatni N, Salim LA, Hargono A, Febriyanti. Antiretroviral medication adherence for people with HIV/AIDS. *J Public Health Afr*. 2023;14(7):2434. doi: https://doi.org/10.4081/JPHIA.2023.2434

21. Harison N, Waluyo A, Jumaiyah W. Pemahaman pengobatan antiretroviral dan kendala kepatuhan terhadap terapi antiretroviral pasien HIV/AIDS. *JHeS (Journal of Health Studies)*. 2020;4(1):87-95. doi: https://doi.org/10.31101/jhes.1008

22. Yuni H, Rasyid R, Nursal DGA. Analisis Faktor-Faktor yang Berhubungan dengan Kepatuhan ODHA dalam Mengkonsumsi Antiretroviral di Poliklinik VCT RSUP Dr M Djamil Padang Tahun 2017. *Jurnal Kesehatan Andalas*. 2020;9(3):320-327. doi: https://doi.org/10.25077/JKA.V9I3.1313

23. Fonsah JY, Njamnshi AK, Kouanfack C, et al. Adherence to Antiretroviral Therapy (ART) in Yaoundé-Cameroon: Association with Opportunistic Infections, Depression, ART Regimen and Side Effects. *PLoS One*. 2017;12(1):e0170893. doi: https://doi.org/10.1371/JOURNAL.PONE.0170893

24. pratiwi ayu, wanufika isna, sukmara yosep. Dukungan Tenaga Kesehatan Dengan Kepatuhan Minum ARV Pada Penderita HIV Di Lapas Pemuda Kelas II A Tangerang. *Jurnal Kesehatan*. 2019;8(1):83-97. Accessed August 10, 2025. https://jurnal.uym.ac.id/index.php/kesehatan/article/view/57

25. Motazedian N, Sayadi M, Firoozbakhtian A. Non-adherence to anti-retroviral medication in Shiraz, 2014: a cross sectional study. *Afr Health Sci*. 2018;18(2):384. doi: https://doi.org/10.4314/AHS.V18I2.24