

FACTORS INFLUENCING ADHERENCE TO TAKING ANTIRETROVIRAL MEDICATION IN PEOPLE WITH HIV/AIDS AT THE WAENA COMMUNITY HEALTH CENTER, JAYAPURA CITY

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Abstract

HIV/AIDS is an infectious disease that is still a global health problem today. Efforts to prevent high transmission are by taking antiretroviral medication (ARV) to weaken the virus and improve the quality of life for people living with HIV/AIDS (PLWHA). Therefore, the level of adherence to taking ARV medication is important for PLWHA patients. The aim of this study was to determine the factors that influence adherence to ARV medication in PLWHA patients at the Waena Health Center, Jayapura City. The type of research used is observational analytical design *cross sectional study*. The population of PLWHA patients taking ARV medication was 82 people with sample collection using a saturated sampling technique. Data was obtained using a questionnaire and data analysis was carried out using *chi square test*. The research results showed that the majority of PLWHA patients were aged 25-35 years, 41 people (50.0%), 46 people (56.1%), with the highest marital status, namely unmarried, 70 people (85, 4%), 59 people (72%) had higher education and 53 people (64.6%) worked. There were 46 patients (56.1%) who were compliant with taking ARV medication and 36 people (43.9%) were non-compliant. There was an influence of length of treatment (p -value = 0.006 < 0.05; RP = 2.161; CI95% (1.42-3.3), knowledge (p -value = 0.035 < 0.05; RP = 1.789; CI95% (1.09-2.94), and attitude (p -value = 0.013 < 0.05; RP = 1.953; CI95% (1.202-3.172) with adherence to taking ARV medication in PLWHA patients at the Waena Health Center, Jayapura City. In addition, it is known There was no influence of family support for PLWHA patients on adherence to ARV medication in PLWHA patients at the Waena Community Health Center, Jayapura City (p -value = 0.930 > 0.05; RP = 0.930; CI95% (0.561-1.56).

Keywords: Antiretroviral, Obedience, PLWHA, Take Medicine.

Introduction

Human Immunodeficiency Virus (HIV) is the virus that causes *Acquired Immuno Deficiency Syndrome* (AIDS). AIDS is a collection of symptoms of reduced immune capacity due to the HIV virus. The World Health Organization (WHO) in July 2023 published a fact sheet that HIV is still a major global public health problem. It is estimated that by 2022 there will be 39 million people living with HIV, of which two-thirds will be in the African region. In 2022, an estimated 630,000 people will die from HIV-related causes and 1.3 million people will contract HIV¹.

The HIV epidemic in Indonesia has been going on for more than three decades, namely since 1987 in Bali. Until now, the HIV epidemic is still concentrated in 4 key populations, namely: men who have sex with men, waria or transgender, female sex workers and injecting drug users. However, in the last 10 years, it has tended to spread to the general population, which can be seen from the increasing number of infections found in women who are partners of key populations. Transmission in the general

population is also seen in the epidemic situation in Tanah Papua which has reached up to 2.3 percent². The Executive Report on the Development of HIV/AIDS and Sexually Transmitted Infectious Diseases (PIMS) for the Second Quarter of 2022 from the Directorate General of Disease Prevention and Control of the Indonesian Ministry of Health stated that the cumulative number of HIV cases reported up to June 2020 was 478,784 people with the cumulative number of AIDS being 139,500 people. The five provinces with the highest number of HIV cases are DKI Jakarta, followed by East Java, West Java, Central Java and Papua³.

Data on HIV/AIDS cases in Papua Province in 2022 is 46,967 cases and in 2022 it will increase by 50,400 HIV/AIDS cases. Of this number, 8,368 people with HIV/AIDS (PLWHA) were compliant with ARV therapy (16.6%). In particular, the number of PLWHA in Jayapura City is 7,761 people and 2,174 people were given therapy, of which 652 people were compliant with ARV therapy (30.12%)².

Although there is no cure for HIV infection, with access to effective HIV prevention, diagnosis, treatment and care, HIV infection has become a treatable chronic health condition, enabling people living with HIV to live long and healthy lives. Antiretroviral therapy (ARV) is known as an effective therapy in preventing the progression of HIV to AIDS, unfortunately the level of compliance with ARV therapy is still far from ideal⁵. A high level of adherence to ART therapy is necessary to suppress viral replication, slow HIV progression, and reduce further transmission. However, poor compliance can also lead to drug resistance⁶.

Compliance with taking medication is an important aspect in assessing the success of ARV therapy. From several literature studies that have been carried out, there are many factors that influence the level of adherence to taking ARV medication. These factors can be divided into at least three major factors, namely individual factors, treatment burden, and health services. Individual factors can include knowledge, misunderstandings in administering medication, patient attitudes and skills in developing the habit of taking medication regularly, social support such as from friends and family, and concerns about side effects. Factors related to the burden of treatment that can influence compliance include the length of treatment, the large number of drug tablets that must be taken, intense drug administration schedules, restrictions on meal times, and drug side effects. Meanwhile, factors related to health services can include the availability of medicines or the cost of training health workers⁵.

The Jayapura City Health Service has prepared HIV testing and counseling services in 24 health service facilities (fayankes) in the Jayapura City area. Of the 24 health facilities, the Waena community health center (Puskesmas) is the health center with the highest number of ARV therapy patients, namely 82 people, of which there are 54 people (65.85%) who adhere to taking medication from January to July 2022. By Therefore, the level of patient compliance at the Waena Community Health Center can be an important reference for ARV therapy services in Jayapura City. The aim of this research is to investigate the factors that influence adherence to antiretroviral therapy (ARV) in people with HIV/AIDS at the Waena Community Health Center, Jayapura City.

Method

Type of observational analytical research with design *cross sectional study*. The population of PLWHA patients taking ARV medication was 82 people, with sample collection using a saturated sampling technique where all members of the population were used as samples. Data was obtained using questionnaires and data analysis using *chi square test*⁷. Independent variables were selected, namely factors that influence adherence to taking medication. Those chosen in this study were: length of treatment, level of patient knowledge, patient attitude, and support from the family. Meanwhile, the dependent variable is adherence to taking ARV medication.

Results

Distribution of Respondents

Table 1 below provides data on the distribution of respondents taking ARB medication at the Waena Health Center, Jayapura City. Most respondents were in the 25-35 year age group, namely 41 people (50%). Based on gender, the majority of respondents were women, 46 people (56.1%). Respondents were also known to be dominated by patients from higher education (72%) and those who had jobs (64.6%).

Table 1 Distribution of respondents taking ARV medication based on age, gender, education, occupation among PLWHA patients at the Waena Community Health Center

Variable	Number (n)	Percentage (%)
Age		
< 25 years	22	26,8
25-35 years old	41	50,0
>35 years	19	23,2
Type Sex		
Man	36	43,9
Woman	46	56,1
Education		
Low	23	28,0
Height	59	72,0
Work		
Doesn't work	29	35,4
Work	53	64,6
Total	82	100

Table 2 below provides data on the distribution of respondents based on the dependent variable. The largest distribution of respondents was obtained from patients with a treatment duration of more than 6 months as many as 65 people (79.3%), with good knowledge as many as 46 people (56.1%), having a good attitude as many as 50 people (61%) and their families. 51 people (62.2%) supported it.

Table 2 Distribution of respondents taking ARV medication based on length of treatment, knowledge, attitudes and family support for PLWHA patients at the Waena Community Health Center

Variable	Number (n)	Percentage (%)
Duration of Treatment		
< 6 months	17	20,7
≥ 6 months	65	79,3
Knowledge		
Less	36	43,9
Good	46	56,1
Attitude		
Less	32	39
Good	50	61

Family support

Does not support	31	37,8
Support	51	62,2
Total	82	100

Table 3 provides data on the distribution of respondents based on the independent variable, namely adherence to taking medication. There were 46 PLWHA patients at the Waena Community Health Center who were compliant with taking ARV medication, while 36 people (43.9%) were found to be non-compliant with taking ARV medication.

Table 3 Distribution of respondents based on adherence to taking ARV medication among PLWHA patients at the Waena Community Health Center

Variable	Number (n)	Percentage (%)
Compliance with taking ARV medication		
Disobedient	36	43,9
Comply	46	56,1
Total	82	100

Effect of Treatment Duration for PLWHA on Adherence to Taking ARV Medication

Table 4 shows that 12 PLWHA patients with treatment duration < 6 months were non-compliant with taking ARV medication (14.6%) and 5 people (6.1%) were adherent to taking ARV medication. PLWHA patients with long treatment ≥ 6 months old who did not adhere to taking ARV medication were 24 people (29.3%) and 41 people (50%) were compliant with taking ARV medication. Test results *chi square* earned value *p-value* = 0.006 < 0.05. This means that there is an influence on the length of treatment for PLWHA patients with adherence to taking ARV medication in PLWHA patients at the Waena Community Health Center. The prevalence ratio test results obtained RP = 2.161; 95% CI (1.42-3.3) which is interpreted to mean that PLWHA patients with treatment duration < 6 months tend to be non-compliant with taking ARV medication by 2.161 times higher than PLWHA patients with treatment duration ≥ 6 months.

Table 4 Effect of length of treatment for PLWHA on adherence to ARV therapy in PLWHA patients at the Waena Community Health Center

Duration of Treatment	Compliance with taking ARV medication				Amount		p-value	RP (CI95%)
	Disobedient		Comply		nt			
	n	%	n	%	n	%		
< 6 months	12	14,6	5	6,1	17	20,7		2,161
≥ 6 months	24	29,3	41	50	65	79,3	0,006	(1,42-
Amount	36	43,9	46	56,1	82	100		3,3)

The Influence of Knowledge of PLWHA on Adherence to Taking ARV Medication

Table 5 shows that the percentage of PLWHA patients who have insufficient knowledge and are not compliant with taking ARV medication is 21 people (25.6%) and 15 people are compliant with

taking ARV medication (18.3%). There were 15 PLWHA patients who had good knowledge and were not compliant with taking ARV medication (18.3%) and 31 people (37.8%) were compliant with taking ARV medication. Test results *chi square* earned value $p\text{-value} = 0.035 < 0.05$. This means that there is an influence of knowledge of PLWHA patients on adherence to taking ARV medication in PLWHA patients at the Waena Community Health Center. The prevalence ratio test results obtained $RP = 1.789$; The 95% CI (1.09-2.94) which is interpreted to mean that PLWHA patients who have poor knowledge tend to be non-compliant with taking ARV medication is 1.789 times higher than PLWHA patients who have good knowledge.

Table 5 Influence of knowledge of PLWHA on adherence to ARV therapy in PLWHA patients at Waena Community Health Center

Knowledge	Compliance with taking ARV medication				Amount		p-value %	RP (CI95%) n
	Disobedient		Comply		n	n		
	n	%	n	%				
Less	21	25,6	15	18,3	36	43,9	1,789	
Good	15	18,3	31	37,8	46	56,1	0,035	
Amount	36	43,9	46	56,1	82	100	2,94)	

The Influence of PLWHA's Attitudes on Adherence to Taking ARV Medication

Table 6 shows the percentage of PLWHA patients who have poor attitudes and are not compliant with taking ARV medication, 20 people (24.4%) and 12 people compliant with taking ARV medication, 14.6%). There were 16 PLWHA patients who had a good attitude and were non-compliant with taking ARV medication (19.5%) and 34 people (41.5%) were adherent to taking ARV medication. Test results *chi square* earned value $p\text{-value} = 0.013 < 0.05$. This means that there is an influence on the attitude of PLWHA patients on adherence to taking ARV medication among PLWHA patients at the Waena Community Health Center. The prevalence ratio test results obtained $RP = 1.953$; The 95% CI (1.202-3.172) is interpreted to mean that PLWHA patients who have a poor attitude tend not to adhere to taking ARV medication, which is 1.953 times higher than PLWHA patients who have a good attitude.

Table 6 Influence of attitudes of PLWHA on adherence to ARV therapy in PLWHA patients at the Waena Community Health Center

Attitude	Compliance with taking ARV medication				Amount		p-value %	RP (CI95%) n
	Disobedient		Comply		n	n		
	n	%	n	%				
Less	20	24,4	12	14,6	32	39	1,953	
Good	16	19,5	34	41,5	50	61	0,013	
Amount	36	43,9	46	56,1	82	100	(1,202-3,172)	

Discussion

Characteristics of PLWHA Patients at the Waena Community Health Center, Jayapura City

Based on the distribution of respondents who are PDHA patients at the Jayapura City Health Center, it is known that the characteristics of most PLWHA patients come from young adults, namely with an age range of 25-35 years. Patients who are diagnosed with HIV/AIDS in the age range of 25-35 years means they have been exposed to the HIV virus as a teenager at the age of 15-17 years, because HIV/AIDS takes at least 8-10 years to show clinical symptoms since being infected for the first time⁸. This shows that the level of HIV infection is vulnerable to occurring during adolescence.

More female PLWHA patients undergo ARV treatment than male patients. The existence of stigma in society causes male patients to be very worried about the potential loss of social status that arises through disclosing their status, so they tend to avoid treatment⁹. Apart from that, there are special health services for women, especially reproductive and child health problems at community health centers, which also encourage female patients to be willing to undergo ARV treatment.

Even though ARV treatment is provided free of charge by the government in Papua Province, the characteristics of PLWHA patients are dominated by patients who have jobs. It turns out that class influences the cost of accommodation to access health services. This causes respondents who do not work to have difficulty accessing health services and obtaining ARV drugs.

Effect of Treatment Duration on Adherence to ARV therapy

The research results showed that there was an influence on the length of treatment for HIV/AIDS patients with adherence to taking ARV medication at the Waena Community Health Center with the prevalence ratio test results with treatment duration < 6 months tending to be non-compliant with taking ARV medication by 2.161 times higher for PLWHA patients with treatment duration \geq 6 months. Although research on pediatric patients shows that there is no relationship between the length of treatment and the level of medication adherence¹⁰ However, PLWHA patients at the Waena Community Health Center are predominantly young adults. Young adult patients generally already have a level of self-awareness (*self-efficacy*) so that this can have an impact on the high level of compliance with taking medication¹⁰. On the other hand, boredom is common among new HIV sufferers because they are not used to taking medication every day. The researcher's assumption is that the low level of compliance among HIV/AIDS patients who have just received treatment is also due to other inhibiting factors such as the cost of treatment, side effects of drugs, and stigma from the environment which makes most HIV sufferers feel uncomfortable.

Knowledge of ARV Therapy Non-adherence

The results of the research showed that there was an influence of the knowledge of PLWHA patients on their adherence to ARV therapy at the Waena Community Health Center with the prevalence ratio test results showing that PLWHA patients who had poor knowledge tended to be non-compliant with ARV therapy by 1.789 times higher than PLWHA patients who had good knowledge. People with HIV/AIDS who have a high level of knowledge are usually more compliant because they already know the severity of the disease they are experiencing and adherence to ARV therapy has improved their quality of life both physically, psychologically and socially. Physically, PLWHA feel fresher and not weak. Psychologically, I feel healthy, as if I haven't been infected with HIV and have more confidence in being able to live longer. Socially, they can carry out normal activities as before.

Knowledge is a very important domain for the formation of a person's actions (*overt behavior*). Based on experience and research, it turns out that behavior that is based on knowledge will be more lasting than behavior that is not based on knowledge¹².

The Influence of Attitude on Adherence to Taking ARV Medication

The results of the research showed that there was an influence on the attitude of HIV/AIDS patients on taking ARV medication at the Waena Public Health Center with the prevalence ratio test results showing that PLWHA patients who had a poor attitude were 1.953 times more likely to be non-compliant with ARV therapy than PLWHA patients who had a good attitude. The attitude of patients who do not comply with ARV therapy is mostly poor. This means that the better your attitude, the more you take ARV medication.

Attitude factors are closely related to the motivation of PLWHA patients where patients realize that they need help so that their physiological needs can be met. Apart from that, many PLWHA patients feel fear and anxiety because their disease cannot be cured and society's view of them makes them lose self-confidence and have low self-esteem, so this makes PLWHA patients have a high level of need for security. This can trigger a good attitude and influence the level of compliance with taking medication¹³.

Family Support for Non-Compliance with ARV Therapy

The research results showed that there was no effect of family support on PLWHA patients taking ARV medication at the Waena Community Health Center with the results of the prevalence ratio test being insignificant. The most non-adherent patients who have family support support the most compliant PLWHA patients who take ARV medication with supportive family support.

Respondents' answers from HIV/AIDS patients regarding family support were mostly reminding them of the purpose, benefits and effects of the medication regimen they are taking, providing financial assistance while undergoing treatment and reprimanding the patient if they do not want to comply with the prescribed medication regimen. So that compliance depends on the attitude of PLWHA patients who are willing to open up about the HIV/AIDS disease they suffer from.

Conclusion

From the research results, it can be concluded that PLWHA patients at the Waena Community Health Center, Jayapura City have the characteristics of the early adulthood age group, are female, and have high education. PLWHA patients are also dominated by patients who have undergone treatment for more than 6 months and have good knowledge, attitudes and family support. This factor in line influences the level of compliance of PLWHA patients to take ARV medication as much as 56.1%. The results of the study also concluded that there was an influence of length of treatment, knowledge and attitudes of PLWHA patients on the level of adherence to taking ARV medication, but there was no influence of family support factors of PLWHA patients on the level of adherence to ARV medication in PLWHA patients at the Waena Health Center, Jayapura City.

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