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Knowledge of ARV therapy in people living with HIV/AIDS (PLWHA) who have a dropping out history in Sumedang, Indonesia. An Overview

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ABSTRACTS

The prognosis of HIV infection improved following the discovery of ARV. Adherence to ARV therapy is an important factor in achieving the success of a therapeutic program. However, many PLWHA do not manage to achieve or maintain adequate levels of adherence to ARV therapy. This study aims to determine the knowledge of ARV therapy in People living with HIV/AIDS (PLWHA) who have a dropping out history. This is a descriptive study enrolled 70 samples by total sampling. The tool used to obtain data is a questionnaire that discusses the definition of ARV, the health service that provides ARV drugs, duration of treatment, treatment benefits, regularity in treatment, and impact if not consuming ARV. The data analysis used is descriptive analysis. 70 participants who had missed treatment, 53 people (75.7%), had good knowledge, and 17 people (24.3) had less knowledge. Most respondents knew about the definition of ARV, the health services that provide ARV drugs, the duration of treatment, regularity in treatment, the impact of not taking ARV, but did not know about the benefits of ARV therapy.

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1. INTRODUCTION

HIV/AIDS (Human Immunodeficiency Virus/Aquired Immuno Deficiency Syndroma) is one of the life-threatening infectious diseases, so until now it is still a fairly serious concern (Surahman, 2022). Based on UNAIDS data (2008), Indonesia is among the countries in Asia with the fastest HIV epidemic. There is an increase in the number of People living with HIV/AIDS (PLWHA) in Indonesia every year. One of the efforts made to extend the life expectancy of PLWHA is the use of a combination of antiretroviral drugs or known as ARV.

After the discovery of Highly Active Antiretroviral Therapy (HAART) or a combination of antiretroviral drugs (ARVs) in 1996 which had a high level of effectiveness, the prognosis of HIV infection improved (Haryatiningsih et al., 2017). People living with HIV/AIDS (PLWHA) must take ARV on time for a lifetime even though the virus does not completely disappear from the patient's body(Andriani & Izzati, 2018). The amount of virus can be suppressed by taking an ARV on a strict schedule and should not be missed. Then Adherence in undergoing ARV therapy is indispensable (Siti et al., 2017).

Nationally, Indonesia targets ARV therapy adherence at 95%, but in reality, the ARV therapy adherence rate is in the range of 40 – 70% (Mariam et al., 2021), as it is known that adherence to ARV therapy is an important factor in achieving the success of a therapeutic program (Latif et al., 2014). However, many HIV-infected patients do not manage to achieve or maintain adequate levels of adherence to ARV therapy. The causes of PLWHA non-compliance with ARV therapy include factors such as drug regimen, side effects, difficulty getting medicine, forgetting to take medication, fear of being discovered, depression or despair, distrust of drugs, and low of knowledge about ARV (Khairunnisa et al., 2017).

In addition, the low of knowledge of HIV patients can be influenced by the low of information provided by health workers regarding treatment (Ruud et al., 2014). This low of knowledge can be a barrier to ART compliance, as it is closely related to patient health outcomes and pharmacotherapy effectiveness, including virological failure, antiretroviral resistance, and increased mortality (Dagli-Hernandez et al., 2016).

PLWHA who receive ARV therapy, it turns out that they are very susceptible to experiencing dropping out or loss to follow up ARV therapy. Loss to follow up ARV therapy is a patient who has not visited the VCT (voluntary counselling and testing) clinic for treatment for 90 days since the last visit or dropped out of the drug for 3 months (Odafe et al., 2012).

PLWHA who experiences drug dropping out or loss to follow up will certainly have a negative impact both clinically and on the treatment program he is currently undergoing. At the clinical level, the continuation of ARV therapy in PLWHA that is loss to follow up will not be evaluated. PLWHA who stop following therapy have a greater risk of death. Of the 402 patients who lost to follow up, 66.7% have died. This is because the immune system that was initially controlled by ARV therapy is getting worse and worse, so PLWHA is susceptible to opportunistic infections and results in death (Zhou et al., 2012)

In addition, HIV becomes resistant to ARV, as a result if PLWHA decides to re-follow the therapy, it is likely that PLWHA will experience therapy failure in line 1 so it will have to switch to line 2. If PLWHA has reached line 2 but has again experienced therapeutic failure, this means that the ARV is no longer able to control HIV replication. In other words, drug resistance will occur so that the ARV no longer functions or there is a failure of ARV therapy (Budi Mahardining, 2010).

The incidence of lost to follow-up ARV therapy is quite high. The data obtained stated that of the 400 PLWHA patients who dropped out of the drug, as many as 68.7% had died due to an immune system that was difficult to control by ARV therapy, so PLWHA are at high risk of opportunistic infections and resulting in death (Zhou et al., 2012).

This study aims to determine the knowledge of ARV therapy in People living with HIV/AIDS (PLWHA) who have a dropping out history in Sumedang, Indonesia.

2. METHODS

This research design is a descriptive study, to obtain data knowledge of ARV therapy in People living with HIV/AIDS (PLWHA) who have a dropping out history.

The target population in this study was PLWHA who accessed ARV drugs to one of the hospitals in Sumedang in July-August 2019 with a history of having dropped out of ARV drugs or not being on a treatment schedule during the study. The sampling technique used in this study was a total sampling technique with a total number of respondents of 70 people. Sampling is carried out during the implementation of HIV treatment services at hospitals every Wednesday to facilitate the sampling process. If there are respondents who did not visit during the study, a home visit will be made to the respondent's home. Participants are taken until the number of subjects is met within the period of conducting the study. The tool used to obtain data is a questionnaire with a closed-ended question type with multiple choice

variations. The questionnaire has been tested for validity and reliability before. There are 6 question items on the questionnaire. The question discusses the definition of ARV, the health service that provides ARV drugs, duration of treatment, treatment benefits, regularity in treatment, impact if not consuming ARV.

The data analysis used is descriptive analysis with the main objective of making an overview of a state of affairs. The data collected is quantitative data, which is in the form of data on the percentage of each respondent in answering all questions.

3. RESULTS AND DISCUSSION

Table 1 Distribution frequency of knowledge about ARV therapy

Knowledge	*f*	%
High	53	75.7
Low	17	24.3
Total	70	100

Based on the table above, it was found that out of 70 participants who had missed treatment, 53 people (75.7%), had good knowledge, and 17 people (24.3) had less knowledge. Almost all respondents (88-94%) understand related to the definition of ARV, the health service that provides ARV drugs, the duration of treatment, regularity in treatment, the impact if not taking ARV.

In general, respondent knowledge is high regarding ARV therapy, but a small percentage of respondents still answer questions incorrectly. This is in line with previous research (van Nguyen et al., 2021). Previous studies have indicated that patients with inadequate knowledge are 3.5 times more likely to default antiretroviral therapy (ARV) and miss ARV appointments compared with those with adequate knowledge (Boateng et al., 2013).

Most respondents know that HIV drugs are antiretrovirals (ARVs), and they know where ARVs are available. Most of the respondents were aware that ARV therapy requires adherence because they had to consume ARV for the rest of their lives. Most of them also understand the dangers that can be caused if they don't take an ARV. Although in general, respondent knowledge was good regarding ARV therapy, respondents had a history of dropping out of medication even though they eventually continued their treatment. It says dropping out of medication here is, if a PLWHA has ever missed taking an ARV even though it was only one dose without replacing the abandoned dose or did not visit the VCT clinic for treatment for

90 days from the last visit or dropped out of the drug for 3 months (lost to follow up). Many factors can cause the disconnection of ARV therapy, including knowledge, accommodation, community stigma, self-awareness, and the role of health workers (Prihanto et al., 2018).

Table 2 Distribution frequency of knowledge about ARV therapy based on the question item

Question	Correct		Incorrect	
	f	%	*f*	%
Drugs that can inhibit the development of HIV in the blood are? a. Opportunistic infection prophylactic drugs b. Antiretroviral drugs (ARVs) ✓ c. Don't know	66	94	4	6
Antiretrovirals can be obtained from … a. Hospital ✓ b. Friend c. Don't know	62	88	8	12
What patients need before undergoing ARV therapy? a. Ready to obediently undergo lifelong treatment ✓ b. No need for counseling before treatment c. There is no need for a companion to take medicine for the patient	65	92	5	8
According to you, the benefits of ARV therapy are ... a. No benefit b. Kills the HIV virus c. Improving the quality of life of HIV patients ✓	48	68	22	32
Obedience means we … a. Take the drug at the right time and way ✓ b. Use the drug until you feel well and even if it is a little late c. Don't know	66	94	4	6
Do you think the dangers/consequences that can arise if you don't seek treatment regularly? a. Harmless and self-healing b. The condition becomes more severe ✓ c. Don't know	62	88	8	12

✓: correct

In this study if the respondent answered 5-6 questions correctly, then it was said to have high knowledge, and if answering less than 5 it was said to have low knowledge. We use questionnaires that have been tested first and are said to be feasible to be instruments (validity value > 0.3; reliability value > 0.7). However, it also had limitations, the questions formulated are less extensive in thoroughly examining the knowledge of HIV survivors, so as to generalize their knowledge.

Of the six questions, questions regarding the benefits of ARV therapy had the highest percentage of incorrect answers (32%), this may be the reason why respondents have experienced a dropped out of ARV therapy. The main benefit of ARV therapy is that it inhibits HIV replication, with a specific mechanism of action according to the type of ARV itself. If the amount of virus can be suppressed, it is expected that the risk of HIV transmission will be

reduced, the worsening of opportunistic infections is hampered and, the quality of life of people with HIV improves (Surahman, 2022).

Survivors may look and feel healthy, but HIV continues to weaken their immune system until the amount of virus in the blood increases and the number of CD 4 T cells decreases. When this happens, the body begins to cause symptoms. Therefore, health workers should emphasize the importance of continuous treatment including benefits when survivors do it regularly.

In the procedure of administering therapy, in general, a physical examination of the patient's health condition will be carried out without counseling with the patient, so that health workers are not focused on explaining important information to the patient such as benefits, impacts when not taking medication, and patients tend to forget important information related to ARV therapy after long-term therapy. In addition, patients with a low level of education may have difficulty understanding complex and specific terminology regarding ARV therapy (van Nguyen et al., 2021).

ARV is the only effective therapy to improve health conditions and prolong the life of PLWHA. Adherence in medicine has an important role in minimizing the prevalence of antiviral resistance and contributes to the success of treatment. However, not all PLWHA understand this. Non-compliance with ARV therapy is also caused by many factors, such as boredom, feeling healed, community stigma, and so on. Therefore, PLWHA must have a good support system, and needs to be equipped with adequate general knowledge about ARV during treatment.

Our study has some limitations that need to be acted upon. The results of this study may not be able to generalize all HIV-infected patients in the country, as the sample size is limited to patients from outpatient clinics in rural provinces. Future research will need to investigate other factors and barriers that influence the increase in PLWHA knowledge, as well as the reasons why ARV drug dropouts occur. Better knowledge is expected to maximize patient adherence to treatment.

4. CONCLUSION

Based on the results of the study, most of PLWHA knowledge who have a history of drug dropped out is good. Only a small percentage of respondents had low knowledge of ARV therapy. Most respondents knew about the definition of ARV, the health services that provide

ARV drugs, the duration of treatment, regularity in treatment, the impact of not taking ARV, but did not know about the benefits of ARV therapy. Patients with low levels of education may have difficulty understanding complex and specific terminology regarding ARV therapy in general, including the benefits of ARVs. Health workers must counsel more often and evaluate PLWHA knowledge related to ARV therapy as a whole so that the problem of forgetting treatment, not understanding the benefits of treatment, not understanding treatment procedures no longer exists. The role of health workers during counseling is vital in order to improve the knowledge of HIV survivors for the better.

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