



Digital Education as an Effort to Improve ARV Adherence Among People Living with HIV AIDS (PWHAs)

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ABSTRACT

Keywords: Education, Digital, Compliance, ARV, ODHA

Background: The discovery of ARVs was a revolution in the treatment of ODHA. The success of HIV/AIDS treatment is determined by adherence to taking ARVs. Non-compliance can be caused by physical discomfort while taking ARVs. Non-compliance can promote HIV resistance. Motivation and knowledge are needed to be compliant with ARV therapy. There needs to be activities to increase the motivation and knowledge of ODHA in consuming ARVs. Objective: To determine the effectiveness of online seminars in increasing the motivation and knowledge of ODHA in consuming ARVs. Method: carried out by holding an online seminar to ODHA and to find out the description of motivation, and knowledge in the use of ARV in ODHA, respondents were given a pretest and posttest. Results: 56 respondents who filled out the pretest and posttest consisted of 60.7% males, 39.3% females, the most ages 53.5% were 30 to 40 years, the most high school education was 57.1%, who used ARV 80.4%; Motivation: The most motivation to consume ARVs comes from Doctors/Nurses/Psychologists/Health Workers at 22%. The most reason was 35.7% to be able to do activities as before. 19.6% of respondents were not motivated and did not use ARVs. Knowledge; 92.9% of respondents had good knowledge and there was no change between pretest and post-test. This can happen because respondents who consume ARVs already have prior knowledge of ARVs. Conclusion: Respondents who consume ARVs are respondents who have good motivation and good knowledge about ARVs. Respondents who did not consume ARVs were unmotivated and partially knowledgeable. Suggestion: Online seminars need to be encouraged to increase and maintain motivation and knowledge in consuming ARVs in ODHA

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Introduction

HIV/AIDS is still one of the deadliest infectious diseases in the world, with high morbidity and mortality rates. Based on data from UNAIDS (2024), more than 39 million people are living with HIV, and about 630,000 people died from AIDS-related diseases in 2022. In Indonesia, the spread of HIV/AIDS is still showing an increasing trend, especially in the productive age group. This condition demands special attention to the ongoing management of the disease, including treatment efforts and prevention of transmission.

One of the major breakthroughs in the treatment of HIV/AIDS was the discovery and use of antiretroviral therapy (ARV). ARV therapy does not cure HIV infection, but it is very effective in suppressing viral replication, lowering viral load, increasing the number of CD4+

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cells, and extending the life expectancy of ODHA (people with HIV/AIDS) (World Health Organization (WHO), 2022). Regular use of ARVs has also been shown to reduce the risk of transmission to at-risk couples (CDC, 2021). Therefore, the success of the therapy program is highly dependent on the level of ODHA compliance in consuming ARVs as recommended.

Adherence in ARV treatment is defined as the patient's behavior in following a predetermined treatment regimen on their own awareness, not solely because of the direction of health workers (Putra, et al, 2021). Research shows that a high level of adherence (at least 95%) is needed to achieve optimal therapeutic effects in suppressing viral load and preventing resistance (WHO, 2022). Unfortunately, non-compliance is still a common problem among ODHA, which has an impact on therapy failure and the risk of further transmission.

Various factors affect the level of ODHA adherence to ARV therapy, both internal factors such as life motivation, expectation of recovery, and perception of benefits, as well as external factors such as the availability of medications, access to health services, and the support of family and medical personnel (Yuyun, et al 2013). Discomfort due to drug side effects, such as nausea, rash, or dizziness is also a common reason for ODHA to be reluctant to continue therapy (Sugiharti, et al, 2014). Perceptions of illness and social barriers such as stigma and shame also exacerbate this non-compliance (Abdul, 2016).

Efforts to improve compliance can be done not only through the provision of medicines and health services, but also through a comprehensive educational approach. Health education has been proven to increase the knowledge and awareness of ODHA on the importance of treatment, as well as foster internal motivation to continue undergoing therapy (Dewi & Susanti, 2022). The level of education, the ability to understand health information, and good interaction with medical personnel greatly affect the effectiveness of this educational intervention (Notoadmojo, 2020).

In the context of the development of digital technology, health education media has also undergone a transformation. Various media such as audio, visual, audiovisual, animation, and internet-based digital platforms can be used to deliver interesting and interactive educational materials (Sinta, 2016). Digital media is believed to be able to reach more ODHAs, especially those who experience geographical and social barriers, and help reduce stigma by maintaining the privacy of education participants.

One potential form of digital educational media is online seminars (webinars). The online seminar allows for the delivery of comprehensive, interactive, and affordable health materials for participants from different regions. Online seminars combined with professional speakers and audiovisual media have been proven to be able to increase the understanding and motivation of ODHA in compliance with ARV consumption (Dewi & Susanti, 2022). In addition, the involvement of HIV/AIDS psychologists and counselors in online seminars can provide emotional support and psychosocial reinforcement for ODHA.

Through online seminars as an innovative form of education, it is hoped that it will be able to become a sustainable strategy to improve therapy adherence, improve the quality of life of ODHA, and reduce the rate of HIV resistance and transmission in the community.

Research Methods

The method used in this activity is an online seminar held through the Zoom platform. The seminar presented two speakers, namely a psychologist who discussed efforts to increase

motivation in the life of people with disabilities, and an HIV/AIDS expert who presented information about HIV and antiretroviral therapy (ARV). The participants of the activity consisted of ODHA and Peer Support Groups (KDS) from various regions in Indonesia. After the presentation session, it was followed by an interactive discussion between participants and resource persons.

To measure changes in participants' motivation and knowledge related to ARV consumption, pretest and posttest were filled out using questionnaires. The data obtained were analyzed univariately to describe the characteristics of the respondents as well as their level of motivation and knowledge before and after participating in the seminar.

Results and Discussion

This online seminar carries the theme "Achieving a Better Quality of Life with ARV", by presenting two competent speakers in their fields. The first resource person was an HIV/AIDS health counselor who delivered material on various important aspects related to the treatment and assistance of ODHA. The material presented included: the importance of taking ARVs, the right time to start treatment, counseling related to ARVs, laboratory test algorithms for HIV viral load, strategies to increase compliance in taking ARVs, handling ARV side effects, and how to get around the stigma and discrimination that people still face.

Meanwhile, material on motivation and psychological strengthening was delivered by a psychologist. He explained the material which includes the definition of positive thinking, the benefits of positive thinking in daily life, the stages that can be done to build a positive mindset, and various obstacles that are often faced in the process. After all the material was delivered and an interactive question and answer session was conducted, participants were asked to fill out a post test. The data obtained from the results of filling out this questionnaire was then analyzed to illustrate the change in the level of knowledge and motivation of the respondents after the counseling., then data from the respondents was obtained as follows.

1. Respondent Characteristics

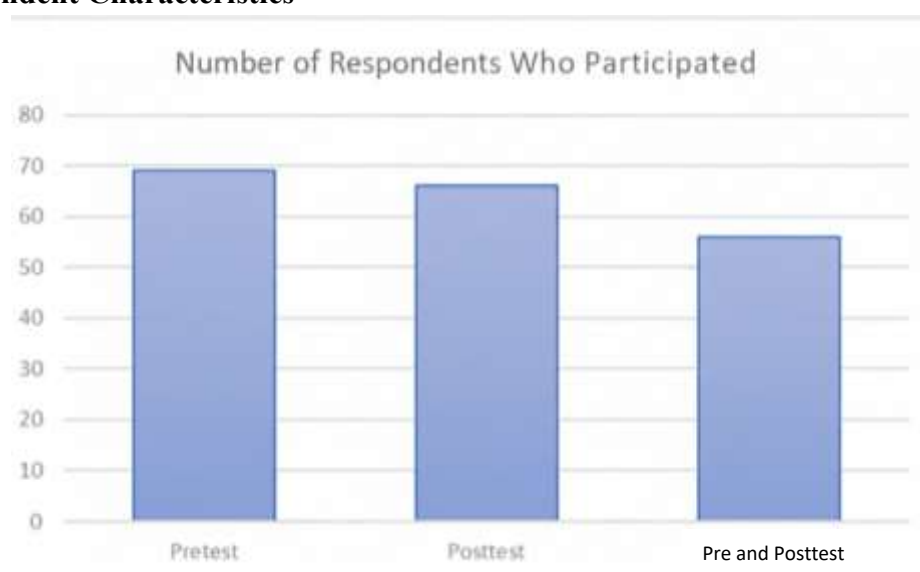


Figure 1. Number of respondents participating in the Pretest and Posttest

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At the time before the seminar was held, there were 69 respondents who were willing to fill out the pretest and register for activities. When the seminar will be held, there are obstacles to joining the zoom platform from the participants, so that some participants fail to take part in the seminar. In the posttest filling session, there were 66 respondents who filled out. For the purpose of analysis, 56 respondents were selected who participated in both the pretest and posttest. The characteristics of the respondents are as shown in table 1 below.

Table 1. Respondent Characteristics

Variabel	Percentage
Gender	
Man	61%
Woman	39 %
Age	
Less than 20 years old	2 %
20 years – 30 years	25 %
30 years-40 years	53 %
40 years-50 years	20 %
Work	
Student/Student	3,6 %
Housewives	5.4 %
PNS	8,9 %
Entertain/hiburan	3.6 %
Private employees	26.8 %
Self-employed entrepreneur/trader/businessman	3,6 %
Other	37,5 %
Not working	10,7 %
Education	
JUNIOR	5 %
SMA	57 %
D1/D2/D3	13 %
S1	23 %
S2 or higher	2 %
Take ARV	
Take ARV	80 %
Do not take ARVs	20 %

Male respondents were more likely than female respondents. Respondents with an age range of 30 years to 40 years were the most respondents. Respondents with other job categories or those who are not included in the categorization on the questionnaire as the most respondents. Respondents with the last high school education as the most respondents. Most of the respondents have consumed ARVs.

2. Motivation Overview

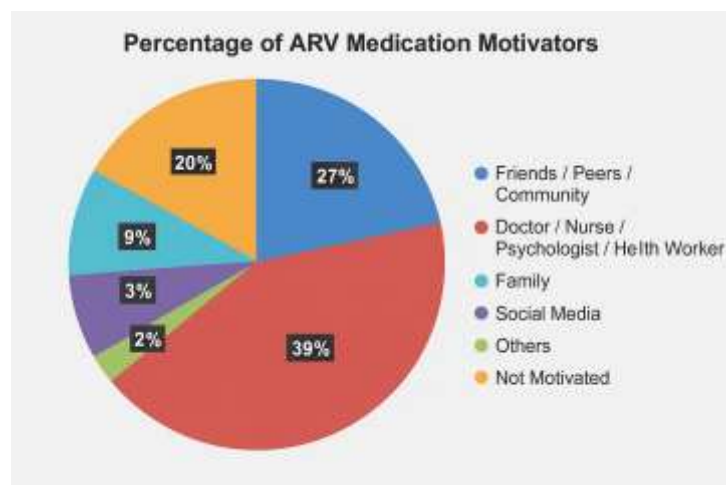


Figure 2. Percentage of Motivators Taking ARVs

The results of the analysis showed that most respondents (39%) were motivated to take ARVs because of the support of healthcare workers, including doctors, nurses, and psychologists. These findings illustrate that people with disabilities who have started ARV therapy generally have strong motivation, but still need continuous motivational strengthening. Therefore, this online seminar is designed to present psychologists to strengthen the psychosocial aspect and support the sustainability of therapy adherence.

The role of health workers as the main motivator is in line with the findings of previous research that emphasized the importance of the educational function of nurses in improving patient adherence to ARV therapy (Danik & Mulyaningsih, 2016). Recent studies have also shown that empathic communication and patient-centered counseling from medical personnel have a significant impact on motivation and long-term therapy success in ODHA (Putra et al., 2021; WHO, 2022).

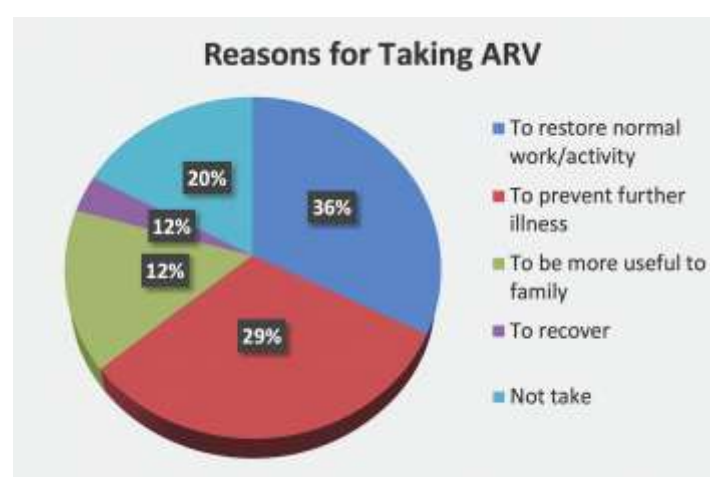


Figure 3. Percentage of Reasons for Taking ARV

The most respondents stated that the reason for taking ARVs was to be able to work/activities as before. This is in line with other studies that state that people with HIV

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positive have a desire to improve their quality of life better, as well as get family support and support from friends so that the quality of health of HIV-positive people is better by complying with ARV therapy (Yelli, et al., 2018). For ODHA whose status is already known by their families and their families can accept their condition, then the family factor is usually the main supporter. Usually, parents, husbands/wives, and children are the closest people who remind them to take medication (Sugiharti, et al, 2014).

3. Results of Knowledge Characteristics

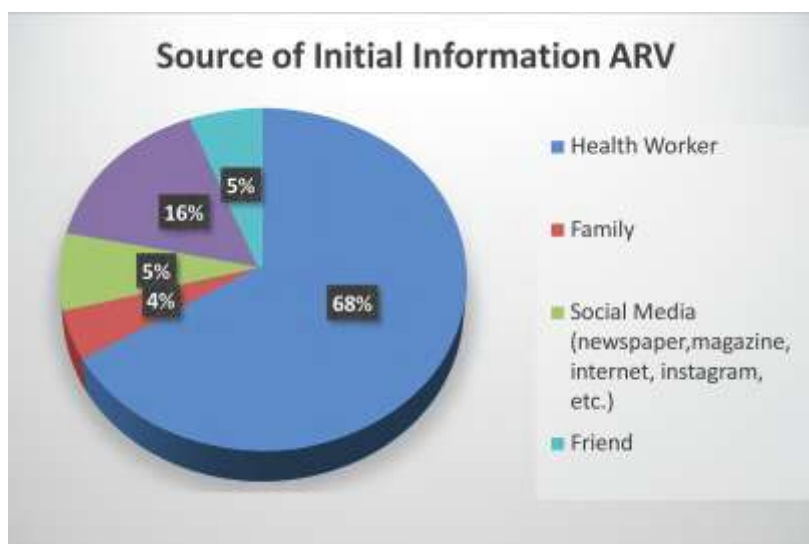


Figure 4. Percentage of ARV Information Sources

The most respondents obtained information about ARVs from doctors/nurses/health workers.

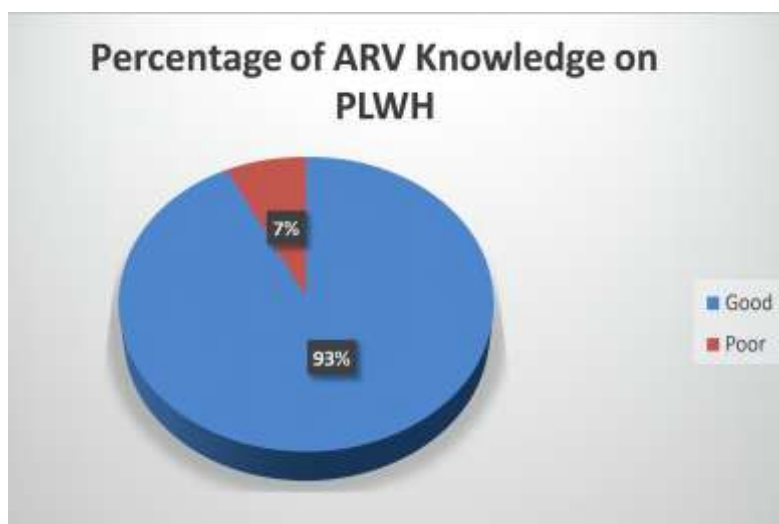


Figure 5. Percentage of Knowledge about ARVs

Based on the results of the analysis, ODHA who have decided to take ARVs generally have good knowledge regarding the benefits of therapy and the risks that arise if they do not

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comply, such as increased viral load and drug resistance. However, a good understanding does not necessarily guarantee long-term compliance, so external support and motivation reinforcement are still necessary. For this reason, this seminar presents expert speakers in the field of HIV/AIDS to provide comprehensive education about ARV, including the benefits, when to start therapy, and how to overcome side effects and psychosocial barriers in undergoing treatment.

The results of the analysis showed that most of the respondents were educated at the high school level with a good knowledge of ARVs, which suggests that education level plays an important role in the ability to receive health information. Higher education makes it easier for individuals to understand material related to treatment and disease risk, thus contributing to improved adherence to therapy (Putra et al., 2021; Notoatmodjo, 2020). In addition, ODHA members of groups such as NGOs and Peer Support Groups (KDS) also tend to have wider access to information and receive emotional support and motivation among members, which also strengthens compliance with ARV consumption (Rifa & Desi, 2019; Dewi & Susanti, 2022).

Most of the respondents who had decided to take ARVs showed a good level of motivation and knowledge, which contributed positively to therapy adherence. Adequate knowledge of ARVs helps ODHA understand the risk of disease as well as the benefits of treatment, thus encouraging them to be more consistent in undergoing therapy. This compliance has been proven to improve the overall quality of life both from physical, psychological, and social aspects such as feeling fitter, having confidence, and being able to return to activities as usual (Yuyun et al., 2013; Putra et al., 2021; WHO, 2022).

The implementation of online seminars accompanied by audiovisual materials and direct interaction with resource persons was considered useful by most respondents. They stated that the delivery of the material was easy to understand and the response of the speakers to the questions was excellent. An educational approach based on a combination of audiovisual and interactive communication has been shown to be more effective in improving the understanding and adherence of ODHA to ARV therapy compared to a single method (Sinta, 2016; Dewi & Susanti, 2022). Education that involves a variety of visual media and active dialogue can reinforce health messages and increase participants' emotional and cognitive engagement.

Table 2. Respondents' Impressions of the Implementation of Online Seminars

Variabel	Response	Percentage
The Benefits of Online Seminars	Benefit	95%
	No benefit	5%
Resource persons are clear and easy to understand	Agree	89%
	Disagree	2%
	Disagree too much	9%
Good response from the resource person to the question	Agree	93%
	Disagree	4%
	Disagree too much	3%

The results of the evaluation showed that the majority of respondents considered this online seminar useful (95%), only a small percentage stated the opposite (5%). As many as 89% of respondents agreed that the resource person conveyed the material clearly and easily

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understood, while the rest stated that they did not agree (9%) or disagree (2%). In addition, 93% of respondents expressed satisfaction with the speaker's response to the participants' questions, reflecting a communicative and responsive interaction during the discussion session. These findings show that the online education method used succeeded in creating a positive learning experience and supporting the effectiveness of material delivery.

Conclusion

The conclusions of this study showed that respondents who took ARVs had good motivation and knowledge about the drug, while respondents who had not taken ARVs tended to be less motivated, although some of them also had less knowledge. The biggest motivation for consuming ARVs comes from health workers such as doctors, nurses, and psychologists, who are also the main sources of information about ARVs. Therefore, the advice that can be given is the importance of holding regular online seminars as a means to increase the motivation and knowledge of ODHA (People with HIV/AIDS) in consuming ARVs.

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