



(RESEARCH ARTICLE)



Determinants of anti-retroviral consumption adherence in people living with HIV/AIDS in the sub-district of Mejobo, Kudus, Central Java, Indonesia

Yosefin Beni Purbo Utami, Baharika Suci Dwi Aningsih *, Lorensia Panselina Widowati and Eviyani Margaretha Manungkalit

Midwifery Study Program, STIK Sint Carolus, Jakarta, Indonesia.

GSC Advanced Research and Reviews, 2024, 18(02), 067–071

Publication history: Received on 24 December 2023; revised on 02 February 2024; accepted on 04 February 2024

Article DOI: <https://doi.org/10.30574/gscarr.2024.18.2.0041>

Abstract

Introduction: In Indonesia, the Human Immunodeficiency Virus (HIV) is a serious health concern. Since HIV/AIDS patients must adhere to anti-retroviral (ARV) treatment for the rest of their lives, treatment and care must have this as their main objective.

Objective: This study was to identify the factors that influence People Living with HIV/ AIDS (PLWHA) to adhere their anti-retroviral (ARV) medication consumption and the determinants of this adherence.

Method: This study uses a descriptive analytic design with cross-sectional approach, which provides an overview of adherence factors in taking ARV, such as gender, education, occupation, knowledge, family support, instructional perception, and motivation. This study was taken in Mejobo District, Kudus Regency, and Indonesia. This study's sample was taken using the total sampling technique involving 33 respondents.

Result: This study showed that instructional perception is a determining factor in adherence to ARV medication use with OR of 2.746, followed by education (OR 2.24) and education (OR 2.197).

Conclusion: The necessity of education on how to consume ARVs is critical, thus medical professionals must be more active in ensuring patient comprehension and motivation so that ARV therapy is sustained.

Keywords: Adherence; ARVs; HIV; AIDS

1. Introduction

HIV is a health issue that poses a threat to Indonesia as well as many other nations worldwide. At present, this issue affects no nation free from it. A group of symptoms known as acquired immunodeficiency syndrome (AIDS) are brought on by the HIV virus, targets the immune system which weakens human immunity (1). Based on data from the World Health Organization (WHO) and the United Nations Programme on HIV/AIDS (UNAIDS), at the end of 2016, it was estimated that 36.7 million people in the world lived with HIV, as many as 1.8 million people were newly infected with HIV and caused 1.1 million deaths in 2016. In the world, 34.5 million people are infected with HIV, with 2.1 million children aged less than 15 years old suffer from it (2). Southeast Asia has the second highest number of HIV sufferers after Africa, which is 3.5 million people, with 39% of HIV sufferers being women and girls (3).

The prevalence of HIV in Indonesia in 2017 reached 280,623 people, with 90,915 new infections and 40,349 deaths. Cumulative prevalence is highest in the age group of 20–29 years old (32.5%), followed by the age group of 30–39 years

* Corresponding author: Baharika Suci Dwi Aningsih

old (30.7%), 40–49 years old (12.9%), 50–59 years old (4.7%), and 15–19 years old (3.2%). The highest cumulative percentage by gender was 57% males and 33% females, while 10% did not report their gender (4). The list of provinces with the highest number of HIV/AIDS sufferers is: DKI Jakarta with 51,981, East Java with 39,633, Papua with 29,083, West Java with 28,964, and Central Java with 22,292. West Java 28,964, Central Java 22,292. While cases of death due to HIV/AIDS reached 882 people (5).

According to data from the World Health Organization (WHO) in 2016, the use of antiretroviral (ARV) medications requires a high degree of adherence in order to achieve therapeutic success and avoid resistance developing. Compliance is necessary to receive a response that reduces the number of infections by 85%. Patients Living with HIV/AIDS (PLWHA) are expected to take their medication every day with no missed drugs more than three times a month, as they are required to do so on average 60 times a month. According to data, barely 50% of patients in wealthy nations adhere to long-term therapy, particularly for HIV/AIDS. It is just 50% in wealthy nations and significantly lower in poor nations or even less. Drug resistance may result from non-adherence to anti-retroviral medication therapy, making the medication ineffective, pharmacological resistance, making the medication ineffective or unable to work (6). Antiretroviral therapy refers to the use of drugs to treat HIV infection. Anti-retroviral medications can delay the virus's growth, which in turn slows the progression of the HIV infection. However, ARV medications cannot eradicate the virus. These medications are often referred to as antiretroviral (ARV) medicine therapy because HIV is a retrovirus (6). The increasing number of PLWHA is a health problem that requires special attention. Adherence to taking ARV drugs is influenced by factors that are important in determining the success of therapy. Based on the above problems, this study formulates what determinants are associated with the level of adherence to taking ARV drugs. The aim of this research was to identify the characteristics that influence PLWHA in to continue taking ARV medications.

2. Material and methods

2.1. Participants

This study was approved by the Medicine Health Research Ethics Committee Universitas Respati Indonesia. This research used a quantitative type with a cross-sectional design. We use the total sampling with 33 PLWHA. Inclusion criterias are PLWHA who are recorded in the Mejobo District, Kudus Regency, unmarried, and willing to become respondents. Exclusion criteria are PLWHA with depression and in coma. Data collection was carried out from April to Mei 2018.

2.2. Measures and Analysis

Analysis conducted in this study is to determine the relationship factors of gender, education, occupation, knowledge, and family support family support, instructional perception, and motivation associated with adherence to taking ARVs.

2.3. Data Analysis

Analysis test using multivariate linear regression with the statistical significance set at $p < 0.05$ was conducted to determine the relationship between the independent variables together with the dependent variable, namely gender, education, occupation, knowledge, family support, instructional perception, and motivation associated with ARV consumption adherence among PLWHA in Mejobo District, Kudus Regency.

3. Results

Based on the results of bivariate selection on the table 1, there were three variables that have a p value < 0.25 . Statistical analysis shows that there is an influence of the three independent variables, namely educational factors, level of knowledge and instructional perception individually with the dependent variable of consumption adherence ARV consumption compliance in PLWHA obtained p value < 0.001 , so that the three variables can be forwarded into multivariate analysis.

Variable analysis showed that PLWHA respondents who has low education has a risk of low adherence in the consumption of consumption of ARV was 2.1 times higher than the higher education'a PLWHA. The analysis result also showed that PLWHA respondents who have low level of knowledge were 2.2 times higher more likely to have low compliance in consumption of ARV than PLWHA respondents who with a high level of knowledge.

Table 1 Bivariate Selection Results

Independent variable	B	SE	Mean	df	p	Exp(B)
Education	3.466	1.016	1.41	1	0.001	32.000
Level of knowledge	4.265	0.019	1.41	1	0.001	32.276
Instructional perception	2.370	1.874	1.41	1	0.001	25.173

Table 2 Multivariate Analysis Results with Multiple Logistic Regression Test of anti-retroviral consumption adherence in PLWHA

Independent variable	B	SE	Mean	df	p	Exp(B)
Education	0.007	8.659	1.41	1	0.002	2.197
Level of knowledge	0.002	2.968	1.41	1	0.001	2.246
Instructional perception	0.001	4.109	1.41	1	0.001	2.746

The results of the analysis of the understanding variable was shown in Table 2. Respondents who have a low instructional perception of ARV were 2.7 times higher more likely to have a low adherence in the consumption of ARV drugs. From the Odd Ratio score based on the table above, it can be seen that the most determinant factor of ARV adherence is the instructional perception of ARV (OR: 2.746).

4. Discussion

The results showed that there were 3% of respondents has low ARV consumption adherence and 97% has high ARV consumption adherence. Those adherence influenced by factors such as education, level of knowledge and instructional perception. The results of this study are similar to the results of Dantje et al, that PLWHA with good knowledge has higher adherence to ARV consumption at 64.7% than on the poor knowledge at 35.3% (7). Other study also showed similar result which found 92.5% adherence in high knowledge PLWHA, and 7.5% adherence in moderate education degree(8). This study supports the research of Yuliandra, which found that the level of the highest level of education among PLWHA respondents was the secondary education level(9). Education can influence a person to take action and choose the right attitude. Education is one of the factors that can influence a person's perception of perception of something can support treatment-seeking behavior and improve quality of life. Quality of life, in addition to increasing the need for basic HIV information and increasing treatment efforts (10) (11). Suryanto and Nurhasanah's research in 2021 states that there is a significant relationship between knowledge in HIV patients and adherence to taking ARV drugs(12).

From the results of the analysis obtained, OR 2.563, represent that HIV patients with low knowledge are at risk of not adhering to taking ARV drugs 2.563 times greater than HIV patients who have good knowledge will adhere to taking ARV medication. Research by Waskito et al. found that there is a relationship between knowledge and compliance of PLWH in undergoing ARV therapy with $p = 0.002$ and an odds ratio (OR) value of 4.9, so it can be interpreted that respondents who have high knowledge have a 4.9 times higher chance of high compliance in undergoing ARV therapy compared to respondents who have low knowledge(13). The results of this study are also supported by other research which gets a pvalue of 0.028 (14). Another study showed similar result which found a p-value of 0.000 with an OR value of 4.4, which obtained the result that there is a relationship between knowledge and adherence to ARV therapy(15).

The results of this study are also supported by research by Debby et al that showed there is a significant relationship between respondents' treatment knowledge and adherence to taking ARV drugs, namely that respondents with good knowledge have a good ARV drug compliance rate of 56.1%, while respondents with less ARV drug compliance have a lower knowledge level of 28.6%(16). According to Niven, more than 60% of those interviewed after meeting with a doctor who misunderstood the instructions given to them, because no one can comply with instructions if he or she misunderstands about the instructions received(17). This is caused by the failure of Health professionals' failure to provide information and the many instructions that to remember and the use of medical Medical.

5. Conclusion

This study reveals that education, degree of knowledge, and instructional perception contribute to adherence to ARV intake among PLWHA in Kudus. The key determining factor among these three variables is instructional perception. The clarity with which medical professionals provide straightforward details about how to consume ARVs is critical for achieving ARV compliance. Apart from that, medical professionals have to ensure that the patient understands the information. Acquiring the proper information, combined with a high level of education and knowledge, significantly increases adherence to ARV consumption, allowing HIV AIDS treatment to deliver the most beneficial results possible.

Compliance with ethical standards

Disclosure of conflict of interest

All authors declare that no competing interests were disclosed.

Statement of ethical approval

Ethical clearance was approved by the Faculty of Medicine Universitas Respati, Jakarta, Indonesia (No.06/KE/UNR/IV/2018) on 26 April 2018

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

- [1] Jadhav P, Laad P, Chaturvedi R. Quality of life factors affecting quality of life in people living with HIV / AIDS in an urban area. *International Journal Community Med Public Health*. 2017;4(8):3031–6.
- [2] UNAIDS. Ending inequality, Ending AIDS. *Strategi Aids Global 2021-2026*. United Nation AIDS [Internet]. 2023; Available from: <https://data.unaids.org/pub/>
- [3] WHO. People living with HIV People acquiring HIV People dying from HIV-related causes. *Who* [Internet]. 2023;1–8. Available from: <https://cdn.who.int/media/docs/default-source/hq-hiv-hepatitis-and-stis-library/j0294-who-hiv-epi-factsheet-v7.pdf>
- [4] Ministry of Health of the Republic of Indonesia. *Indonesia's health profile in 2016*. Jakarta; 2017.
- [5] Ministry of Health of the Republic of Indonesia. *Indonesia's health profile in 2017*. Jakarta; 2018.
- [6] Andriani, Rika, Sandhita. Correlation between Adherence to Consuming Anti-Retroviral Virus (ARV) and Increase in Cd4 Number of PLHIV in Lancang Kuning Support Group Pekanbaru. *Scientia Journal*. 2014;2(3):150–9.
- [7] Damtie Y, Tadese F. Antiretroviral therapy adherence among patients enrolled after the initiation of the Universal Test and Treat strategy in Dessie town: a cross-sectional study. *International Journal of STD and AIDS*. 2020;31(9):886–93.
- [8] Wulandari EA, Rukmi DK. Relationship of Knowledge Level and Adherence to ARV Therapy among PLWHA in Yogyakarta. *Jurnal Keperawatan Klinis dan Komunitas*. 2022;5(3):157..
- [9] Yuliandra Y, Nosa US, Raveinal R, Almasdy D. Antiretroviral Therapy in HIV/AIDS Patients at RSUP. Dr. M. Djamil Padang: Sociodemographic Study and Medical Evaluation. *Jurnal Sains Farmasi & Klinis*. 2017;4(1):1..
- [10] Notoadmodjo S. *Health Behavior Science*. Jakarta: Rineka Cipta; 2014.
- [11] Burhan R. Utilization of Health Services by Women Infected with HIV/AIDS. *Kesmas: National Public Health Journal*. 2013;8(1):33..
- [12] Suryanto Y, Nurjanah U. Adherence to Taking Anti-Retro Viral (ARV) Medication in HIV/AIDS Patients. *Jurnal Ilmu Keperawatan Indonesia (JIKPI)*. 2021;2(1):14–22.
- [13] Waskito IB, Wardani DWSR, Susianti S. Knowledge is Associated with Compliance with PLWHA in Undergoing Anti-Retro Viral Therapy. *Jurnal Penelitian Perawat Profesional*. 2023;5(2):803–10.

- [14] Ashraf M, Virk RN. Determinants of medication adherence in patients with HIV: Application of the health belief model. *Journal of the Pakistan Medical Association*. 2021;71(5):1409–12.
- [15] Fatihatunnida R, Nurfitra D. THE RELATIONSHIP BETWEEN KNOWLEDGE, FAMILY SUPPORT, AND ECONOMIC LEVEL AND COMPLIANCE WITH ANTIRETROVIRAL TREATMENT IN HIV/AIDS PATIENTS AT THE MATAHATI PANGANDARAN FOUNDATION. *Repository Universitas Ahmad Dahlan*. 2018;429:1–12..
- [16] Debby C, Sianturi SR, Susilo WH. Factors Related to Compliance of ARV Medication in HIV Patients at RSCM Jakarta. *Jurnal Keperawatan*. 2019;10(1):15–22.
- [17] Niven. *Health Psychology*. Jakarta: EGC; 2016.