

RESEARCH ARTICLE

**THE RELATIONSHIP BETWEEN ANTIRETROVIRAL THERAPY ADHERENCE
AND QUALITY OF LIFE IN HIV/AIDS PATIENTS:
A STUDY AT WELAS ASIH HOSPITAL
(HUBUNGAN KEPATUHAN MINUM OBAT ANTIRETROVIRUS DENGAN
KUALITAS HIDUP PASIEN HIV/AIDS DI RSUD WELAS ASIH)**

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ABSTRACT

One of the biggest global health concerns, Human Immunodeficiency Virus (HIV)/Acquired Immunodeficiency Syndrome (AIDS) still presents a significant obstacle, even in Indonesia. Patient adherence to treatment is essential for antiretroviral therapy (ARV) to be successful. The purpose of this study was to investigate the relationship between ARV medication adherence and HIV/AIDS patients' quality of life. This study used a cross-sectional design and a quantitative design. 55 respondents in total were chosen by accident sampling from the population intended to be HIV/AIDS patients undergoing treatment at the Voluntary Counseling and Testing (VCT) Care, Support, and Treatment (CST) Clinic of RSUD Welas Asih. The World Health Organization Quality of Life – Brief Version (WHOQOL-BREF) instrument was used to measure quality of life, and the Morisky Medication Adherence Scale-8 (MMAS-8) questionnaire was used to evaluate medication adherence. The Spearman rank correlation test was used for both univariate and bivariate analyses of the data. The results indicated that the majority of respondents had a good quality of life and a high degree of adherence to ARV therapy. According to statistical analysis, there is a significant correlation ($p < 0.05$) between ARV medication adherence and HIV/AIDS patients' quality of life. In conclusion, quality of life and treatment adherence are significantly correlated. In order to maintain treatment adherence and improve the quality of life for individuals living with HIV/AIDS, healthcare providers are advised to improve education and support.

Keywords: ARV Adherence, HIV/AIDS, quality of Life, Welas Asih Hospital.

ABSTRAK

HIV/AIDS merupakan masalah kesehatan global yang masih menjadi tantangan serius, termasuk di Indonesia. Keberhasilan terapi antiretroviral (ARV) sangat bergantung pada kepatuhan pasien dalam minum obat. Penelitian ini bertujuan untuk mengetahui hubungan antara kepatuhan minum obat ARV dengan kualitas hidup pasien HIV/AIDS. Penelitian ini menggunakan desain kuantitatif dengan pendekatan cross-sectional. Populasi adalah pasien HIV/AIDS yang berobat di Poliklinik Voluntary Counseling and Testing dan (VCT) Perawatan, Dukungan, dan Pengobatan (PDP). RSUD Welas Asih, dengan jumlah sampel sebanyak 55 responden yang diambil menggunakan teknik Accidental Sampling. Instrumen yang digunakan adalah kuesioner Morisky Medication Adherence Scale-8 (MMAS-8) untuk menilai kepatuhan minum obat dan kuesioner The World Health Organization Quality of Life – Brief Version (WHOQOL-BREF) untuk menilai kualitas hidup. Analisis data dilakukan secara univariat dan bivariat menggunakan uji Spearman Rank. Hasil penelitian menunjukkan bahwa sebagian besar responden memiliki tingkat kepatuhan minum obat ARV yang tinggi dan kualitas hidup dalam kategori baik. Uji statistik menunjukkan adanya hubungan yang signifikan antara kepatuhan minum obat ARV dengan kualitas hidup pasien HIV/AIDS ($p < 0.05$). Terdapat korelasi yang signifikan antara kepatuhan pengobatan dengan kualitas hidup. Disarankan agar tenaga kesehatan meningkatkan edukasi dan dukungan bagi ODHA untuk mempertahankan kepatuhan terapi sehingga kualitas hidup dapat ditingkatkan.

Kata Kunci: HIV/AIDS, kepatuhan ARV, kualitas Hidup, RSUD Welas Asih

INTRODUCTION

Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (HIV/AIDS) remain major global public health challenges, particularly in developing countries. Southeast Asia has one of the highest HIV burdens worldwide, and Indonesia continues to experience a growing number of cases. According to the Ministry of Health of the Republic of Indonesia, approximately 564,000 people were living with HIV, with most cases concentrated in several provinces, including West Java. Although access to antiretroviral therapy (ARV) has increased, viral suppression has not been achieved in all patients, indicating the need for effective long-term treatment strategies.¹

Antiretroviral therapy is the cornerstone of HIV management because it suppresses viral replication, improves immune function, and reduces morbidity and mortality. However, treatment success depends greatly on patient adherence. Poor adherence may result in virological failure, opportunistic infections, drug resistance, and deterioration of health status. Several factors influencing adherence include treatment fatigue, side effects, patient knowledge, and family support.^{2,3}

Adherence to ARV therapy is closely associated with the quality of life of people living with HIV/AIDS. Quality of life encompasses physical, psychological, social, and environmental dimensions and

reflects individuals' perceptions of their overall well-being.⁴ Previous studies have demonstrated that better adherence is associated with improved quality of life among HIV/AIDS patients.⁵ Considering the high burden of HIV in West Java and the limited evidence from RSUD Welas Asih, this study aimed to determine the relationship between ARV medication adherence and the quality of life of HIV/AIDS patients attending the VCT/CST Clinic of RSUD Welas Asih.

HIV and AIDS are still major problems for global public health, especially for doctors and nurses. The "iceberg phenomenon" is often used to show how HIV/AIDS spreads. It says that the cases that healthcare systems report are only a small part of the real burden of the disease. There is a much larger group of people who have not been diagnosed or reported, which makes the risk of ongoing transmission in the community higher. Southeast Asia is still one of the areas with the highest rates of HIV, coming in second only to Africa. This is despite many efforts around the world to control the epidemic.⁶

In Indonesia, the HIV epidemic has shown worrying signs. The Indonesian Ministry of Health says that 564,000 people in Indonesia have HIV (PLHIV). 76% of the 2025 cases are in 11 provinces, including West Java. About 67% of people living with HIV have received antiretroviral therapy

(ARV), but only 55% have been able to suppress the virus. With 28,964 recorded cases, the country has the fourth highest number of PLHIV who know their status. This means that many cases are still not known. This situation is a big risk to the economy and public health, especially because the epidemic affects people in their working years the most. Data shows that people between the ages of 20 and 29 make up more than 30% of all cases. This demographic trend indicates that HIV/AIDS could significantly affect workforce and family stability if not managed properly.⁷

Antiretroviral (ARV) therapy is the main medical treatment for HIV/AIDS. This treatment works by lowering the amount of virus in the body (viral load), boosting the immune system by keeping CD4 counts high, and lowering the chance of spreading the virus to other people. The global target set by UNAIDS, known as the 90-90-90 target, emphasizes that 90% of all people living with HIV will know their HIV status, 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy, and 90% of all people receiving antiretroviral therapy will have viral suppression. However, the clinical efficacy of ARV therapy is heavily dependent on patient adherence. Unlike many other chronic conditions, HIV treatment requires near-perfect compliance.

It is clinically established that optimal viral suppression requires an adherence level of at least 95%. Non-adherence is a major barrier to treatment success and can lead to severe consequences, including viral resistance, the emergence of opportunistic infections, and a rapid decline in the patient's clinical condition.⁸

Achieving high adherence is challenging for many patients. Various factors influence a patient's ability to adhere to the regimen, including patient knowledge about the disease, the severity of side effects from the medication, treatment fatigue (often referred to as saturation from taking lifelong daily medication), and the level of family support available. When adherence falters, the therapeutic goals are compromised, leading to health deterioration.⁹

Therapeutic adherence is intrinsically linked to the Quality of Life (QoL) of patients living with HIV/AIDS (PLHIV). QoL is a multidimensional concept defined by the World Health Organization (WHO) as an individual's perception of their position in life within the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards, and concerns. It encompasses physical health, psychological state, level of independence, social relationships, and their relationship to salient features of their environment. The

"Calman Gap" theory suggests that QoL is the gap between a person's expectations and their current reality. According to this theory, a narrower gap indicates a better quality of life.¹⁰

It is thought that taking ARV medication will improve quality of life through a chain of biological and psychological events. By staying on track with their treatment, patients keep their physical health, which in turn helps their mental health and lets them keep being productive in their social lives. On the other hand, not following the treatment plan can make health worse, lead to more hospital stays, and expose people to social stigma, all of which greatly lower QoL.¹¹

Even though HIV is very common in West Java, we need to do specific studies at the Welas Asih Regional General Hospital (RSUD Welas Asih) to see how adherence affects quality of life. This will help us make local interventions more effective. A preliminary study at the VCT Polyclinic of RSUD Welas Asih, which included interviews with five patients, indicated a discrepancy in treatment outcomes. Patients who reported high adherence exhibited improved physical and psychosocial well-being, whereas those with low adherence demonstrated deteriorating health and productivity. This observation underscores the pressing necessity for empirical evidence to validate

the relationship between these variables in this particular context. Consequently, this study seeks to examine the correlation between adherence to ARV medication and the quality of life of HIV/AIDS patients at the VCT/PDP Polyclinic of RSUD Welas Asih, West Java Province.

MATERIALS AND METHODS

Study Design and Setting

This study employed a quantitative research design with a cross-sectional approach to determine the relationship between antiretroviral (ARV) medication adherence and quality of life among HIV/AIDS patients. The study was conducted at the Voluntary Counseling and Testing/Care, Support, and Treatment (VCT/CST) Clinic of RSUD Welas Asih, West Java, Indonesia. The study period covered February to April 2025, while data collection was performed in July 2025.

Population and Sample

The target population consisted of 123 HIV/AIDS patients receiving treatment at the VCT/CST Clinic of RSUD Welas Asih. The sample size was calculated using Slovin's formula with a precision level of 10%, resulting in a minimum sample of 55 respondents. Participants were selected using accidental sampling during routine clinic visits.

Inclusion and Exclusion Criteria

The inclusion criteria were HIV/AIDS patients aged 18–60 years, registered at the VCT/CST Clinic, receiving ARV therapy for at least six months, able to communicate effectively, and willing to participate by signing informed consent. Patients who were critically ill, had severe opportunistic infections, or experienced cognitive or mental disorders that could affect the accuracy of self-reported responses were excluded from the study.

Research Instruments

Medication adherence was assessed using the Morisky Medication Adherence Scale-8 (MMAS-8), which consists of eight items, including seven dichotomous questions and one Likert-scale question. The instrument demonstrated acceptable reliability with a Cronbach's alpha coefficient of 0.729. MMAS-8 scores were categorized into three levels: high adherence (score = 8), medium adherence (score 6 to <8), and low adherence (score <6).¹²

Quality of life was measured using the World Health Organization Quality of Life-BREF (WHOQOL-BREF), a 26-item questionnaire consisting of four domains: physical health, psychological health, social relationships, and environmental health, along with two general questions on overall quality of life and health status. Raw scores were transformed into a scale ranging from

0 to 100 according to the WHO scoring guideline. The quality-of-life scores were categorized as very good (76–100), good (51–75), moderate (26–50), and poor (0–25). Previous studies have demonstrated satisfactory validity and reliability of the WHOQOL-BREF instrument, with Cronbach's alpha values greater than 0.70.

Data Collection Procedure

Prior to data collection, permission was obtained from the Director of RSUD Welas Asih and ethical approval was granted by the Health Research Ethics Committee of Institut Kesehatan Immanuel Bandung (No. 139/KEPK/IKI/E2/VII/2025). Eligible respondents were recruited while attending routine visits at the VCT/CST Clinic. Participants were informed about the objectives and procedures of the study and provided written informed consent before completing the questionnaires. Each questionnaire required approximately 15 minutes to complete, and all responses were checked immediately to minimize missing data.

Data Analysis

Data were edited, coded, entered, and analyzed using statistical software.

Descriptive (univariate) analysis was performed to describe respondents' characteristics, ARV adherence levels, and quality-of-life categories. Prior to bivariate analysis, data normality was assessed using the Shapiro–Wilk test, which indicated that the variables were not normally distributed ($p < 0.05$). Because the data were ordinal and violated the assumption of normality, the non-parametric Spearman Rank correlation test was employed to determine the relationship between ARV medication adherence and quality of life. Statistical significance was established at $p < 0.05$.

RESULTS AND DISCUSSION

Respondent Characteristics

Table 1 shows that most respondents were aged 18–39 years (94.5%), male (78.2%), with senior high school education (47.3%), employed (76.4%), and MSM as the main transmission risk (81.8%). This profile reflects national data from the Ministry of Health (2020), which highlights HIV prevalence among young, productive-age males.¹ Similar demographic trends were reported by Adejumo et al. (2023) in sub-Saharan Africa, where adolescents and young adults are disproportionately affected.¹³

Tabel 1 Respondent characteristics

Characteristic	Category	f	%
Age	18–39 Years (Early Adulthood)	52	94.5
	40–60 Years (Middle Adulthood)	3	5.5
Gender	Male	43	78.2
	Female	12	21.8
Education Level	Elementary (SD)	8	14.5
	Junior High (SMP)	14	25.5
	Senior High (SMA)	26	47.3
	College/Univ	7	12.7
Occupation	Unemployed	13	23.6
	Employed	42	76.4
Marital Status	Single	17	30.9
	Married	21	38.2
	Divorced	6	10.9
	Living Together	11	20.0
Risk Factor / Transmission	Men who have Sex with Men (MSM)	45	81.8
	Heterosexual	10	18.2

Adherence Level Table 2 shows that 94.5% of respondents had high adherence. This exceeds findings by Rihaliza (2020)² who reported lower adherence rates in other regions. High adherence here may be explained by strong family support³, regular counseling, and the productive age of respondents. However, treatment fatigue remains a risk, as noted by Suryanto & Nurjanah (2021).¹⁴

Table 2 ARV Adherence levels (n=55)

Adherence Level	f	%
High	52	94.5
Medium	1	1.8
Low	2	3.6
Total	55	100

Table 3 shows that 54.5% reported good QoL and 41.8% very good QoL. No

respondents reported poor QoL. This aligns with Safitri (2020)¹⁵ and Omenogor & Omonaiye (2023),¹⁶ who found ARV therapy improves QoL by stabilizing health and reducing stigma. WHOQOL-BREF validation and WHOQOL-HIV BREF confirm that QoL encompasses physical, psychological, social, and environmental domains.

Table 3 Quality of life distribution (n=55)

QoL Category	f	%
Very Good	23	41.8
Good	30	54.5
Medium	2	3.6
Poor	0	0.0
Total	55	100

Relationship between Adherence and QoL Table 4 shows a significant

positive correlation ($p=0.003$). Patients with high adherence consistently reported good or very good QoL, while low adherence was only linked to medium QoL. This supports Prameswari (2020),⁵ Handayani (2023),¹⁷ Joulaei (2023)¹⁸, and Nurjanah et al.

(2023)¹⁹, who found adherence directly improves QoL. Biologically, adherence prevents virological failure, maintains CD4 counts (Sitorus et al., 2021)²⁰, and reduces opportunistic infections.

Table 4 Relationship between ARV Adherence and Quality of Life (n=55)

Adherence	Medium QoL	Good QoL	Very Good QoL	Total	%	P-value
Low	2 (3.6%)	0	0	2	3.6	0.003
Medium	0	1 (1.8%)	0	1	1.8	
High	0	29 (52.7%)	23 (41.8%)	52	94.5	
Total	2	30	23	55	100	

Clinical Implications These findings highlight that adherence is not only crucial for viral suppression but also for psychosocial stability. Patients with high adherence maintain employment, family roles, and social participation. Nurses play a central role in sustaining adherence through education, counseling, and peer support groups (KDS).²

Limitations This study is limited by its cross-sectional design, small sample size (n=55), and reliance on self-reported adherence, which may introduce bias. Future research should adopt longitudinal designs, larger samples, and integrate biological markers such as viral load for accuracy.

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