Profile of Outpatient HIV Patients at Universitas Airlangga Hospital Surabaya With Good Adherence Levels During One Year of Treatment

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ABSTRACT

Background: HIV is still a world problem to this day. The program 95-95-95 that the WHO form (95% of people know their HIV status, 95% of people who know their HIV status get the therapy, and 95% of people who get the therapy had their viruses suppressed) to overcome the global HIV cases is still relatively low. In Indonesia, the program only runs about 81-41-19. This shows a low level of therapeutic success. ART accompanied by good adherence is an important factor in succeeding of controlling HIV. Several regions have different tendencies between patient profiles and the adherence of that patient. *Objective:* This study presents demographic data of patient profiles with good adherence at Universitas Airlangga Hospital in Surabaya, one of the cities with the most HIV in Indonesia. *Method:* This research is a retrospective study using secondary data from the HIV patient's medical record taken at Universitas Airlangga Hospital, Surabaya. The study shows the distribution database on the patient profile (age, gender, marital status, educational status, employment, HIV staging, and treatment side effect) who underwent ART for at least a year adherently (adherence level of more than or equal to 95%). *Result:* Among the outpatient population, 107 patients met the sample criteria. Several factors showed a tendency to cluster within specific groups, including age (20–39 years), gender (male), educational level (high school), employment status (employed), HIV staging (stage 1 and stage 3), CD4 cell count (<500 cells/mm^3), and the presence or absence of side effects, with a tendency toward patients who did not experience side effects. Additionally, marital status was more prevalent among married patients.

Keywords: HIV; adherence; profile of patient.

INTRODUCTION

Human Immunodeficiency Virus (HIV) is a virus that attacks the human immune system, specifically white blood cells [3]. As the immune system weakens, individuals infected with HIV become more susceptible to various diseases. The symptoms that arise in patients with HIV are collectively referred to as acquired immunodeficiency syndrome (AIDS). To prevent the progression from HIV infection to AIDS, antiretroviral (ARV) therapy plays a crucial role. The success of ARV treatment is marked by the suppression of the HIV virus, which requires strict adherence to the prescribed medication. Adherence, as defined by the World Health Organization (WHO), refers to the extent to which a person's behavior taking medication, following a diet, or implementing lifestyle changes aligns with the recommendations agreed upon with healthcare providers [12].

HIV remains a significant global health challenge. The WHO has set ambitious 95-95-95 targets to accelerate HIV control: ensuring that 95% of people living with HIV (PLHIV) know their HIV status, 95% of those diagnosed receive treatment, and 95% of those treated achieve viral suppression.

However, as of 2018, only 79% of the 37.9 million people infected globally were aware of their HIV status, 62% received treatment, and just 53% achieved viral suppression. This means only 25.9% of PLHIV had successful treatment outcomes. In Indonesia, out of 325,667 people aware of their HIV status, only 39,599 achieved viral suppression [10]. According to the Indonesian Ministry of Health report in 2022, Indonesia has reached only 81-41-19 of the WHO targets, indicating substantial challenges in addressing HIV-AIDS cases effectively [4]. One critical issue is patient adherence to ARV therapy.

Patient adherence is pivotal for the success of HIV treatment programs. Numerous studies have investigated factors influencing ARV adherence, including age, gender, occupation, and treatment type. However, findings vary significantly. For example, a 2018 study in Korea by Kim et al. showed the highest adherence rates among patients aged 20–29[5], whereas Abadiga et al.'s 2020 study in Ethiopia found the highest adherence among patients over 48 years old [1].

Similarly, research conducted by Debby et al. in 2019 at RSCM Jakarta identified a significant relationship between gender and adherence [2], while Sari et al. in 2019 found no such association in their study at RSUD Ngudi Waluyo Wlingi Blitar [8]. These discrepancies highlight the need for further research on the profiles of patients demonstrating high adherence to ARV therapy. This study aims to explore the characteristics of HIV patients with good adherence at Universitas Airlangga Hospital in Surabaya, a city with the highest number of HIV cases in East Java. The findings are expected to help identify patients likely to adhere to ARV therapy, guiding healthcare providers in tailoring interventions to promote adherence and improve treatment outcomes.

METHODS

This research is a retrospective study using secondary data from the HIV patient's medical record taken at Universitas Airlangga Hospital, Surabaya. This research period is August – October 2024. The Inclusion sample is the patient who underwent ART for at least a year adherently (adherence level of more than or equal to 95%). Patients with incomplete data on their medical records are excluded from this research. The study shows the distribution database on the patient profile (age, gender, marital status, educational status, employment, HIV staging, CD4 level, and treatment side effect) who underwent ART for at least a year adherently (adherence level of more than or equal to 95%).

RESULT AND DISCUSSION

The study covers 107 patients who are matched by the inclusion criteria. The distribution of the patients is shown in Table 1 below.

TABLE 1: Distribution of Patient by Basic Profile.

Characteristic	Number (N=107)	Percentage (%)
Age (Years old)		
0-19	2	1,87%
20-29	29	27,10%
30-39	40	37,38%
40-49	22	20,56%
>50	14	13,08%
Gender		
Male	73	68,22%
Female	34	31,78%
Marital Status		
Married	55	51,40%
Single	36	33,64%
Divorce	11	10,28%
No data	5	4,67%
Education		
Elementary	5	4,67%
Junior High School	7	6,54%
Senior High School	57	53,27%
College	37	34,58%

No data	1	0,93%
Employment		
Employed	78	72,90%
Unemployed	28	26,17%
No data	1	0,93%

Sample Distribution by Basic Profile

Age: The largest proportion of patients at Universitas Airlangga Hospital was aged 30–39 years (37.38%), followed by 20–29 years (27.10%), with the smallest group being 0–19 years (1.87%). This trend aligns with Jungmee Kim et al. [5], who reported similar patterns, highlighting that mental maturity and life responsibility in adults significantly enhance adherence to ARV therapy.

Gender: Male patients dominated the sample (68.22%), reflecting the broader HIV population in Indonesia. This disparity is linked to a higher prevalence of HIV among men, especially in the MSM group, and is compounded by stigma that discourages women from seeking treatment [11].

Marital Status: Married patients made up 51.40% of the sample, suggesting that spousal support plays a vital role in improving adherence. While Cara O'Connor observed a higher prevalence of single patients, the adherence rates were higher among married individuals in both studies [7].

Education: High school graduates represented the largest educational group (53.27%), followed by those with higher education (34.58%). Despite studies associating higher education with better adherence, Universitas Airlangga Hospital's patient demographics align with broader societal trends where most of the patients have an educational level equivalent to high school regardless of whether the patient is compliant or not.

Employment: A majority of patients were employed (72.90%). This aligns with the research led by Nguyen et al in Vietnam [6]. The majority that is leaning toward the patients who were employed may positively influence adherence by providing economic stability and healthcare access, though statistical significance between employment and adherence remains limited.

TABLE 2: Distribution of Patient by Clinical Profile.

Characteristic	Number (N=107)	Percentage (%)
HIV Staging		
Stage 1	37	34,58%
Stage 2	21	19,63%
Stage 3	39	36,45%
Stage 4	10	9,35%
CD4 Count (cell/mm³)		
<200	41	38,32%
200-500	24	22,43%
501-800	0	0,00%
>800	0	0,00%

No data	42	39,25%
ARV Side Effect		
Experience	11	10,28%
No side effect	71	66,36%
No data	25	23,36%

Sample Distribution by Clinical Status

HIV Staging: The highest proportion of patients were in Stage III (36.45%), followed by Stage I (34.58%). Unlike findings by Ayele Tiyou [9], where Stage I patients had lower adherence, RSUA's data indicates that stigma and psychological burdens drive early-stage patients to adhere more closely to treatment.

CD4 Cell Count: Most patients had CD4 cell counts <200 cells/mm^3 (38.32%), with a smaller group at 200–500 cells/mm^3 (22.43%). The absence of patients with CD4 >500 cells/mm^3 and the high proportion of late-stage diagnoses suggest delayed testing and treatment initiation.

ARV Side Effects: A majority (66.36%) reported no ARV side effects, while 10.28% experienced side effects and 23.36% lacked data. The absence of side effects is critical for adherence, as adverse reactions can deter patients from continuing therapy.

CONCLUSION

Based on the data of medical records at Universitas Airlangga Hospital, it can be concluded that HIV patients undergoing outpatient treatment with good adherence to medication over one year are generally young to middle-aged adults (20–39 years old), predominantly male, with high school or college education, married, and employed. This adherence is also more frequently observed in patients at clinical stages III and I, with CD4 cell counts < 200. Additionally, patients who adhere to their treatment generally do not experience side effects from ARV therapy, which supports the continuity of their treatment. These findings emphasize the importance of monitoring and supporting factors that influence patient adherence to HIV therapy programs.

ACKNOWLEDGMENT

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