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# People Living with HIV/AIDS (PLWHA) based on clinical characteristics

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# Abstract

**Background :** Since it was discovered and identified ten years ago, the Human Immunodeficiency Virus (HIV) has the potential to produce the immunodeficiency syndrome condition known as Acquired Immunodeficiency Syndrome (AIDS). In the 2020-2024 National Medium-Term Development Plan (RPJMN), one of the policy and strategy directions is to increase access and quality of health services towards universal health coverage. Improving disease control, where HIV AIDS and sexually transmitted infections are part of the policy direction. In order to improve the quality of services for PLWHIV, it is necessary to have a comprehensive perspective of the medical officers, so there is a need for patient mapping based on the characteristics of the patients being treated.

**Purpose:** To determine the description of the clinical stage based on characteristics of PLWHIV at the Sukabumi Public Health Center, Bandar Lampung in 2021.

Method: This study is a quantitative descriptive observational study with a cross-sectional approach.

**Results** : The results of the study, it is known that the characteristics of PLWHIV based on gender that's male are 67%, there 41.7% of PLWHIV are 31-40 years old, level of education PLWHIV are 67% have a senior high school, 52.4% as private employees, and 62,1% of PLWHIV live in cities. The results showed that at stage 1 the age group was 21-30 years old, the clinical stage 2 patients were 31-40 years old, the clinical stage 3 patients were 31-40 years old, and the clinical stage 4 patients were 21-30 years old. The results of the study also revealed that most of the patients in stages 1–4 had a senior high school education, worked as private employees, and lived in urban areas

# Keywords: HIV; AIDS; Age, Gender; Occupation; Clinical Stadium

# INTRODUCTION

Human Immunodeficiency Virus (HIV), since it was first detected and isolated in a decade, can cause an immunodeficiency syndrome condition known as Acquired Immunodeficiency Syndrome (AIDS). This syndrome can kill millions of people worldwide. In 2001, the United States of America and the United Nations (UN) held a special session on HIV aimed at setting a common agenda to encourage global efforts to avoid a pandemic. Although major increases have only been recognized in the last 20 years, the sheer scale of the AIDS pandemic persists. World leaders in 2021, through the United Nations High Level Meeting on AIDS, have made transformative declarations and actions in an effort to end the global AIDS epidemic by 2030.(UNAIDS, 2021).

The government and the community have a strong commitment to controlling HIV/AIDS and achieving the elimination of HIV/AIDS and sexually transmitted diseases by 2030. In the National Medium-Term Development Plan (RPJMN) 2020–2024, one of the policy and strategy directions is to improve access and quality of health services toward universal health

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coverage. Improving disease control, where HIV/AIDS and sexually transmitted diseases are part of the policy direction (Indonesian Ministry of Health, 2020)

In order to improve disease control, HIV/AIDS and PIMS are part of the policy direction. The state's commitment is also contained in the Strategic Plan for the health sector (Renstra Kemenkes RI) by increasing the number of people with HIV/AIDS (PLWHIV) who receive treatment as a form of efforts to prevent HIV transmission and improve the quality of life of PLWHIV. The government and the community support efforts to achieve HIV AIDS elimination, which has been agreed upon at the global level that by 2030 we can reach 95/95/95 for treatment, where 95% of people living with HIV know their status, 95% of people living with HIV know the status of getting treatment, and 95% of people living with HIV are treated with suppressed virus. Prevention and control of sexually transmitted infections are integral parts of controlling HIV/AIDS. (Indonesian Ministry of Health, 2020)

Globally, there were 37.7 million people living with HIV (PLWHIV) in 2020, and there were 1.5 million new HIV infections. The death rate for sufferers reaches 680,000 people (UNAIDS, 2021). Cumulatively, there were 456,453 people living with HIV in Indonesia reported until December 2021, while the number of AIDS cases reported was 135,490. Of these, there are 387,210 people living with HIV who are still alive and have started antiretroviral (ART) treatment; 49,391 people living with HIV who have died starting ART; and 71,995 people living with HIV who have dropped out or lost follow-up (LFU) (Indonesian Ministry of Health, 2021).

In Lampung Province in 2021, cumulatively, 4,729 people living with HIV were found, and 3,380 people were still alive and on antiretroviral (ART) treatment (Lampung Provincial Health Office, 2022). Bandar Lampung City in 2021 will have cumulatively found 2,783 people living with HIV and 1,566 still alive who received antiretroviral therapy (ART). There were 436 people lost to follow-up, which means they are not compliant with antiretroviral therapy. (Bandar Lampung City Health Office, 2022)

Sukabumi Health Center is one of the HIV AIDS services in Bandar Lampung and has become one of the Care, Support, and Treatment (PDP) facilities. Based on the report on the HIV/AIDS program in December 2021, there are 103 people living with HIV who are currently being treated.

In order to improve the quality of services for PLWHIV, it is necessary to have a comprehensive perspective of the medical officers, so there is a need for patient mapping based on the characteristics of the patients being treated. It can also be useful for determining logistical needs, managing service schedules, and monitoring treatment for HIV patients.

Based on the description above, the researcher wants a description of the clinical stage based on the characteristics of people living with HIV at the Sukabumi Bandar Lampung Health Center in 2021.

# **RESEARCH METHOD**

This research is observational, descriptive, and quantitative, with a cross-sectional approach. The study was conducted at the Sukabumi Health Center in Bandar Lampung in 2021. The population in this study consisted of 103 HIV patients. The sampling technique used was total sampling. The inclusion criteria for this study were HIV patients who were taking treatment and were willing to become respondents by signing an informed consent form after being given an explanation by the researcher. The sample exclusion criteria in this study were HIV patients who had died. The variables in this study were clinical stage, age, gender, education, occupation, and place of residence. Data collection using medical record data The data analysis for this research includes univariate analysis using percentages. Sukabumi Public Health Center is one of the health facilities with HIV services in the city of Bandar Lampung. Services, support, and treatment at the Sukabumi Health Center have been implemented since 2019. Currently, there are 103 people living with HIV (PLWHIV) who access HIV treatment services at the Sukabumi Health Center in Bandar Lampung.

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# **RESEARCH RESULTS**

Variables		Results (n/%)
Age	<20 years	5/4.9
-	21-30 years	42/40.8
	31-40 years	43/41.7
	41-50 years	9/8.7
	>50 years	4/3.9
Gender	Male	69/67.0
	Female	34/33.0
Level of Education	Junior High School	22/21.4
	Senior High School	69/67.0
	Diploma	4/3.9
	Bachelor	8/7.8
Occupations	Private Sector Employee	54/52.4
-	Laborer	9/8.7
	Housewife	20/19.4
	Prisoners	13/12.6
	Other	7/6.8
Place of Residence	City	64/62.1
	Village	39/37.9
Treatment Duration	<1 year	14/13.6
	1-3 years	30/29.1
	3-5 years	26/25.2
	5-9 years	24/23.3
	>10 years	9/8.7
Clinical Stadium	1 <sup>st</sup> Stadium	47/45.6
	2 <sup>nd</sup> Stadium	29/28.2
	3 <sup>rd</sup> Stadium	19/18.4
	4 <sup>th</sup> Stadium	8/7.8

### Tabel 1 Demographic Characteristic of Respondents (N=103)

People living with HIV at Sukabumi Health Center about gender are 69 men (67%) and 34 women (33%). Based on age, it can be seen that as many as 5 people (4.9%) with PLWHIV are less than 20 years old, and as many as 4 people (3.9%) with PLWHIV are over 50 years old. Most people living with HIV are aged 21–30 years. As many as 42 people (40.8%), as many as 43 people living with HIV (41.7%), and as many as 9 people obout (8.7%) living with HIV are aged 41–50 years. Based on the education level, most of the PLWHIV have a high school education, as many as 69 people

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(67%) do, and only nine people (7.8%) have a bachelor's degree. Based on occupation, the majority of people living with HIV/AIDS work as private employees—as many as 54 people (52.4%). Based on the place of residence, as many as 64 people (62.1%) PLWHIV live in the city and 39 people (37.9%) PLWHIV live in the village. Based on the length of treatment, there were 14 people (13.6%) of people living with HIV who had only undergone treatment for less than 1 year, and as many as 9 people (8.7%) of people with HIV had undergone treatment for more than 10 years. Based on the clinical stage, there were 47 people (45.6%) of people living with HIV who were at 1st Clinical Stadium, and as many as 8 people (7.8%) of people living with HIV were at 4th Clinical Stadium.

<b>Age</b> <20 Years					
<20 Years					
	3	1	1	0	5
	6.4%	3.4%	5.3%	0.0%	4.9%
21-30 Years	22	10	5	5	42
	46.8%	34.5%	26.3%	62.5%	40.8%
31-40 Years	19	12	10	2	43
	40.4%	41.4%	52.6%	25.0%	41.7%
41-50 Years	2	3	3	1	9
	4.3%	10.3%	15.8%	12.5%	8.7%
>50 Years	1	3	0	0	4
	2.1%	10.3%	0.0%	0.0%	3.9%
Gender					
Male	27	19	16	7	69
	57.4%	65.5%	84.2%	87.5%	67.0%
Female	20	10	3	1	34
	42.6%	34.5%	15.8%	12.5%	33.0%
Level of					
Education					
Junior High School	10	9	2	1	22
	21.3%	31.0%	10.5%	12.5%	21.4%
Senior High School	29	18	17	5	69
	61.7%	62.1%	89.5%	62.5%	67.0%
Diploma	3	0	0	1	4
ырютта	6.4%	0.0%	0.0%	12.5%	3.9%
Bachelor	5	2	0.078	12.5%	3.9 <i>%</i> 8
	10.6%	6.9%	0.0%	12.5%	7.8%

### Tabel 2 People Living with HIV/AIDS (PLWHA) Based on Clinical Characteristics

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Private Sector Employee	25	13	12	4	54
	53.2%	44.8%	63.2%	50.0%	52.4%
Laborer	2	4	2	1	9
	4.3%	13.8%	10.5%	12.5%	8.7%
Housewife	12	4	3	1	20
	25.5%	13.8%	15.8%	12.5%	19.4%
Prisoners	6	6	1	0	13
	12.8%	20.7%	5.3%	0.0%	12.6%
Other	2	2	1	2	7
	4.3%	6.9%	5.3%	25.0%	6.8%
Place of					
Residence					
City	27	19	13	5	27
-	57.4%	65.5%	68.4%	62.5%	57.4%
Village	20	10	6	3	20
-	42.6%	34.5%	31.6%	37.5%	42.6%

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Based on the table above, it can be seen that patients at 1st Clinical Stadium are dominated by patients aged 21–30 years, with as many as 22 people (46.8%); patients at 2nd Clinical Stadium are dominated by patients aged 31-40 years, with as many as 10 people (34.5%); patients at 3rd Clinical Stadium are dominated by patients aged 31-40 years, with as many as 10 people (52.6%); and patients at 4th Stadium are dominated by patients aged 21-300 years, with as many as 5 people (62.5%). In a study conducted at the Balige HKBP AIDS Committee, it was found that there was no influence of age on the incidence of HIV infection (Manalu et al., 2019). Based on national data, the highest percentage of HIV cases was reported in the 25-49 year age group (69.7%), followed by the 20-24 year age group (16.9%), and the 50 year age group (7.9%). (Ministry of Health Republic Indonesia, 2021). In addition, based on the proportional hazard model analysis conducted in Vadodara India, it showed that young adults (20-24 years) were around three times (P < 0.05) more at risk of developing into the next stage compared to adolescents (10-19 years) (Madan-Patel Geetics, 2021).

Based on the table above, it can be seen that patients at 1st Clinical Stadium were dominated by male patients as many as 27 patients (57.4%), at 2nd

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Clinical Stadium patients were dominated by male patients as many as 19 patients (65.5%), at 3rd Clinical Stadium patients were dominated by male patients as many as 16 patients (84.2%), and at 4th Stadium patients were dominated by male patients as many as 7 patients (87.5%). This is in line with previous research that shows there is an influence of gender on the incidence of HIV infection (Manalu et al., 2019). Based on national data, the percentage of people living with HIV by sex found in men is 70% and found in women is 30%, with a male to female ratio of 2:1. (Indonesian Ministry of Health, 2021). This is due to the differences in the lifestyles of men that put them at the highest risk of HIV/AIDS, such as drug addicts, homosexuals, and heterosexuals. Other studies also suggest that age is a risk factor for the incidence of HIV/AIDS; based on the results of the chi square statistical test, the p value = 0.0001 with an OR of 5.40 (Amelia et al., 2016). Based on a gender-based analysis conducted by Geetika Madan-Patel, 2021 revealed that more women were infected through heterosexual behavior than men in certain groups. Approximately 46% of patients were found when their disease progressed to 3rd and 4th Clinical Stadium, while 29% were in 3rd Clinical Stadium and 24% were in 2nd Clinical Stadiium.

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Based on the table above, it can be seen that patients at 1st Clinical Stadium are dominated by HIV patients who have Senior high school education, as many as 29 patients (61.7%), at 2nd Clinical Stadium, patients are dominated by patients who have senior high school education, as many as 18 patients (62.1%), at 3rd Clinical Stadium, patients are dominated by patients who have senior high school education, as many as 17 patients (89.5%), at 4th Clinical Stadium, patients are dominated by patients who have senior high school education, as many as 5 patients (62.5%). This shows that PLWHIV with education up to senior high school represent the clinical stage of the patients being treated. The results of descriptive analysis in research (Susilowati et al., 2018) show that the higher the education, the better the knowledge. Based on the multivariate test OR: 4.70, 95% CI 2.11-10.47, p value 0.001 so that a low level of education is said to have an effect on the incidence of HIV and AIDS. However, this is not in line with research (Manalu et al., 2019) which states that there is no influence of education on the incidence of HIV infection, where the statistical test results obtained a p value = 0.503 and the reality in the field of education of all patients is the majority of high school education.Based on the table above, it can be seen that patients at 1st Clinical Stadium were dominated by patients who have jobs as private employees as many as 25 patients (53.2%), at 2nd Clinical Stadium were dominated by patients who have jobs as private employees as many as 13 patients (44.8%), at 3rd Clinical Stadium were dominated by patients who had jobs as private employees as many as 12 patients (63.2%), at 4th Clinical Stadium were dominated by patients who had jobs as private employees as many as 4 patients (50%). This shows that the majority of people living with HIV work as private employees. Manalu et al., 2019 in their research that there was no effect of work on the incidence of HIV infection based on statistical tests that obtained a p value = 0.283. Based on the table above, it can be seen that patients in 1st Clinical Stadium were dominated by patients living in the city as many as 27 patients (57.4%), at 2nd Clinical Stadium were dominated by patients living in the city as many as 19 patients (65.6%), at 3rd Clinical Stadium were dominated by patients living in the city as many as 13 patients (68.4%), and 4th Clinical Stadium were dominated by patients living in the city as many as 5 patients (62.5%).

Based on HIV behavioral indicators, initiation of sexual intercourse is an important indicator for understanding sexual behavior. In the case of Indonesia, sex before the age of 18 has different meanings between women and men, and in urban versus rural areas. In general, women in rural areas started having sex earlier than women in urban areas, and the number of women in rural areas who started sexual relations earlier was higher than men of the same age. According to the latest Indonesia Demographic and Health Survey 2012, 5.4% of adult men have purchased sex, with the rate in urban areas being higher than the rate in rural areas (Indonesian Ministry of Health, 2016). This, of course, increases the risk of disease transmision.

## CONCLUSION

This study describes the clinical stage based on the characteristics of people living with HIV at the Sukabumi Public Health Center, Bandar Lampung. The results showed that at stage 1 the age group was 21-30 years old, the clinical stage 2 patients were 31-40 years old, the clinical stage 3 patients were 31-40 years old, and the clinical stage 4 patients were 21-30 years old. The results of the study also revealed that most of the patients at stage 1–4 had high school education, worked as private employees, and lived in urban areas.

## SUGGESTION

It is hoped that this research can be used as basic data for further research on HIV/AIDS, The researchers suggest that health workers should improve monitoring of treatment for people living with HIV, the regularity of taking medication, and the quality of services and infrastructure to prevent the development of active disease, and always record the results of visits to HIV patients in full in the available medical records.

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