



# Psychosocial Influences on the Quality of Life of People Living with HIV in Jambi City



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## ABSTRACT

**Aims** This study aimed to investigate the connection between psychosocial well-being and quality of life among individuals living with HIV/AIDS, considering the influence of the local socio-cultural context.

**Instrument & Methods** This research utilized a quantitative design with a cross-sectional methodology. A total of 230 people living with HIV/AIDS selected using an accidental sampling technique were assessed. Data were collected using the Depression Anxiety Stress Scale-42 to evaluate the psychosocial status and the Quality of Life Brief Scale to measure the quality of life. The relationship between parameters was analyzed using the Chi-square test and multivariate regression analysis.

**Findings** There was a notable link between levels of stress, anxiety, and depression and the quality of life among individuals living with HIV/AIDS ( $p < 0.0001$ ). Participants experiencing higher degrees of stress, anxiety, and depression were more likely to have a diminished quality of life. For instance, 78.7% of those with severe anxiety and moderate stress reported a low quality of life, while 84% of respondents suffering from very severe depression also indicated poor quality of life. The univariate analysis highlighted significant associations between moderate stress, very severe depression, and quality of life; however, these connections were not maintained in the multivariate analysis. On the other hand, moderate anxiety consistently showed a significant correlation with quality of life across both univariate and multivariate analyses.

**Conclusion** The quality of life of individuals living with HIV/AIDS in Jambi City is significantly influenced by their psychosocial status, including levels of stress, anxiety, and depression.

**Keywords** HIV; AIDS Virus; Quality of Life; Anxiety; Depression

## CITATION LINKS

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## Introduction

People living with HIV/AIDS (PLWHA) are those infected with the human immunodeficiency virus (HIV), which weakens the immune system and, without proper treatment, may develop into Acquired immunodeficiency syndrome (AIDS) [1-3]. Beyond medical concerns, PLWHA encounter various challenges that include psychosocial and socio-cultural aspects. HIV is predominantly spread through certain bodily fluids such as blood, semen, vaginal secretions, and breast milk, a mode of transmission that frequently leads to stigma and discrimination against those affected [4, 5].

The management of HIV is commonly achieved through antiretroviral therapy (ART), a treatment aimed at inhibiting viral replication and improving life expectancy [6, 7]. However, addressing the psychosocial needs of PLWHA is equally critical. Psychosocial support plays a vital role in helping individuals manage emotional distress, navigate social stigma, and sustain their quality of life. Stigma, frequently rooted in myths and misconceptions about HIV/AIDS, exacerbates psychosocial challenges such as stress, anxiety, and depression, further complicating their overall well-being [8, 9].

The well-being of PLWHA involves multiple aspects of quality of life, such as physical health, mental well-being, social connections, and environmental influences [10]. Improving their quality of life requires a comprehensive approach that combines medical care, strong social support systems, and proactive measures to reduce stigma [11, 12].

Psychosocial challenges, such as stress, anxiety, and depression, are particularly prevalent among PLWHA, especially during the early stages following diagnosis [13, 14]. Prolonged stress can further compromise physical health by weakening the immune system, while anxiety and depression can disrupt adherence to ART, ultimately affecting treatment outcomes. Considering these implications, quality of life is a vital measure that necessitates targeted research to gain deeper insights and effectively address the needs of this population [15, 16]. Jambi City possesses distinctive socio-cultural characteristics, particularly in how the community perceives and interacts with PLHIV. Stigma against PLHIV remains prevalent, largely due to limited awareness about HIV/AIDS and the influence of conservative cultural values. However, efforts are underway by certain groups, including local communities and non-governmental organizations, to provide social support and advocate for the rights of PLHIV. A significant proportion of respondents in this study are from the younger generation, who are generally more open to accessing health information and services but are also more susceptible to social pressures. This is especially true for those identifying as part of the lesbian, gay, bisexual, and transgender community (LGBT) community, who often face dual

stigmatization—both as PLHIV and as sexual minorities. In this context, sexual orientation emerges as a critical factor, underscoring the compounded challenges faced by LGBT individuals in navigating societal stigma and maintaining their well-being [17, 18].

While several studies have explored related subjects, few have specifically focused on how stress, anxiety, and depression interact simultaneously and affect quality of life. Additionally, the role of the time since HIV diagnosis in shaping psychosocial well-being and quality of life remains insufficiently studied, especially within the context of Indonesia. This research aimed to investigate how stress, anxiety, and depression are linked to the quality of life among PLWHA in Jambi City. The results are expected to offer valuable insights into the factors influencing the quality of life of PLWHA, contributing to the development of more effective intervention strategies.

Previous studies have identified a connection between psychosocial factors and the quality of life in PLWHA, with depression recognized as a key predictor of quality of life related to HIV/AIDS. However, existing studies are often limited to specific populations and fail to account for local variations, such as those found in Jambi City. This study provides a unique approach by exploring the combined impact of stress, anxiety, and depression on the quality of life of PLWHA, while also considering local factors, such as sexual orientation, illness duration, and socio-cultural influences. Moreover, this research adopted a comprehensive methodology, utilizing both the DASS-42 instrument for psychosocial assessment and the QOL-BREF tool for evaluating quality of life. These tools are rarely applied concurrently in the Indonesian context, making this study particularly valuable. Unlike prior studies that typically focus on a single psychosocial factor or broader populations, this research provides targeted insights into the unique factors affecting the quality of life of PLWHA within the socio-cultural framework of Jambi City, Indonesia.

The originality of this study stems from its thorough examination of the relationship between psychosocial factors (specifically stress, anxiety, and depression) and the quality of life of PLWHA, with a focus on the unique socio-cultural environment of Jambi City. Additionally, by introducing new parameters, such as sexual orientation and the length of time living with the illness, this research provided a fresh perspective on the factors that influence the quality of life of PLWHA in Indonesia.

## Instrument and Methods

### Study design

In this quantitative cross-sectional study, data were gathered at one specific moment. This method allows for the examination of associations between

parameters at that point, without requiring long-term monitoring or follow-up [19].

### Subjects

The study was carried out between April and June 2024 at two health centers in Jambi City, Indonesia, chosen for having the highest number of visits from PLWHA compared to other centers. A total of 230 participants were selected through accidental sampling, where individuals were chosen based on their availability and willingness to take part in the study.

To be included, participants had to meet specific criteria; they must be at least 18 years old, have a confirmed HIV/AIDS diagnosis from a healthcare facility, be able to communicate effectively both verbally and in writing, and complete the questionnaires independently or with assistance. Additionally, participants needed to be in stable health, as confirmed by medical records or healthcare provider evaluations, and must consent to participate in the study.

Those who did not meet the inclusion criteria were unable to provide consent, declined participation, or had significant health conditions preventing participation were excluded. The sample size was calculated using the Slovin formula, accounting for a 5% margin of error ( $e=0.05$ ) and a population of 541, which resulted in an estimated sample size of approximately 230 participants.

### Research tools

This study utilized two measurement tools. Psychosocial status was evaluated using the Depression Anxiety Stress Scale-42 (DASS-42), which includes 42 items that assess three main areas, including depression, anxiety, and stress. Each area is scored individually to determine the participant's level of psychosocial distress. The DASS-42 is divided into 14 items for depression, 14 for anxiety, and 14 for stress. Participants rate each statement on a four-point Likert scale, from zero (never) to three (very often). Scores for each area are calculated separately, with results interpreted according to the DASS-42 guidelines, which categorize them as normal, mild, moderate, severe, or very severe. The total score for each category indicates the participant's level of distress in that dimension.

Quality of life was assessed using the Quality of Life Brief Scale (QOL-BREF), which measures four critical dimensions, including physical, psychological, social, and environmental factors.

The responses provide insights into participants' overall perception of their quality of life. The QOL-BREF evaluates life quality across these four domains, including physical (energy, mobility, daily activities, and pain), psychological (self-satisfaction, emotional state, and stress levels), social (relationships and social support), and environmental (living conditions, safety, and access to healthcare). Respondents rate 26 items on a five-point Likert scale, from one (very poor) to five (very

good). The scores for each dimension are calculated and averaged to yield an overall quality of life score.

### Data collection

Data were gathered by distributing questionnaires to all participants. To assist with this, three students were appointed as enumerators. Before the data collection began, the enumerators received training to ensure they understood the data collection methods, how to administer the questionnaires, and how to communicate effectively with participants. When approaching potential participants, the enumerators first provided an informed consent form, which outlined the study's objectives, the data collection process, participants' rights, and the confidentiality of their personal information. Participants were given sufficient time to review and understand the informed consent before agreeing to participate.

Once consent was obtained, participants completed the questionnaire independently. If any questions were unclear, the enumerators provided clarification without influencing the participants' responses. After completion, the enumerators reviewed the questionnaires for completeness before submitting the data to the research team for further analysis. This process was designed to ensure the validity, accuracy, and ethical integrity of the data collected.

### Data analysis

Descriptive analysis was used to summarize the collected data. Inferential statistics were applied to test the research hypothesis and examine the relationships or differences between parameters within the population, based on the sample data. The Chi-square test was used to evaluate the associations between stress, depression, anxiety, and quality of life, with a p-value of less than 0.05 deemed statistically significant.

Furthermore, multivariate logistic regression was utilized to explore the simultaneous impact of multiple parameters on the quality of life of PLWHA, enabling the identification of potential confounding factors.

By considering multiple parameters at once, multivariate regression accounts for interactions between different factors, providing a more comprehensive understanding of how each factor influences quality of life. Data analysis was performed using SPSS version 23.0.

## Findings

This study involved 230 PLWHA and was conducted over three months in Jambi City. Most respondents fell within the 20 to 30-year age range. A large majority of the participants (95.7%) were male, outnumbering females.

The majority of respondents had a high school education. Furthermore, a considerable number of participants were identified as LGBT. Most

individuals reported living with the illness for less than one year (Table 1).

A substantial number of respondents in Jambi City were experiencing significant mental health challenges. The high rates of severe depression, anxiety, and stress observed suggest that mental health issues were prevalent among the population in Jambi City (Table 2).

Increased levels of stress, depression, and anxiety were linked to a lower quality of life. Participants who reported no or mild stress were more likely to have a better quality of life, whereas those experiencing moderate to severe stress, severe to very severe depression, and moderate to severe anxiety were more likely to report a poorer quality of life (Table 3).

There were strong links between moderate anxiety and a higher likelihood of negative outcomes, both prior to and after controlling for confounding parameters, indicating a consistent relationship.

On the other hand, very severe depression was significantly associated with negative outcomes in the univariable analysis, but this association was not maintained after adjusting for confounders, suggesting the presence of influencing factors. Regarding stress, although moderate stress was significantly related to negative outcomes in the univariable analysis, the association was not significant in the multivariable analysis, implying that other parameters may be impacting the results (Table 4).

**Table 1.** Frequency of demographic characteristics of respondents

Parameter	Values
<b>Age (year)</b>	
20-30	170(73.9)
30-40	60(26.1)
<b>Gender</b>	
Male	220(95.7)
Female	10(4.3)
<b>Education</b>	
Junior school	40(17.4)
High school	179(77.8)
College	11(4.8)
<b>Sex orientation</b>	
Straight	43(18.7)
LGBT	187(81.3)
<b>Length of illness (year)</b>	
<1	193(83.9)
>1	37(16.1)

**Table 2.** Frequency of respondents' characteristics according to psychosocial well-being and quality of life

Parameter	Values
<b>Depression level</b>	
Severe	86(37.4)
Very severe	144(62.6)
<b>Anxiety level</b>	
Mild	0(0)
Moderate	45(19.6)
Severe	181(78.7)
<b>Stress level</b>	
None	4(1.7)
Mild	40(17.4)
Moderate	181(78.7)
Severe	5(2.2)
<b>Quality of life</b>	
Good	70(30.4)
Poor	160(69.6)

**Table 3.** Frequency of the association between stress, depression, anxiety, and quality of life in people living with HIV/AIDS (PLWHA)

Parameter	Quality of Life of PLWHA		p-value
	Good	Poor	
<b>Stress level</b>			
None	1(25)	3(75)	0.0001
Mild	26(65)	14(35)	
Moderate	42(23.2)	139(76.8)	
Severe	1(20)	4(80)	
<b>Depression level</b>			
Severe	47(54.7)	39(45.3)	0.0001
Very severe	23(16)	121(84)	
<b>Anxiety level</b>			
Mild	27(60)	18(40)	0.0001
Moderate	42(23.2)	139(76.8)	
Severe	1(25)	3(75)	

**Table 4.** Binary logistic regression analysis for predicting quality of life of people living with HIV/AIDS (PLWHA)

Parameter	Univariable analysis		Multivariable analysis	
	COR (95%CI)	p-value	aOR (95%CI)	p-value
<b>Stress</b>				
Mild	1.00(ref)		1.00(ref)	
Moderate	5.282(2.633-10.594)	0.001*	1.747(0.741-4.117)	0.202
<b>Anxiety</b>				
Mild	1.00(ref)		1.00(ref)	
Moderate	6.340(3.426-11.734)	0.001*	4.783(2.255-10.145)	0.001*
<b>Depression</b>				
Severe	1.00(ref)		1.00(ref)	
Very severe	4.953(2.492-9.847)	0.001*	0.000(0.000-0.000)	1.000

COR: Crude odds ratio, aOR: Adjusted odds ratio, CI: confidence interval, \*p-values≤0.05

## Discussion

This study aimed to investigate the connection between psychosocial well-being and quality of life

among individuals living with HIV/AIDS. There was a significant connection between psychological factors, namely stress, depression, and anxiety, and overall

quality of life. The findings underscore the considerable influence of these mental health conditions on a person's well-being, as evidenced by the extremely low p-values for each of these factors. Depression, in particular, emerged as a significant contributor to poor quality of life. Individuals with severe and very severe depression demonstrated a markedly higher likelihood of reporting a diminished quality of life, supporting the hypothesis that more severe mental health conditions lead to poorer life outcomes [20-22]. Anxiety showed a similar pattern, with individuals experiencing mild anxiety more likely to report a better quality of life, while those with moderate to severe anxiety were more likely to experience a poorer quality of life. These trends highlight the significant impact of mental health on different aspects of daily life, a finding that aligns with previous research [23-25].

Additional analysis through both univariate and multivariate models offered a more thorough understanding of the link between psychological factors and quality of life. The univariate analysis indicated a significant relationship between moderate stress and quality of life, as shown by the COR value. However, the multivariate analysis revealed that this association lost statistical significance, suggesting that other factors might influence or alter the effect of stress on quality of life. This points to the complexity of these relationships and emphasizes the need for future studies to investigate other potential contributing parameters. Conversely, anxiety demonstrated a consistent and significant effect on quality of life across both analytical approaches. The high COR value observed in the univariate analysis was supported by a similarly significant aOR in the multivariate analysis, reinforcing the idea that anxiety plays a more stable and influential role in shaping an individual's quality of life compared to stress.

The univariate analysis showed a strong connection between very severe depression and quality of life, but this relationship was not maintained in the multivariate analysis, where the adjusted odds ratio (aOR) decreased substantially. This suggests that while depression may initially appear to significantly affect quality of life, other factors included in the multivariate analysis could have diluted its effect, necessitating further investigation into the combined influence of these parameters.

Stress, anxiety, and depression play a crucial role in shaping the quality of life for individuals with HIV, influencing multiple dimensions of their physical, emotional, and social well-being. Chronic stress can disrupt hormonal balance and the immune system, both of which are crucial for individuals with HIV [26, 27]. Stress can exacerbate the physical symptoms of HIV, slow down the body's response to treatment, and reduce adherence to antiretroviral (ARV) medication regimens. Moreover, emotional stress can impair an individual's ability to manage their health

effectively, such as prioritizing medical care or maintaining a healthy lifestyle, which ultimately worsens overall quality of life [28].

Anxiety and depression also affect the quality of life in different ways. High levels of anxiety often lead to excessive fear and worry about health, medication, or the stigma associated with HIV, adding to the psychological burden and worsening the patient's mental condition [29, 30]. Depression, on the other hand, reduces motivation and energy, making patients feel hopeless or powerless in managing their illness. These feelings of anxiety and depression often lead patients to isolate themselves, further deteriorating their social and emotional well-being. Overall, these psychological disorders not only affect the patient's mental health but also worsen their physical condition, decrease their quality of life, and influence the success of treatment and their participation in medical care [31].

The findings of this study align with previous research on the impact of mental health on quality of life, particularly among individuals with chronic illnesses such as HIV/AIDS. Studies by Perez *et al.* [3] and Campos & Ortiz [5] have similarly emphasized the critical role that mental health plays in determining the well-being of PLWHA. These studies highlight the importance of considering psychological and social factors, such as depression, anxiety, and social support, in assessing health outcomes. Additionally, according to Cai *et al.* [17], mental health issues, particularly depression and anxiety, are prevalent among those with chronic physical conditions, reinforcing the need to address mental health to enhance overall quality of life and improve treatment outcomes for PLWHA.

The results of this study carry significant implications for healthcare, particularly in improving mental health services for PLWHA. Given the strong link between mental health and quality of life, it is crucial to incorporate psychological care into HIV treatment. Healthcare providers should be attuned to the mental health needs of individuals with HIV and ensure that care addresses both their physical and emotional well-being. This holistic approach is vital for boosting treatment adherence, combating HIV-related stigma, and enhancing overall patient quality of life. Furthermore, interventions designed to manage issues such as depression, anxiety, and stress could lead to improved health outcomes and a better quality of life for PLWHA.

The limitations of this study are important to consider when interpreting the results and their generalizability. The sample was limited to PLWHA in Jambi City. This geographical limitation restricts the external validity of the study, meaning that the findings may not be applicable to other populations or regions, especially those with different social, cultural, or economic contexts. Furthermore, while this study highlights the significant effects of psychological factors on quality of life, the

multivariate analysis reveals that these effects may be influenced or diluted by other parameters that were not accounted for in the study.

## Conclusion

Elevated levels of stress, depression, and anxiety correlate with a diminished quality of life.

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**Authors' Contribution:** Syukri M (First Author), Introduction Writer/Methodologist/Main Researcher/Discussion Writer/Statistical Analyst (60%); Daryanto D (Second Author), Introduction Writer/Methodologist/Assistant Researcher/Discussion Writer/Statistical Analyst (20%); Daryono D (Third Author), Introduction Writer/Methodologist/Assistant Researcher/Discussion Writer/Statistical Analyst (20%)

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