

Short Communication

Quality of life and its predictors among people living with HIV in Muslim majority region: A cross-sectional study in Aceh

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Abstract

Human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) remain significant global health challenges addressed by countries worldwide. The advent of antiretroviral therapy (ARV) has significantly reduced morbidity and mortality of people living with HIV (PLHIV), transforming HIV/AIDS from a fatal disease to a manageable chronic disease. However, the increasing number of elderly individuals with HIV who experience early frailty syndrome presents new challenges and potential for diminished quality of life. The aim of this study was to assess the quality of life and to identify its significant predictors in PLHIV patients who have received ARV therapy in Banda Aceh, a Muslim-majority region in Indonesia. A cross-sectional study was conducted on all PLHIV who received ARV therapy at the voluntary counseling and testing (VCT) polyclinic at Dr. Zainoel Abidin Hospital, Banda Aceh, Indonesia between January and February 2023. The WHOQOL-HIV BREF instrument, a multi-dimensional tool developed by the World Health Organization (WHO), was used to assess the quality of life of the PLHIV, and potential predictors were assessed. The Chi-squared test was used to determine the predictors associated with the quality of patient's lives. Our data indicated that the majority of PLHIV were male (88%), 26–35 years old (78%), employed (92%), and unmarried (54%). Poor quality of life was dominant for the physical health (100%) and social relationships (76%) domains. In contrast, good quality of life was observed in aspects of independence, psychology, and spirituality, all reporting 100% results. Significant associations were found between married status ($p=0.004$) and medication adherence ($p<0.001$) with higher quality of life among PLHIV. In conclusion, married PLHIVs that received support from their partners regarding adherence to therapy exhibited a better quality of life. These results underscore the significance of sustained support systems and adherence strategies to enhance PLHIV's quality of life.

Keywords: HIV, AIDS, antiretroviral, marital status, quality of life

Introduction

Acquired immune deficiency syndrome (AIDS) is an infectious disease caused by the human immunodeficiency virus (HIV) that infects leucocytes and leads to the human immune system weakening. People living with HIV (PLHIV) are more susceptible to various diseases and their incidence continues to rise globally with leading to physical, psychological, and social impacts on patients, families, and the community. Indonesia is the fifth most at-risk country for HIV/AIDS



in Asia and the number of cases continue to rise [1,2]. There were 540,000 PLHIV in Indonesia in 2021 and between April and June of 2022, there were 11,100 new cases, including 40 cases in Aceh province, a Muslim majority region in the country [1,2]. Advances in antiretroviral therapy (ARV) have transformed the HIV/AIDS landscape from a fatal condition to a manageable chronic disease. This condition poses a new challenge with the increasing number of elderly HIV population at high risk of early frailty syndrome, having a lower quality of life and being more vulnerable than the average population [3].

Quality of life is an individual perception of position in everyday life based on the cultural context and adopted values and is related to the goals, expectations and standards set in life [4,5]. It is affected by physical health, psychological state, level of independence, social relations and spiritual level of each individual [4]. It can also be interpreted as a state without pain, or an individual who can function adequately in everyday life [4]. Each individual perceives the quality of life differently depending on how they respond to the arising problems. Positive problem-solving approaches often result in a better quality of life, whereas negative coping mechanisms can lead to diminished quality of life [6,7].

This study aimed to determine the quality of life of PLHIV receiving ARV therapy and identify the predictors of varying quality of life, including demographics, medication adherence, duration of HIV diagnosis, and duration of ARV therapy. The outcome of this study is expected to improve holistic treatments for PLHIV, optimize therapy management, and lead to better clinical outcomes, thereby enabling HIV-positive individuals to lead fulfilling lives and reduce negative impacts on families and communities.

Methods

Study setting and participants

A cross-sectional study was conducted among PLHIV receiving ARV who visited the voluntary counseling and testing (VCT) polyclinic at Dr. Zainoel Abidin Hospital in Banda Aceh, Indonesia, between January and February 2023. The participants of this study were HIV-positive individuals aged 18 years or older who had been receiving ARV therapy for a minimum of one month. Participants were required to have the ability to communicate effectively in Indonesian, express willingness to participate in an interview, and provide informed consent.

Sampling strategy

The total number of PLHIV receiving ARV at the VCT polyclinic at Dr. Zainoel Abidin Hospital was 250 individuals. All PLHIV visited the VCT polyclinic between January and February 2023 were considered eligible to be included in this study. There were 63 PLHIV who visited the polyclinic during the period and were approached; however, 13 of them refused to participate.

Study variables

The dependent variable in this study was the quality of life of PLHIV, which was measured using the Indonesian version of the WHOQOL-HIV BREF instrument [7]. WHOQOL-HIV BREF instrument has been validated and used in many countries [8-10] including Indonesia [11,12]. The WHOQOL HIV-BREF questionnaire comprises of 31 questions, encompassing both general and specific questions of quality of life [7,13]. There are two general questions asking about quality of life perception and health perception in general; and 29 specific questions that pertain to six different domains of quality of life [7,13]. The first domain (physical well-being) consists of four questions, psychological health (five questions), personal freedom (four questions), social relationships (four questions), environmental well-being (eight questions), and the last domain assesses the spiritual wellness (four questions). The possible responses for each question were in five-point Likert scale and scored between 1 and 5; therefore, the total scores ranged from 31 to 155. Those who had score between 31 and 93 were classified to have a poor quality of life while those who had 94 or more were classified had a good quality of life. Each domain was also classified into poor and good [13].

The explanatory variables included gender, age, employment status, marital status, medication adherence, duration of HIV diagnosis, and duration of receiving ARV therapy. Data

related to medication adherence was obtained by asking health workers and patients directly related to schedule and regularity of ARV taken by the PLHIV.

Data collection

PLHIV who agreed to participate in this study were interviewed directly through structured interviews by the researchers. The interviews were carried in Bahasa Indonesia and participants' responses were recorded for further analysis. The study was conducted in accordance with ethical guidelines; participants' privacy and confidentiality were strictly maintained. Informed consent was obtained from all participants before participating in the study.

Statistical analysis

The Chi-squared test was utilized to assess the associations between possible predictors and quality of life among PLHIV. A *p*-value less than 0.05 was considered statistically significant. All statistical analysis were conducted using the IBM-SPSS program.

Results

Characteristics of participants

There were 63 PLHIVs visiting the VCT polyclinic at Dr. Zainoel Abidin Hospital in Banda Aceh, Indonesia, between January and February 2023 were approached of which 13 refused to participate. A total of 50 PLHIVs were included in the final analysis and their characteristics are represented in **Table 1**. Out of total participants, 88% were men and majority (78%) aged between 26–35 years. Among the participants 92% of them were employed and 54% were unmarried. The 72% of participants have been diagnosed with HIV and received ARV therapy for ≥ 2 years. Most of the participants (88%) had a high medication adherence.

Table 1. Characteristics of people living with HIV included in the study (n=50)

Variable	n	%
Sex		
Male	44	88.0
Female	6	12.0
Age (years)		
17–25	11	22.0
26–35	39	78.0
Employment status		
Not employed	4	8.0
Employed	46	92.0
Marital status		
Not married	27	54.0
Married	23	46.0
Length of time diagnosed		
<2 years	14	28.0
≥ 2 years	36	72.0
Medication adherence		
No	6	12.0
Yes	44	88.0
Length of antiretroviral therapy (ARV) therapy		
<2 years	14	28.0
≥ 2 years	36	72.0

Quality of life of people living with HIV

There were 40 (80%) and 10 (20%) of PLHIV who had good and poor quality of life, respectively, based on the WHOQOL-HIV BREF instrument. Detailed data of each domain of quality of life, quality of life perception, and health perceptions in general between those who had a poor and good quality of life are presented in **Table 2**. The physical aspect (100%) and social relations (76%) were primarily affected in HIV patients with poor quality of life. Meanwhile, those with a good quality of life are mostly affected in the aspects of independence, psychology, and spirituality for all subjects (100%), as well as the environment (80%) and perceived quality of life (80%).

Table 2. Quality of life of people living with HIV included in the study

Variable	Poor		Good	
	n	%	n	%
Quality of life				
Physical	50	100	0	0
Independence	0	0	50	100
Psychological	0	0	50	100
Social relations	38	76	12	24
Environment	10	20	40	80
Spirituality	0	0	50	100
Quality of life perception	10	20	40	80
Health perception in general	10	20	40	80

Predictors of quality of life of people living with HIV

Associations between the demographics (sex, age, employment status, marital status), medication adherence, duration of HIV diagnosis, and duration of receiving ARV therapy, with the quality of life of PLHIV are presented in **Table 3**. Statistical analysis indicated that marital status ($p=0.004$) and medication adherence ($p<0.001$) were associated with the quality of life of PLHIV who received ARV therapy included in this study.

Table 3. Factors associated with the quality of life of people living with HIV

Variable	Quality of life		p-value
	Poor n (%)	Good n (%)	
Sex			0.446
Male	10 (100)	34 (85)	
Female	0 (0)	6 (15)	
Age (years)			0.267
17–25	4 (40)	7 (17.5)	
26–35	6 (60)	33 (82.5)	
Employment status			0.696
Not employed	0 (0)	4 (10)	
Employed	10 (100)	36 (90)	
Marital status			0.004*
Not married	10 (100)	17 (42.5)	
Married	0 (0)	23 (57.5)	
Length of time diagnosed			0.181
<2 years	5 (50)	9 (22.5)	
≥2 years	5 (50)	31 (77.5)	
Medication adherence			<0.001**
No	6 (60)	0 (0)	
Yes	4 (40)	40 (100)	
Length of antiretroviral therapy (ARV) therapy			0.181
<2 years	5 (50)	9 (22.5)	
≥2 years	5 (50)	31 (77.5)	

* Statistically significant at $p<0.05$

** Statistically significant at $p<0.001$

Discussion

This study provides a comprehensive exploration of the intricate dimensions surrounding the quality of life among individuals with HIV undergoing ARV. By examining patient characteristics, their quality of life, and the complex interplay of various factors, the study yields valuable insights with implications for both clinical practice and the broader field of HIV research. The study brings forth several significant findings concerning the study participants. Primarily, the predominance of male subjects and the substantial representation of individuals aged 26 to 35 aligns with established trends in diverse geographical contexts [1,2,5,6]. This underscores the need for targeted interventions and awareness campaigns for this demographic due to their heightened vulnerability to transmission risk factors. The correlation between employment and marital status underscores the intricate interplay of factors impacting the lives of HIV patients. The high prevalence of employed yet unmarried individuals points to potential socioeconomic and lifestyle factors that require attention, indicating the necessity for comprehensive interventions

addressing medical and psychosocial dimensions tailored to specific subgroups within the HIV population.

Our data indicated there is an association between marital status and quality of life (**Table 3**), which is similar to the study in Jakarta [14]. Generally, married subjects received support for treatment and to continue with their life from their partners, friends, families or patient support institutions. These supports are essential for individuals with HIV because it can make them more optimistic in dealing with problems related to their health conditions, have adequate coping resources from their partners, and develop more adaptive coping to their stressors. This condition will affect all aspects of their quality of life and their perspective on life [14,15].

Significantly, the adherence to ARV medication emerges as a critical determinant of quality of life (**Table 3**). This result agrees with previous studies in other cities in Indonesia such as Padang [16] and Sorong [11]. In this present study, majority of the participants were adhered to medication, which is directly related to the quality of life, in particular physical health, because adherence to ARV increases immunity, reduces viral load, and delays disease progression. Lack of adherence to ARV therapy provides time for the HIV to replicate quickly and worsens the condition of individuals which worsening the quality of life. Therefore, high medication adherence is directly proportional to a good quality of life [11-16].

The strong adherence rate observed in this study, consistent with previous research [10, 11], reflects a positive trend in therapy management. High adherence to medication holds profound importance, influencing not only the physical health but also the psychological well-being and overall quality of life of HIV patients [11-16]. These findings underscore the significance of continued support systems and strategies to bolster medication adherence among individuals living with HIV.

This study's implications extend to a broader understanding of the quality of life among HIV patients. The dimensions of spirituality, psychology, and independence are particularly relevant for individuals with a good quality of life, often influenced by regional contexts such as the deeply ingrained spirituality observed in Aceh province. Conversely, those experiencing poorer quality of life are significantly impacted physically, likely due to the challenges posed by living with a chronic condition compounded by societal stigma [4-7]. These insights underscore the need for tailored interventions addressing psychological and physical well-being while considering regional cultural nuances.

There are some potential limitations of this study. First, the cross-sectional design limits the ability to establish causality. The study was conducted in a single hospital setting, which might affect the generalizability of the findings. Self-report measures might introduce bias in participant responses.

Conclusion

This study effectively bridges the connection between patient characteristics, medication adherence, and quality of life within the realm of HIV and ARV therapy. The identification of notable associations between marital status, medication adherence, and quality of life paves the way for comprehensive strategies to manage and enhance the lives of individuals living with HIV. The integration of medical care, psychosocial support, and community engagement remains pivotal for promoting holistic well-being, and mitigating the far-reaching impact of HIV. As the battle against HIV endures, these findings stand as guiding principles for more effective and compassionate care. By uplifting the lives of those living with the virus and cultivating resilience in the face of challenges, we are inch closer to a future where the impact of HIV is minimized, and the well-being of affected individuals is optimally nurtured.

Ethics approval

This study was approved by the Health Research Ethics Committee of Dr. Zainoel Abidin Hospital Banda Aceh, Indonesia (No 002/ETIK-RSUDZA/2023).

Competing interests

The authors declare that there is no conflict of interest.

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Underlying data

Derived data supporting the findings of this study are available from the first author on request.

How to cite

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