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Differences in quality of life of People living with HIV Based on Sexual Orientation and Related Factors

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Abstract

Purpose: Human immunodeficiency virus (HIV) patients, especially men with male-sex-male (MSM) sexual orientation have the highest risk of transmitting the disease. Therefore, this study aims to assess the Health-Related Quality of Life (HrQoL) among male HIV patients with different sexual orientations as well as to determine the dominant influential factors.

Methods: This is a cross-sectional study, which was carried out among 206 men living with HIV from Sriwijaya Plus Foundation as well as a medical facility providing antiretroviral (ARV) therapy. The data obtained were then analyzed using Chi-square and binomial logistic regression.

Results: The analysis showed that male HIV patients with MSM sexual orientation were more than the non-MSM, and they accounted for 68.9% of the total population. Furthermore, depression status, social stigma, family support, therapy duration, and suffering duration were significantly associated with the quality of life (p-value <0.001). The multivariate logistic regression revealed that the most dominant influential factor was depression status (POR=5.417; 95% CI=2.473-11.876), where the majority of the depressed patients were 5.417 times more at risk of lower life quality compared to others.

Conclusion: Depression can lead to low quality of life among HIV patients.

Keywords: male-sex-male, HIV, quality of life, depression

Introduction

Evaluation of life quality involves the understanding of the human immunodeficiency virus (HIV) impact on its patients' daily life. The high mortality and prevalence of HIV is still a global health problem, and a total of 33 billion death cases have been recorded. A previous study also estimated an increase in the number of patients to 38 billion by the end of 2019.¹ Meanwhile, one of SDGs goals is to put an end to the epidemic in 2030.² Indonesia is one of the countries with a high prevalence rate and most of the patients are sex workers, drugs users, shemale and people engaging in the same sexual orientation, namely man-sex-male (MSM). As an archipelago, the country also has a complex and dynamic epidemic pattern. In 2015, approximately 630,000 cases of HIV were recorded, where the prevalence among the 15-49 years age group was estimated to reach 0.3%. After 2007, Indonesia experienced an increase in maternal mortality with 228 deaths per 100,000 live births.³

At present, HIV is no longer a deadly disease, but has changed to a lifetime chronic condition, which can be managed. Patients with a controlled infection rate are often considered to be healthy. Health-related quality of life (HrQoL) is a multidimensional construct related to the impact of health on an individual's function in life domains as well as the physical, mental, emotional, and social well-being.^{4,5} Several studies revealed that self-reported levels of anxiety and depression were higher in HIV patients compared to others.⁶ Therefore, paying attention to their HrQoL has become a global agenda. UNAIDS has also set a target of 90-90-90, which ensures that 90% of infected people know their status, 90% of diagnosed patients are receiving antiretroviral therapy, and 90% of sufferers under treatment are virologically suppressed.⁷⁻⁹

Combinatorial antiretroviral treatment can substantially increase life expectancy and quality in HIV patients.⁵ Sexual violence can occur among MSM with alcohol dependency, depression, and violence from partners. Intimate partner violence refers to any behavior in a close relationship that causes physical, psychological, or sexual harm, such as physical assault, sexual compulsions, psychological abuse, and other aggressive attitudes.¹⁰⁻¹²

Several studies showed that the quality of life of HIV patients is higher than that of people with other chronic diseases¹³, however no study has compared MSM to other sexual orientations. Therefore, this study aims to compare the life quality of male HIV patients with different sexual orientations as well as to determine the dominant influential factor.

Methods

Participants and procedures

This study used a quantitative approach with a cross-sectional design, and the sample population consists of 1180 HIV patients. Subsequently, a total of 206 respondents were selected using a non-random sampling technique, namely purposive sampling. They were registered in the Care Support and Treatment (CST) service as well as the Sriwijaya Plus Community in Palembang City

Measures

The respondents' quality of life was measured using the World Health Organization Quality of Life-HIV BREF (WHOQOL-HIV BREF) instrument, which consisted of 6 domains, namely physical, psychological, level of independence, social relationships, environment, and spirituality. Each domain was rated on a 5-point Likert scale where 1 indicates low and negative perceptions, while 5 shows high positive perceptions. The validity and reliability tests of the instrument were carried out using the Indonesian language. The validity test revealed a strong correlation coefficient ($r = 0.60 - 0.79$), while the Cronbach Alpha value obtained from the reliability test was in the medium and good categories (0.513-0.798).¹⁴

Depressive symptoms: The symptoms include the psychological state of the respondents within the last two weeks. Furthermore, their depression status was measured using the PHQ-9 questionnaire (Patient Health Questionnaire-9), and the answers were given different scores, namely never (0), several days (1), more than a week (2), and almost every day (3). The questionnaire (PHQ) was a self-administered version of the PRIME-MD diagnostic instrument for common mental disorders. The depression status was grouped into 2 categories, where scores of 5-27 indicated a depressed state, while 0-4 were categorized as not depressed.¹⁵

Social stigma: This is a bad mark or view received by PLWHA while living with HIV/AIDS, and it was measured using the Berger HIV Stigma Scale instrument, where the total score ranged from 25-125. The categorization was carried out using a cut-off point formula of 75% of the total score (125), where values ≥ 93.75 indicates high stigma, while values < 93.75 were in the low category. The validity and reliability test of the Indonesian version of the Berger HIV Stigma Scale questionnaire (40 items) conducted by Nurdin (2013) obtained a Cronbach Alpha value of 0.94. Meanwhile, a value of 0.93 was recorded from the short version, which consisted of 25 items.¹⁷

Family support: This includes the support received by PLWHA from family members, such as husband, wife, children as well as biological father, mother, brother, and sisters that cared for them during illness. It can be in various forms, including informational, emotional, instrumental, and appreciative support, which were measured using an instrument developed by Arikunto (2002), where the total score ranged from 18 to 90. The categorization was carried out using a cut-off point formula of 75% of the total score, where values < 67.5 indicate low support, while others ≥ 67.5 were in the high category. A Cronbach's Alpha value of 0.6 was obtained from the reliability results.¹⁶

Occupation: Information about the respondent's occupation was obtained through interviews with questions that were already available in a structured questionnaire. Their occupations were then categorized into “not working and working” for further analysis.

Duration of ARV Therapy: Information about the respondent's Duration of ARV Therapy was obtained through interviews using questions that were already available in a structured questionnaire. The durations were categorized into “ < 1 year and ≥ 1 year” for further analysis.

Duration of living with HIV: Information about the respondent's duration of HIV infection was collected through interviews with questions that were already available in a structured questionnaire. The durations were then categorized into “ < 5 years and ≥ 5 years” for further analysis.

Statistical analysis

The data collected were analyzed statistically in 3 stages. A ¹univariate analysis was carried out to describe the characteristics of the respondents, after which the ₈Chi-square test was applied to explore the relationship between the main independent variables and quality of life. To

determine the dominant factors, a multivariate ⁸ analysis was performed using the multiple logistic regression test.

Results

Based on descriptive analysis, the demographic characteristics of the respondents showed that male HIV patients with MSM were more than people with other sexual orientations, and they accounted for 68.9% of the total population. Table 1 revealed that among the MSM group, 68.1% have a job, 71.2% are not married, 71.2% have incomes below the minimum wage, and 76.9% are below the age of 30 years. Furthermore, 64.8% have an undergraduate degree, 71% have a low quality of life, 63.9% experienced bad stigma, 68.8% are undergoing antiretroviral therapy, 72% have HIV duration of less than 5 years, 80.6% received low family support, and 70.2% were not depressed.

The evaluation of HIV patients' quality of life showed that non-MSM had a better quality of life in the physical domain. However, the MSM group was better in the psychological aspect, independencies, social interaction, environmental impact, as well as their perception of health, as shown in Table 2.

The bivariate analysis showed that depression status, social stigma, family support as well as the duration of antiretroviral (ARV) therapy and HIV infection significantly correlated with the quality of life with a p-value of 0.000. The multivariate analysis using logistic regression revealed that the most influential factor was depression status (p-value=0.000, PR_{Adj} 5.417; 95% CI (2.473-11.867)). This finding indicates that depressed HIV patients are 5.417 times more at risk than others, ¹⁵ as shown in Table 3.

Table 1. Demographic Characteristics People Living with HIV based on sexual orientation

Variables	Sexual orientation	
	MSM N=142	Non-MSM N=64
Gender		
Male	142 (68.9%)	64 (31.1%)
Occupation		
Unemployed	18 (75.0%)	6 (25.0%)
Employed	124 (68.1%)	58 (31.9%)
Marital status		
Not married yet	126 (82.9%)	26 (17.1%)
Married	12 (27.3%)	32 (72.7%)
Widower	4 (40.0%)	6 (60.0%)
Income		
< regional minimum wage	94 (71.2%)	38 (28.8%)
≥ regional minimum wage	48 (64.9%)	26 (35.1%)
Age		
< 30	80 (76.9%)	24 (23.1%)
≥ 30	62 (60.8%)	40 (39.2%)
Degree		
Elementary school	2 (28.6%)	5 (71.4%)
Junior High School	7 (70.0%)	3 (30.0%)
Senior High School	81 (72.3%)	31 (27.7%)
Diploma	15 (75.0%)	5 (25.0%)
Undergraduate	35 (64.8%)	19 (35.2%)
Graduate	2 (66.7%)	1 (33.3%)
Quality of Life		
Low	76 (71.0%)	31 (29.0%)
Good	66 (66.7%)	33 (33.3%)
Social stigma		
High	43(84.3%)	8 (15.7%)
Low	99 (63.9%)	56 (36.1%)
Duration of ARV therapy		
< 1 year	23 (69.7%)	10 (30.3%)
≥ 1 year	119 (68.8%)	54 (31.2%)
Duration of living with HIV		
< 5 years	118 (72.0%)	46 (28.0%)
≥ 5 years	24 (57.1%)	18 (42.9%)
Family support		
Low support	108 (80.6%)	26 (19.4%)
High support	34 (47.2%)	38 (52.8%)
Depression symptoms		
Depression	36 (65.5%)	19 (34.5%)
Not depression	106 (70.2%)	45 (29.8%)

Table 2. Descriptive analysis of People Living with HIV based on sexual orientation

Quality of life domains	N		Mean ± SD		Min – Max	
	MSM	Non MSM	MSM	Non MSM	MSM	Non MSM
Physical	142	64	13.75 ± 2.98	14.58 ± 2.88	6 – 19	5 – 20
Psychological	142	64	14.33 ± 2.63	14.01 ± 2.10	5.6 – 20	8 – 18.4
Level of independencies	142	64	14.52 ± 2.39	13.77 ± 2.01	7 – 19	7 – 18
Social relationship	142	64	13.65 ± 2.61	13.48 ± 2.89	8 – 20	8 – 20
Environment	142	64	13.81 ± 2.15	13.58 ± 2.29	8.5 – 20	9 – 20
Spiritual	142	64	13.08 ± 3.76	14.23 ± 3.54	4 – 20	6 – 19
3 Individual perception of QOL	142	64	3.84 ± 0.89	3.63 ± 0.81	1 – 5	1 – 5
Individual perception of health	142	64	3.76 ± 0.86	3.58 ± 0.89	2 – 5	2 – 5

Table 3. Bivariate and multivariate analysis using chi-square and logistic regression

Variables	Bivariate			Multivariate		
	PR	95% CI	p-value	PR	95% CI	p-value
	Crude			Adjusted		
Quality of life						
Low				Low		
High				High		
Depression status						
Depression	6.460	3.027-13.786	0.000	5.417	2.473-11.867	0.000
Not depression						
Social stigma						
High	2.839	0.344-1.054	0.003	2.506	1.213-5.176	0.013
Low						
Family support						
Low	2.469	1.370-4.449	0.003	2.430	1.280-4.612	0.007
High						
Occupation						
Unemployed	2.000	0.816-4.905	0.130			
Employed						
Duration of ARV Therapy						
< 1 year	2.437	1.095-5.424	0.029	7.239	3.822-13.714	0.000
≥ 1 year	2.026	1.011- 4.058				
Duration living with HIV						
< 5 years	2.026	1.011- 4.058	0.046			
≥ 5 years						

Discussion

The results showed that depression had an effect on the life quality of HIV patients, and the prevalence rate was higher among people with MSM sexual orientation compared to others. Furthermore, it is one of the most common psychiatric disorders, which negatively impacts the adherence and outcomes of antiretroviral treatment (ART). Throughout HIV infection, the patients experienced depressive symptoms due to their deteriorating health status, side effects of ART, apathy, stigma, and discrimination.¹⁸⁻²⁰ Depression consists of a series of disorders that affect sleep, weight, appetite, pleasure, reward-seeking behavior, and causes loss of motivation.²¹ The patients' quality of life can be improved by reducing stress-inducing factors as well as increasing family and peer support. Socio-economic empowerment can also be carried out along with sensitization on the effect of social stigma.²²

The result showed that perceived and internalized stigma led to an increase in the intensity of depression among the patients. They also caused serious public health problems, such as avoiding testing, not disclosing test results to partners, poor adherence to treatment, increased risk of developing drug resistance, restricted access to health services, and reduced HrQoL. This is in line with the results of several studies, that they are associated with poor physical life quality.²³⁻²⁶ Despite the efforts to reduce the negative impact of HIV-related stigma, patients are still stigmatized in various contexts, including community, workplace, access to health services, and family support.²⁴ The results also showed that there is a significant relationship between HIV patients' quality of life and family support. Furthermore, this finding is consistent with Jun et al. (2017) that it is associated with encouragement and the absence of discrimination.²⁷ HrQoL can be increased by strengthening support and family care as well as promoting HIV screening among high-risk populations. Providing information about medication adherence, overcoming discrimination, encouraging early Antiretroviral therapy (ART) initiation, and attending therapy regularly can improve their condition.²⁸

The results showed that the length of treatment is significantly related to an increase in life quality. In a regression analysis, Edwin (2014) reported that ART duration was negatively associated with HrQoL after controlling the sociodemographic, clinical, and therapy-related factors. A previous study revealed that patients with chronic disease or clinical symptoms of acute illness had the worse health-related quality of life.²⁹ The intake of ART helps to lower viral load, improve physical immune function as well as reduce opportunistic infections and comorbidities. It also increases the patient's productivity, social inclination, and quality of life.³⁰ ART is a conceptual framework that incorporates care retention. It has also become a

key component, which helped to increase longevity and control other infectious diseases. Treatment adherence has a significant long-term contribution to improving HrQoL^{31,32}

Conclusion

The results showed that the average physical and spiritual life quality of HIV patients with MSM sexual orientation was higher than others in the non-MSM category. They also had a better psychological well-being, independence level, social relationships, environment, and perceptions of health. The patients' life quality can be improved by providing vital support, reducing stigma as well as paying attention to stress levels and therapy adherence.

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Authors' Contribution

R.J.S. designed the study, developed a data instrument for data collection analysis, and drafted the manuscript. N.Y.A. contributed to the interpretation of results, as well as the reviewing and editing of the article. Furthermore, R.V.S. contributed to the proofreading and editing of the article, while M.N.P. assisted in the literature review and editing. All co-authors reviewed and approved the final manuscript before submission.

Ethics Approval and Consent to Participate

This study was approved by the ethical review committee of the Faculty of Public Health Sriwijaya University with reference number 149/UN9.FKM/TU.KKE/2021.

Competing Interest

The authors declare no significant competing financial, professional, or personal interests that can affect the performance or presentation of the work described in this manuscript.

Availability of Data and Materials

All data and related materials from this study are available and can be provided by the first author.

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