

# Factors Associated with the Quality of Life of People Living with HIV/AIDS

ORIGINAL

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## Abstract

**Methods:** This is a cross-sectional study with a quantitative approach and random sample selection, carried out in two Specialized Assistance Services, with 356 people living with HIV. The comparison between the domain scores was performed using the student t test, ANOVA and Pearson's correlation. Multiple linear regression was used to assess the contribution of variables to the outcome quality of life using the stepwise method.

**Results:** The domains that showed the best results in averages were Psychological (17.0), Social Relations (14.9) and Level of Independence (14.0). The domain that had the greatest determination was the *Psychological* ( $R^2 = 0.49$ ), followed by Social Relations ( $R^2 = 0.434$ ), the lowest determination was the *Spirituality* domain ( $R^2 = 0.270$ ). No domain had a score considered high.

**Conclusion:** The quality of life presented unsatisfactory results, especially in the *Physical*, *Environment* and *Spirituality* domains. The need to formulate strategies aimed at coping with HIV and increasing the quality of life of people living with HIV is evident.

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## Keywords

HIV; Quality of Life; Cross-Sectional Studies

## Introduction

Quality of life (QOL) is defined as the individual perception of life within a cultural context and value systems. It is, therefore, a broad concept, encompassing psychological, social, aesthetic, cultural and spiritual aspects. In addition, it is necessary to consider other essential elements for life, such as food, housing, work, education, health, leisure, family and love. [1]

Understanding the concept of quality of life in the current context of intense social transformations is necessary for health care, especially for planning assistance to people living with chronic diseases. In this perspective, the availability of increasingly powerful and effective antiretroviral (ARV) schemes, with minor side effects and in combined use, has enabled changes in the lives of people living with HIV (PLHIV), providing a decrease in morbidity and mortality and an increase in quality and life expectancy. [2]

Data show that two thirds of PLHIV worldwide have access to antiretroviral therapy (ART). This increase in access contributes to the reduction of new HIV infections and contributes to the decline in deaths related to the disease. There is a reduction in new cases on several continents, a phenomenon that is not yet observed in Latin America as well as in Brazil. [3] Therefore, the challenges to control the epidemic and provide quality assistance are still great.

Among these challenges, the maintenance of high rates of adherence to treatment stands out, essential for the control of the disease and to maintain longevity with quality. It is noteworthy that failures in adherence or the inconsistent use of medications impair the effectiveness of the treatment, enable viral resistance and compromise the individual's QOL. [2, 3, 4]

HIV infection can also cause clinical, psychological and social changes to the individual due to impaired immune status. Studies that deepen the assessment and identification of factors that influence quality of life can contribute to reduce morbidity and mortality, increase adherence to treatment and control of the

disease. In this perspective, this study aims to assess the quality of life and the associated factors in people living with HIV.

## Methods

This is a cross-sectional study with a quantitative approach and random sample selection, through the intrinsic randomness of appointments and outpatient entries, carried out in two Specialized Assistance Services (SAS) of reference in the treatment of HIV/AIDS infection in the city of Recife- Between June and November 2016.

Participated in the study PLHIV accompanied by SAS, of both sexes, aged  $\geq 18$  years, diagnosed with HIV for at least six months and who did not present cognitive alterations or neurological diseases that could compromise the interview.

To calculate the sample, an equation for quantitative outcomes (means) was used, considering an  $\alpha$  error of 5% for a 95% confidence level, a maximum standard error of 2.0 points and a standard deviation for the outcome of quality of life of 20.57 points. [5] A finite population of 2630 patients registered at the service until March 2016 was considered. Using these parameters, the calculated sample was 352 patients plus a safety margin of over 6%, leaving the sample with 378. Considering the refusals to participate in the study, the final sample was 356 participants.

Data were collected through individual interviews, in the outpatient's own rooms, before or after consultation with the specialist, to ensure confidentiality of the interviews. The collection of clinical data, such as TCD4 lymphocytes, viral load and antiretroviral therapy, was carried out during the interviews, when the participants had these tests and medications in hand, when not, after the interviews, the medical records were consulted to collect these data.

To characterize the research subjects, a questionnaire was elaborated, with sociodemographic va-

riables (sex, age, marital status, income, education, sexual orientation and religion) and clinical variables (time of diagnosis, ART, last TCD4 lymphocyte count and viral load). The main outcome measure was quality of life and the World Health Organization of Quality of Life – HIV Bref (WHOQOL-HIV BREF) scale was used to measure it. [1]

The primary data were stored in Microsoft Excel 2013 spreadsheets and were analyzed through analytical statistics, using the Statistical Package for the Social Sciences (SPSS) software, version 22.0. The results of the Kolmogorov-Smirnov test proved to be significant for all domains ( $p = 0.2$ ), revealing Gaussian distribution for the quality of life outcome. All domains showed Cronbach's alpha greater than 0.8, indicating high reliability in the application of the instrument for the study population.

The comparison between the scores of the domains according to the categorical variables was made using the student t test and ANOVA. The association between domains, facets and total QOL score was assessed by Pearson's correlation coefficient, being considered strong if  $r \geq 0.8$ , moderate if  $0.3 \leq r < 0.8$ , and weak if  $r < 0.3$ . Multiple linear regression was performed to assess the contribution of variables to the outcome quality of life using the stepwise method. Initially, predictive variables whose associations had a p-value greater than 0.20 were excluded. Then, an exclusion was tested for  $p > 0.1$  and it was decided to keep this reference to define the variables that would remain in the model, since there were no significant differences for a broader criterion ( $p > 0.2$ ).

The ethical precepts of Resolution 466/2012 of the National Health Council of the Ministry of Health were respected. The research was approved by the Research Ethics Committee of the HUOC/PROCAPE hospital complex, under the number: 1.593.538 approved in 2016. All research participants signed the Free and Informed Consent Form.

## Results

378 patients were approached, of which 22 refused to participate, 17 claimed another appointment in time/lack of time and five did not want to reveal information to the researcher, even though secrecy was explained and ensured. The sample was composed of 356 PLHIV, being 178 in each of the SAS studied. The homogeneity between the results in each service was tested and the measurements proved to be homogeneous, which enabled the analysis grouped in a single sample.

There was a slight predominance of males (200 - 56.2%), aged between 24 and 72 years (mean  $46.15 \pm 23.3$  years), without a partner (264 - 74.1%), of low income (222 - 62.4% - up to a minimum wage in force during the collection period) and heterosexuals (244 - 68.5%). There was a registration of a transsexual person (0.4%). Regarding education level, 12 declared themselves illiterate (3.4%), most had completed high school (272 - 76.4%). The predominant religions were evangelical (137 - 38.5%), followed by catholic (126 - 35.4%), agnostics (42; 11.8%) and spiritist (27 - 7.6%).

The mean time of diagnosis was  $10.25 \pm 6.37$  years and the mean time of use of ART was  $9.09 \pm 5.09$  years. Regarding adherence to antiretrovirals, 270 (75.8%) never stopped antiretrovirals. The last count of TCD4 lymphocytes is between 500 and 999 cells/mm for 57.6% (205) and 85.4% (304) had an undetectable viral load in the last exam.

The results of the WHOQOL-HIV Bref domains did not vary significantly in terms of age, gender and marital status. The *Social Relations* and *Environment* domains showed the best results in the highest income group ( $p = 0.009$  and  $p = 0.007$ , respectively); the domains Level of Independence, Social Relations and Spirituality had better scores in the more educated groups ( $p < 0.001$ ,  $p < 0.001$  and  $p = 0.036$ , respectively), sexual orientation was associated with the Social Relations domain ( $p = 0.001$ ) and the religion with the Physical domain ( $p = 0.036$ ) (Table 1).

**Table 1.** Scores of quality of life domains as a function of sociodemographic variables.

Variables	Physical			Psychological			Level of independence			Social relations			Environment			Spirituality		
	Avg	sd	p-value	Avg	sd	p-value	Avg	sd	p-value	Avg	sd	p-value	Avg	sd	p-value	Avg	sd	p-value
<b>Age range<sup>1</sup> (years)</b>																		
18 to 29	15.3	2.9	0.380	16.0	1.7	0.307	15.0	1.6	0.130	15.4	2.7	0.613	14.1	2.0	0.915	15.1	3.4	0.498
30 to 39	14.7	3.7		14.9	3.0		14.3	3.5		15.2	2.9		13.9	2.1		14.8	3.5	
40 to 49	14.4	3.4		15.0	2.7		14.1	3.2		15.0	2.8		13.8	2.3		15.5	3.4	
50 to 59	14.6	3.4		14.6	3.1		14.0	2.7		14.8	2.7		13.5	2.3		15.4	3.3	
60 to 69	15.7	3.1		15.6	1.7		14.7	2.6		15.7	2.3		14.0	1.8		16.2	3.3	
≥70	14.0	2.8		16.4	2.8		14.0	1.4		14.0	1.4		14.0	0.7		12.5	3.5	
<b>Sex<sup>2</sup></b>																		
Female	14.6	3.5	0.95	14.7	2.6	0.179	13.8	3.0	0.249	14.9	2.8	0.656	13.5	2.2	0.203	15.2	3.4	0.152
Male	14.8	3.5		15.2	2.9		14.6	3.0		15.2	2.7		14.0	2.1		15.5	3.4	
<b>Marital status<sup>2</sup></b>																		
No partner	14.4	3.5	0.566	14.5	2.7	0.125	14.3	2.9	0.636	14.8	2.9	0.597	13.98	2.2	0.881	15.3	3.4	0.877
With partner	13.4	3.0		15.1	2.2		13.5	3.8		15.6	2.5		13.1	2.0		15.9	3.5	
<b>Income<sup>2</sup></b>																		
Up to 1 MW	14.4	3.5	0.951	14.8	2.7	0.170	12.5	4.4	0.06	12.1	4.6	0.009	12.2	4.6	0.007	14.8	3.0	0.608
More than 1 MW	14.8	3.5		15.3	3.5		14.4	2.7		14.9	3.0		15.1	3.4		15.3	3.2	
<b>Education<sup>1</sup></b>																		
Illiterate	14.9	3.5	<0.355	14.9	2.2	0.067	12.2	2.8	<0.001	14.1	2.8	<0.001	13.6	1.7	0.094	13.7	3.8	0.036
Literate	12.7	4.4		15.2	1.4		13.2	3.3		13.8	3.2		13.0	3.1		14.5	3.5	
Elementary School	14.4	3.4		14.9	2.7		13.9	3.2		14.7	2.5		13.5	2.4		15.5	3.5	
High school	14.8	3.3		15.0	2.9		14.5	2.7		15.4	2.6		13.9	2.0		15.3	3.3	
Higher education	15.9	2.9		15.9	2.2		15.5	2.7		16.0	2.8		14.8	1.9		15.9	2.9	
Graduate	18.2	1.7		17.2	1.9		15.5	2.89		16.2	2.1		14.9	2.1		17.5	2.1	
<b>Sexual Orientation<sup>1</sup></b>																		
Heterosexual	14.5	3.5	0.736	15.1	2.7	0.263	13.9	3.2	0.299	14.9	2.8	0.001	13.6	2.2	0.399	15.4	3.4	0.409
Homosexual	15.4	3.4		15.0	2.8		15.1	2.7		15.4	2.6		14.2	2.7		15.3	3.3	
Transsexual	14.0	3.0		14.1	3.5		14.5	2.6		14.9	2.2		14.2	2.1		15.1	4.3	
Other	19.2	4.8		20.0	4.4		17.0	4.6		19.0	3.9		14.0	2.2		16.0	4.0	
<b>Religion<sup>1</sup></b>																		
Catholic	14.9	3.3	0.036	15.1	2.8	0.411	14.5	2.8	0.735	15.4	2.5	0.449	13.8	1.9	0.195	15.4	3.3	0.220
Evangelic	14.2	3.7		14.9	2.7		13.7	3.1		14.9	2.8		13.7	2.3		15.4	3.6	
Spiritist	16.3	2.7		15.6	2.2		15.9	2.5		15.5	2.5		14.8	2.4		16.3	3.1	
Umbanda	13.8	2.9		15.4	2.2		14.2	2.4		15.6	2.6		13.8	1.8		14.5	2.8	
Atheist	15.0	1.7		14.6	2.3		14.7	2.3		17.0	3.5		13.0	1.0		17.0	0.0	
Without religion	14.6	3.5		14.9	3.2		14.7	3.2		14.9	2.8		13.9	2.1		14.7	3.6	
Other	14.5	3.3		13.0	2.2		11.2	3.3		12.8	3.6		13.0	2.6		14.6	2.5	

Source: Authors, 2019. 1: ANOVA; 2: t test; Avg: Average; sd: standard deviation; MW: minimum wage in force in the period.

**Table 2.** Multiple linear regression of sociodemographic and treatment-related variables versus WHOQOL HIV-Bref.

Variables	Avg	sd	R	p*	β	CI 95%	p*
<b>Sociodemographic (R<sup>2</sup> adjusted = 0.08)</b>							
Age (years)	46.1	9.9	-0.002	0.48			
Income (MW)	1.8	1.8	0.242	0.00	0.179	0.06/1.09	0.026
Education (years)	12.2	5.9	0.251	0.00	0.163	0.26/1.26	0.003
<b>Treatment-related</b>							
Diagnostic time (years)	10.2	6.4	-0.037	0.246			
ART time (years)	9.1	5.9	-0.063	0.117			
Last CD4	4.6	1.0	0.076	0.077			
Last viral load	1.3	0.9	-0.091	0.044			
<b>Source:</b> Authors, 2019. Avg: Average; sd: standard deviation; MW: minimum wage in force in the period; ART: Antiretroviral therapy; R: Pearson's correlation coefficient; β: angular coefficient; CI: Confidence Interval. *: Values of p < 0.1 were considered in the regression model in the bivariate analysis..							

The first linear regression tested a model with sociodemographic variables to explain QOL and then a model with treatment-related variables. The variables income and education level showed a weak correlation with the outcome and the model presented a weak determination of QOL, while the variables related to treatment did not present a significant association (**Table 2**). It was observed that the adjusted model for sociodemographic variables explains only about 8% (R<sup>2</sup> adjusted = 0.08) of the variation in the quality of life score.

The domains that showed the best results in averages also showed a better correlation with the total, with the highest averages for the domains: Psychological, Level of Independence and Social Relations. The domain with the lowest scores was Spirituality / Religiosity / Personal Beliefs (**Table 3**). Items that did not have a p-value less than 0.1 did not compose multiple linear regression for the analysis of possible explanatory models of QOL.

**Table 3.** Correlation between the domains and facets of Quality of Life and the total score of the WHOQOL HIV-Bref.

Domains of Quality of Life	Avg	sd	R	p
Self-Assessment of Quality of Life	3.6	0.8	0.474	
Satisfaction with health	3.6	0.9	0.383	
<b>Physical Domain</b>	<b>11.8</b>	<b>4.8</b>	<b>0.384</b>	
Limitation due to physical pain	2.3	1.4	-0.06	0.259
Discomfort due to HIV-related physical problem	2.3	1.4	-0.026	0.62
Self-perceived energy for everyday life	3.7	0.9	0.567	0.00
Satisfaction with sleep	3.5	1.1	0.486	
<b>Psychological Domain</b>	<b>17.0</b>	<b>5.1</b>	<b>0.67</b>	
Self-assessment of the enjoyment of life	3.6	1.1	0.528	0.00
Concentration capacity	3.5	1.0	0.427	
Capacity to accept your physical appearance	3.9	0.9	0.436	
Satisfaction with yourself	3.8	0.9	0.531	
Frequency of negative feelings	2.2	1.2	-0.234	
<b>Independence Level Domain</b>	<b>14.3</b>	<b>4.1</b>	<b>0.647</b>	<b>0.00</b>
Need for medical treatment for daily life	3.1	1.2	0.054	0.312
Mobility capacity	4.1	0.9	0.422	
Satisfaction with ability to perform activities	3.7	0.9	0.574	
Satisfaction with work capacity	3.4	1.1	0.568	
<b>Social Relations Domain</b>	<b>14.9</b>	<b>3.7</b>	<b>0.658</b>	
Feeling of acceptance by acquaintances	3.8	0.9	0.454	0.00
Satisfaction with personal relationships	3.8	0.9	0.486	
Satisfaction with sex life	3.6	1.0	0.467	
Satisfaction with support from friends	3.7	0.9	0.523	
<b>Social Relations Domain</b>	<b>14.9</b>	<b>3.7</b>	<b>0.658</b>	
Feeling of security in daily life	3.4	0.9	0.299	0.00
Self-assessment of the physical environment	3.6	0.9	0.322	
Enough money for needs	2.7	1.0	0.44	
Availability of information	4.0	0.9	0.337	
Leisure opportunities	3.4	1.1	0.414	
Satisfaction with where you live	3.7	0.9	0.418	
Satisfaction with access to health services	3.6	1.2	0.233	
Satisfaction with means of transport	3.2	1.1	0.165	
<b>Spirituality / Religiosity / Personal Beliefs Domain</b>	<b>10.6</b>	<b>5.1</b>	<b>0.306</b>	
Self-assessment of meaning for life	4.0	0.8	0.474	
Discomfort with the responsibility of others for having HIV	2.3	1.5	0.09	0.089
Fear of the future	2.2	1.4	0.095	0.074
Concern about death	2.1	1.4	0.187	0.00
<b>Source:</b> Authors, 2019. Avg: Average; sd: standard deviation; R: Pearson's correlation coefficient.				

**Table 4.** Result of multiple linear regression between the total score and the domains that make up the WHOQOL HIV-Bref.

Domínios Domains of Quality of Life	$\beta^*$	CI 95%	p
Self-assessment of quality of life ( $R^2 = 0.223$ )	0.474	3.7/5.6	0.00
Satisfaction with health ( $R^2 = 0.144$ )	0.383	2.4/3.9	
<b>Physical Domain (adjusted <math>R^2 = 0.406</math>)</b>			
Self-perceived energy for everyday life	0.447	3.1/4.6	0.00
Satisfaction with sleep	0.321	1.6/2.8	
<b>Psychological Domain (<math>R^2 = 0.49</math>)</b>			
Self-assessment of the enjoyment of life	0.364	2.4/3.3	0.00
Concentration capacity	0.222	1.1/2.4	
Capacity to accept your physical appearance	0.160	0.6/2.1	
Satisfaction with yourself	0.330	2.2/3.9	
Frequency of negative feelings	0.147	0.4/1.6	0.001
<b>Level of Independence Domain (<math>R^2 = 0.398</math>)</b>			
Mobility capacity	0.150	0.5/2.0	0.00
Satisfaction with ability to perform activities	0.296	1.5/3.8	
Satisfaction with work capacity	0.299	1.3/2.9	0.002
<b>Social Relations Domain (<math>R^2 = 0.434</math>)</b>			
Feeling of acceptance by acquaintances	0.161	0.6/2.3	0.00
Satisfaction with personal relationships	0.186	0.7/2.6	
Satisfaction with sex life	0.321	1.8/3.1	
Satisfaction with support from friends	0.243	1.2/3.0	
<b>Environment Domain (<math>R^2 = 0.411</math>)</b>			
Feeling of security in daily life	0.148	0.5/1.9	0.001
Self-assessment of the physical environment	0.098	0.1/1.7	0.037
Enough money for needs	0.210	0.9/2.4	0.00
Availability of information	0.186	0.9/2.5	
Leisure opportunities	0.229	0.9/2.9	
Satisfaction with where you live	0.180	0.7/2.3	0.032
Satisfaction with access to health services	0.092	0.1/1.2	
<b>Spirituality / Religiosity / Personal Beliefs Domain (<math>R^2 = 0.270</math>)</b>			
Self-assessment of meaning for life	4.0	0.8	0.474

**Source:** Authors, 2019.  $\beta$ : angular coefficient;  $R^2$ : determination coefficient; CI: Confidence Interval. \*: Values of  $p < 0.1$  were considered in the regression model in the bivariate analysis.

In the regression analysis, the domains were considered as explanatory models for QOL, and the power of determining each domain on the total score was evaluated. The domain that had the greatest determination was *Psychological* ( $R^2 = 0.49$ ), followed by *Social Relations* ( $R^2 = 0.434$ ), while the lowest QOL determination was presented by the *Spirituality / Religiosity / Personal Beliefs* domain ( $R^2 = 0.270$ ). The two isolated questions about the self-assessment of QOL and satisfaction with health also showed low power to determine the total QOL (**Table 4**).

## Discussion

The sociodemographic data of the study showed people in the productive phase, single, with low income, schooling compatible with high school (around 12 years of study) and the female gender almost equal to the male. The feminization of the HIV epidemic is a phenomenon global and has repercussions on the increase in cases of vertical transmission and lower QoL rates, since women suffer more from stigmatizing and social factors, in addition to suffering greater impacts on sexual life. [6]

Considering the clinical aspects, good parameters are verified, such as non-interruption of treatment, TCD4 cell count  $> 500$  cells/mm<sup>3</sup> and undetectable viral load. These factors contribute to quality of life and are an indication of good adherence to treatment. However, it is necessary to consider that adherence is configured as something broader, which should consider, in addition to taking medications at the prescribed dose and frequency, the performance of routine examinations and attendance at scheduled appointments. [7]

Some factors must be considered when assisting people living with HIV, since the time of diagnosis and treatment of up to one year was associated with a lower quality of life due to adaptation, changes imposed by treatment and side effects more significant at the start of treatment. As well as high

viral load levels and low CD4 cell count were related to higher rates of hospitalization, greater use of medications and more associated diseases. [8, 9] In contrast, people undergoing treatment for approximately a decade showed results that pointed to a quality of life that did not vary significantly in terms of age, gender, marital status and religion. [10]

Despite the advances in this area, adherence to treatment still represents a challenge for health professionals, since ARVs are drugs of continuous use and studies show a tendency to decrease adherence over time, which may reflect negatively in the individual's QOL, besides being able to cause therapeutic failures. Thus, it is necessary for the multiprofessional team to act in the formulation and implementation of strategies aimed at increasing adherence to treatment. [10, 11]

In this study it was possible to identify that the analyses of the QOL domains did not vary significantly in relation to the age group, gender and marital status. There is a significant association in the Social Relations and Environment domains with the highest income group. Social Relations also showed an association with the group with the highest level of education and this association was also observed in the Level of Independence and Environment. Religion was associated with the Physical domain. These results may be linked to the fact that people who live with HIV and have higher education and income are able to experience the disease with more resources and to establish better adaptation mechanisms, in addition to experiencing leisure opportunities, better living conditions and access goods that provide comprehensive health care. [8]

When sociodemographic variables were assessed to explain QOL, it was observed that income and education had a weak correlation. The treatment-related variables were not correlated. The domains that showed the best results, on average, were Psychological, Level of Independence and Social Relations. The Level of Independence domain encompasses factors of the practice of activities of

daily living and health care, treatment follow-up, use of medications and work capacity. The Social Relations domain involves factors of sexual and social activities. [1]

It is perceived that the essences of these domains have conceptual connections, since they represent factors considered socially as determinants of better socioeconomic and educational conditions, with a chain effect, since income favors more education which, consequently, adds more favorable conditions of life. These factors trigger a more acute relationship of self-perception and personal management due to the greater ease in accessing and understanding information. [8]

Sexual orientation showed a positive association with Social Relations, in which the highest averages are distributed among homosexual groups. Religion, specifically spiritist, was associated with the Physical domain. The factors related to the sexual orientation of HIV patients are constantly attributed to segments considered to be marginalized in society, groups considered to be most vulnerable to HIV. These factors contribute to stigmas and prejudices that inevitably culminate in depressive symptoms and social detachment. The Social Relations domain encompasses sexuality in its concept, and this relationship is confirmed in the results presented in this study. [12]

The domain with the lowest scores was Spirituality / Religiosity / Personal Beliefs which focuses on conceptions about health, death, the future, feelings of guilt and forgiveness. Considering religion, it is curious to notice that the association was significant in relation to the Physical domain. This fact may be linked to the characteristics of the Physical domain that cover issues such as pain, discomfort, energy, fatigue, sleep and rest. Spiritual extension contributes to personal protagonism in dealing with the disease, with the strengthening of issues linked to self-care and reports of feelings of happiness, comfort and resignation in relation to the health and life conditions imposed by the disease. [8]

Still with regard to religion, only those who declared themselves to be spiritists had a higher average in the Level of Independence domain. Similar findings are noticed in other national studies, which observed that the more the individual experiences his religious belief, the more positively he faces the disease. In this way, the religious-spiritual confrontation is of great impact, since it helps in the acceptance of the health condition and favors the quality of life. Thus, the use of religiosity and spirituality and the strengthening of family and emotional ties are considered factors that can collaborate with improving the quality of life. The use of spiritual care in the context of care provides the patient with a reflection about the disease, as well as can assist in behavioral changes. [8, 13]

In the analysis of the power of determination of each domain on the total score, there is greater determination in the Psychological and Social Relations domains and less determination in Spirituality / Religiosity / Personal Beliefs. In planning care, it is important to consider that religiosity and spirituality can be used in the search for the meaning and reason for living in the context of illness and these strategies can contribute to the promotion of health and quality of life. [14] In addition, it is of great relevance that the health professional has knowledge about religiosity and spirituality, since the use of these strategies can help in coping and accepting the disease, directly impacting adherence to treatment, consequently, improving clinical aspects and quality of life of PLHIV. [13]

It is observed that there is no consensus regarding the mean of the domains presented by the WHO-QOL HIV-Bref QOL questionnaire. The results show better averages in the Social Relations, Spirituality and Environment domains. Worse results in the Level of Independence and Environment domains, with factors that negatively influenced the quality of life of homo-affective relationships, such as having suffered stigma or prejudice and the presence psychosocial feelings. [4, 8, 15] In the present study,

the results indicate the domains Psychological, Level of Independence and Social Relations with prominence in relation to the others.

Quality of life was influenced by access to treatment, economic condition, mode of transmission and condom use. [16] In a study conducted with women, low quality of life was found in all domains. The factors that affected quality of life were difficulties in social support, income, education, perceived stigma and TCD4 cell count at the beginning of treatment. [17]

In the present study, no domain presented a score considered high for QOL, which corroborates the need to take measures that can help these people, that is, it is necessary to formulate strategies that contribute not only to adherence to treatment, but to cope with the disease, providing a psychological and social improvement. The importance of the patient-professional bond, the creation of support and adherence groups is highlighted. These strategies are excellent opportunities for guidance, communication with an exchange of experiences between individuals and the strengthening of others based on what has been experienced. In addition, the use of religiosity or spirituality and family strengthening are also identified as measures that can collaborate. [13, 18]

The limitations of the study refer to the cross-sectional design that does not allow establishing a cause and effect relationship between the outcome variable and the independent variables. However, improving the quality of life has been considered an important goal in the health care of PLWHA and should be considered when planning the assistance provided by the multiprofessional team. In this perspective, studies that allow assessing quality of life are relevant, since the natural history of the disease is dynamic and multifaceted.

In addition, the results found, especially in relation to clinical aspects, bring reflection on other perspectives, such as the process of decentralizing the care of these people to primary care, with the

possibility of improving the quality of life. These individuals, when they are asymptomatic and stable, can receive care in primary care, including the offer of exams, availability of medicines and care by trained professionals and SAS would function as matrix and reference services for symptomatic, coinfecting, pregnant women and children. [7]

## Conclusion

The quality of life expressed in this research showed unsatisfactory results. The domains that showed the best results in averages were Psychological, Level of Independence and Social Relations. The Psychological domain, followed by Social Relations, were the ones that showed the greatest powers of determination over the total quality of life score. The least determined was presented by the domain Spirituality / Religiosity / Personal Beliefs. No domain had a score considered high.

These data serve as important indicators that can guide strategies for facing the great challenge of the clinical management of patients with HIV, which is to maintain QOL in the long term. It is necessary to note that antiretroviral therapy has transformed HIV diagnosis from an issue that referred to death to a perspective of hope and longevity living with the virus.

In this regard, care for people living with HIV should focus on HIV-related chronicity as an intrinsic factor to QOL, highlighting the influence of multidisciplinary and specialized monitoring. With the process of decentralization of care in progress, it is expected to collaborate in the planning of care at all levels of care for these patients, considering a full and happy life. The contribution in expanding knowledge about the factors associated with QoL presented in this research is highlighted, so that health professionals, especially nurses, can plan individualized care considering the various aspects of quality of life in people living with HIV.

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## Competing and Conflicting Interests

There is no conflict of interest.

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