

# Quality of life of HIV seropositive women

Qualidade de vida de mulheres portadoras do HIV

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## Abstract

**Objective:** Analyze the quality of life of HIV seropositive women.

**Methods:** Cross-sectional study including 40 women selected through non-probabilistic sampling. The questionnaire WHOQOL-HIV brief was the research instrument employed, considering the six domains of the instrument and socio-demographic and clinical aspects. Data analysis was performed using the Kolmogorov-Smirnov test to analyze the normality of sampling average distributions, and the Mann-Whitney and Kruskal-Wallis tests to analyze the difference between averages or medians of the scores for quality of life. The Spearman coefficient was used for potential correlations.

**Results:** According to the questionnaire, the *Spirituality* domain (average=59.5) reported the highest score, while the *Environment* domain (average=52.1) scored lowest. The average age was 41 years old; 97.5% declared themselves to be heterosexual; and 80.0% used antiretroviral treatment.

**Conclusion:** Spirituality was the best-performing domain, followed by the Physical domain. The lowest average scores were observed for the Environment and Social Relations domains.

## Resumo

**Objetivo:** Analisar a qualidade de vida de mulheres portadoras do HIV.

**Métodos:** Estudo transversal que incluiu 40 mulheres selecionadas por amostra não-probabilística. O instrumento de pesquisa foi o questionário WHOQOL-HIV brief, considerando-se os seis domínios do instrumento e os aspectos sociodemográficos e clínicos. Para análise dos dados foi realizado o teste de *Kolmogorov-Smirnov* para a normalidade das distribuições de médias amostrais e os testes *Mann-Whitney* e *Kruskal-Wallis* para analisar a diferença entre as médias ou medianas dos escores de qualidade de vida. O coeficiente de Spearman foi utilizado para possíveis correlações.

**Resultados:** Segundo o questionário, o domínio *Espiritualidade* (média = 59,5) apresentou maior escore e o domínio *Meio Ambiente* (média = 52,1) o menor escore obtido. A média da idade foi de 41 anos, 97,5% declararam ser heterossexuais, 80,0% utilizavam tratamento antirretroviral.

**Conclusão:** A espiritualidade foi o domínio com melhor desempenho, seguido do domínio Físico. Os menores escores médios foram observados nos domínios Meio Ambiente e Relações Sociais.

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**Conflicts of interest:** there are no conflicts of interest to be declared.

## Introduction

The number of individuals living with HIV has increased due to, among other factors, reduced mortality rate, mainly because of the introduction of the policy of universal access to antiretroviral therapy.

The epidemiological situation indicates that, by the end of 2013,<sup>(1)</sup> 35 million individuals worldwide lived with HIV/AIDS, of which 15.9 million were women. Although the man/woman ratio has decreased in some countries, women represent 50% of all adults living with HIV.<sup>(2)</sup>

Thus, in countries where access to antiretroviral therapy is a reality, the perception of the disease has been changed from a lethal to a chronic health condition.<sup>(3)</sup> The number of individuals taking antiretroviral therapy in Latin America and the Caribbean has increased from 210,000 in 2003 to 795,000 in 2013, representing 56% of people needing treatment and 44% of all people with HIV.<sup>(4)</sup>

Many times, living with the human immunodeficiency virus means having to cope with depressive symptoms as well as the stigma and discrimination associated with the disease, in addition to the need for social support.<sup>(5)</sup> Moreover, there are the side effects of the therapeutic regimen, in addition to the fight against prejudice perceived by individuals with HIV.<sup>(6)</sup> All of these aspects reinforce the importance of evaluating quality of life.<sup>(7)</sup>

The disclosure of the diagnosis of HIV infection causes changes to the woman's life, such as dismissal or voluntary abandonment of employment, restrictions in the ability to do household chores, and abnegation of pleasant activities due to the manifestation of the disease. The possibility of losses related to the physical impairments associated with the difficulty of living with a chronic disease that still bears stigma and discrimination can trigger isolation and loneliness.<sup>(8)</sup>

The social roles played by men and women and the existing inequality have a negative impact on the quality of life of women living with HIV. Studies with different populations show a worsening of the quality of life of women compared to that of men.<sup>(9,10)</sup>

The quality of access to treatment also influences the quality of life.<sup>(11)</sup> HIV seropositive women present higher average scores for depressive symp-

toms and lower quality of life than non-infected women.<sup>(12)</sup>

The objective of this study was to analyze the quality of life of HIV seropositive women.

## Methods

This was a cross-sectional study conducted at a specialized outpatient care unit in the interior of São Paulo, southeast region of Brazil.

The non-probabilistic sampling of the study was comprised of 40 HIV seropositive women with a previously booked medical appointment from January to July 2011 who met the following inclusion criteria: 18 years old or more; aware of the HIV/AIDS infection for at least six months; and undergoing regular clinical follow up at the site of study. The exclusion criteria were as follows: pregnancy; puerperal period; and/or psychiatric disease.

Researchers collected data in a private room, through individual interviews, for 15 to 20 minutes on average.

The following instruments were employed: a socio-demographic and clinical questionnaire; and the WHOQOL-HIV brief instrument designed by the World Health Organization, translated into and validated in Portuguese. This is an instrument of quality of life for individuals with HIV/AIDS, the shortened version of which consists of 31 questions distributed in six domains: Physical; Psychological; Degree of Independence; Social Relations; Environment; and Spirituality.<sup>(13)</sup> Each domain can be scored from 0 (worst QL) to 100 (best QL).<sup>(14)</sup>

Data was input into a Microsoft Office Excel® for Windows 2007 spreadsheet and was analyzed through the Statistical Package for the Social Sciences, version 18.0 software. The Kolmogorov-Smirnov test was performed to evaluate the normality of sampling averages distributions. It used the syntax to calculate scores for each item of the instrument offered by the Group Survey on Quality of Life in Brazil, in Portuguese.<sup>(14)</sup> The Mann-Whitney and Kruskal-Wallis tests were performed to analyze the differences between the averages or medians of scores for quality of life. The Spearman coefficient was used to analyze potential correlations.

The study development met the national and international standards of ethics for research with human subjects.

## Results

The study included 40 women aged 22 to 69 years old, aged 41 years on average, with most (57.5%) in the age group of 30 to 50 years. Regarding relationships, 22(55.0%) were in a relationship and 18(45.0%) stated that they were not in a relationship. The education category considered the completed years of education; most prevalent was up to eight years for 25(62.5%) participants. With regard to the link between labor and income, 22(55.0%) had no link and 27(67.5%) earned from one to three minimum wages a month.

Concerning the time of HIV diagnosis, 50.0% (19) had up to five years of diagnosis and 28.9% (11) reported more than 11 years. The evaluation of T CD4+ lymphocytes disclosed a prevalence of the range above 350 cells/mm<sup>3</sup> in (650%) women, and just 5(12.5%) reported results below 200 cells/mm<sup>3</sup>. As regards viral load, 22 (55.0%) patients presented with an undetectable count.

Regarding the clinical phase of the infection/disease, 24(60.0%) respondents were classified as AIDS cases, eight (23.7%) as asymptomatic HIV, and five (13.1%) as symptomatic HIV.

Concerning the use of antiretroviral therapy, most of the participants - 32(80.0%) - reported using it and the time of use ranged from nine months to 13 years and six months, with an average of seven years.

Regarding the domains that make up the WHOQOL-HIV bref, Environment (52.1) was the domain reporting the lowest average score, and the highest score was found in the domain of Spirituality (59.5) (Table 1).

**Table 1.** Distribution of scores for the WHOQOL-HIV bref domains

Domains	Number of items	Mean	Maximum	Minimum	Standard Deviation
Physical	4	58.8	80	32	32
Psychological	5	57.6	80	22	22
Degree of independence	4	57.6	80	32	32
Social relations	4	55.9	80	24	24
Environment	8	52.1	68	40	40
Spirituality	4	59.5	80	36	36

Table 2 shows the highest score in the domain of Spirituality among women in a stable

**Table 2.** Socio-demographic variables and domains

Variables	Physical	Psychological	Degree of independence	Social relations	Environment	Spirituality
Age						
20  - 30	70.00	56.53	54.00	56.67	51.00	66.00
30  - 50	56.00	55.93	58.78	53.04	51.91	56.35
> 50	58.55	61.67	57.09	61.45	53.09	62.55
Stable relationship						
In a relationship	58.00	57.45	59.27	54.18	52.18	62.36
Not in a relationship	59.78	57.78	55.56	58.00	52.00	56.00
Sexual orientation						
Heterosexual	58.56	57.27	57.64	56.00	52.21	59.18
Bisexual	68.00	70.40	56.00	52.00	48.00	72.00
Sexual partner						
Yes	60.30	57.13	56.59	56.00	51.48	57.19
No	55.69	58.58	59.69	55.69	53.38	64.31
Years of education						
≤ 8	55.20	57.86	56.64	55.20	51.36	59.52
>8	64.80	57.17	59.20	57.07	53.33	59.47
Labor situation						
Employed	58.00	59.56	59.33	54.00	52.56	59.78
Unemployed	59.45	56.00	56.18	57.45	51.73	59.27
Income						
No income	52.80	55.68	52.00	58.40	46.80	56.80
Less than one minimum wage*	57.50	56.00	54.50	54.50	53.25	52.50
From one to three minimum wages	60.30	58.43	59.56	55.85	52.74	62.07

\*Minimum wage value during the study: R\$ 545.00, equivalent to \$326.34 (\$1.00=R\$1.67)

**Table 3.** Socio-demographic variables and domains

Variables	Physical	Psychological	Degree of independence	Social relations	Environment	Spirituality
Time of awareness about the HIV diagnosis (year)						
1   5	57.05	54.74	53.89	59.37	50.42	54.95
6   10	62.00	64.80	64.50	58.00	52.25	63.00
>11	62.18	59.35	61.09	49.45	55.82	65.09
T CD4+ (cells/mm <sup>3</sup> )						
< 200	52.80	56.96	59.20	51.20	47.60	44.00
201 a 350	60.44	59.38	59.56	57.78	53.11	64.00
> 350	59.38	57.11	56.62	56.15	52.62	60.92
Viral load (copies/ml)						
Undetectable	62.18	59.05	59.45	56.36	53.91	61.09
Detectable	54.67	55.82	55.33	55.33	49.89	57.56
Infection classification						
Asymptomatic	63.56	52.98	59.56	53.78	51.33	61.33
Symptomatic	57.60	52.48	51.20	58.40	51.60	60.80
AIDS	57.33	61.07	58.67	56.67	52.50	58.17
Perception of health status						
Bad	44.00	41.60	32.00	46.00	45.00	56.00
Not bad, not good	42.00	48.53	52.67	55.33	53.67	50.67
Good	60.94	57.60	55.53	54.59	49.29	58.12
Very good	65.07	63.36	65.33	58.93	55.60	65.07
Use of antiretroviral therapy (TARV)						
Yes	52.80	56.96	59.20	51.20	47.60	44.00
No	60.25	57.60	55.25	60.25	53.25	64.00
Interrupted	59.16	57.77	59.16	53.47	52.32	59.79

relationship (62.36), who declared to be bisexual (72.00), with no sexual partner (64.31), and earning income from one to three minimum wages (2.07).

Women with levels of T CD4+ lymphocytes >350 cel/mm<sup>3</sup> scored higher in the domain of Spirituality when compared to those with T CD4+ lymphocytes <200 cel/mm<sup>3</sup> (Table 3). In relation to the detection of viral load, it was observed that individuals with lower viral load reported better quality of life scores in the Physical and Spirituality domains when compared to individuals with higher viral loads. Regarding antiretroviral therapy (TARV), it was found that users of this therapy reported better scores in the domain of Degree of Independence.

## Discussion

As limitations to the results of this study, it is worth mentioning the cross-sectoral design and the use of non-probabilistic sampling in one single health service, thus restricting data generalization.

Regarding quality of life, Spirituality was the domain with the best performance. This domain evalu-

ates forgiveness and fault, concerns about the future, and death and dying.

Being in a relationship was perceived as the best contributor to the score of the domains Degree of Independence and Spirituality.

The use of retroviral therapy presented the best score in the domain of Spirituality. Another study also reported better quality of life in the Physical and Psychological domains and those of Degree of Independence and Spirituality.<sup>(15)</sup>

The Physical domain scored second in quality of life. This domain evaluates issues such as pain and discomfort, energy and fatigue, sleep and rest, and symptoms of infection.<sup>(13)</sup> There was a difference regarding the quantification of viral load and the physical domain, where the lower the viral load, the higher the score of the Physical domain.

The scores achieved in the domain of Social Relations-which evaluates personal relationships, social support, and sexual activity-were the second lowest scores. In this study, the lowest scores observed for this domain were: being in a relationship; being employed; stated bisexuality; and no sexual partner.

The Environment domain scored the lowest. This domain evaluated physical security; financial status;

and physical environment regarding pollution, noise, traffic, climate, and conditions of the site where respondents lived. However, differences were found between the scores of the Environment domain in relation to viral load, where the lower the viral load, the better the evaluation in all domains. It was also found that when the CD4 values are above 350 cells/mm<sup>3</sup>, there was a better score in the domain of Spirituality. This differed from the study that reported better levels of quality of life in the domains Physical, Psychological, and Degree of Independence for those with a count of CD4  $\geq$ 350 cells/mm<sup>3</sup>.

## Conclusion

Spirituality was the best-performing domain, followed by the Physical domain. The lowest average scores were observed for the Environment and Social Relations domains.

## Collaborations

Bellini JM; Reis RK; Reinato LAF; Magalhães RLB and Gir E declare to have contributed with the elaboration and development of the research, data interpretation, writing, relevant critical review of the intellectual content, and approval of the final version to be published.

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