

## Quality of Life of People Living with HIV: A Cross-Sectional Study

Dr. Danaoui Khadija<sup>1\*</sup><sup>1</sup>Department of Infectious Diseases, Moulay El Mehdi Regional Hospital Center, Laâyoune, MoroccoDOI: <https://doi.org/10.36347/sjams.2026.v14i06.016>

| Received: 10.05.2026 | Accepted: 18.06.2026 | Published: 20.06.2026

\*Corresponding author: Dr. Danaoui Khadija

Department of Infectious Diseases, Moulay El Mehdi Regional Hospital Center, Laâyoune, Morocco

**Abstract****Original Research Article**

**Background:** Thanks to advances in antiretroviral therapy, HIV infection has become a chronic disease whose management no longer relies solely on virological control but also incorporates the assessment of patients' quality of life (QoL). The aim of this study was to assess the quality of life of people living with HIV (PLHIV) followed at the Moulay El Mehdi Centre Hospitalier Régional (CHR) in Laâyoune and to identify the most affected domains. **Methods:** This was a descriptive cross-sectional study conducted over a period of 9 months, involving 300 patients followed for HIV infection at the Moulay El Mehdi CHR in Laâyoune. Quality of life was assessed using the WHOQOL-HIV BREF scale, covering six domains: physical, psychological, level of independence, social relationships, environment, and spirituality/personal beliefs. Scores were expressed on a scale of 4 to 20. **Results:** The predominant age range was 25 to 45 years, with a male predominance. The majority of patients were married (60%) and of low socioeconomic status (77%). The mean duration of antiretroviral therapy (ART) was 7 years, with an undetectable viral load in 89% of patients. The mean CD4 lymphocyte count ranged between 170 and 280 cells/mm<sup>3</sup>. WHO clinical stage A or B was found in 76% of patients. The highest mean quality of life scores were observed in the physical (18.7/20) and social (18.1/20) domains, followed by the environmental domain (16.9/20) and the level of independence (17.6/20). The psychological domain showed a more moderate score (14.8/20), notably marked by low self-esteem (55%). Despite apparently good social inclusion (98%) and good family relationships (76%), the majority of patients concealed their HIV status from those around them for fear of stigma. **Conclusion:** Patients followed at the Moulay El Mehdi CHR in Laâyoune generally show good physical and functional quality of life, related to virological success and free access to care. However, the psychological dimension, particularly self-esteem, and the persistent burden of stigma and concealment of HIV status constitute priority areas for improving overall patient management.

**Keywords:** HIV/AIDS; quality of life; WHOQOL-HIV BREF; stigma; adherence; Morocco.

**Copyright © 2026 The Author(s):** This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

## INTRODUCTION

Human immunodeficiency virus (HIV) infection remains a major global public health issue. However, the advent of highly active antiretroviral therapy (ART) has profoundly transformed its prognosis, turning a once rapidly fatal disease into a manageable chronic condition over the long term. In Morocco, the widespread availability of free antiretroviral treatment and screening reflects a strong national commitment supported by the Ministry of Health and co-financed by the Global Fund to Fight AIDS, Tuberculosis and Malaria. This partnership has enabled universal and free access to antiretroviral therapy for all people living with HIV, significantly improving survival and virological control among PLHIV. In this context of increased life expectancy, quality of life (QoL) has become a treatment objective in its own right, complementary to classical biological indicators such as viral load and CD4 lymphocyte count. Health-related quality of life is a

multidimensional concept encompassing perceived physical, psychological, social, environmental, and spiritual well-being. In PLHIV, it is influenced not only by clinical factors (disease stage, treatment duration, side effects, comorbidities) but also by psychosocial determinants such as stigma, family and social support, socioeconomic status, and treatment adherence. The WHOQOL-HIV BREF scale, developed by the World Health Organization, is one of the most widely used tools for assessing quality of life specifically in people living with HIV, owing to its multidimensional structure and cross-cultural adaptability. The aim of this study was to assess the quality of life of patients followed for HIV infection at the Moulay El Mehdi CHR in Laâyoune using the WHOQOL-HIV BREF scale, and to identify the most impaired domains as well as factors that may influence quality of life in this regional context.

## PATIENTS AND METHODS

We conducted a descriptive cross-sectional study over a 9-month period within the HIV care unit of the Moulay El Mehdi Regional Hospital Center in Laâyoune, including all patients aged over 18 years, regularly followed for confirmed HIV infection, who agreed to participate. Quality of life was assessed using the WHOQOL-HIV BREF, the short version of the WHO HIV-specific scale consisting of 31 items grouped into six domains: [1] Physical – pain and discomfort, energy and fatigue, sleep and rest, activities of daily living; [2] Psychological – positive feelings, cognition, self-esteem, body image, negative feelings; [3] Level of independence – mobility, ability to work, dependence on medication, capacity to carry out daily activities; [4] Social relationships – personal relationships, social support, sexual activity, social inclusion; [5] Environment – physical safety, home environment, financial resources, access to health care, opportunities for information/skills, participation in leisure activities, transport; [6] Spirituality/personal beliefs – meaning given to life, personal strengths, hope concerning the disease. Each item is rated on a 5-point Likert scale, and domain scores are converted to a scale of 4 to 20 according to the WHO-recommended formula, where a higher score reflects better perceived quality of life. Sociodemographic data (age, sex, marital status, socioeconomic status) and clinical data (duration of ART, viral load, CD4 lymphocyte count, WHO clinical

stage) were collected from medical records and supplemented by direct patient interviews; the WHOQOL-HIV BREF questionnaire was administered in Arabic during consultations, with assistance provided for patients with reading difficulties. Qualitative variables were expressed as percentages and quantitative variables as means. Certain WHOQOL-HIV BREF items could not be fully exploited, particularly in the independence, social relationships, and spirituality domains; CD4 count was not systematically available for the entire cohort, and the mean range reported here (170–280 cells/mm<sup>3</sup>) should be interpreted with caution, representing an avenue for further investigation in future studies.

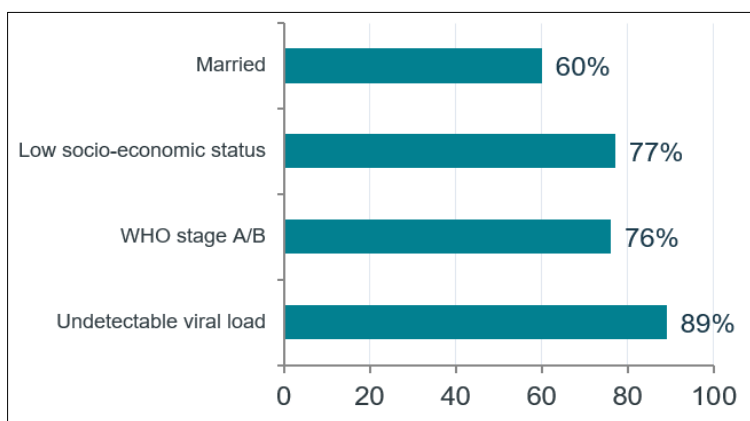
## RESULTS

### Sociodemographic and Clinical Characteristics

A total of 300 patients followed for HIV infection were included over a 9-month period. The predominant age range was 25 to 45 years, with a male predominance. The majority of patients were married (60%). A low socioeconomic status was found in 77% of patients. Regarding treatment, the mean duration of antiretroviral therapy was 7 years. Viral load was undetectable in 89% of patients, reflecting good overall virological success. The mean CD4 lymphocyte count ranged between 170 and 280 cells/mm<sup>3</sup>. Clinically, 76% of patients were classified as WHO stage A or B.

**Table 1: Sociodemographic and clinical characteristics of the study population (n = 300).**

Characteristic	Result
Sample size	300 patients
Study duration	9 months
Predominant age	25–45 years
Sex	Male predominance
Marital status (married)	60%
Low socioeconomic status	77%
Mean ART duration	7 years
Undetectable viral load	89%
WHO clinical stage A or B	76%
Mean CD4 lymphocyte count	170–280 cells/mm <sup>3</sup> (mean ± SD)



**Figure 1: Key sociodemographic and clinical characteristics (n = 300)**

### Quality of Life Scores by Domain

The mean quality of life scores obtained for each WHOQOL-HIV BREF domain, expressed on a scale of 4 to 20, are presented in Table 2. The physical domain showed the highest score (18.7/20), followed by

the social domain (18.1/20), the level of independence (17.6/20), and the environmental domain (16.9/20). The psychological domain showed a more moderate score (14.8/20).

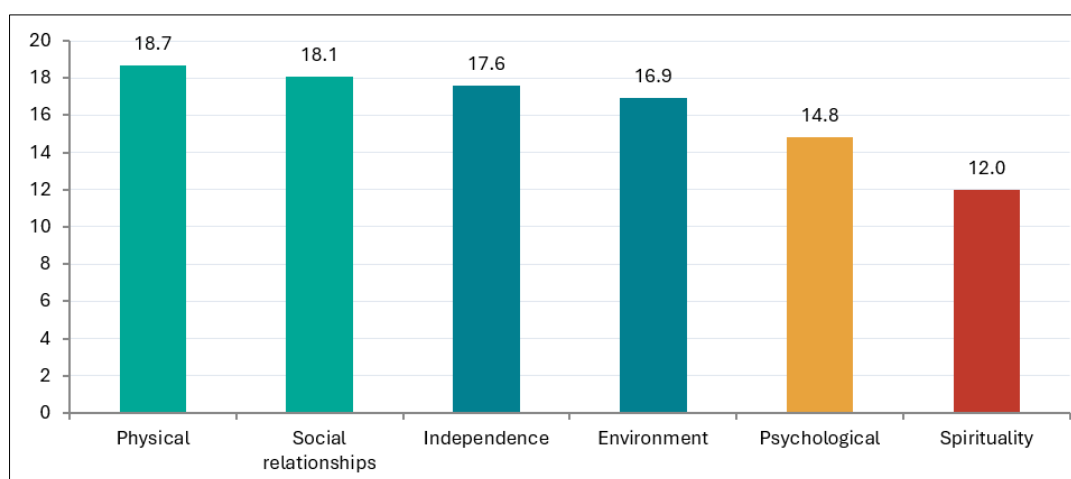
**Table 2: Mean quality of life scores by domain (WHOQOL-HIV BREF, n = 300).**

WHOQOL-HIV BREF Domain	Mean score (4–20 scale)	Equivalent (%)
Physical	18.7	93.5%
Social relationships	18.1	90.3%
Level of independence	17.6 *	88%
Environment	16.9 **	84.4%
Psychological	14.8	74.0%
Spirituality / personal beliefs	12.0 ***	60%

\* Score calculated based on the item “ability to carry out activities of daily living” (88%); the items mobility, ability to work, and dependence on treatment were not analyzed separately in this study.

\*\* Score calculated on 7 of the 8 domain items (excluding the transport item).

\*\*\* Score calculated based on the item “hope for a cure regarding HIV” (60%); the other three items of the spirituality domain were not analyzed in detail.

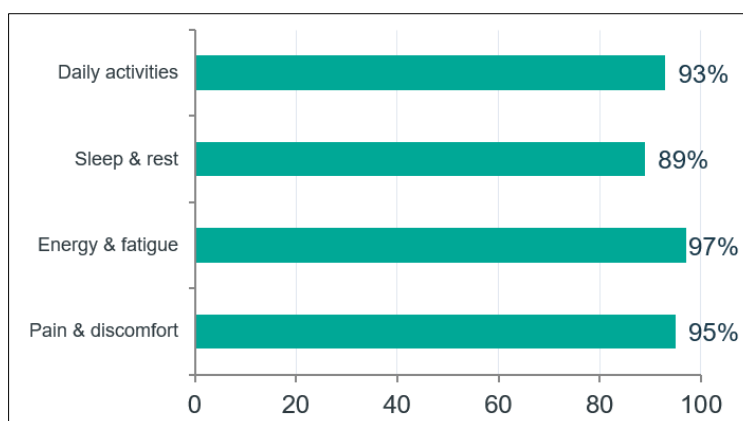


**Figure 2: WHOQOL-HIV BREF domain scores (n = 300)**

### Physical Domain

In the physical domain, 89% of patients reported satisfactory sleep and rest, and 93% reported a good capacity to perform their activities of daily living. Only 5% of patients reported significant pain or discomfort, and only 3% reported significant fatigue, reflecting overall good physical status, consistent with

the high rate of undetectable viral load (89%) and the predominance of early clinical stages (A/B in 76% of patients). The mean CD4 count of 170–280 cells/mm<sup>3</sup>, while indicative of partial immune restoration, remains consistent with clinical stability in patients with controlled viremia.

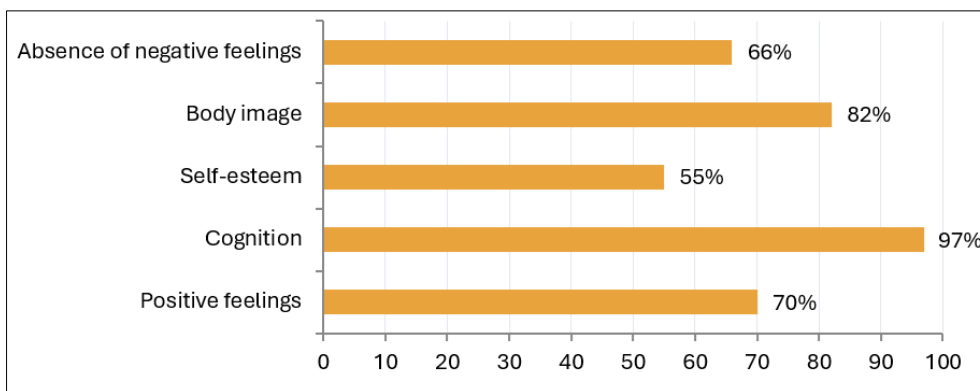


**Figure 3: Physical domain – item-level results (n = 300).**

**Psychological Domain**

In terms of psychological well-being, 97% of patients reported no significant difficulties with thinking, learning, memory, or concentration, and 82% had a satisfactory body image. Positive feelings were reported by 70% of patients. In contrast, self-esteem appeared

notably more fragile, satisfactory in only 55% of patients, and 34% reported frequent negative feelings (anxiety, sadness, hopelessness). This domain appears to be the most vulnerable in the cohort after the spirituality domain.



**Figure 4. Psychological domain – item-level results (n = 300).**

**Level of Independence**

The large majority of patients (88%) reported being able to carry out their daily activities independently, consistent with the good overall clinical and virological profile of the cohort.

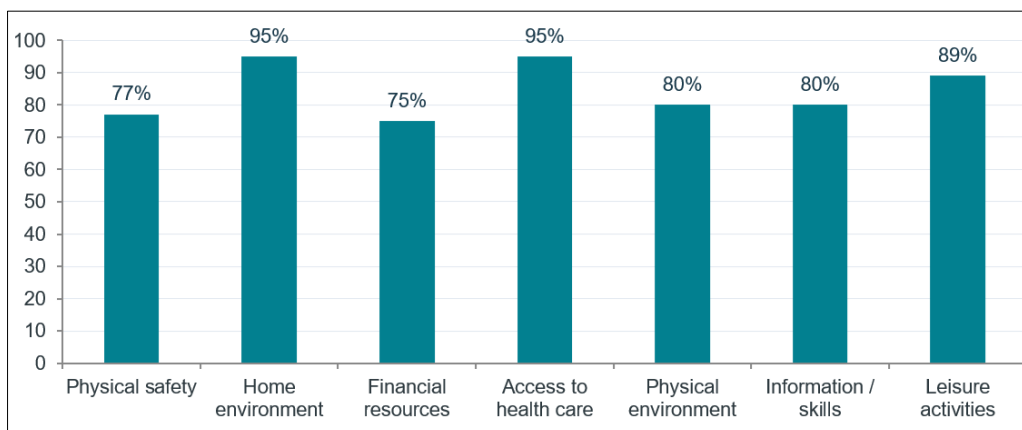
**Social Relationships**

Social relationships were generally well preserved: 97% of patients reported sexual activity (with a stable partner or multiple partners), highlighting the importance of maintaining good treatment adherence among these patients to limit the risk of transmission. Personal relationships with close family were rated as good by 76% of patients, and perceived social inclusion was high (98%). However, these favorable results should be interpreted with caution: a large proportion of patients did not disclose their HIV status to those around them, including close family members, for fear of judgment and stigma. The apparently good social domain score may therefore partly reflect a disclosure-avoidance

strategy rather than a genuine absence of perceived stigma.

**Environmental Domain**

The environmental domain showed an overall satisfactory score (16.9/20). Access to health care (95%) and home environment (95%) were perceived very favorably, reflecting notably the free availability of HIV screening and treatment in Morocco, guaranteed by the Ministry of Health and supported by the Global Fund to Fight AIDS, Tuberculosis and Malaria, which finances a large part of HIV/AIDS programs in Morocco, including antiretroviral procurement, biological monitoring, and psychosocial support through community associations. Physical safety (77%) and participation in leisure activities (89%) were also rated as satisfactory. Regarding financial resources, despite a low socioeconomic status reported by 77% of patients, perception of this domain remained acceptable (75%), directly buffered by the free and universal care provided under this national program.



**Figure 6: Environment domain – item-level results (n = 300, 7/8 items)**

### Spirituality Domain

The spirituality domain was not analyzed in detail in this study. Only the item relating to hope for a cure regarding HIV was recorded, reported by 60% of patients.

## DISCUSSION

This cross-sectional study of 300 PLHIV followed at the Moulay El Mehdi CHR in Laâyoune highlights an overall satisfactory quality of life in physical, functional, and social domains, contrasting with a more fragile psychological dimension and a persistent burden of stigma. The high score observed in the physical domain (18.7/20) is consistent with the high rate of undetectable viral load (89%) and the predominance of early clinical stages (A/B in 76% of patients), reflecting the effectiveness of the national antiretroviral care program. The mean treatment duration of 7 years suggests good therapeutic stability in this cohort, and the mean CD4 count ranging between 170 and 280 cells/mm<sup>3</sup>, while not yet reaching full immunological restoration, is coherent with a population in which virological control has been achieved and maintained over time; these findings are consistent with other studies using the WHOQOL-HIV BREF, which generally report an association between good virological control, early clinical stage, and better physical quality of life. Despite this good clinical and functional profile, the psychological domain remains the most impaired after the spirituality domain, with a score of 14.8/20; the low self-esteem reported by only 55% of patients, along with the presence of negative feelings in 34% of them, highlight the persistent psychological impact of an HIV diagnosis, independent of biological disease control, consistent with international literature emphasizing that the psychological quality of life of PLHIV depends more on factors related to disease acceptance, self-image, and experience of stigma than on immunovirological status alone. One of the most striking findings of this study is the coexistence of high perceived social inclusion (98%) and satisfactory family relationships (76%) with frequent concealment of HIV status within close family circles; this apparent paradox illustrates a coping mechanism frequently described among PLHIV in contexts where HIV-related stigma remains socially and culturally significant — patients maintain functional social relationships while avoiding disclosure of their status for fear of rejection or judgment, a phenomenon that may limit access to informal social support recognized as a major protective factor for quality of life, and represents a potential barrier to adherence when medication intake must be hidden. The relatively preserved score of the environmental domain (16.9/20), particularly regarding access to care (95%), appears to be a major protective factor in this context: the universal and free HIV screening and antiretroviral treatment in Morocco, ensured by the Ministry of Health with co-financing from

the Global Fund to Fight AIDS, Tuberculosis and Malaria, combined with the active involvement of AIDS associations in psychosocial support, appears to substantially offset the difficulties related to the low socioeconomic status of the majority of patients (77%), whose perception of financial resources nonetheless remains acceptable (75%). This study has several limitations: its cross-sectional design does not allow causal relationships to be established between sociodemographic or clinical characteristics and quality of life scores; certain WHOQOL-HIV BREF items were not fully exploited; the CD4 count data were not systematically available for the entire cohort, and the mean range reported here (170–280 cells/mm<sup>3</sup>) should be interpreted with caution; and information regarding HIV status disclosure relies on patients' self-reported perceptions, which may be subject to social desirability bias.

## CONCLUSION

The quality of life of people living with HIV followed at the Moulay El Mehdi CHR in Laâyoune appears overall satisfactory in terms of physical, functional, social, and environmental dimensions, largely due to the therapeutic success of antiretroviral therapy, the mean CD4 count between 170 and 280 cells/mm<sup>3</sup>, and the free access to care guaranteed by the Moroccan health system. However, the psychological dimension, marked by low self-esteem, and the persistent burden of stigma, which leads many patients to conceal their HIV status even from their families, represent priority areas for improvement. Strengthening psychological support, combating stigma, and increasing the involvement of community associations appear essential for comprehensive and sustainable management of PLHIV in this region.

## REFERENCES

1. World Health Organization. WHOQOL-HIV BREF. Geneva: WHO; 2002.
2. Fuster-Ruiz de Apodaca MJ, Laguía A, Safreed-Harmon K, Lazarus JV, Cenoz S, del Amo J. Assessing quality of life in people with HIV in Spain: psychometric testing of the Spanish version of WHOQOL-HIV-BREF. *Health Qual Life Outcomes*. 2019; 17:144.
3. Tran BX, et al. Quality of life outcomes of antiretroviral treatment for HIV/AIDS patients in Vietnam. *Health Qual Life Outcomes*.
4. Ramier C, Marcellin F, Sogni P, Salmon-Céron D, Wittkop L, et al. Health-related quality of life among people living with HIV and hepatitis C co-infection: psychometric properties of the French version of the WHOQOL-HIV BREF scale (ANRS CO13 HEPAVIH). 2023.

5. Ministry of Health of the Kingdom of Morocco.  
National HIV/AIDS Program: Situation Report.