

Adherence of men living with HIV/AIDS to antiretroviral treatment

Adesão de homens vivendo com HIV/Aids ao tratamento antirretroviral
Adhesión de hombres que viven con VIH/SIDA al tratamiento antirretroviral

Danielle Chianca de Andrade Moraes¹

Regina Célia de Oliveira¹

Solange Fátima Geraldo Costa²

1. University of Pernambuco.

Recife - PE, Brazil.

2. Federal University of Paraíba.

João Pessoa - PB, Brazil.

ABSTRACT

Objectives: To identify the socio-demographic and clinical aspects, as well as classify the adherence of men living with HIV/AIDS to antiretroviral therapy (ARVT). **Methods:** Observational, quantitative, and cross-sectional study conducted with 136 adult men living with HIV/AIDS undergoing ART, between May and August 2013. At two referral centers for HIV/AIDS in the Agreste region of the state of Pernambuco, Brazil. We used a validated questionnaire to classify the levels of adherence to ART. **Results:** 63.3% of participants had an "insufficient/average" giving an insufficient adherence to the success with the treatment by not maintaining the viral load at an undetectable level. **Conclusion:** It was observed that most men do not satisfactorily adhere to ART, demonstrating that adherence involves a laborious and multifactorial care; health professionals must adopt a different posture regarding men's care, considering all aspects and feelings of masculinity that can interfere with treatment.

Keywords: HIV; Medication adherence; Men's health.

RESUMO

Objetivos: Identificar os aspectos sociodemográficos e clínicos e classificar a adesão de homens que vivem com HIV/Aids à terapia antirretroviral (TARV). **Métodos:** Estudo observacional, quantitativo, transversal, desenvolvido com 136 homens adultos que vivem com HIV/Aids em TARV, entre maio e agosto de 2013, em dois serviços de referência em HIV/Aids no Agreste de Pernambuco. Utilizou-se um questionário validado para classificar níveis de adesão à TARV. **Resultados:** 63,3% dos participantes apresentaram nível de adesão "insuficiente/regular", o que confere uma adesão insuficiente para o sucesso do tratamento, por não manter o nível de carga viral indetectável. **Conclusão:** Foi observado que a maioria dos homens não adere à TARV de forma satisfatória. Isso significa que a adesão é um cuidado difícil e multifatorial e, que os profissionais de saúde devem assumir uma postura diferenciada quanto ao cuidado do homem, considerando todos os aspectos e sentimentos de masculinidade que podem interferir no tratamento.

Palavras-chave: HIV; Adesão à medicação; Saúde do homem.

RESUMEN

Objetivos: Identificar los aspectos sociodemográficos y clínicos y clasificar la adhesión de hombres con VIH/SIDA de la Terapia Antirretroviral (TARV). **Métodos:** Estudio observacional, cuantitativo y transversal, desarrollado con 136 hombres adultos que viven con VIH/SIDA en TARV, entre mayo y agosto de 2013, en dos centros de referencia para VIH/SIDA en el Agreste de Pernambuco, Brasil. Se utilizó un cuestionario validado para clasificación de los niveles de adhesión de la TARV. **Resultados:** El 63,3% de los participantes presentaron niveles de adhesión "insuficiente/regular", inadecuado para lograr éxito con el tratamiento por no mantener el nivel de carga viral indetectable. **Conclusión:** Se constató que la mayoría de los hombres no cumplen con la TARV de manera satisfactoria, lo que demuestra que el cumplimiento involucra un cuidado laborioso y multifactorial; y que los profesionales deben asumir una postura diferenciada, considerando los aspectos y sentimientos de masculinidad que pueden interferir en el tratamiento.

Palabras-clave: VIH; Cumplimiento de la medicación; Salud del hombre.

Corresponding author:

Danielle Chianca de Andrade Moraes.

E-mail: dani_chianca@hotmail.com

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INTRODUCTION

The Acquired Immunodeficiency Syndrome (AIDS) is regarded as an infectious disease, and is characterized by the changes in its evolution. Over the years, it came to be perceived as a disease related to HIV (Human Immunodeficiency Virus) vulnerable behaviors, which can affect all people, regardless of class, gender, race or ethnicity, sexual orientation and age range¹.

In Brazil, since its inception, 686,478 cases of AIDS, with 13,781 new cases in just the first half of 2013 were reported. It is worth pointing out that despite the feminization trend presented in recent years, since 2008 the number of AIDS cases in young men has been increasing at a faster rate compared to women, which influenced the reversal of the gender reasons, where it became apparent that this went from 0.9 cases in men for every woman, between the years of 2000 and 2005, to 1.9 cases in men for each case in women, in 2012².

Furthermore, in the last decade, in Brazil an increase of 67.8% in the detection rate of AIDS cases has been observed in young males and a reduction of 12.2% among females, implying in the progression of men living with HIV/AIDS in the coming years².

It should be noted that the hegemonic model of masculinity imposed by society is a factor that can influence the male vulnerability to infection by HIV/AIDS, since it contributes to men not assuming the behavioral changes necessary for the prevention of the virus transmission³.

Important to mention that the number of deaths from HIV/AIDS is on the decline in recent decades due to the introduction and free distribution of antiretroviral therapy (ART) in Brazil⁴. On the other hand, the mortality rate by gender have shown wide variations in the same period. One should consider that in 2012 the percentage of deaths due to HIV/AIDS in males was considered high, represented by 71.6% of all deaths that year².

Given this scenario, it is that adherence to ART presents itself as an important weapon against the evolution and mortality of HIV/AIDS, with a view to its regular and disciplined use greatly contributes to minimize the signs and symptoms of the disease, improving the quality of life and increases the life expectancy of those infected⁵.

However, in order to obtain the therapeutic effectiveness, a strict adherence to prescribed medications is necessary⁶, keeping in mind that a low adherence may represent a threat to public health, since it increases the probability of viral resistance, providing a treatment with low control of the HIV replication, as well as in the dissemination of a multidrug-resistant virus⁵.

However, it is noteworthy that adherence is dynamic and involves many factors, such as, psychological, physical, behavioral and sociocultural, requiring shared and co-accountable decision-making between the person living with HIV/AIDS, healthcare staff and society⁷.

Therefore, the male stereotypes must be taken into consideration, regarding taking care of their own health, where the men assume a cultural role of being absent and little participatory, and the woman is given the place of care. Thus, the demand for health services to receive care and treatment of HIV/AIDS with less frequency⁸.

In the context of vulnerability to infection and the treatment of HIV/AIDS in that the male is inserted, the knowledge about the uptake of antiretroviral drugs by male group is crucial, due to the low literary production that involves the theme. This study also expects to contribute to the discussions, regarding the full assistance to the health of the people living with HIV/AIDS. Therefore, health professionals can plan strategies that foster the sense of responsibility of care, which males should have with their health, minimizing the inequalities of access to healthcare services that exist in the culture between the genders and that aimed at promoting adherence to ART. For this reason, this study's objectives aimed to identify the socio-demographic aspects and clinical and classify the adherence of men living with HIV/AIDS to ART.

METHODOLOGY

This was an observational, quantitative, cross-sectional study developed in two Specialized Care Services for HIV/AIDS (SCS), located in two distinct municipalities in the Agreste region of the state of Pernambuco and serving adult patients living with HIV/AIDS.

The population was defined based on the total number of patients cared for in services until the start of data collection, in May 2013, corresponding to 502 men. The sample was non-probabilistic stratified totaling in 136 participants. Thus, the following inclusion criteria were used: men with HIV/AIDS who were using antiretroviral drugs and being monitored at both services, older than 18 years of age. Exclusion criteria were patients with mental disabilities and the people who refused to participate in the study.

Data collection occurred in the period of May to August 2013, by means of the interview technique from a form containing socio-demographic, clinical and laboratory data related to ART and a questionnaire, contemplating the ART adherence variables.

For the categorization of socio-demographic aspects, the following variables were used:

- Age group: categorized at intervals of ten years, ranging between < 20 and ≥ 60;
- Race (self-declared): classified as: white, black, mulatto, indigenous and other;
- Schooling: determined by the years of study (0-2 years, 3-7 years, 8-14 years, > 14 years);

- Family Income/per capita: family income was considered divided by the number of household members, categorized as minimum wage (MW), whose value in the year the study was conducted, was R\$ 678.00;
- Religion: classifications used were Catholic, evangelical, Spiritism and others.

The variables related to clinical and laboratory aspects associated with ART were collected by means of records found in the patients' clinical records. The most recent entries at the time of data collection were considered. They are:

- Viral Load: it was considered that the number of viral copies, which was categorized as follows: < 50 copies, 50 to 1,000 copies, 1001-3500 copies and ≥ 3,501 copies.
- Count of CD4 T cells: categorized in: counts < 200 cells/mm³, between 200 and 350 cells/mm³, between 351 and 500 cells/mm³ and counts < 501 cells/mm³.
- Antiretroviral Drugs (ARVs) prescribed: categorized in: 2 ARV, 3 ARV and 4 or more ARV.
- Diagnosis of associated disease: in this variable, classifications were used for diagnosis: tuberculosis, hepatitis B, hepatitis C, syphilis and others.

Regarding the variable of adherence to ART, it was categorized into levels of "good adherence", "insufficient/regular" and "low adherence". It was used a validated version in Portuguese (Brazil) for the instrument. "Cuestionario para la Evaluación de la Adhesión al Tratamiento Antiretroviral (CEAT-VIH)"^{9,10}. Therefore, prior consent of the author was obtained.

It is an instrument consisting of 20 items that address the main factors that may interfere with adherence to antiretroviral therapy in adult patients: the non adherence history of the patient, the physician-patient relationship; the beliefs of the patient with respect to the ART; the expectations about the therapeutic efficacy; the patient effort to follow the treatment; the assessment of the severity of side effects of antiretroviral therapy for the patient; the degree of satisfaction with the antiretroviral medication and the use of strategies for remembering to take the medication. Therefore, it is possible to assess the degree of adherence to antiretroviral drug treatment in adults.

After application, the sum of points obtained by the answers of 20 items was performed, per the instructions of analysis described in the CEAT HIV-manual, available from the author for this study. The minimum score possible of the questionnaire is 17, and the maximum possible 89. The adherence was classified in three levels^{9,10} (Chart 1):

The CEAT-HIV considers good adherence to ART a percentage of adherence equal or superior to 85% in order to

Chart 1. Classification of the level of adherence to anti-retroviral therapy^{9,10}

Adherence Classification	Adherence Percentage
Good	Greater than 85%
Regular/insufficient	Between 50% and 84%
Low	Less Than 50%

identify significant correlations with the score for that count CD4 T lymphocytes and viral load from laboratory tests performed on the same day as the application of the questionnaire⁹.

The data were analyzed by means of descriptive statistical techniques, by percentage and measures: mean standard deviation and median. The following factors were entered and stored in a spreadsheet, in which each row corresponds to a data collection form, and each column of the data collected. Double typing was applied, in order to minimize typing errors.

The study was approved by the Research Ethics Committee of the University Hospital Oswaldo Cruz (the HUOC)/Emergency Cardiac Pernambuco (PROCAPE), through the opinion nº 205.799. All of the participants were informed on the study's purpose and accepted and they signed the Statement of Informed Consent. It is worth pointing out that the researchers took into account the ethical observances contemplated in the Resolution 466/2012 of the National Health Council.

RESULTS AND DISCUSSIONS

Initially were analyzed variables related to socio-demographic characteristics of men living with HIV/AIDS on ART in the outpatient public services in the Agreste region of the state of Pernambuco.

The age of the men in the sample ranged from 18 to 87 years and median of 41.5 years and standard deviation of 12.66 years. The age group most prevalent was between 40 to 49 years (39%), followed by 30 to 39 years (22.7%). In this context other studies^{1,11,12} developed in different regions of the country, showed these age groups as being the most prevalent in people who use ARVs, showing that there are more people infected with HIV in the reproductive phase of life.

Regarding race, most of the men stated being mulatto (52.2%), followed by Caucasians (31.6%). This result differs from the national profile submitted by other studies^{2,12}, in that the white race is the predominant in people living with HIV/AIDS. This can be justified by historical circumstances of intermingling of races that the state of Pernambuco, mainly the Agreste region, experienced during the colonization period Brazilian, when Africans were brought from their continent to, along with the native Indians, working as sugar laborers¹³.

In relation to education, 46% of men on ART had between three and seven years of education, and only 6% had more than 14 years of schooling. The percentage of men who are living with

HIV/AIDS with years of schooling between 0 and 2 years was 20%. Similar results were also identified by other authors, whose studies have found that the low schooling in people living with HIV/AIDS prevails as an aspect that can influence the understanding and adherence to treatment of the disease^{1,2,14}.

With regard to religion, Catholic was the most often reported (71.3%). Authors point out that it is important to understand religiosity as a practice that contributes to the emotional well-being, and that affects the driving staff and social with the adherence to ART¹⁵.

In relation to the number of people who live at home, the majority reported living with more than two people (50.7%). The number of persons living in the same household can negatively influence taken regular daily doses of ARV, because many people living with HIV/AIDS prefer hide that they are carriers of the virus/disease, in order to avoid accusations and discrimination in society, including by their family¹⁶.

With regard to family income, the predominant income was equal to or less than one minimum wage (61.1%). Similar result has been identified in other studies^{11,15}.

The expansion of the number of cases among the populations with low levels of family income (income less than a minimum wage) and low schooling, configures the characteristic of "Impoverishment" that the infection by HIV/AIDS has assumed over the years¹².

Table 1 presents the clinical findings concerning the determination of viral load and the count of CD4 T cells recorded in the medical records.

Table 1. Percentage of men receiving antiretroviral treatment, according to the number of viral load copies and CD4 T cell counts (n = 136), Pernambuco, 2013

Variable	%
Total	100.0
• Viral Load (number of copies)	
< 50 (undetectable)	16.9
50 a 1,000	64.0
1,001 a 3,500	5.1
> 3,500	14.0
• CD4 (cells/mm ³)	
< 200	11.0
200 a 350	33.1
351 a 500	16.2
≥ 501	39.7

The viral load ranged between 30 and 186,717 copies, with an average of 6036.74 copies. It was found that 64% of men had a viral load between 50 and 1,000 copies, and only 14% presented number of copies more than 3,500.

Regarding the count of CD4 T cells, this ranged from between 49 and 64,025 cells/mm³ and presented an average of 1,332 cells/mm³, where the majority of men (39.7%) proved to be quantitative with greater than or equal to 501 cells/mm³, and only 11% presented were immune-compromised (< 200 cells/mm³), and these findings similar to those of other studies^{12,15}.

Thus, the viral load percentage found suggest a control of the virus by ARVs and allows levels inversely proportional and appropriate of CD4 T lymphocytic cells into the bloodstream. One may associate the appropriate levels of viral load and the count of CD4 T cells as an indication of adherence to ART, because the more regular is the ingestion of drugs, these markers will be more adequate in the bloodstream¹⁰.

Concerning the good levels of viral load and CD4 T cells, they can justify the low percentage of associated diseases by men who live with HIV/AIDS found in this study, it was only 8% (Table 2).

Table 2. Percentage of men receiving antiretroviral treatment, according to associated disease (n = 136), Pernambuco, 2013

Variable	Yes		No	
	N	% ⁽¹⁾	n	% ⁽¹⁾
• Associated Diseases	11	8.0	125	92.0
Tuberculosis	9	6.7	127	93.3
Other diseases	2	1.5	134	98.5
Hepatitis C	-	-	136	100.0
Hepatitis B	-	-	136	100.0
Syphilis	-	-	136	100.0

⁽¹⁾ The percentage values were obtained from the total of 136 patients evaluated.

Among the diseases associated with HIV/AIDS, Tuberculosis was the most prevalent, having been identified in 6.7% of men. This result corroborates with the findings of other authors¹⁵.

Thus, considering these results, the prevalence of tuberculosis found in this study may be associated with not only the percentage of immunocompromised persons in antiretroviral treatment (11%), but also to the low income and low education levels, indicative of "impoverishment of HIV/AIDS", also found in this study.

As for the prescription of antiretroviral drugs, recorded in clinical records, it was identified that there was a predominance of therapeutic regimen involving three drugs (66.2%), followed by the regime involving four ARVs, by 32.3% of the participants (Table 3).

As if there were not identified requirements involving only one antiretroviral, corroborating, in this way, with other authors who also found a high percentage of people using three ARVs^{14,15}.

Given this scenario, it is noteworthy that the amount of prescription drugs is a factor that can interfere with the regular

Table 3. Antiretroviral treatment regimen prescribed in the medical records, for men receiving antiretroviral treatment (n = 136), Pernambuco, 2013

Variable	%
Total	100.0
• Number of antiretroviral drugs prescribed	
Two antiretrovirals	1.5
Three antiretrovirals	66.2
Four antiretrovirals	32.3

and correct decision of antiretrovirals. Therefore, it should be considered that, if the man living with HIV/AIDS faced with a diversity of medicinal products, the chances of him confusing or changing medicines may increase¹⁷.

Still, health professionals should take into account the education of people on ART, having in view that a low level of education can contribute to a irregular doses, or even mistaken, configuring in a treatment without success¹⁴.

It should be emphasized that men present themselves culturally as belonging to a group of patients who seek very little health services, which only make for healing practices and adhere to drug treatments less than women⁸. Thus, the type of treatment regimen prescribed is a factor that contributes directly to the membership of the ART, in view of the fact that the greater the number of prescribed medications lower the occurrence of correct follow-up with treatment¹⁷.

Regarding the level of adherence, this was considered "insufficient/regular" for the majority (63.3%) of men receiving antiretroviral treatment, followed by 36.7% of men with "good adherence". The level "low adherence" was not identified among the men who participated in this study (Table 4).

Table 4. Percentage of men receiving antiretroviral treatment, according to the level of adherence to treatment (n = 136), Pernambuco, 2013

Variable	%
Total	100.0
• Level of adherence*	
Good	36.7
Insufficient/regular	63.3
Low	0.0

* Levels defined according to the classification of adherence to antiretroviral treatment of validated version for the Portuguese (Brazil) "*Cuestionario para la Evaluación de la Adhesión al Tratamiento Antiretroviral*"^{9,10}

These findings corroborate those of other authors¹⁸ who found the level of adherence to antiretroviral therapy in adults using the same assessment instrument, CEAT-HIV. However, it should be noted that there is a low literary production regarding the adherence to ART in the male gender.

The majority of the participants maintained a percentage of adherence to ART was less than 85%. In this case, it is a percentage of adherence considered insufficient for the success of the treatment, due to the fact that it doesn't maintain the level of undetectable viral load^{6,9}.

Given the culture of masculinity imposed by society, the man assumes the role of strength and virility and ends up repressing their health care needs⁸. Consequently, not rarely, omits their weaknesses and vulnerabilities before the maintenance of adherence to ART.

The various factors that interfere in the dynamism of the accession of men to ART should be identified and worked nurses and other health professionals, so that they are developed strategies to propose effective interventions and encourage the involvement of man in actions of prevention and promotion of healthcare^{11,3}.

Thus, the nurse plays a key role in the assistance to the people living with HIV/AIDS, with a view not only the actions of promotion, protection, and recovery of health, but in particular, those related to the bond required for adherence to antiretroviral drugs¹.

On the study, it should be emphasized that this presented as limiting the inclusion only of men who went up to the SCS to perform clinical consult, for some health reason; make the blood collection for the monitoring of viral load and count of CD4 T cells and/or to search for the prescribed ARV medicines. Those who do not regularly go to the SCS, i.e., who were not regular clinical follow-up or did not attend regularly to get the medications prescribed to treat HIV/AIDS had levels of adherence to ART assessed. Therefore, the levels of adherence to ART can be lower or higher than the percentages found.

FINAL CONSIDERATIONS

According to the results of this study, it was identified that many men do not adhere well to antiretroviral treatment, which demonstrates that the adherence is, in fact, a difficult care process and dependent on many factors - social, cultural, economic and clinical.

Therefore, nurses and other health professionals must understand the man as vulnerable to HIV/AIDS subject, considering the sociocultural influences about masculinity, in which men seek health services only for healing practices, which ends up interfering with their access and attendance at the service.

It is particularly important that the work of nurses in the approach regarding the adherence to antiretroviral drugs is directed to the male group not only as a curative care, but also preventative, to improve the quality of life and life expectancy. In this context, it emphasizes the importance of their commitment for the success of the treatment. For this reason, the nurses who worked in reference services for HIV/AIDS and other health professionals must assume a different position concerning the care toward men, understand it in full and consider all aspects and feelings of masculinity that may interfere with treatment.

It is expected that this study will contribute to the reflection and understanding of HIV treatment in men, by nurses, and serve for comparisons with other studies that address the issue of adherence of the male subject to AVRT. It should be emphasized that prevention is still the greatest weapon in the fight against HIV infection.

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