



## Sociodemographic and clinical characteristics of patients with human immunodeficiency virus

Características sociodemográficas e clínicas de pacientes com o vírus da imunodeficiência humana

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**Objective:** to describe the sociodemographic and clinical characteristics of patients diagnosed with the human immunodeficiency virus. **Methods:** this is a descriptive and documentary study, developed from the sociodemographic and clinical information registered in the identification sheets of 33 patients diagnosed with human immunodeficiency virus. Data were analyzed using the Statistical Package for the Social Sciences 18, with calculation of statistical measures and association between variables. **Results:** regarding the characteristics of the patients, the average age was 42 years, ranging from 20 to 64 years, 54.5% were women, married and with low level of education, 84.8% were heterosexual and exposed to the virus through of sexual intercourse ( $p=0.495$ ). **Conclusion:** the patients with the infection were women, young, with low education and exposure to the virus due to sexual contact and unprotected sex with multiple partners.

**Descriptors:** HIV; Sexually Transmitted Diseases; Epidemiology.

**Objetivo:** descrever as características sociodemográficas e clínicas de pacientes diagnosticados com o vírus da imunodeficiência humana. **Métodos:** estudo descritivo e documental, desenvolvido a partir das informações sociodemográficas e clínicas contidas nas fichas de identificação de 33 pacientes diagnosticados com o vírus da imunodeficiência humana. Os dados foram analisados por meio do programa *Statistical Package for the Social Sciences* 18 para o cálculo das medidas estatísticas e associação entre variáveis. **Resultados:** em relação às características dos pacientes, a média de idade foi de 42 anos, variando entre 20 e 64 anos, 54,5% mulheres, casados e com baixa escolaridade, 84,8% heterossexuais e que se expuseram ao vírus por meio de relação sexual ( $p=0,495$ ). **Conclusão:** percebeu-se que os pacientes com a infecção foram mulheres, jovens, com baixo nível de instrução e com exposição ao vírus pelo contato sexual e multiparcerias desprotegidas.

**Descritores:** HIV; Doenças Sexualmente Transmissíveis; Epidemiologia.

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## Introduction

Sexually Transmitted Infections (STIs) are frequent and a prevalent health problem. They are mainly transmitted by sexual contact in its various modalities, and mainly caused by viruses, bacteria or other microorganisms<sup>(1)</sup>. In this universe, the Human Immunodeficiency Virus (HIV) and the Acquired Immunodeficiency Syndrome (AIDS) stand out. Despite being old diseases, originated in the 1980s, they are considered major problems in the context of public health and social welfare until present date. Regarding the impacts of the infection on the various levels of health care, its occurrence is not restricted, and affects all individuals without distinction<sup>(2)</sup>.

Recent data on the subject has shown that around 37.9 million people live with HIV worldwide. At the national level, the status of notifications is also alarming: from 2007 until June 2018, 247,795 cases were reported in Brazil, most of them males, in the ratio of 26 men to 10 women<sup>(3)</sup>. High exposure to risk situations makes men the most prone to infection.

The clinical profile of positive cases, as evidenced by the literature, corroborates the above findings, that is, the prevalence of this clinical condition in the male population. However, one of the factors that aggravates the infection among females is the gestational period. This is due to the chances of vertical transmission, whose rates vary from 25 to 30.0% when there is no treatment during and after pregnancy<sup>(4)</sup>.

The disease outbreak in the epidemic has changed over the years; nowadays, the groups susceptible to more than half of all new infections comprise people who use drugs, those deprived of freedom, homosexual men and others who have sex with them, transgender, and sex workers<sup>(5)</sup>.

The vulnerability and the mode of exposure to the disease occur differently in the population, but studies suggest that the main form of transmission is still unprotected sex, with a significant prevalence in heterosexual people and in the context of stable union. The main reasons given for not using condoms

during sexual intercourse include trust in the partner and also the personal preference not to use<sup>(6-7)</sup>.

Based on the evidence reported in the studies, the following question arose: What is the sociodemographic and clinical profile of HIV-positive patients diagnosed at a referral center for serological testing? The production of knowledge about the clinical characteristics of this population may favor the creation and application of preventive measures aimed at health promotion, as well as disease control.

The relevance of the research is justified by the fact that this infection is a major challenge for health services and professionals due to the high prevalence. Furthermore, it is necessary to know the sociodemographic and clinical characteristics of these patients because despite the vulnerability of some in these groups, there are still variations in the profile of the epidemic, prompting the need to keep constant vigilance and attention to these aspects. Therefore, the present investigation aimed to describe the sociodemographic and clinical characteristics of patients diagnosed with the human immunodeficiency virus.

## Methods

This is a descriptive, documentary and quantitative study conducted in a Testing and Counseling Center located in the municipality of Floriano, Piauí, Brazil. The sample consisted of identification sheets of patients diagnosed with HIV who were admitted to the institution from January to December 2017.

The population was initially composed of 41 sheets of patients with a positive diagnosis for HIV. When the inclusion and exclusion criteria were applied, eight sheets were removed, resulting in a sample of 33 patients with a positive diagnosis for HIV infection.

The inclusion criteria were the duly completed entry forms containing sociodemographic and clinical information of patients. Forms that did not correspond to the study period or were unreadable were excluded.

Data collection took place between March and April 2018 and was guided by a semi-structured instrument prepared by the authors, divided into two parts, one for sociodemographic data and the other for clinical behavioral variables related to virus exposure.

The sociodemographic information considered for analysis in this study included sex, age, marital status, education, and sexual orientation. The clinical variables investigated were the type of exposure to the virus, number of sexual partners in the last year, as well as condom use with fixed partner, and contact with other STIs.

After data collection, they were organized and placed in a Microsoft Excel 2016 spreadsheet, being double entered by the authors in order to avoid errors and bias in the research. After that, data were transferred to the Statistical Package for the Social Sciences 18 to calculate the statistical measures mean and standard deviation. The Fisher's exact test was used for associating variables. The dependent variable used in the associations was sex and the independent, the clinical characteristics related to vulnerability to HIV. In the analysis,  $p < 0.05$  indicated statistical significance.

Before the beginning of data collection, the legal document supporting the use of data was made available in the institution in order to respect the confidentiality of the information provided and to preserve all ethical aspects advocated by national regulations regarding studies involving human subjects. The research was approved by the Ethics and Research Committee of the State University of Piauí by means of the Certificate of Presentation for Ethical Appraisal n<sup>o</sup> 84179318,6,0000,5209 and approval report n<sup>o</sup> 2,537,165/2018.

## Results

From the 33 forms investigated in the study, it was possible to identify that the average age of patients with HIV-positive diagnoses was 42 years, ranging

from 20 to 64 years, as shown in Table 1. There was a predominance of women, 18 (54.5%); married or in a stable relationship, 22 (66.7); about 18 individuals (54.5%) were illiterate or had attended only elementary school; and the majority were heterosexuals, 28 (84.8%).

**Table 1** – Sociodemographic characteristics of patients with human immunodeficiency virus

Variables	n (%)
Gender	
Female	18 (54.5)
Male	15 (45.5)
Age (years)	
20 to 29	10 (30.3)
30 to 49	18 (54.5)
50 to 59	4 (12.2)
> 60	1 (3.0)
Marital status	
Single	9 (27.3)
Married/common-law married	22 (66.7)
Widowed	2 (6.0)
Schooling	
Illiterate	4 (12.1)
Complete/incomplete elementary school	14 (42.4)
Complete/incomplete high school	15 (45.5)
Sexual orientation	
Heterosexual	28 (84.8)
Homosexual	4 (12.1)
Bisexual	1 (3.0)

Regarding clinical variables, a scenario of high risk of infection was observed, as 26 (78.8%) of the patients contracted the virus through sexual intercourse; 25 (75.8%) reported having had sexual intercourse in the last year with a partner and never used a condom with a stable partner, 20 (60.6%). Most had not contracted any other type of STI in the last year, 23 (69.7%) (Table 2).

**Table 2** – Clinical characteristics of patients with human immunodeficiency virus

Variables	n (%)
Type of exposure	
Sexual intercourse	26 (78.8)
Blood transfusion	1 (3.0)
Others	6 (18.2)
Nº of sexual partners in the last year	
1	25 (75.8)
2 to 4	4 (12.1)
> 5	4 (12.1)
Condom use with stable partner	
Never	20 (60.6)
Sometimes	11 (33.3)
Not informed	2 (6.1)
Contracted any sexually transmitted infections in the last year	
Yes	7 (21.2)
No	23 (69.7)
Not informed	3 (9.1)

Regarding the associations between clinical variables and sex, it was observed that half of the men and women had been exposed to HIV through sexual intercourse ( $p=0.495$ ). The highest number of sexual partners in the last year was observed among men ( $p=0.156$ ). Regarding condom use with permanent partner, 13 (65.0%) of the women reported never using condoms ( $p=0.307$ ) and 4 (57.1%) had contracted some type of STI ( $p=0.741$ ), as shown in Table 3.

**Table 3** – Associations between clinical variables and gender of the patients

Variables	Gender		p*
	Female n (%)	Male n (%)	
Type of exposure			0.495
Sexual intercourse	13 (50.0)	13 (50.0)	
Blood transfusion	1 (100.0)	-	
Others	4 (66.7)	2 (33.3)	
Nº of sexual partners in the last year			0.156
1	9 (36.0)	16 (64.0)	
2 to 4	1 (25.0)	3 (75.0)	
> 5	1 (25.0)	3 (75.0)	
Condom use with stable partner			0.307
Never	13 (65.0)	7 (35.0)	
Sometimes	4 (36.4)	7 (63.6)	
Not informed	1 (50.0)	1 (50.0)	
Contracted any sexually transmitted infections in the last year			0.741
Yes	4 (57.1)	3 (42.9)	
No	13 (56.5)	10 (43.5)	
Not informed	1 (66.7)	2 (33.3)	

\*Fisher's exact test

## Discussion

Among the limitations of the study, we highlight the composition of the sample that was limited to the time interval investigated of only one year. Another limitation was the losses related to the incompleteness of some patient identification sheets, preventing the analysis of more cases. However, it was possible to observe the dynamics of the profile of exposure to infection in the population. This findings estimate the use of new approaches in health care that highlight the clinical singularities and vulnerability of individuals.

The present study showed that women represent the largest population diagnosed with HIV compared to males. International and national data show a different picture, with more cases of HIV infection among men, but this proportion has decreased over the years, and the incidence among women has increased<sup>(3,5)</sup>. This scenario draws attention about the importance of implementing preventive measures aimed at both sexes, because, despite the fact that there is a population that is more exposed, the profile of contracting the illness and of the contact with the virus is different.

Regarding the age of the patients, there was a predominance of infection among the young, thus demonstrating a tendency to juvenilization of the cases. The prevalence in this group can be explained by the risk behavior experienced, especially in relation to multi-partnership sex, non-use of condoms, occasional sex with sporadic people while using licit or illicit drugs<sup>(8)</sup>. Probably, in this period of life, the majority of the population is sexually active and in full reproductive age, thus constituting the age group with the highest risk of incidence of the disease.

Regarding marital status, it was observed that the highest number of HIV notifications was among married people or those in a stable union. Similar findings were observed in a study conducted with people who had HIV-positive serology admitted to a health service, reference in infectious diseases, in which 63.8% of the patients studied were married<sup>(9)</sup>. The

above data confirm the fact that couples who have a stable union tend not to use contraceptive barrier methods, thus becoming more prone to sexually transmitted infections, such as HIV<sup>(10)</sup>.

When it comes to schooling, most of the study population was illiterate or had incomplete/complete elementary school. This aspect is especially related to the poor access of some people to teaching and learning, and may contribute to lack of knowledge, lack of access and understanding of health information relevant to this health problem. Individuals with a higher level of education tend to better understand the demands required to prevent this infection<sup>(11-12)</sup>.

The literature shows that access to higher levels of education has positive repercussions on health because people have the possibility to easily gather knowledge about the disease, and this empowers them to adopt appropriate preventive actions. In this context, especially in relation to exposure to the virus, as they are expected to adopt risk-free behaviors, taking into account their awareness of the impacts caused by the disease<sup>(13)</sup>. Given this scenario, health care provided to the most diverse publics must take into account the educational aspects of individuals to be really effective.

In the present investigation, heterosexuals were the most affected by the infection, which is in line with other studies that state that, since the 1990s, the epidemiological profile has changed and the main route of transmission has become the heterosexual, male to female, or vice versa, which significantly increased the number of heterosexuals with this condition<sup>(14-15)</sup>.

Regarding the type of exposure to the virus, a large proportion of patients contracted the infection through sexual intercourse. Other studies have also pointed out this mode of transmission as recurrent in part of the investigated cases and the fact that information related to sexual protection and vulnerability is still ignored by individuals<sup>(3)</sup>.

Regarding the number of sexual partners in the last year, most men had a relationship with more

than one partner, while women reported, in most cases, never having used a condom with a fixed partner. A research conducted with 1,222 women in Pelotas, southern Brazil, brought results that confirm the findings of the present investigation, showing the profile and behavioral experiences of women who underwent anti-HIV testing. The authors found that 56.9% had a steady partner and 64.7% did not use condoms in their sexual practices<sup>(6)</sup>. This fact shows the risk behavior experienced by some women in acquiring STIs<sup>(16)</sup>.

Another study, this time carried out in Cuba, identified gender inequality as a social barrier in safe and protected sex life practices. Moreover, low risk perception is a barrier in the decision to use condoms among women who have a stable partner, married or not, because they do not see the need to protect themselves<sup>(17)</sup>.

Thus, health practices developed by professionals, especially at primary care, should focus on the various lines of health promotion, based mainly on encouraging safe sex, with protection in sexual relations, both in terms of adoption of contraceptive methods and for prevention of sexually transmitted diseases among men and women.

The literature also points out that among the main justifications of women for not using condoms in their sexual relations is the trust in the partners and also the personal preference to abstain from use<sup>(6)</sup>. In this sense, it is imperative to make a critical analysis about this female behavioral dynamics, given the need to break the negative outcomes resulting from exposure to the virus.

Regarding contact with other infections in the last year, women had the highest incidence. Current statistics show that despite the declining number of HIV cases in the general population, there is still an alarming number of young women who get infected: 6,200 females are affected every week. It is noteworthy that exposure to this disease opens doors to other infections, especially those transmitted sexually<sup>(5,18)</sup>.

Evidence indicates that the prevalence of infec-

tion among the female public is directly related to the historical differences that exist between genders. This social scenario experienced reflects the tendency of women to passively ignore or accept the multiple sexual partnerships of their partner, the low perception about barrier-contraception methods that are simple, accessible and freely available and that could favor their autonomy, such as female condoms. These facts lead to flaws in the access and use of testing services by this population<sup>(19)</sup>.

## Conclusion

The results found during the study showed that most patients with HIV were women, young, married, poorly educated, heterosexual, with multiple sexual partnerships, and sexual intercourse was the main means of exposure to the virus.

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## Collaborations

Martins WRD, Silva AP and Silva MLR contributed to the design of the project, collection and analysis of data, writing and relevant critical review of the intellectual content, and final approval of the version to be published. Silva FA, Sousa JAS and Silva JP collaborated in the analysis of data and relevant critical review of the intellectual content.

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