



ORIGINALES

Adherence to antiretroviral therapy and the association in the use of alcohol and psychoactive substances

Adesão à terapia antirretroviral e a associação no uso de álcool e substâncias psicoativas

Adhesión a la terapia antirretroviral y la asociación en el uso de alcohol y sustancias psicoactivas

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ABSTRACT:

Objective: To evaluate the adherence to antiretroviral therapy (ART) and its correlation with the consumption of alcohol and other drugs in people living with HIV/Aids.

Material and Method: This study is a descriptive, cross-sectional research with quantitative approach. It was developed with 184 users of a Specialized HIV/Aids Assistance Service.

Results: Adherence to ART was classified as regular (67.4%), good (32.1%) and low (0.5%). Marijuana abuse/dependence and regular/low ART adherence was (100%), followed by tobacco (77.1%), marijuana (75%) and alcohol (73.5%). The degree of drug dependence was not evaluated as a determinant factor for good adherence to ART.

Conclusion: It is observed that there is only a tendency for PLWHA users of licit and illicit drugs to have a regular/bad adherence. Thus, it is essential to maintain health promotion interventions within the specialized services in HIV/Aids to ensure the promotion of a satisfactory adherence.

Keywords: Adhesion to medication; HIV; antiretrovirals

RESUMO:

Objetivo: Avaliar a adesão à terapia antirretroviral (TARV) e sua correlação com o consumo de álcool e outras drogas em pessoas vivendo com HIV/Aids.

Material e Métodos: Estudo descritivo, transversal, com abordagem quantitativa. Desenvolvido com 184 usuários de um Serviço de Assistência Especializada em HIV/Aids.

Resultados: A adesão à TARV foi classificada em regular (67,4%), boa (32,1%) e baixa (0,5%). O uso abusivo/dependência da maconha e a regular/baixa adesão à TARV foi de (100%), seguida do tabaco (77,1%), maconha (75%) e álcool (73,5%). O grau de dependência das drogas não foi avaliado como fator determinante para a boa adesão à TARV.

Conclusão: Observa-se que existe apenas uma tendência de que PVHA usuárias de drogas lícitas e ilícitas apresentem uma adesão regular/ruim. Assim, é fundamental a manutenção de intervenções de promoção da saúde dentro dos serviços especializados em HIV/Aids para a garantia do estímulo a uma adesão satisfatória.

Palavras-chave: Adesão à medicação; HIV; antirretrovirais.

RESUMEN:

Objetivo: Evaluar la adhesión a la terapia antirretroviral (TARV) y su correlación con el consumo de alcohol y otras drogas en personas con HIV/Aids.

Material y Métodos: Estudio descriptivo, transversal, con enfoque cuantitativo. Fue desarrollado con 184 usuarios de un Servicio de Asistencia Especializada en HIV/Aids.

Resultados: La adhesión a la TARV fue clasificada en regular (67,4%), buena (32,1%) y baja (0,5%). El uso abusivo/dependencia de la marihuana y la regular/baja adhesión a la TARV fue de (100%), seguida del tabaco (77,1%), marihuana (75%) y alcohol (73,5%). El grado de dependencia de las drogas no fue evaluado como factor determinante para la buena adherencia a la TARV.

Conclusión: Se observa que sólo existe una tendencia de que PVHA usuarias de drogas lícitas e ilícitas presenten una adhesión regular/mala. Así, es fundamental el mantenimiento de intervenciones de promoción de la salud dentro de los servicios especializados en HIV/Aids para la garantía del estímulo a una adhesión satisfactoria.

Palabras clave: Adhesión a la medicación; HIV; antirretrovirales.

INTRODUCTION

The discovery of acquired immunodeficiency syndrome (AIDS) and its etiologic agent, the human immunodeficiency virus (HIV), became a reference in the history of global health in the late twentieth century. Despite advances in scientific knowledge and therapeutic plans, this problem still has a challenge to health. The report published by the Joint United Nations Program on HIV/AIDS (UNAIDS) revealed that by the end of 2015, approximately 36.7 million people were living with HIV worldwide⁽¹⁾. In Brazil, estimates indicate that since the beginning of the epidemic, more than 842,000 people were infected with the virus⁽²⁾.

The history of AIDS has changed considerably after the advent of antiretroviral therapy (ART). It is important to note that since 1996, with the publication of Federal Law 9,313, Brazil has made available universal and free access to HIV treatment, which makes the country stand out in the international scenario in the treatment and fight against AIDS. Currently, about 250 thousand people receive the necessary medications through the Unified Health System (SUS)⁽³⁾.

ART has given a significant decrease in mortality rate, favoring a substantial increase in CD4 counting and reduction of viral load, slowing the progression of the disease and increasing patient survival. Therefore, adequate adherence maintenance is necessary for the amount and time of medication intake⁽⁴⁾. In this context, the international literature considers that adherence to ART is defined when there is at least 85% of the drugs prescribed, a value capable of guaranteeing inhibition of viral replication⁽⁵⁾.

The nurse is highlighted as a professional capable of articulating strategies that allow the patient's understanding of the importance of the continued and correct intake of the drug to achieve suppression of virological replication, contributing to the control of the HIV epidemic⁽⁶⁻⁷⁾.

Although adherence to ART is a key marker for people living with HIV/AIDS, it is not the only determinant of treatment success. The adherence is a dynamic process that presents sociodemographic, behavioral health and clinical among several factors. Some factors have shown a strong and consistent association with non-adherence, such as the use and abuse of alcohol and other drugs, depression and the absence of a social support network⁽⁸⁾.

In this context, it is essential to reliably measure adherence to ART and to evaluate the associated factors that impair it so it is possible to guarantee treatment efficacy and prevent HIV resistance to treatment⁽⁸⁾. Studies show that the consumption of alcohol and other drugs adversely affects PLHA adherence and quality of life. Thus, nurses working in the Specialized Care Services (SAE) on HIV/AIDS should know their users and take interventions with the multi-professional team to minimize the effects resulting from the use of these substances⁽⁹⁾.

Due to the existence of scarce data in the current literature regarding the adherence to the use of ART in people in the Northeast region of Brazil and its interference in the consumption of alcohol and other drugs, it was felt the need to carry out such a study.

It is believed that the research will contribute to the improvement of knowledge in the determination of health interventions that allow better results in a higher level of adherence and less consumption of alcohol and other drugs in people diagnosed with HIV. Considering this, the study aims to evaluate the adherence to ART and the correlation with alcohol and other drugs in PLHA, SAE users.

MATERIAL AND METHODS

This is a descriptive, cross-sectional study with a quantitative approach developed in the city of Recife, Pernambuco, Brazil in 2016, with 184 users of an SAE in HIV/AIDS.

For the eligibility criteria, patients with HIV/AIDS who underwent treatment with ART for a period of 6 months or more, were aged 18 years old or older and enrolled in the Logistic Control System for Antiretroviral Medicines - SICLOM Ministry of Health were included. Subsequently, pregnant women and individuals with cognitive impairment that interfered with the interviewee's communication and understanding of the interview questions were excluded.

Data collection took place between February and August 2016, before or after the medical visit, and it was performed through individual interviews, in the clinic's rooms that provided privacy for the interviewee and interviewer.

The independent variables were sociodemographic data (gender, age, income, education level, marital status and employment status), behavioral health (condom use) and clinical data (HIV transmission way and irregular record registration).

The dependent variable described by the Adherence was investigated through the CEAT-VIH instrument developed in Spain, considered valid and reliable to measure compliance with ART treatment and it has been used in a wide range of countries. The instrument consists of 20 questions, evaluated in a score of 17 to 89 points, presenting three classifications: good adherence (≥ 79 points), which is equivalent to a compliance $\geq 85\%$; regular adherence (53 and 78 points), which represents 50% to

84% of adherence; and low adherence (<53 points), meaning less than 50% adherence to ART⁽⁵⁾.

ASSIST was also used to detect the abuse of alcohol and other psychoactive substances. The instrument was developed by the World Health Organization, validated and already tested for its reliability and feasibility in Brazil. The ASSIST result allows three classifications from a score ranging from 0 to 20 points: occasional use (0 to 3 points), suggestive of abuse (4 to 15 points) and suggestive of dependence (16 to 20 points)⁽¹⁰⁾.

The study sample was estimated based on the mean number of patients enrolled in the service selected for the study, totaling the monthly mean number of 506 patients. For the determination of the sample size, the sample calculation equation for nominal variable in the finite population was used, considering a 95% confidence level, 5% margin of error and an expected prevalence of patients with good adherence equal to 75%, making a total of 184 people.

The data were cataloged and organized in EPI INFO, version 3.5.2. Spreadsheet and double typed in order to compare and correct the divergent values. Subsequently, the data were exported to the Statistical Package for the Social Sciences (SPSS), version 18.0, to carry out the statistical analysis.

In order to evaluate the sociodemographic and clinical health profile of the interviewees, the percentage frequencies were calculated and the frequency distributions were constructed. To measure the adherence, its prevalence was calculated in good, regular and low, classified according to CEAT-VIH. To evaluate the use of alcohol and other psychoactive substances by ASSIST, the prevalence and frequency of use and classification were obtained. In all the conclusions, the level of significance of 5% was considered.

The study complied with Resolution N° 466/2012 of the National Health Council and it was approved by the Research Ethics Committee of the Hospital Complex of the University of Pernambuco under opinion: 1,739,597.

RESULTS

There were 184 PLHA using ART for 6 months participating in the study. Table 1 shows the sociodemographic and clinical health profile of the sample studied and shows that the age ranged from 18 to 70 years old, with a prevalence of 40 to 60 years old expressed by 53.3% (n=98) of the participants, mean of 42.2 years old, standard deviation of 10.1 years old and median of 40 years old. There was a predominance of males (58.2%, n=107), low level of education represented by incomplete elementary school (44%, n=81) and unmarried individuals (45.9%, n=84).

Regarding their family income, 45.1% (n=83) received a minimum wage and 59.8% (n=110) of the interviewees were unemployed. Regarding the way of transmission, 70.1% (n=129) know how they acquired the virus, and the most prevalent cause was the intercourse (95.3%). Regarding the regular use of ART recorded, 68.5% (n=126) had regular adherence to the evaluation of the health team of the service.

Table 1 - Distribution of people living with HIV/AIDS, according to sociodemographic characteristics and health clinics. Recife, PE, Brazil, 2016

Evaluated factor	N	%	p-value ¹
Gender			
Female	77	41.8	0.027
Male	107	58.2	
Age			
18 to 28	15	8.2	<0.001
29 to 39	63	34.2	
40 to 60	98	53.3	
Older than 60	8	4.3	
Level of Education			
None	6	3.3	<0.001
Comp/incomp elementary school	81	44.0	
Comp/incompl high school	80	43.5	
Comp/incompl higher education	17	9.2	
Marital status			
Married/with a partner	71	38.8	<0.001
Single	84	45.9	
Widow	6	3.3	
Separate/divorced	22	12.0	
Family income			
Up to a minimum wage (MW)*	83	45.1	<0.001
More than 1 to 2 MW	60	32.8	
More than 2 to 3 MW	21	11.4	
More than 3 to 4 MW	13	7.1	
More than 4 MW	7	3.8	
Currently working			
Yes	74	40.2	0.008
No	110	59.8	
Knowing how they acquired HIV			
Yes	129	70.1	<0.001
No	55	29.9	
Irregular adherence to ART			
Yes	58	31.5	<0.001
No	126	68.5	

¹p-value of the Chi-square test for proportion comparison (if p-value <0.05 the proportions differ significantly).

* Value of the minimum wage at the time of the study: 880.00.

Table 2 shows the descriptive statistics of the scores that evaluate the CEAT-HIV classification. It was observed that regular adherence represented (67.4%) of the evaluation, the extremes of the scores ranged from 47 to 84 points, with a mean of 74 points and a standard deviation of 6.0. The proportion-comparison test was significant (p-value <0.001), indicating that the prevalence of regular adherence is significantly higher in the evaluated group.

It should be noted that later, the grouping of the low adherence with the regular one was made to enable the accomplishment of the statistical associations, since the low adherence presented only one interviewee, making the statistical tests unviable.

Table 2 - Distribution of people living with HIV/AIDS on antiretroviral treatment according to adherence according to CEAT-VIH scores. Recife, PE, Brazil, 2016

Evaluated factor	N	%	p-value ¹
Good adherence	59	32.1	
Regular adherence	124	67.4	<0.001
Low adherence	1	0.5	

¹p-value of the Chi-square test for proportion comparison (if p-value <0.05 the proportions differ significantly).

Table 3 shows the distribution of the adherence classification according to the CEAT-HIV scores by the ASSIST score for those interviewees who reported using alcohol and other psychoactive substances at least once in their life. In none of the drugs, the degree of use was statistically significant in the CEAT-HIV classification (p-value > 0.05), indicating that the degree of drug dependence is not a determining factor for good adherence to ART.

Table 3 – Distribution of the classification of ART adherence according to the CEAT-VIH scores by the ASSIST score. Recife, PE, Brazil, 2016

Evaluated factor	CEAT-VIH		p-value
	Good adherence n-59	Regular/low adherence n-125	
Smoking			
Casual	18(33.3%)	36(66.7%)	0.244 ¹
Abuse/addiction	11(22.9%)	37(77.1%)	
Total	29(49.1%)	73(58.4%)	
Alcohol			
Casual	36(36.0%)	64(64.0%)	0.194 ¹
Abuse/addiction	18(26.5%)	50(73.5%)	
Total	54(91.5%)	114(91.2%)	
Marijuana			
Casual	6(19.4%)	25(80.6%)	0.692 ²
Abuse/addiction	3(25.0%)	9(75.0%)	
Total	9(15.2%)	34(27.2%)	
Cocaine			
Casual	5(45.5%)	6(54.5%)	0.231 ²
Abuse/addiction	0(0.0%)	4(100.0%)	
Total	5(8.4%)	10(8%)	
Amphetamine			
Casual	1(50.0%)	1(50.0%)	-
Inhalants			
Casual	3(33.3%)	6(66.7%)	0.509 ²
Abuse/addiction	0(0.0%)	3(100.0%)	
Total	3(5%)	9(7.2%)	
Sedatives			
Casual	1(33.3%)	2(66.7%)	1.000 ²
Abuse/addiction	3(60.0%)	2(40.0%)	
Total	4(7%)	4(3.2%)	
Hallucinogens			
Casual	0(0.0%)	1(100.0%)	-

Opioids			
Casual	0(0.0%)	1(100.0%)	-

¹p-value of the Chi-square test for independence (if p-value <0.05 the factor evaluated influences the CEAT-HIV classification). ²p-value of Fisher's exact test.

DISCUSSIONS

The sociodemographic variables in the results reveal that, although most of the participants are male, the proportion of men for each woman is less than 2:1. It is also worth noting the greater representativeness in older adults and the low level of education, corroborating with the current epidemiological tendency of the disease in the country in feminization, pauperization and increase in the vulnerability of non-young population, similar to the national and international literature^(9, 11-13).

With the positive diagnosis for HIV infection, a greater investment in health actions is necessary, since the demand for care in the area of medicine is increased, mainly associated with the continued use of medicines, regular consultation with the multi-professional team and conducting monitoring exams⁽¹⁴⁾. In this way, developing actions that stimulate adherence to ART in PLHA becomes fundamental in this process.

Understanding the degree of adherence to ART in PLHA should be considered a priority in the healthcare and control activities of the HIV epidemic in the country since AIDS is a chronic, controllable, but incurable disease^(15,16).

The evaluation of drug treatment does not involve a definitive judgment and may vary at any time during treatment. Thus, classifying adherence should be understood as an attitude constantly being encouraged by health professionals, always bearing in mind their co-responsibility in the success or failure of therapy^(15,16).

Despite advances in the treatment of HIV in more than three decades of epidemics, a significant percentage of non-adherents to ART are perceived. The data is similar with studies evaluating the degree of adherence in PLHA, revealing that adherence to ART in SAEs is reduced^(9, 15, 17,18). This finding implies elevation of viral load and reduction of lymphocyte levels TCD4+, resulting in a higher incidence of HIV transmission, increased morbidity and mortality, resistance to ART, health expenses and lower quality of life of PLHA⁽¹⁹⁾.

A meta-analysis constructed from the synthesis of 43 studies indicated that the average proportion of patients showing good adherence worldwide was 63.4%. However, an average of 32.1% of people with good adherence was found in this study, revealing that the service under study is well below the world average⁽²⁰⁾. The low adherence found can be justified by the great social discrepancy existing in the Brazilian Northeast when compared to the other regions of the country. The findings indicate that achieving and maintaining high levels of ART adherence remain important issues in Brazil, especially in some states.

Therefore, it is not enough to know the degree of adherence to ART. It is also necessary to analyze the profile of PLHA and the association of factors that can interfere in adherence so professionals working in health services and public policy programs can plan and execute health actions to improve the indicators regarding the degree of adherence to drug therapy in PLHA, especially ART.

Poor adherence to ART can be due to low educational levels, family and social support deficits, and the consumption of alcoholic beverages and psychoactive substances, among other things ⁽²¹⁾.

In this context, it is important to emphasize that the chances of virological failure are almost three times higher for participants with regular adherence compared to those with good adherence. This confirms that achieving optimal long-term adherence is, in fact, a guarantee of successful virological outcomes.

Although the study states that the degree of dependence on alcohol and other drugs did not influence the classification of HIV-AIDS adherence, it is observed that PLHA who reported abusive or addiction to alcohol, tobacco, cocaine/crack, inhalants, opioids, and hallucinogens showed a trend towards inadequate adherence when compared to those who reported occasional use of such drugs.

The use of alcohol and other drugs can be considered a risk factor for the lack of adherence to the treatment of chronic diseases, in general, presenting as a challenge for PLHA. A study carried out in another state of the Brazilian Northeast found that PLHA reported interrupting the use of antiretroviral drugs at weekends for the recreational use of alcohol and other psychoactive substances⁽²²⁾. This fact happens because, even without having scientific knowledge, many people are afraid to use licit and illicit drugs by taking medicine, often opting for the temporary suspension of medicines⁽²²⁾.

The literature reveals that although the individual is aware of the harm caused by the use of drugs, it is used as a means of oblivion and not coping with problems, hindering to maintain drug treatment⁽²³⁾. It should be noted that interference with the use of licit and illicit drugs in ART leading to inadequate adherence exacerbates already established pathological conditions and increases treatment costs due to procedures and hospitalizations.

A study conducted in three SAEs in Vietnam states that drug users tend to show inadequate ART adherence. PLHA who reported excessive use of alcoholic beverages were classified predominantly as non-adherent to ART⁽¹¹⁾.

People who use drugs tend to be socially more vulnerable and have an inadequate lifestyle, influencing adherence to any kind of drug treatment for chronic diseases. Thus, the use of illicit drugs was associated with low adherence, reflecting a decrease in viral and immunological responses to ART. The use of tobacco and crack cocaine was also associated with discontinuation of daily ART and the findings were also found in this study⁽²⁴⁾.

Adherence is an essential factor for therapeutic success, both for the patient and for the multidisciplinary team that takes responsibility for the success of the treatment. The adherence reported in this study is considered to be regular because some of this information is based on answer from a questionnaire, which may be an important limitation, due to the possibility of false answers to some questions or because the respondents may not have remembered or could have been ashamed of any non-compliance with the treatment.

Therefore, it is necessary to broaden the discussion about the evaluation of adherence according to the daily demands around the theme to understand and propose health actions that are related to the prevention of illness and promotion, recovery and maintenance of health of this population⁽²⁵⁾.

Health professionals, especially nurses, play a key role in ensuring adequate adherence to SAEs. A study carried out at the infectology outpatient clinic revealed

that an adherence program was created in which the nursing consultation was included in the process. This showed an improvement in the patient's coping with the disease, leading to an increase in adherence levels⁽²⁶⁾. This professional is able to assist the individuals who need ART in their biopsychosocial factors, and above all, guided by the systematization of nursing care⁽²¹⁾.

CONCLUSIONS

Based on the current challenges associated with ART adherence, there is a need to develop social strategies, since the main variables capable of influencing drug adherence are conditioned, in particular, to socioeconomic and behavioral health factors.

Although the study shows a predominance of regular adherence to ART and the consumption of alcohol and other psychoactive substances statistically does not interfere with adherence to therapy, it is observed that there is a tendency of PLHA users of such licit and illicit drugs to have a regular/bad adherence.

Also, it is essential to maintain health promotion interventions within specialized HIV/AIDS services to ensure satisfactory adherence, as well as to maintain this condition allowing a better quality of life for this population and reducing unfavorable outcomes related to infection, ultimately improving the country's health indicators.

Thus, it should be emphasized that the data presented here were extracted from the investigation of users of a service, configured as a limitation of the investigation. However, it is suggested to deepen the search for an understanding of the factors that determine and influence drug adherence, allowing facets to be revealed that express truths about the phenomenon investigated, which point out favorable implications for the quality of care and for the effectiveness of public policy which deals with HIV/AIDS issues.

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