

Signs and symptoms of anxiety and depression in people living with HIV: Cross-sectional study

Sinais e sintomas de ansiedade e depressão em pessoas vivendo com HIV: Estudo transversal

Signos y síntomas de ansiedad y depresión en personas viviendo con VIH: Estudio transversal

RESUMO

Objetivo: estimar a ocorrência de sinais e sintomas de ansiedade e depressão em pessoas com vírus da imunodeficiência humana e sua associação com as características sociodemográficas e clínicas. Método: estudo transversal, realizado entre maio de 2015 a junho de 2016. A amostra constituiu-se de 134 sujeitos. Utilizou-se a Escala Hospitalar de Ansiedade e Depressão para a realização das entrevistas. Resultados: a prevalência dos sinais e sintomas de ansiedade e depressão foi de 22,3% e 16,4%, respectivamente. Homens apresentaram menos sintomas de depressão que as mulheres ($p=0,04$). Ter filhos aumentou 3,2 vezes as chances de sinais e sintomas de ansiedade ($p<0,05$). Histórico de outras infecções sexualmente transmissíveis aumentou em 2,4 vezes a chance de ansiedade ($p=0,03$) e histórico de internações aumentou em 3,3 a chance de depressão ($p=0,04$). Conclusão: Sinais e sintomas de ansiedade e depressão foram prevalentes em pessoas vivendo com vírus da imunodeficiência humana.

DESCRIPTORIOS: Ansiedade; Depressão; HIV; Transtornos Mentais.

ABSTRACT

Objective: to estimate the occurrence of signs and symptoms of anxiety and depression in people with human immunodeficiency virus and its association with sociodemographic and clinical characteristics. Method: cross-sectional study, conducted between May 2015 and June 2016. The sample consisted of 134 subjects. The Hospital Anxiety and Depression Scale was used to conduct the interviews. Results: the prevalence of signs and symptoms of anxiety and depression was 22.3% and 16.4%, respectively. Men had fewer symptoms of depression than women ($p=0.04$). Having children increased 3.2 times the chances of signs and symptoms of anxiety ($p<0.05$). History of other sexually transmitted infections increased by 2.4 times the chance of anxiety ($p=0.03$) and history of hospitalizations increased the chance of depression by 3.3 ($p=0.04$). Conclusion: Signs and symptoms of anxiety and depression were prevalent in people living with human immunodeficiency virus.

DESCRIPTORS: Anxiety; Depression; HIV; Mental Disorders.

RESUMEN

Objetivo: estimar la aparición de signos y síntomas de ansiedad y depresión en personas con virus de inmunodeficiencia humana y su asociación con las características sociodemográficas y clínicas. Método: estudio transversal, realizado entre mayo de 2015 a junio de 2016. La muestra se constituyó de 134 sujetos. Se utilizó la Escala Hospitalaria de Ansiedad y Depresión para la realización de las entrevistas. Resultados: la prevalencia de los signos y síntomas de ansiedad y depresión fue de 22,3% y 16,4%, respectivamente. Los hombres mostraron menos síntomas de depresión que las mujeres ($p=0,04$). Tener hijos aumentó 3,2 veces las posibilidades de signos y síntomas de ansiedad ($p<0,05$). Historial de otras infecciones de transmisión sexual aumentó en 2,4 veces la probabilidad de ansiedad ($p=0,03$) e historial de internaciones aumentó en 3,3 la posibilidad de depresión ($p=0,04$). Conclusión: Los signos y síntomas de ansiedad y depresión fueron frecuentes en personas que viven con virus de inmunodeficiencia humana.

DESCRIPTORES: Ansiedad; Depresión; VIH; Trastornos Mentales.

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INTRODUCTION

Depression is a common mental disorder among People Living with HIV (PLHIV) and can be triggered by the absence of a cure for the infection, limits caused by the disease, feelings of guilt, in addition to the experience of prejudice and discrimination imposed by society, being associated with hopelessness in the face of the diagnosis, denial, demotivation and inability to deal with the situation.⁽¹⁻²⁾

Anxiety symptoms in PLHIV are associated with stressors related to the diagnosis, anguish and uncertainties regarding the evolution of the disease, choices about the future, social isolation, lack of family support, fear of pain, physical deterioration and death.⁽³⁾

When untreated, mental disorders cause loss of psychological identity and psychological distress⁽²⁻⁴⁾, changes in the immune system, inadequate adherence to Antiretroviral Therapy (ART), practice of sex without condoms and multiple partners, increasing the risk of HIV transmission and morbidity and mortality.⁽⁵⁾

There are many damages resulting from mental disorders. A study carried out in Korea with 457 PLHIV identified that participants with depression and anxiety were 2.28 times more likely to have a moderate/high risk of cardiovascular disease than those without depression or anxiety.⁽⁶⁾

The literature highlights the high prevalence of mental disorders among PLHIV, influenced by sociodemogra-

phic and clinical factors in their occurrence. In a survey conducted in Guinea with 160 people living with HIV, the prevalence of anxious and depressive symptoms among HIV-infected patients was 13.8% and 16.9%, respectively. People with a BMI \leq 18 and who did not receive antiretroviral treatment were more likely to have depressive symptoms, and those aged <40 years were also at greater risk of experiencing anxiety.⁽⁷⁾

Anxiety and depression experienced by PLHIV are also associated with suicidal ideation.⁽⁸⁻⁹⁾ Virus-related stigma has a strong causal association with anxiety, depression, and suicidal ideation⁽¹⁰⁾, including cultural prejudices that expose PLWHA to emotional and social vulnerabilities, interfering with therapeutic adherence.⁽¹¹⁾

Due to the negative effects that anxiety and depression symptoms cause, it is important to identify the occurrence of these signs and symptoms in PLHIV, because it is believed that this can facilitate the planning of interventions aimed at this population, providing the prevention of risky health behaviors and contributing to improve the quality of life of these patients. Given the above, the objective was to estimate the occurrence of signs and symptoms of anxiety and depression in PLHIV and their association with sociodemographic and clinical characteristics.

METHODS

A cross-sectional study, carried out from May 2015 to June 2016, in an in-

fectious disease outpatient clinic, a reference in care in Fortaleza, Ceará State, Brazil. Inclusion criteria were: PLHIV of both sexes, aged 18 years or older, in outpatient follow-up and using ART for more than six months. Pregnant women and people in prisons and shelters were excluded. In the end, the sample consisted of 134 patients.

Data collection took place through interviews carried out in a private environment, lasting approximately 40 minutes. Two instruments were used: the Sociodemographic and Clinical Form for People Living with HIV (with clinical and demographic data) and the Hospital Anxiety and Depression Scale (HAD).⁽¹²⁾ The score that the participant reaches when responding to the HAD items allows the classification of signs and symptoms of anxiety and depression as follows: without symptoms (\leq 7 points) and with symptoms ($>$ 7 points).

The software used to perform the analyzes was Statistical Package for the Social Science® version 20.0 for Windows®. Descriptive analysis was used to analyze the sociodemographic, clinical and HAD scores, using absolute and relative frequency, the measure of central tendency (mean) and the measure of dispersion (standard deviation). The association between the HAD scale and sociodemographic and clinical variables was analyzed using Fisher's exact test. The Spearman test was used to perform the correlations and the scales were evaluated for inter-item correlation (Cronbach's alpha). In all cases, the

significance level established was 0.05 (5%), with $p < 0.05$ being statistically significant. The project was approved by the Research Ethics Committee of the Walter Cantídio University Hospital of the Federal University of Ceará, CAAE 37868214.9.3001.5045, under opinion No. 1,215,361, following all the recommendations of Resolution 510/16 of the National Health Council.

RESULTS

Of the 134 PLHIV, 52.9% were female. The mean age was 39.6 (± 1.5 years), with most of them in the 30-50 age group (mean \pm standard deviation: 39.6; 95% CI: 23-71 years), 77.6% declared themselves to be heterosexual, 73.1% had more than eight years of schooling, 76.1% had a steady partner, 62.7% had children, 91.8% professed religion, with Catholic being the most prevalent (63.4%) and 65.7% had an income equal to two minimum wages (R\$ 788.00 at the time of the study, equivalent to US\$

233.74).

As for the clinical characterization, the average time of diagnosis of positive anti-HIV serology was 60 months, 89.6% of the patients were in the category of sexual exposure, 96.3% had a viral load lower than 10,000 copies/ml and 91% had a CD4+ T lymphocyte count lower than or equal to 200 cells/mm³ in the last three months. Regarding the history of STIs, 46.3% reported that they had already had some disease, 11.9% used psychiatric medication, 89.6% had not been hospitalized due to complications of HIV infection in the last year, and 90.3% were using ART for more than 12 months.

The prevalence of signs and symptoms of anxiety and depression in PLHIV was 22.3% and 16.4%, respectively. There was a direct correlation between the increase in anxiety scale scores and the increase in depression scale scores (Spearman correlation: 0.570; $p < 0.01$). In the inter-item correlation (Cronbach's alpha) of the HAD questionnaire, values

of 0.846 and 0.681 were obtained for the anxiety and depression scales, respectively, showing good internal consistency.

PLHIV who had children were 3.2 times more likely to have signs and symptoms of anxiety when compared to those without children (odds ratio: 3.20; 95% confidence interval: 1.35-7.53; $p < 0.05$). Men had fewer symptoms of depression when compared to women (odds ratio: 0.36; 95% confidence interval: 0.13-0.99; $p = 0.04$). (Table 1).

A significantly higher proportion of PLHIV and a history of other STIs had symptoms of anxiety (odds ratio: 2.45; 95% confidence interval: 1.06-5.67; $p = 0.03$). Among the Sexually Transmitted Infections (STIs), the most prevalent were Human Papillomavirus (HPV) infection (32.2%) and syphilis (29.0%). Regarding the signs and symptoms of depression, there was a statistically significant association with the history of hospitalizations for complications resulting from HIV, so that individuals in this group were more than three times as

Table 1. Association between sociodemographic variables and the presence of signs and symptoms of anxiety and depression in people with HIV according to HAD*. Fortaleza, CE, Brazil, 2015-2016 (n=134).

	Anxiety			Depression		
	No (%)	Yes (%)	pt	No (%)	Yes (%)	pt
Sex						
Male	52 (50,0)	11 (36,7)	0,20	57 (50,9)	6 (27,3)	0,04
Female	52 (50,0)	19 (63,3)		55 (49,1)	16 (72,7)	
Age (in years)						
≤ 50	91 (87,5)	27 (90,0)	0,71	98 (87,5)	21 (95,5)	0,30
> 50	13 (12,5)	3 (10,0)		14 (12,5)	1 (4,5)	
Sexual orientation						
Heterosexual	80 (76,9)	24 (80,0)	0,72	85 (75,9)	19 (86,4)	0,29
Homo/bisexual	24 (23,1)	6 (20,0)		27 (24,1)	3 (13,6)	
Education (years of study)						
≤ 8	26 (25,0)	10 (33,3)	0,37	29 (25,9)	7 (31,8)	0,57
> 8	78 (75,0)	20 (66,7)		83 (74,1)	15 (68,2)	
Family income (in minimum wages) §						
≤ 2	70 (67,3)	18 (60,0)	0,46	71 (63,4)	17 (77,3)	0,21
> 2	34 (32,7)	12 (40,0)		41 (36,6)	5 (22,7)	

Have a companion?						
Yes	79 (76,0)	23 (76,7)	0,94	88 (78,6)	14 (63,6)	0,14
No	25 (24,0)	7 (23,3)		24 (21,4)	8 (36,4)	
Has kids						
Yes	40 (38,5)	20 (66,7)	< 0,05	68 (60,7)	16 (72,7)	0,29
No	64 (61,5)	10 (33,3)		44 (39,3)	6 (27,3)	
Religion						
Yes	96 (92,3)	27 (90,0)	0,69	102 (91,1)	21 (95,5)	0,50
No	8 (7,7)	3 (10,0)		10 (8,9)	1 (4,5)	

*HAD: Hospital anxiety and depression scale; tp: Fisher's Exact Test; #IC: Confidence Interval; § Family income: R\$ 788,00 at the time of the study equivalent to US\$ 233.74.

Table 2. Association between clinical characteristics and the presence of signs and symptoms of anxiety and depression in people with HIV according to HAD*. Fortaleza, CE, Brazil, 2015-2016 (n=134).

	Anxiety			Depression		
	No (%)	Yes (%)	pt	No (%)	Yes (%)	pt
HIV exposure category §						
Sexual	93 (89,4)	27 (90,0)	0,93	99 (88,4)	21 (95,5)	0,34
Others	11 (10,6)	3 (10,0)		13 (11,6)	1 (4,5)	
Time of HIV diagnosis (years)						
< 5	53 (51,0)	14 (46,7)	0,68	56 (50,0)	11 (50,0)	1,00
≥ 5	51 (49,0)	16 (53,3)		56 (50,0)	11 (50,0)	
Viral load (copies/ml)						
< 10.000	102 (98,1)	27 (90,0)	0,07	109 (97,4)	20 (90,9)	0,17
≥ 10.000	2 (1,9)	3 (10,0)		3 (2,6)	2 (9,1)	
CD4+ T lymphocytes (cells/mm ³)						
≤ 200	10 (9,6)	2 (6,7)	0,62	10 (8,9)	2 (9,1)	0,98
> 200	94 (90,4)	28 (93,3)		102 (91,1)	20 (90,9)	
History of other STIs associated						
Yes	43 (41,3)	19 (63,3)	0,03	53 (47,3)	9 (40,9)	0,58
No	61 (58,7)	11 (36,7)		59 (52,7)	13 (59,1)	
Use of psychiatric medication						
Yes	11 (10,6)	5 (16,7)	0,37	11 (9,8)	5 (22,7)	0,10
No	93 (89,4)	25 (83,3)		101 (90,2)	17 (77,3)	
Hospitalizations for HIV complications§ in the last year						
Yes	11 (10,6)	3 (10,0)	0,93	9 (8,0)	5 (22,7)	0,04
No	93 (89,4)	27 (90,0)		103 (92,0)	17 (77,3)	
Time of use of antiretroviral therapy (months)						
< 12	8 (7,7)	5 (16,7)	0,15	9 (8,0)	4 (18,2)	0,15
≥ 12	96 (92,3)	25 (83,3)		103 (92,0)	18 (81,8)	

*HAD: Hospital anxiety and depression scale; tp: Fisher's Exact Test; #IC: Confidence Interval; §HIV: Human immunodeficiency virus; ||STI: Sexually Transmitted Infections.

likely to have symptoms of depression (odds ratio: 3.37 ; 95% confidence interval: 1.01-11.26; $p = 0.04$). (Table 2)

DISCUSSION

When estimating the prevalence of signs and symptoms of anxiety and depression, it was observed that the results were similar to those found in other national surveys^(4,13-14) and international^(1,15-16) involving PLHIV. Often, these mental disorders are caused by the impact of the diagnosis of HIV infection, reduced life expectancy, complex and long-term treatment regimens, stigmatization and lack of social and family support.

Satisfactory social support in PLHIV can have a positive impact on mental health, adherence to ART, quality of life and health status, yet PLHIV who have greater social support demonstrated greater psychological support to cope with the disease⁽¹⁷⁾, may have an impact on the reduction of mental disorders such as anxiety and depression.

The care dedicated to children reduces self-care in health, especially with regard to adherence to treatment, generating negative consequences for the health of PLHIV.⁽¹⁸⁾ It may have repercussions on mental health, a negative consequence found in this study was that anxiety symptoms were more prevalent in the population that had children.

Women are usually responsible for the daily care of the house, children and family, which can generate a greater load of stress and emotional exhaustion, in addition to the stressors related to the disease⁽¹⁹⁾, culminating in depressive symptoms, reinforcing the need for attention to this public. Women were more likely to develop depression when compared to men^(4,18), corroborating the findings of this research.

In a previous study, condom use and alcohol consumption were associated with anxiety in PLHIV. Anxious people used more alcohol to minimize symptoms of anxiety, and as a result

The care dedicated to children reduces self-care in health, especially with regard to adherence to treatment, generating negative consequences for the health of PLHIV. (18) It may have repercussions on mental health, a negative consequence found in this study was that anxiety symptoms were more prevalent in the population that had children.

of substance use, they did not use condoms during sexual intercourse⁽⁴⁾, being more exposed to the acquisition of STIs. Depression in PLHIV interferes with adherence to therapeutic treatment, influencing medication intake and non-attendance to appointments.⁽²⁰⁾ Thus, inadequate adherence to ART compromises the immune system, causing a reduction in defense cells, an increase in viral load and opportunistic diseases, which may have repercussions on the increase in the number of hospital admissions.⁽²¹⁻²²⁾

Anxiety and depression are prevalent in PLHIV⁽¹³⁻¹⁴⁾ and the level of psychological stress and cortisol is higher in this population when compared to people living without HIV.⁽²³⁾ Knowing this evidence intensifies the need to integrate PLHIV treatment with basic mental health services, in order to provide social support and psychological well-being.

Therefore, the regular practice of physical activity can be a strategy to combat the psychological problems associated with HIV infection. The anxiolytic and antidepressant effect of exercise is essential to improve the quality of life of PLHIV.⁽²⁴⁾ Individuals engaged in physical training programs have better well-being and decreased symptoms of depression and anxiety.⁽²⁵⁾

CONCLUSION

The results of the study showed that signs and symptoms of anxiety and depression occurred in PLHIV. Participants who had children and a history of other STIs were more likely to develop signs and symptoms of anxiety. Regarding depression, women who had a history of hospitalization were more likely to have such signs and symptoms. It is hoped that this research can contribute to the development of strategies that seek to minimize the psychological suffering experienced by these individuals in coping with the disease.

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