

## ORIGINAL RESEARCH ARTICLE

# Psychological Disorders among Human Immunodeficiency Virus-infected Adults in Southern Nigeria

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## Abstract

Persons living with HIV/AIDS (PLWHA) have been reported to be more at risk of developing mental illness than the general population. A cross sectional study was carried out to evaluate psychological symptoms of PLWHA. A total of one hundred and thirteen persons living with HIV/AIDS ( $M= 43$ ,  $F=70$ ) with an age range of 21-65 years  $X=38.00\pm9.68$  participated in the study. Paranoid ideation, Depression, Neuroticism, Interpersonal sensitivity and Anxiety were the most common psychopathologic symptoms. Women reported a higher proportion of psychopathology compared to men on all subscales. There was no significant statistical difference between the age groups on all symptoms evaluated. Single PLWHA in this study had a higher tendency towards psychopathology compared to the married or widowed. The psychopathological proportion of symptoms reported by PLWHA in this study calls for concern. Mental health screening and psychological intervention thus remains imperative in the care of PLWHA in Nigeria. *Afr J Reprod Health 2013 (Special Edition); 17[4]: 177-182*.

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**Keywords:** Psychological disorders, HIV/AIDS, Southern Nigeria.

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## Résumé

On a documenté le fait que les personnes vivant avec le VIH / SIDA (PVVIH) sont plus à risque de développer une maladie mentale que la population générale. Une étude transversale a été réalisée pour évaluer les symptômes psychologiques des PVVIH. Un total de cent treize personnes vivant avec le VIH / sida ( $M = 43$ ,  $F = 70$ ) avec une tranche d'âge de 21-65 ans ont participé à l'étude. L'idéation paranoïaque, la dépression, la névrose, la sensibilité interpersonnelle et l'anxiété sont des symptômes psychopathologiques les plus courantes. Les femmes ont signalé une plus forte proportion de la psychopathologie par rapport aux hommes sur toutes les échelles. Il n'y avait pas de différence statistiquement significative entre les groupes d'âge sur tous les symptômes évalués. PVVIH unique dans cette étude avaient une plus grande tendance vers la psychopathologie par rapport à ceux qui sont mariés ou veufs. La proportion psychopathologique des symptômes rapportés par les PVVIH dans cette étude appelle de préoccupation. Le dépistage et l'intervention psychologique de la santé mentale demeurent donc impératifs dans la prise en charge des PVVIH au Nigeria. *Afr J Reprod Health 2013 (Edition Spéciale); 17[4]: 177-182*.

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**Mots-clés:** troubles psychologiques, VIH / sida, le sud du Nigeria.

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## Introduction

In Nigeria, an estimated 3.6% of the population is living with HIV/ AIDS<sup>1</sup>. Although, substantial effort is in place to control the spread of the virus, the transmission is still ongoing with devastating effects on communities, countries and the world at large<sup>1</sup>. Living with HIV/AIDS has been shown to have tremendous negative impact on psychological well being to the extent that people living with

HIV/AIDS (PLWHA) are more at risk of developing mental disorder than the general population<sup>2</sup>. Symptoms like depression are estimated to be two to five times higher among persons living with HIV/AIDS compared to those who are HIV negative. It is also reported that people living with HIV/AIDS meet the criteria for generalized anxiety disorder at a rate almost eight times higher than a comparative U.S sample<sup>3</sup>. People with HIV/AIDS have also been shown to

have feelings of self doubt, self consciousness, negative expectations about interpersonal interaction and feelings of hopelessness and despair related to their illness<sup>4</sup>.

Despite the existent of the negative mental health indices associated with people living with HIV/AIDS, few research works in Nigeria seem to focus on the relation between mental health and HIV/AIDS. A report entitled "HIV/AIDS and mental health research in sub-Saharan Africa: a systematic review" states that the relationship between mental illness and HIV/AIDS is complex and bidirectional. It posits that although significant amount of research has been carried out in high-income countries less is known about HIV and mental health in sub-Saharan Africa<sup>5</sup>. The present study thus aims at evaluating general psychological symptoms of PLWHA in Nigeria using the Symptom Checklist 90 (SCL-90). We hypothesize that PLWHA in Nigeria will exhibit psychological symptoms of psychopathological proportions due to the distressing factors associated with HIV/AIDS.

## Method

### Participants

A total of one hundred and thirteen persons living with HIV/AIDS ( $M=43$ ,  $F=70$ ) with an age range of 21-65 years ( $X=38.00 \pm 9.68$ ) seen at the out-patient clinic of the Institute of Human Virology Nigeria (IHVN), University of Benin Teaching Hospital, Nigeria were consecutively recruited for the study.

### Measures

The symptom checklist-90 (SCL-90) is a self report psychometric instrument published by the Clinical assessment division of the Pearson assessment and information group<sup>6</sup>. SCL-90 was adapted for Nigerian use by Omoluabi P.F. (1997)<sup>7</sup>. The instrument is designed to evaluate a wide range of psychological problems and symptoms of psychopathology. It is also used in measuring the progress and outcome of psychiatric and psychological treatment or for research purposes.

The instrument consists of 90 items, which are subdivided into 10 subscales, each focusing on a specific symptom indicative of a psychological problem. The subscales are Somatization (Bodily pains, discomfort and dysfunction) Obsessive-compulsive (Irresistible thoughts, impulses and actions) Interpersonal sensitivity (Discomfort in social situations) Depression (Loss of vital energy, interest and motivation) Anxiety (Restlessness, nervousness and tension) Hostility (Feelings of anger, hatred, repression and unfriendliness) Phobic Anxiety (Irrational fears and avoidance of objects, places and situations) Paranoid Ideation (Suspiciousness, distrustfulness and blaming others) Psychoticism (Hallucinations, delusions, externally manipulated thoughts) Neuroticism (Poor sleep and appetite, feeling of unwellness).

### Procedure

The study was carried between July and September, 2011. Persons living with HIV/AIDS seen at a routine checkup clinic of the Institute of Human Virology, Nigeria, University of Benin Teaching Hospital were consecutively recruited for the study after informed consent was obtained from them. Participants were required to fill the SCL 90; a self report psychometric instrument. The research assistants read to those who could not read or write English language. Participants were required to respond to each of the ninety problems contained in the questionnaire as it applied to them in the past seven days including the day of testing. The questions were formulated on a Likert scale ranging from 0 (Not at all) to 4 (Extremely). For our analysis, we used the normative values developed in Nigeria to ascertain those who had scores indicative of psychopathology and normal. Scores on all subscales and the scale total were thus classified as either normal or psychopathologic. The scores were further evaluated as determined by gender, age and marital status.

## Results

Of the 113 subjects involved in the study, ( $M=43$ ,  $F=70$ ) 59 (52.2%) were married, 31(27.4%) single, 5(0.04.4%) widowed while 18(15.9%) persons

failed to disclose their marital status. Their educational attainment ranged from no formal education to tertiary education.

**Table 1:** Mean scores and standard deviation of respondents on SCL-90

Psychological symptoms	Mean	Std Deviation
Phobic Anxiety	1.7	3.4
Hostility	2.4	3.6
Psychoticism	3.8	6.0
Anxiety	4.4	6.7
Obsessive compulsive	4.5	5.5
Paranoid Ideation	4.5	5.2
Interpersonal sensitivity	5.0	7.0
Neuroticism	5.2	6.1
Somatization	6.6	6.9
Depression	8.1	9.2
Sub total	46.2	60.0

The mean scores of respondents as presented on Table I show that the highest mean score recorded was on the Depression sub scale followed by Somatization subscale. The least mean score was in Phobic anxiety subscale.

**Table 2:** Frequency of psychological symptoms among persons living with HIV/AIDS

Psychological symptoms	Number (%)
Paranoid Ideation	39(34.5)
Depression	31(27.4)
Neuroticism	27(23.9)
Interpersonal Sensitivity	24(21.2)
Anxiety	18(15.9)
Psychoticism	15(13.3)
Hostility	15(13.3)
Phobic anxiety	13(11.5)
Obsessive Compulsive	13(11.5)
Somatization	10(8.8)

**Table 3:** Psychopathologic symptoms reported by respondents by gender

Psychological Symptoms	Males Number (%)	Females Number (%)	P-Value
Paranoid Ideation	13 (30.2)	26 (37.1)	P=0.453
Depression	8 (18.6)	23 (32.9)	P=0.099
Neuroticism	10 (23.3)	17 (24.3)	p=0.901
Interpersonal sensitivity	7 (16.3)	17 (24.3)	P=0.312
Anxiety	8 (18.6)	10 (14.3)	P=0.542

Table 3 shows that paranoid ideation was the most common symptom recorded in both males and females followed by depression, neuroticism, interpersonal sensitivity and anxiety in females

Table 2 presents the proportion of psychological symptoms recorded across the subscales. Paranoid ideation was the most reported psychological symptom followed by depression, the least reported psychological symptom was Somatization. Although somatization had the second highest mean score as shown in Table I, it was the least frequent psychological symptom reported by the respondents.

The Nigerian norm was used as the basis for classifying the respondents into a normal or psychopathologic index across the subscales. Scores higher than the norms indicate that the respondent has psychopathologic manifestation of the particular SCL-90 scale. The proportion of respondents who had scores indicative of psychopathology as evaluated by the Nigerian norms varied from subscale to subscale. Although respondents had scores indicative of psychopathology on all subscales of the SCL 90, only the first five most reported symptoms are presented; the others are Psychoticism, Hostility, Phobic anxiety, Obsessive compulsive and Somatization subscales.

Summary of Table – Paranoid ideation was the most common symptom recorded in both males and females followed by depression, neuroticism, interpersonal sensitivity and anxiety in females and neuroticism, depression, anxiety and interpersonal sensitivity in males. Females had higher proportions in all five symptoms as well as a tendency towards psychopathology compared to males, however there was no statistical difference between male and females on all the symptoms as shown in the table.

and neuroticism, depression, anxiety and interpersonal sensitivity in males. Results however show that while interpersonal sensitivity was the least psychopathologic symptoms in males,

anxiety was the least in females. Women had higher proportions in all five symptoms compared to men indicating a higher tendency towards psychopathology; however, there was no statistically significant difference between males and females on the reported symptoms.

## Discussion

In support of our hypothesis, PLWHA had psychological symptoms in psychopathological proportions on all subscales of the SCL90. This may be attributed to physical, social as well as psychological consequences of the disease. In addition to the physiological burden of the diseases which require daily intake of drugs, victims are also exposed to social challenges like stigmatization, shame and isolation as well as psychological issues like anxiety, fear and depression. Not surprisingly, research findings have reported that PLWHA are more at risk of developing mental disorder than the general population<sup>8</sup>. Among other challenges, the experience of stigma associated with HIV/AIDS has been identified as a major source of psychological distress, particularly depression among PLWHA<sup>9</sup>. The negative psychological effects of stigma seem more severe among people with HIV/AIDS than among people with other medical conditions. HIV was identified in a meta-analysis of 21 studies to be more stigmatizing than other diseases such as diabetes and sexually transmitted infections (e.g. genital herpes simplex infection)<sup>10</sup>.

Stigmatization may take the form of enacted stigma as may be observed in direct experiences of prejudice and discrimination or by the anticipation of being stigmatized or the fear of being discriminated against known as felt or perceived stigma. A comparison of cancer patients and PLWHA, found that patients with HIV/AIDS reported more experiences of enacted stigma including social rejection, social isolation, and financial insecurity associated with possible workplace discrimination than cancer patients did. People with HIV/AIDS also reported more experiences of internalized shame and lower self-esteem than cancer patients did<sup>11,12</sup>. Stigmatization experiences that are most strongly related to

psychological distress have been found to include manifestations within family setting such as receiving advice to conceal one's status, being avoided and being treated with exaggerated kindness as well as manifestations in health care settings like awkward social interaction<sup>13</sup>.

Of the ten psychological symptoms evaluated in this study, paranoid ideation was the most common symptom irrespective of gender, age group or marital status. The mean score on interpersonal sensitivity reported by PLWHA in this study further stresses a plausible difficulty in interpersonal relation. The need for psychological aid to PLWHA can thus not be over emphasized. In this study depression was the second most common psychopathologic symptom found among the respondents, comparable to another research finding in Nigeria in which sixty-six participants (21.3%) had significant depressive symptoms while 14.2% met ICD-10 diagnostic criteria for depressive disorder<sup>14</sup>. Our finding is also supported by results from a study of patients newly diagnosed with HIV/AIDS carried out in Cape Town. Fifty-six per cent of the patients were diagnosed with a psychiatric disorder, most commonly major depression, dysthymic disorder, post-traumatic stress disorder, and alcohol dependence<sup>15,16</sup>. Our result also corroborates a study among HIV positive patients, in which depression was found to be second only to substance abuse as the most prevalent psychiatric disorder<sup>17</sup>. These findings identify depression as a significant co-morbidity in HIV/AIDS. Depression in the context of HIV/AIDS has been implicated in adherence to treatment for both mental illness and for antiretroviral treatment (ART)<sup>18</sup>. Depression may not only lead to non-adherence to ART, it can result in poorer health, social isolation and faster progression to AIDS<sup>19</sup>. This vicious circle suggests that depression in HIV/AIDS demands attention in clinical and psychological practice.

The prevalence of anxiety in the present study was 15.9%, anxiety in the context of HIV/AIDS has far reaching implications as it can also correlate with lower adherence to antiretroviral therapy (ART) and medical recommendations<sup>20</sup>. In a study which assessed the prevalence of psychiatric disorders using the Mini International

Neuropsychiatric Interview among 149 recently diagnosed HIV/AIDS patients, the prevalence of anxiety was 6.7% and that of depression was 34.9%<sup>15,16</sup>. A study conducted in Brazil using the Hospital Anxiety and Depression Scale (HADS) reported a prevalence of anxiety and depression as 35.8% and 21.8% respectively<sup>21</sup>. Anxiety, especially among those that have recently been diagnosed with HIV, was shown to be more prevalent among patients with stress or excess social stigma related to their diagnosis<sup>22</sup>.

There was no statistically significant difference between the males and females in this study, however, women were generally more susceptible and reported a higher proportion of psychological symptoms in all the subscales of SCL 90. This is in consonance with a previous study in which gender was found to be the most significant predictor of psychological distress. Using the Brief Symptom Inventory (BSI) both HIV positive and HIV negative females had more distress than their male counterparts on several dimensions (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, phobic anxiety and paranoia)<sup>23</sup>. An important implication of women's susceptibility to psychopathology as reported in this study emphasizes the need to strongly consider the mental health concerns of women living with HIV/AIDS.

There was also no significant difference across the age groups on symptoms measured by SCL 90 in this study. However research findings suggest that the mental health needs of persons 50 years of age and older with HIV/AIDS seems largely overlooked. It was also found that HIV older adults who had more psychological symptoms also report more HIV related life stressors burden, less support from friends and reduced access to health care and social services due to AIDS related stigma<sup>24</sup>. It will be of immense benefit if future studies on mental health and HIV/AIDS in Nigeria look at the older population of PLWHA.

Single PLWHA in this study had higher proportions on all psychopathologic symptoms compared to married or widowed respondents. Several reasons may account for this finding; first and foremost is that a single person is more likely to carry the burden of ill health alone compared to the married who is assured of company. The future

as it pertains to marriage, employment/job security, finance and other challenges may also be more distressing for the single person. There is however a need for future studies to explore the mental health implication of living with HIV/AIDS on single persons.

The findings from this study provide valuable insight into the psychological profile of PLWHA in the context of mental health. In view of the fact that research reports affirm that mental health is one of the co-morbidities that is often overlooked in treating patients for Acquired Immune Deficiency Syndrome from Human Immunodeficiency Virus (HIV/AIDS)<sup>25-27</sup>. There is a dire need to further explore the psychological health of PLWHA in Nigeria with an aim to providing a needed yet over looked area of need.

### ***Limitations of the study***

The results of this study being a hospital based study and a self-selected population may not be a true representation of the general population. The lack of data on a comparative normal population also constitutes a limitation to this study. It is hoped that future studies in this area will address these challenges.

### **Acknowledgement**

The authors wish to sincerely thank all Persons living with HIV/AIDS who participated in this study for their time and willingness to provide information which made the study possible.

### **References**

1. 2008 Country Profile: Nigeria. US Department of State (2008).
2. Scott-Sheldon LAJ, Kalichman SC, Carey MP, Fielder R. Stress management intervention for HIV+ adults: A meta-analysis of randomized controlled trials, 1989 to 2006. *Health Psychology* 2008; 27:129–139.
3. Bing EG, Burnam MA, Longshore D, Fleishman JA, Sherbourne CD, London AS, et al. Psychiatric disorders and drug use among Human Immunodeficiency Virus-infected adults in the United States. *Archives of General Psychiatry* 2001; 58:721–728.
4. Kylma J, Vehvilainen-Julkunen K, Lahdevirta J. Hope, despair and hopelessness in living with HIV/AIDS: a

- grounded theory study. *Journal of Advanced Nursing* 2001; 33:764–775.
5. Breuer E, Myer L, Struthers H & Joska JA. HIV/AIDS and mental health research in sub-Saharan Africa: a systematic review *African Journal of AIDS Research* 2011; 10, (2):101-122.
  6. Derogatis LR. Symptom Checklist-90-R. Minneapolis: 1994 Pearson Education, Inc.
  7. Omoluabi PF. Adaptation of SCL 90 for Nigerian use. Unpublished manuscript 1997 Department of Psychology, University of Lagos. Nigeria.
  8. Mall S, Sorsdahl K, Swartz L, Joska J. "I understand just a little..." Perspectives of HIV/AIDS service providers in South Africa of providing mental health care for people living with HIV/AIDS. *AIDS Care* 2012; 24(3):319-23.
  9. Simbayi LC, Kalichman S, Strebel A, Cloete A, Henda N, Mqeketo A. Internalized stigma, discrimination, and depression among men and women living with HIV/AIDS in Cape Town, South Africa. *Soc Sci Med* 2007; 64:1823-1831.
  10. Fife BL, Wright ER. The dimensionality of stigma: A comparison of its impact the self of persons with HIV/AIDS and cancer. *Journal of Health & Social Behavior* 2000; 41:50–67.
  11. Lawless S, Kippax S, Crawford J. Dirty, diseased and undeserving: The positioning of HIV positive women. *Social Science & Medicine* 1996; 43(9):1371–1377.
  12. Vanable PA, Carey MP, Blair DC, Littlewood RA. Impact of HIV-related stigma on health behaviours and psychological adjustment among HIV positive men and women. *AIDS Behav* 2006; 10(5):473-482.
  13. Stutterheim SE, Pryor JB, Bos AE, Hoogendojk R, Muris P, Schaalmal HP. HIV-related stigma and psychological distress: the harmful effects of specific stigma manifestations in various social settings. *AIDS* 2009; 23(17):2353-7.
  14. Olisah VO, Baiyewu O, Sheikh TL. Adherence to highly active antiretroviral therapy in depressed patients with HIV/AIDS attending a Nigerian university teaching hospital clinic. *Afr J Psychiatry (Johannesburg)*. 2010; 13(4):275-9.
  15. Olley BO, Seedat S, Nei DG, Stein DJ. Predictors of major depression in recently diagnosed patients with HIV/AIDS in South Africa. *AIDS Patient Care STDS* 2004; 18(8):481-487.
  16. Olley BO, Seedat S, Stein DJ. Persistence of psychiatric disorders in a cohort of HIV/AIDS patients in South Africa: A 6 month follow-up study. *J Psychosom Res* 2006; 1(4):479-84.
  17. Rabkin JG. HIV and Depression: review and update. *Current HIV/AIDS Reports* 2008; 5:163-171.
  18. Horberg MA, Silverberg MJ, Hurley LB, Towner WJ, Klein DB, Bersoff-Matcha S, Weinberg WG, Antoniskis D, Mogayoros M, Dodge WT, Dobrinich R, Quesenberry CP, Kovach DA. Effects of depression and selective serotonin reuptake inhibitor use on adherence to highly active antiretroviral therapy and on clinical outcomes in HIV-infected patients. *J Acquir Immune Defic Syndr* 2008; 47(3):384-390.
  19. Boarts JM, Buckley-Fischer BA, Armelie AP, Bogart LM, Delahanty DL. The impact of HIV diagnosis-related vs. non-diagnosis related trauma on PTSD, depression, medication adherence, and HIV disease markers. *Journal of Evidence-Based Social Work* 2009; 6(1):4-16.
  20. Hand GA, Phillips KD, Dudgeon WD. Perceived stress in HIV-infected individuals: Physiological and psychological correlates. *AIDS Care* 2006; 18:1011-1017.
  21. Nogueira Campos L, De Fátima Bongolo P, Crosland Guimarães MD. Anxiety and depression assessment prior to initiating antiretroviral treatment in Brazil. *AIDS Care* 2006; 18(6):529-536.
  22. Emlet CA. Experiences of stigma in older adults living with HIV/AIDS: A mixed-methods analysis. *AIDS Patient Care STDs* 2007; 21(10):740-752.
  23. Kennedy CA. Psychosomatic symptoms among persons 50 years of age and older living with HIV disease. *Aging & Mental Health* 2002; 6, 2.
  24. Heckman TG, Heckman BD, Kochman A, Sikkema KJ, Suhr J & Goodkin K. Psychological symptoms among persons 50 years of age and older living with HIV disease *Aging & Mental Health* 2002; 6 (2) 121-128.
  25. Lyketsos CG, Federman EB. Psychiatric disorders and HIV infection: impact on one another. *Epidemiol Rev* 1995; 17:152-64.
  26. Owe-Larsson B, Sall L, Salamon E, Allgulander C. HIV infection and psychiatric illness. *Afr J Psychiatry (Johannesburg)* 2009; 12:115-28.
  27. Stober DR, Schwartz JA, McDaniel JS, Abrams RF. Depression and HIV disease: prevalence, correlates, and treatment. *Psychiatr Ann*.1997; 27:372-7.