ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 9, Issue, 03, pp.47393-47396, March, 2017

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

PREVALENCE OF PSYCHIATRIC MORBIDITY IN HIV POSITIVE PATIENTS IN A TERTIARY HOSPITAL IN NIGERIA

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ARTICLE INFO

Article History:
Received 27th December, 2016
Received in revised form
07th January, 2017
Accepted 15th February, 2017
Published online 31st March, 2017

Key words:

Health, Psychiatric,
Morbidity, Prevalence,
HIV/AIBS.

ABSTRACT

Background: Human immunodeficiency virus (HIV) is a chronic multi-systemic disorder with associated psychiatric co-morbidity of significant public health importance.
Aim: The study focused on investigating the prevalence of psychiatric morbidity living with HIV and AIDS in a tertiary hospital in the Niger Delta region of Nigeria.
Methods: Using a systematic sampling method, 353 subjects were recruited into two groups; HIV positive subjects from the RVD clinic and HIV negative subjects from the GOPD clinic. They were assessed using a self-designed questionnaire to elicit socio-demographic and clinical variables. The subjects were screened for psychological distress with a 12 item General Health Questionnaire and diagnoses made using Present State Examination (PSE) manual (version 10). Data was analysed using the statistical package for social sciences (SPSS, version 15).
Results: Among the 241 subjects who completed the study, 89 were HIV positive while 152 were HIV negative. A higher proportion of the HIV positive subjects were females (57.3%). The prevalence of psychiatric morbidity in adults living with HIV/AIDS in this study was 23.6%. There was a significant difference in the prevalence of psychiatric morbidity in the HIV positive patients when compared with controls.
Conclusion: One of the results of this study was that one in five HIV/AIDS patients had a depressive disorder. This suggests that the most prevalent mental health problem in HIV and AIDS patients are mood disorders, hence the need to step up measures in preventing and managing them for a more wholesome effective management.

Citation: Ogbe, F.E., Chukwujekwu, D.C. and Lasebikan, V.O. 2017. "Prevalence of psychiatric morbidity in hiv positive patients in a tertiary hospital in nigeria", *International Journal of Current Research*, 9, (03), 47393-47396.

INTRODUCTION

HIV disease is a chronic multi-systemic disorder with associated psychiatric co-morbidity of significant public health importance. The aetiological agents of the acquired immunodeficiency syndrome (AIDS) have been identified as two RNA lentiviruses called the human immunovirus types I and II (Kumar, 2006; Power *et al*., 2004). These viruses preferentially attack T4 lymphocytes and the neuroglia cells of the central nervous system resulting in a lethal neuro-medical disorder and neuropsychiatric complications (Sadock, 2000). About two-thirds of the global population of people living with HIV and AIDS reside in Africa (Joint United Nations Program, 2006). However, most of the studies investigating the prevalence of psychiatric morbidity in this group of patients are from the developed world.

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The paucity of information on the prevalence of psychiatric morbidity among people living with HIV and AIDS in Africa and the under-developed world prompted an interest in this study. Therefore, this study sought to investigate the prevalence of psychiatric morbidity in people living with HIV and AIDS in a tertiary hospital setting within the Niger Delta region of Nigeria.

LITERATURE REVIEW

People infected with HIV are living longer and healthier lives as a result of better medical care, major advances in antiretroviral therapy and prophylaxis of some of the initially fatal complications (Cohen *et al*., 2002). However, many of such persons continue to experience numerous challenges beyond those posed by the physical effects of the disease including poverty, mental illness, drug addiction, social alienation and homophobia (http//www.cmellc.com/psychcongress/syllabus/data/176-Forstein-Psychosocial_Input-WDL-BW.pdf).

The risk of mental disorders in HIV positive persons have been reported to be significantly higher than that described for the general population (Wells *et al*., 1988; Kessler, 1994). Widely varying prevalence rates of psychiatric morbidity have been reported in people with HIV disease and AIDS. Prevalence rates ranging between 38% and 73% have been reported in this population depending on the methods applied in the surveys (Gallego *et al*., 2000). The higher prevalence rates are reported by surveys determining psychological distress in people living with HIV and AIDS (Cohen *et al*., 2002; Kessler *et al*., 1994). Surveys that incorporated a diagnostic instrument to improve the reliability of its diagnoses tended to report lower prevalence rates in this population. For instance Brown and Rundel reported a prevalence rate of 35% in a sample of women with HIV disease. However, the sample size was small and was not compared to another group.

Similarly, the prevalence of major DSM axis I psychiatric disorders in active duty Air Force men in the US was reported as 38.7%. Only subjects between 18 and 44 years were surveyed and they were not matched with another group. While Freeman *et al*. (2007) reported that 43.7% of their sample had a psychiatric disorder, they also observed that less than a fifth of them were receiving highly active antiretroviral therapy (HAART). This suggests that a lack of treatment in this population of patients may escalate medical complications.

MATERIALS AND METHODS

This was a two-stage cross-sectional comparative study that was conducted at the retro-viral disease clinic and the general outpatient department of the University Port Harcourt Teaching Hospital.

Materials

Subjects who consented to participate in the study were assessed using a pretested specially designed questionnaire to elicit socio-dermographic and clinical variables including age, gender, sexual orientation, type of HIV infection, CD4 count and stage of HIV disease. The subjects were also screened for psychological distress with the 12 -item general health questionnaire (GHQ – 12). A cut off point of 3 was adopted, and scores of 3 and above was indicative of psychological distress. Such subjects, who were regarded as cases, were thereafter assessed for psychopathology by using the 10^{th} version of the present state examinations (PSE – 10). Symptoms from this instrument were then used to generate a diagnosis according to the definitions and criteria of ICD – 10.

Procedure

At the initial stage, a list of all the patients, attending both clinics was obtained from the medical records and this constituted the sampling frame. The sampling method adopted was systematic sampling technique (nth sample). The first patient to be interviewed was selected by balloting, and subsequent ones systematically of 1 in 5 until the quota was satisfied. Three hundred and fifty three subjects were recruited into two groups over a four month period. The first group (group A) was recruited from the retroviral disease (RVD) clinic of the University of Port – Harcourt Teaching Hospital and included all confirmed HIV seropositive patients who had no past histories of neurological or psychiatric disorders and who were not chronically ill. The second group (group B) ware recruited from the general outpatient department (GOPD) of the same hospital, and included all confirmed HIV seronegative patients without a history of a chronic medical or psychiatric disorder. Subjects in both groups were between the ages of 18-60 years and gave informed written consent to participate in the study.

Ethical Consideration

Permission for the study was obtained from the ethical committee of the University of Port-Harcourt Teaching Hospital to ascertain that the methodology of the study did not contravene laid down regulations for experiments involving human beings. Patients were duly informed, and the objectives of the study explained to them.

Statistical Analysis

Data was pre-coded to ensure accuracy and was analyzed using the 15^{th} version of the statistical package for social sciences (SPSS – 15). Tables were generated according to objectives and the t – test and analysis of variance (ANOVA) were used to analyze parametric variables, while the chi – square and fisher's exact test were used for non-parametric variables where applicable. For risk factors analysis, variables with significant association with psychiatric mobility during bivariate analysis were entered into the regression equation. A reference category was also entered to facilitate interpretation of odds ratios. All analyses were set at 0.05 level of significance two-tailed test.

RESULTS

The study involved 353 subjects however, only 241 subjects completed the study. The others opted out at various stages of the study for reasons including ill health, death and incomplete data in their questionnaires. Among the 241 subjects that completed the study, 89 of them were HIV positive and were receiving care at the retroviral disease clinic, while 152 subjects were HIV negative and were attending the general out-patient department for varied minor ailments. Table 1 shows the sociodemographic characteristics of the respondents in the study. According to the table, a higher proportion of the controls were in the younger age groups of 18-37 years, while the reverse was the case with the patients who had a higher representation in the older age groups of 38-68 years. However, these differences in age distribution did not attain statistical significance ($X^2 = 6.72$, $p = 0.15$). In terms of gender distribution, a higher proportion of the HIV positive patients were female, 51(57.3%), while there were more males, 54(55.3%) among the controls. There was no significant difference in gender distribution between the patients and controls ($X^2 = 3.55$, $P = 0.06$). The table further shows that a greater proportion of the patients were currently married when compared to the controls, but these observations did not attain statistical significance. The respondents who met the inclusion criteria to participate in the study were screened for psychological distress with the 12 item GHQ. Table 2 shows the pattern of GHQ scores among the patients and controls. According to the table, 68 (76.4%) patients and 121 (79.6%) controls scored between 0 and 2 on the GHQ-12 and were categorized as low scorers while 21 (23.6%) patients and 31 (20.4%) controls had scores of 3 and above, and were regarded as high scorers.

Table 1. Sociodemographic Characteristics of the Patient and Comparison Group

Sociodemographic Characteristics	Patient N = 89 n (%)	Control N = 152 n (%)	x^2	P
Age (years)				
18 – 27	12(13.5)	38(25.0)		
28 – 37	34(38.2)	61(40.1)	6.72	0.15
38 – 47	27(30.3)	30(19.7)		
48 – 57	11(12.4)	17(11.2)		
58 – 67	5(5.6)	6(4.0)		
Gender				
Male	38(42.7)	84(55.3)	3.55	0.06
Female	51(57.3)	68(44.7)		
Religion				
Christianity	87(97.7)	148(97.4)	FE*	1.0
Non Christians	2(2.3)	4(2.6)		
Employment				
Employed	57(64.0)	84(52.3)		
Not employed	32(36.0)	68(47.7)	1.78	0.18
Marital status				
Currently married	43(48.3)	59(38.8)		
Not currently married	46(51.7)	93(61.2)	2.07	0.15
Years of education				
0 – 6	12(13.5)	14(9.2)	2.93	0.23
7 -12	41(46.0)	60(39.5)		
›12	36(40.5)	78(51.3)		

Table 2. Pattern of GHQ Scores among the Respondents

Variable	Patients N=89 HIV+ n (%)	Controls N=152 HIV- n (%)	x^2	p
GHQ Score				
0 – 2	68(76.4)	121(79.6)	0.34	0.55
≥3	21(23.6)	31(20.4)		

Table 3. Pattern and Prevalence of Psychiatric Morbidity among the Respondents

Variable	Patient n (%)	Control n (%)	x^2	P value
Psychiatric morbidity				
Present	21(23.6)	19(12.5)		
Absent	68(76.4)	133(87.5)	4.99	0.03
Total	89(100)	152(100)		
Types of psychiatric morbidity				
Any mood disorder	18(71.4)	16(84.2)	*FE	1.0
Anxiety and Other disorders**	3(28.6)	3(15.8)		
Total	21(100)	19(100)		

**Other disorders i.e. generalized anxiety disorder, phobic anxiety and organic delusional disorder
*FE – Fisher's Exact

The table further shows that there were no significant differences in the GHQ score distribution between both groups (X^2=0.34, p=0.55). After screening for psychological distress, all the patients and controls that were high scorers (GHQ≥3) were interviewed with the 10th version of the present state examination (PSE-10). An ICD 10 diagnosis was then generated from the profile of symptoms elicited from the PSE 10. Table 3 shows the pattern and prevalence of psychiatric morbidity among the respondents. The table shows that all (100%) the patients with high GHQ scores had an ICD 10 psychiatric diagnosis, while 19 (12.5%) of the controls had a psychiatric diagnosis. There was a significant difference in the prevalence of psychiatric morbidity in the HIV positive patients when compared to the control group (X^2=4.99, p=0.03). A higher proportion of the HIV positive respondents had a mood disorder compared to other disorders. However, this difference was not statistically significant (p=1.0).

DISCUSSION

This study provides information on the prevalence of psychiatric co-morbidity in HIV positive patients attending the retroviral disease clinic of the University of Port-Harcourt Teaching Hospital Port-Harcourt, Nigeria. The findings in this study indicate a female preponderance among the HIV positive patients in this cohort. This supports previous notions that HIV infection is commoner in females[4]. Suggestions that the female genital tract has a larger surface area than that of the male and that it has a higher vulnerability to cuts and excoriations may explain the observation of a higher prevalence of infection. The results of this study also indicate that HIV infection was more prevalent in persons aged between 24 and 47 years. This is in keeping with the United Nations report on the global AIDS epidemic. This study also shows that a greater proportion of the HIV positive patients were married during the study period. However, it did not determine if such infection occurred before or after marriage. The present study found that 23.6% of the HIV positive patients screened positive for psychological distress on the GHQ-12 (GHQ≥3). All these patients also met ICD 10 diagnostic criteria for a current psychiatric disorder. Based on this, the prevalence rate of psychiatric morbidity in adults living with HIV and AIDS in this study is 23.6%. This finding is lower than reported rates from previous studies (Brown, 1990; Brown, 1992; Freeman *et al*., 2007). The reason for this variation may lie in the methods adopted in this study with strict exclusion criteria which

included a current history of a chronic medical condition and a past history of a psychiatric disorder both of which are important factors in the development of psychiatric morbidity in HIV infection (Sadock, 2002; Kroenke, 1993; Bakare, 2004; McDaniel *et al*., 1995). In addition, the high GHQ cut-off point of 3 may have excluded persons with minor psychological disturbances. The results of this study further determined that one in five HIV/AIDS patients had a depressive disorder. This suggests that the most prevalent mental health problems in HIV and AIDS patients are mood disorders. These findings have been reported in previous studies.

Limitations

This study was limited by a number of factors such as;

- This was a hospital based study. A community based survey would have given a better representation of the general population.
- The cross-sectional nature of this study does not permit causal inferences. A longitudinal study may provide a better evaluation of psychiatric problems in this group of patients.

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