

Prevalence and Level of Anxiety among HIV/AIDS Patients Attending HIV Clinic at Murtala Mohammed Specialist Hospital, Kano, North-Western Nigeria

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Abstract

The HIV/AIDS epidemic remains a significant global health challenge with a large majority being in low- and middle-income nations thus poses various degree of anxiety to the patients. The study was conducted to assess the prevalence, level of anxiety and relationship between socio-demographic characteristics and level of anxiety among HIV/AIDS patients attending HIV clinic in Murtala Mohammed Specialist Hospital, Kano. Cross-sectional descriptive design was used. A total of 73 patients were recruited for the study using systematic random sampling technique. A structured interviewer administered questionnaire was used for data collection. Data collected were organized and analyzed with Statistical Package for Social Sciences (SPSS) version 20 and results were presented using frequency distribution tables and percentages, pie chart, bar chart and chi-square at <0.005 level of significant. The prevalence of anxiety was 57.5%. Mild anxiety was recorded to be 54.8% where as 35.7% had moderate anxiety with 9.5% recorded severe anxiety. Statistically significant association was found between level of anxiety and age ($\chi^2=103.304$, $p<0.0001$), gender ($\chi^2=51.937$, $p<0.0001$), marital status ($\chi^2=89.803$, $p<0.0001$), religion ($\chi^2=65.186$, $p<0.0001$), ethnicity ($\chi^2=69.002$, $p<0.0001$), educational status ($\chi^2=84.265$, $p<0.0001$), occupation ($\chi^2=129.501$, $p<0.0001$) and monthly income ($\chi^2=79.123$, $p<0.0001$). Health workers should ensure disseminating adequate and accurate information to the patients in order to assist them in coping with anxiety related to the HIV/AIDS.

Keywords: Relationship, Level of Anxiety, HIV/AIDS Patient, Prevalence

1. INTRODUCTION

Psychological issues arising from Human immunodeficiency virus (HIV) infection continue to attract attention globally. Large numbers of people living with HIV (PLWH) are in low and middle-income countries (LMICs). By the end of 2018, it is estimated that over 37.9 million PLWH were found worldwide, with an estimated 68% in sub-Saharan Africa alone (UNAIDS, 2018; Duko *et al.* 2019). Across the globe, HIV prevalence is reportedly to be 0.8% with Nigeria having a national HIV prevalence of 1.4% among adults aged 15–49 years (Walensky *et al.* 2006). In Nigeria, the North



West zone which is the area of the present study had a prevalence of 0.6% (UNAIDS, 2018; UNAIDS, 2019).

People living with HIV (PLWH) suffer from a variety of physical comorbidities as a result of opportunistic infections (Walensky *et al.* 2006). In addition to these, they are also susceptible to psychological issues such as mental health problems. one of such mental health issues is anxiety (Bouhnik *et al.* 2005; Carrico *et al.* 2011, Fadzil, *et al.* 2013).

A variety of factors are reported to contribute to development of anxiety in PLWH. According to Eshetu *et al.* (2014) and Bhate and Munjal, (2014), low income, being widowed, being female, having no job, substance abuse including alcohol, non-adherence to medication, low educational status and being in stage III and stage IV of HIV/AIDS are significant factors that project psychological disorders such as anxiety in PLWH.

Although anxiety is a useful emotion that helps people to engage in meaningful activities, distress which is a high level of anxiety triggers non-proportionate responses to the threats within the environment and thus become problematic to the individual (Bennett, 2011). PLWH often have high levels of anxiety, and these usually distort patient's psychological well-being, causing grief, guilt, hopelessness, social isolation, fear about impending death, loss of job among others (Belete *et al.* 2014; Wani and Sankar, 2017).

Among the early studies on people living with HIV, Chandra *et al.* (1998) found that 30% of people diagnosed with HIV reported some level of anxiety. About 10 years later, Imasiku (2008) revealed that HIV/ AIDS patients have higher anxiety levels than previously reported, with respondents' mean age at 37.66 (SD±10.03). He further reported that anxiety levels correlated positively with previous history of mental illness and poor social support.

Sreelekshmi (2015) reported that fear of stigma and discrimination cause extreme anxiety in 42.68% people living with HIV. Shane *et al.*, (2011) also found 82.3% patients have anxiety just as Sewell *et al.* (2000) highlighted that 70.3 % AIDS patients have high level of anxiety. Similarly, Shukla *et al.* (2016) reported that people living with HIV have mild (n= 165; 92.1%) to moderate (n= 9; 5.0%) anxiety while another 5 (2.7%) severe levels of anxiety. In another study by Chandalia and Patoliya (2015) among PLWH, it was found that female and elderly PLWH had high levels of anxiety than their male and young counterparts. Earlier, Belete, *et al.* (2014) had reported that patients recently diagnosed with HIV infection reported higher levels of anxiety than patients who had lived for some time with the infection.

Quite recently, Wani and Sankar (2017) established that people living with HIV reported various levels of anxiety with about 59% having severe anxiety. Gender and marital status were found to correlate with levels of anxiety, being higher in female and among married.

In spite of the high prevalence of anxiety among the HIV/AIDS patients, less attention is given to it as much of the researches have focused on depression. So only little on anxiety among HIV patients is known in the study location. Thus, the researchers conducted this study in order to assess the prevalence of anxiety, level of anxiety and relationship between socio-demographic characteristics and level of anxiety among HIV/AIDS patients attending HIV clinic in Murtala Mohammad Specialist Hospital, Kano (MMSH).

2. METHODS AND MATERIALS

2.1 Study setting: The study area was Murtala Mohammad Specialist Hospital, Kano. This hospital is the biggest state owned hospital in Kano state and is one of the training ground for nursing, midwifery and medical students. The hospital has capacity of 688 beds and has 1, 200 staffs with many units, clinics and departments including, HIV clinic that runs for three days weekly (Monday, Tuesday and

Wednesday), consulting an average number of 50 clients. The HIV unit has six (6) medical officers, two (2) visiting consultant psychiatrists, two (2) Nurses. There were no professional counsellors in the unit.

The patient population consisted of both adults and children, without any special grouping for treatment

2.2 Research design: A cross-sectional descriptive research design was employed to identify the prevalence, level of anxiety and relationship between socio-demographic characteristics and level of anxiety among HIV/AIDS patients.

2.3 Study population and Sampling: The study population was all patients attending HIV clinic in Murtala Mohammad Specialist Hospital, Kano. Systematic random sampling technique was employed for the selection of respondents and the list of all the registered patients formed the sampling frame, which was calculated by dividing the desired sample size in a clinic day by the total number of eligible respondents, where, after the first caregiver was selected using balloting, four (4) patients were skipped and the subsequent one was selected to serve as respondents until the desired sample size was achieved. A total of 73 HIV/AIDS patients were recruited for the study based on 95% prevalence rate of depression and associated factors among HIV patients Mohammed et al., (2015), using Cochran formula $n = z^2 pq / d^2$.

Where n = minimum sample size,

$Z = 1.96$ (standard normal deviation for 95% confidence interval level),

p = proportion of population with 95.0% prevalence rate of depressed patients studied (Mohammed *et al.* 2015),

q = complementary probability = $(100 - P) = (100 - 95) = 5$,

Therefore, $n = (1.96)^2 \times 5 (100 - 5) / 5^2 = 72.96$, approximately 73

2.4 Research instrument: The Data were collected using Hospital Anxiety and Depression scale (HADS) questionnaire adapted from Sale et al., (2014). This instrument is used as a screening tool for anxiety and depression, although only the anxiety subscale of HADS was analysed. The interview guided questionnaire consists of two sections. Section A address sociodemographic characteristics and section B addressed presence of anxiety using Hospital Anxiety and Depression Scale. Section B comprised seven questions for anxiety, and respondent take like 2–5 minutes to complete. The total score for anxiety range from 0 - 21. The scale was categorized as no case (0-7), mild (8-10), moderate (11-14), and severe (15-21). Validity of the instrument was ensured by five jurists from the Department of Nursing Sciences, Bayero University Kano. A pilot study was conducted using split half reliability method and Cronbach alpha value of 0.67 was obtained.

2.5 Method of data analysis: Data was analyzed using statistical package for social sciences version 20. The data was then displayed using frequencies and percentages. Chi-square test was used to test the relationship between socio-demographic data and level of anxiety.

2.6 Ethical consideration: Ethical approval was obtained from ethics sub-committee of operational research advisory committee of ministry of health Kano state, to conduct the study. Consent of the respondents was obtained, right to refusal or opt-out from the study was assured.

RESULT

Respondents sociodemographic characteristics

The findings from the study shows that majority of the respondents (32.9%) were within the age range of 26-36 years. Female respondents formed 75.3% of the study participants whereas male respondents constituted the rest of 24.7%. Also, majority (41.1%,) were single and 2.7% being the widower. Majority of the respondents had secondary school leaving certificate (45.2%), only 12.3% had

informal education. Most (63 %) were Muslims, while others (33%) were Christians, 38.4% reported being petty traders. Majority of them had an income of $\leq \text{₦}20,000$ (43. 8%) while 34.2% had no source of income (Table 1).

Table 1: Respondents sociodemographic characteristics (n=73)

Variables	Frequency	Percentage (%)
Age(Years)		
Less than 15	8	10.9
15-25	17	23.3
26-35	24	32.9
36-45	17	23.3
46 and above	7	9.6
Gender		
Male	18	24.7
Female	55	75.3
Marital status		
Married	25	34.3
Single	30	41.1
Divorced	9	12.3
Widow	6	8.2
Widower	3	4.1
Level of education		
Primary	14	19.2
Secondary	33	45.2
Tertiary	17	23.3
Non-formal	9	12.3
Religion		
Islam	46	63
Christianity	27	37
Tribe		
Hausa	43	58.9
Fulani	5	6.8
Igbo	10	13.7
Yoruba	11	15.1
Others	4	5.5
Occupation		
House wife	16	21.9
Student	12	16.4
Civil servant	14	19.2
Petty trader	28	38.4
Farmer	3	4.1
Monthly income (₦)		
No income	25	34.2
Less than 20,000	32	43.8
20,000-40,000	10	13.7
40,000-60,000	5	6.8
More than 60,000	1	1.4

Prevalence of Anxiety

Figure 1 showed that anxiety is present in more than half of the respondents, 42 (57.5%) while it is absent in less than half of the respondents, 31 (42.5%).

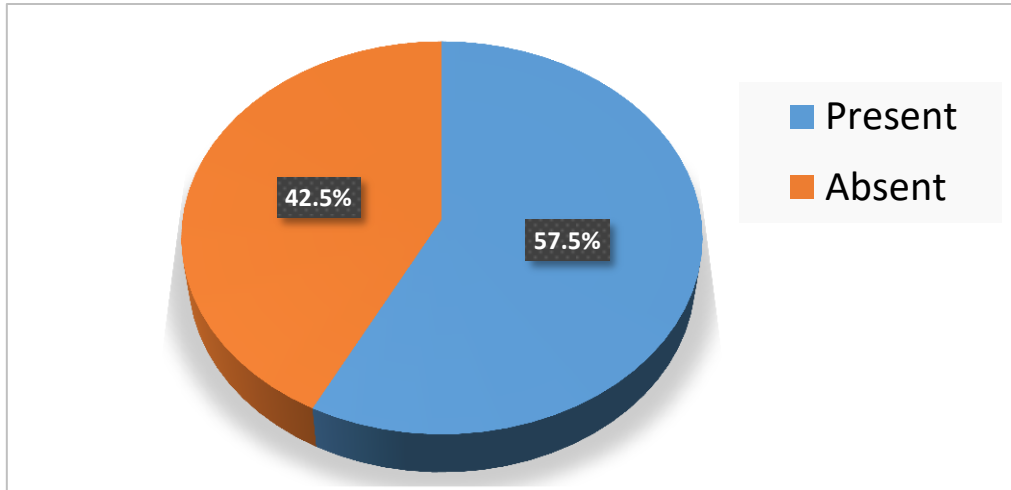


Figure 1: Prevalence of anxiety among HIV/AIDS Patients

Level of Anxiety

Majority of the HIV/AIDS patients 23 (54.8%) experienced mild (scores 8-10) anxiety, 15 (35.7%) rated the anxiety as moderate (scores 11-14) while 9.5% rated it as severe (scores 15-21).

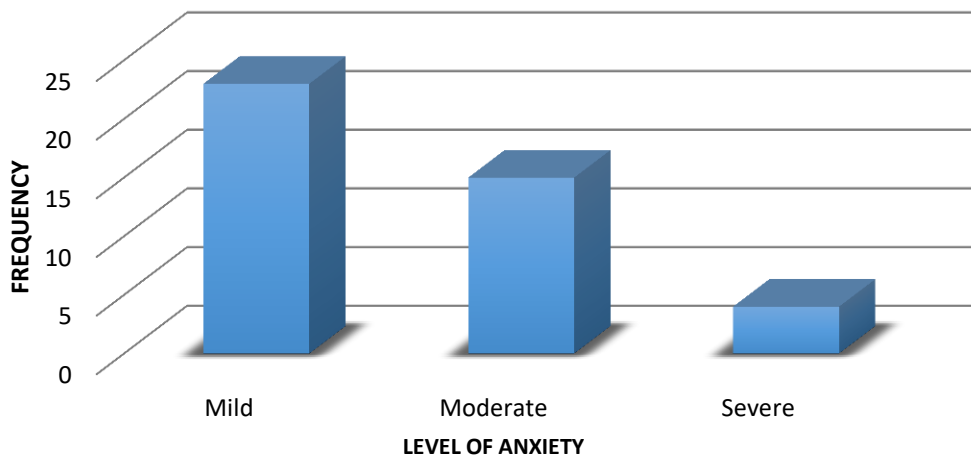


Figure 2: Level of Anxiety among HIV/AIDS Patients

Socio-Demographic Characteristics and Level of Anxiety

Table 2 shows the relationship between socio-demographic characteristics and Level of anxiety, statistically significant association was found between level of anxiety and age ($\chi^2=103.304$, $p<0.0001$), gender ($\chi^2=51.937$, $p<0.0001$), marital status ($\chi^2=89.803$, $p<0.0001$), religion ($\chi^2=65.186$, $p<0.0001$), ethnicity ($\chi^2=69.002$, $p<0.0001$), educational status ($\chi^2=84.265$, $p<0.0001$), occupation ($\chi^2=129.501$, $p<0.0001$) and monthly income ($\chi^2=79.123$, $p<0.0001$).

Table 2: Association between Socio-demographic Characteristics and Level of Anxiety

Socio-Demographic Data	Grading on Level of Anxiety				Chi-square Test		
	No case	Mild	Moderate	Severe	χ^2	Df	P value
Age (In years)							
Less than 15 (n=8)	0 (0.00%)	8 (11.0%)	0 (0.00%)	0 (0.00%)	103.304	12	<0.0001
15-25 (n=17)	0 (0.00%)	15 (20.6%)	2 (2.7%)	0 (0.00%)			
26-35 (n=24)	7 (9.6%)	0 (0.00%)	13 (17.8%)	4 (5.4%)			
36-45 (n=17)	17 (23.3%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
46 and above (n=7)	7 (9.6%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
Gender							
Male (n=18)	0 (0.00%)	18 (24.7%)	0 (0.00%)	0 (0.00%)	51.937	3	<0.0001
Female (n=55)	31 (42.5%)	5 (6.8%)	15 (20.6%)	4 (5.4%)			
Marital status							
Married (n=25)	0 (0.00%)	23 (31.5%)	2 (2.7%)	0 (0.00%)	89.803	12	<0.0001
Single (n=30)	13 (17.9%)	0 (0.00%)	13 (17.9%)	4 (5.4%)			
Divorced (n=9)	9 (12.3%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
Widowed (n=6)	6 (8.2%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
Widower (n=3)	3 (4.1%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
Religion							
Christianity (n=27)	27 (37.1%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	65.186	3	<0.0001
Islam (n=46)	4 (5.4%)	23 (31.5%)	15 (20.6%)	4 (5.4%)			
Ethnicity							
Hausa (n=43)	1 (1.4%)	23 (31.5%)	15 (20.6%)	4 (5.4%)	69.002	12	<0.0001
Fulani (n=5)	5 (6.8%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
Igbo (n=10)	10 (13.7%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
Yoruba (n=11)	11 (15.1%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
Others (n=4)	4 (5.4%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
Educational status							
None formal (n=9)	9 (12.3%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	84.265	9	<0.0001
Primary (n=14)	0 (0.00%)	14 (19.2%)	0 (0.00%)	0 (0.00%)			
Secondary (n=33)	5 (6.8%)	9 (12.3%)	15 (20.6%)	4 (5.4%)			
Tertiary (n=17)	17 (23.3%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
Occupation							
House wife (n=16)	0 (0.00%)	16 (22.0%)	0 (0.00%)	0 (0.00%)	129.501	12	<0.0001
Students (n=12)	0 (0.00%)	7 (9.6%)	5 (6.8%)	0 (0.00%)			
Civil servant (n=14)	0 (0.00%)	0 (0.00%)	10 (13.7%)	4 (5.4%)			
Petty traders (n=28)	28 (38.4%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
Farmers (n=3)	3 (4.1%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
Monthly Income							
No income (n=25)	0 (0.00%)	23 (31.5%)	2 (2.8%)	0 (0.00%)	79.123	9	<0.0001
Less than 20,000 (n=32)	15 (20.6%)	0 (0.00%)	13 (17.8%)	4 (5.4%)			
20,000-40,000 (n=10)	10 (13.7%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
40,000-60,000 (n=5)	5 (6.8%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			
More than 60,000 (n=1)	1 (1.4%)	0 (0.00%)	0 (0.00%)	0 (0.00%)			

3. DISCUSSION

The high prevalence of anxiety (57.5%) found in this study seems to indicate an increasing need for the mental health and psychological attention required by PLWH in the study area. Previous studies had shown that a significant number of patients living with HIV/AIDS were anxious despite increased patients' levels of awareness on the disease processes and available healthcare for the disease. Studies in other developing countries such as Duko *et al.* (2019) in South Ethiopia, Chandra *et al.* (1998) in India had reported 34.4% and 30% of PLWH having various levels of anxiety related to the HIV episodes. On the other, Shane *et al.* (2011) found a much higher anxiety levels compared to the present study (82.3%, prevalence of anxiety among HIV/AIDS patients). There are thus wide range of anxiety levels across the globe.

Even in Nigeria particularly in south-west zone of Nigeria, such differences in anxiety levels among PLWH were reported. For example, studies by UNAIDS, (2018) and (2019) indicated that 57.6% of the HIV/AIDS patients experienced mild anxiety; while 35.7% and 9.5% reported moderate and severe levels respectively. Similar finding has been reported by Shukla *et al.* (2016), in India in which most people living with HIV have mild (n= 165; 92.1%) to moderate (n= 9; 5.0%) anxiety while another 5 (2.7%) severe levels of anxiety. Findings by Amsalu *et al.* (2014), Belete, *et al.* (2014) in Ethiopia, Imasiku (2008), Sewell *et al.* (2000) and Wani and Sankar (2017) variously affirmed that PLWH have high level of anxiety, ranging from 27% of patients experienced mild level, 14 % patients have moderate level, 59 % have severe level of anxiety.

In our present study in Kano, Nigeria, statistically significant associations were found between level of anxiety and age ($\chi^2=103.304$, $p<0.0001$), gender (51.937, $p<0.0001$), marital status ($\chi^2=89.803$, $p<0.0001$), religion ($\chi^2=65.186$, $p<0.0001$), ethnicity ($\chi^2=69.002$, $p<0.0001$), educational status ($\chi^2=84.265$, $p<0.0001$), occupation ($\chi^2=129.501$, $p<0.0001$) and monthly income ($\chi^2=79.123$, $p<0.0001$). Such diverse socio-demographic findings contribute to the understanding of the holistic needs and the required care of PLWH.

The results of this study adds to previous findings by Eshetu *et al.* (2014) and Bhate and Munjal (2014) who reported only on low income, being widowed, being female, having no job, and low educational status as factors contributing to anxiety among HIV patients. Also, our findings seem to support Wani and Sankar (2017) study which demonstrated that HIV/AIDS patients who were females and married had high levels of anxiety. In those findings, socio-demographic variables appear to be relevant. Those studies indicated fact that about 63.8% of the patient has a reliable source of income which would certainly give relief to the patient. Besides, significant number of the respondents has at least secondary school leaving certificate and above which is associated to different kinds of coping skills that could be adopted by the respondents. These factors are therefore in the overall prevalence and degree of anxiety found among PLWH. These are thus important considerations in planning any psychosocial interventions for PLWH.

4. CONCLUSION

There is high prevalence of anxiety in patients living with HIV/AIDS in the study setting although most of them experiencing mild to moderate anxiety. The need for mental health intervention among such patients is therefore established in this study. Intensifying psycho-educational programmes in order to reduce the prevalence of anxiety in HIV care setting and factors fertilizing this disorder need to be empirically explored further to aid in planning intervention strategies.

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Conflict of Interest – None declared

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