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Psychological Well-being and Coping Mechanism among HIV-Naive Patients in Nigeria: An Analysis of Depression and Anxiety

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Abstract

Depression and anxiety disorders (DAD) have consistently been established as some of the major mental health outcomes in the HIV/AIDS population. In light of previous research attempts to examine its causes and proffer solutions, however, rates of DAD have remained consistently high, especially in HIV populations. This study therefore examined the prevalence of depression, anxiety and coping strategies among HIV naïve patients in Abuja. The research design was a descriptive cross-sectional survey that utilized multistage sampling technique to recruit 1022 HIV naïve patients. Patient Health Questionnaire (PHQ), generalized anxiety scale (GAD-7) and developed instruments for coping were used to assess depression, anxiety and coping strategies respectively. The research instrument was administered to well-consented and eligible participants. Three objectives, which were later transformed into hypotheses, examined the prevalence of depression, anxiety and coping strategies. Data was analyzed using descriptive analysis, Chi-square and logistic regression. Results indicated that the prevalence of depression was 65.1%, 18.8%, 10.8% and 5.3% for minimal, mild, moderate and severe depression respectively. Similarly, the prevalence of anxiety was 69.5%, 20.6%, 7.6% and 2.3% for minimal, mild, moderate and severe anxiety respectively. Further results revealed that sex is significantly associated with depression and anxiety $X^2 = 21.597$, df = 4, p < .000; $X^2 = .000$ 12.480, df= 4, p<.05. There was also a statistically significant difference in coping between patients with mild depression and severe depression (OR. 2.673 to 29.949). Also, there was a statistically significant difference in coping between patients with mild and severe anxiety (OR, 2.673 to 29.949). Governmental and Non-governmental organizations should take cognizance of this prevalence and evolve measure to reduce the rate of these problems among HIV naïve patients in Abuja and beyond.

Keywords: Anxiety, Coping Strategies Depression, HIV Naïve Patients.

Introduction

Human Immunodeficiency Virus (HIV) and acquired immunodeficiency syndrome (AIDS) continue to be significant global health concerns [1], particularly in regions with

limited access to healthcare resources. Previous studies have reported an astronomical increase in HIV prevalence, especially among adults aged 15-49 [2]. Literature has shown that the rate of HIV/AIDS is substantially higher among adults aged 15-49 than older

population [2], with a higher risk of mental health problems than the general population. Beyond the physical challenges posed by the virus, individuals living with HIV/AIDS often face profound psychological and emotional stressors [3]. According to a study in China, 43.0% of people living with HIV/AIDS are also living with depression and anxiety [4]. Similarly, in a national survey in Ghana, the prevalence estimates of depression, anxiety, and stress among PLHIV were 28.6%, 40.8% and 10.6% respectively, with females being higher on depression at 32.2%, anxiety at 44.0%, and stress 12.6% [5]. In sub-Saharan Africa 9 to 32% is reported [6] and in Nigeria 32.6% to 39.6% [7].

In Nigeria, despite the serious mental health impact of living with HIV/AIDS, the rate of HIV/AIDS has continued to rise inconceivably [2]. This is worrisome considering that having HIV/AIDS is associated with substantive mental health outcomes, including suicide ideation, suicide attempt, alcohol use, anxiety and depression [8]. On the other hand, persons with mental problems are more likely to engage in risky behaviours which can predispose them to HIV infection and increase their chances of transmitting the virus [9]. More so, mental health problems can impair the HIV care continuum including delayed initiation of antiretroviral treatment (ART) and poor ART adherence [10]. Therefore, given the impact of mental health problems on persons living with these disease conditions, greater attention is needed to the prevalence for effective intervention.

Studies have consistently shown that individuals diagnosed with HIV/AIDS are at an increased risk of experiencing depression and anxiety compared to the general population [11]. Factors contributing to this heightened risk include the stigma associated with the disease, the chronic nature of HIV/AIDS, social isolation, financial strain, and the uncertainty surrounding long-term health outcomes [12].

Moreover, newly diagnosed HIV/AIDS patients, often referred to as "naive" patients, face unique challenges in adapting to their The initial period following diagnosis. diagnosis is marked by emotional upheaval, fear, and uncertainty about the future [13]. Understanding the prevalence of depression anxiety specifically among and naive HIV/AIDS patients is crucial for developing targeted interventions that can improve mental health outcomes and overall well-being.

Coping strategies play a vital role in how individuals manage the psychological impact of living with HIV/AIDS [14]. Effective coping mechanisms can enhance resilience, promote adherence to treatment regimens, and foster a sense of empowerment among patients. However, not all coping strategies are equally effective, and certain maladaptive coping mechanisms may exacerbate mental health issues [14]. The findings showed that females seem to use maladaptive coping styles (across all levels of the six types of problems) more than males [15]. The use of adaptive and maladaptive coping styles increases with age [15]. Studies have shown that there was no significant difference found in the overall coping strategies based on age and gender [16]. Although significant differences were found in the subscales - based on age, a significant difference was found between the coping strategies used by youth and working age group in self-distraction, active coping, religion and self-blame; based on gender significant differences were found between coping strategies used by men and women in Religion and humour subscales.

Compared with males, females account for a larger proportion of patients with depression [17, 18]. Similarly, Anxiety disorders occur twice as often in women than men, and social and cultural factors likely play an important role in the development of anxiety [19]. Age differences have been identified in the prevalence of depression and anxiety [20]. Younger adults (18 years) were more likely to

be affected by depression and severe anxiety than older adults. Contrary to this report, it has been found that there is a relatively high rate of both current and lifetime anxiety disorders in the elderly, where 35% of the older participants had received an anxiety disorder diagnosis at least once and 23% had been diagnosed recently [21]. In summary, there is inconsistency in gender and age differences in depression and anxiety disorders that require further investigation.

Therefore, this study aims to investigate the prevalence of depression and anxiety among naive HIV/AIDS patients, explore the association among demographic variables, depression and anxiety as well as association among depression, anxiety and coping strategies among HIV/AIDS naïve patients in Abuja.

Methodology

Design and Study Setting

The study adopted a descriptive cross-sectional research design. The study was carried out at public hospitals in Abuja Municipal Council Areas. These hospitals were National Hospital, Federal Medical Centre Jabi and other selected district general hospitals within Abuja. These hospitals are big public hospitals for accessing health care for different illnesses including HIV/AIDs in the state capital and beyond.

Sample Size Determination and Sampling Techniques

The sample size of the study was 1,022 participants which was determined using the formulae to estimate proportions as described by Fisher's formula for descriptive studies at standard normal deviation corresponding to a 95% confidence interval. Participants for the study comprised 1022 HIV naïve patients who met research criteria for inclusion such as being HIV naïve patients who have started taking medication, currently within the age

limit of 25 years and above and have given consent for participation.

Ethical approval was taken from the Federal Capital Territory Ethical Review Committee and permission to conduct the study was obtained from relevant authorities in the hospital. The research adhered to ethical guidelines for conducting human research according to Helsinki's declaration. Participants' consent was sought, informed about the study and assured of confidentiality.

Outcome Measures

The instrument used to gather data for the study was a questionnaire consisting of three sections. The first section tapped demographic data from the participants on their age, gender and marital status. The Patient Health Ouestionnaire (PHO) is a self-administered questionnaire for common mental health disorders and Patient Health Questionnaire-9 (PHQ-9) was used to specifically measure symptoms of depression [22]. Responses include Not at all = 0; Several days = 1; More than half the days = 2; Nearly every day = 3. Scoring involves adding up all checked boxes on PHQ-9. A score of 1-4 is classified as minimal depression, 5-9= mild depression, 10-14= moderate depression, 10-14= moderately depression and 20-27=severe severe depression.

The generalized Anxiety Disorder (GAD-7) scale was used to assess anxiety symptoms in HIV naïve patients [22]. It is a seven-item instrument that is used to measure or assess the severity of GAD. Each item asks the individual to rate the severity of his or her symptoms over the past two weeks. Response options include "not at all", "several days", "more than half the days" and "nearly every day" and scores 0, 1, 2, and 3 are assigned to the response categories respectively. GAD-7 is scored by adding up the response of the 7 items and the total score ranges from 0-21. Scores of between 0–4: minimal anxiety, 5–9:

mild anxiety, 10–14: moderate anxiety, and 15–21: severe anxiety.

Data Analysis

The data collected from the research were analyzed using frequency counts, and percentages. Frequency counts and

percentages were used to summarize the demographic information of the participants while Chi-square and multiple logistic regression were to test the research hypotheses.

Results

Table 1. Prevalence of Depression and Anxiety among Patients

Categories	Frequency	Percentage				
Depression:						
Minimal	649	65.1				
Mild	188	18.8				
Moderate	108	10.8				
Severe	53	5.3				
Total	1022	100.0				
Anxiety:						
Minimal	694	69.5				
Mild	206	20.6				
Moderate	76	7.6				
Severe	23	2.3				
Total	1022	100.0				

The result in Table 1 showed that the majority 65.1% of the patients had minimal depression, followed by mild depression. 10.8% and 5.3% of participants had moderate and severe depression respectively. Similarly,

69.5% of the patients who participated in this study had minimal anxiety, followed by mild 20.6% anxiety while 7.6% and 2.3% had moderate and severe anxiety respectively.

Table 2. Association between Demographic Factors and Depression

Demographic variables	Depression				Chi- Square	P- Value
	Minimal	Mild	Moderate	Severe	- 4	, ,,,,
Sex					•	
Male	285 (27.8)	57 (5.6)	33 (3.1)	11 (1.1)	21.597	-
Female	375(43.0)	131(12.7)	75 (7.2)	42 (4.1)		<.05
Age group						
25-30	287 (28.2)	73 (7.1)	52 (5.1)	18 (1.8)		
31-40	200 (19.7)	69 (6.8)	33 (3.2)	22 (2.2)		
<25	89 (8.7)	21 (2.1)	12 (1.2)	6 (0.6)		
41-60	43 (4.2)	12 (1.2)	6 (0.6)	2 (0.2)		
>60	40 (3.9)	13 (1.3)	5 (0.5)	5 (0.5)	14.226	>.05
Education						
Primary	237 (23.2)	60 (5.9)	30 (2.9)	20 (2.0)		·
Secondary	313 (30.6)	100 (9.8)	62 (6.1)	28 (2.7)		

Tertiary	110 (10.8)	28 (2.7)	16 (1.6)	5 (0.5)	7.069	>.05
Occupation						
Business	407 (39.9)	132 (12.9)	77 (7.5)	35 (3.4)		
Security	59 (5.9)	10 (1.0)	6 (0.6)	5 (0.5)		
Sales Rep	78 (7.6)	24 (2.3)	12 (1.2)	3 (0.3)		
Farmer	56 (5.5)	11 (1.1)	9 (0.9)	2 (0.2)		
Civil Servant	60 (5.9)	11 (1.1)	4 (0.4)	8 (0.8)	23.944	>.05

The result in Table 2 indicated the association between demographic variables and depression among patients. Only gender $X^2 = 21.597$, df= 4, p<.000 have a significant association with depression. Age $X^2 = 14.226$,

df = 16, p>.05, education $X^2 = 7.069$, df = 8, p>.05 and occupation $X^2 = 23.944$, df = 16, p>.05 did not have statistically significant association with depression.

Table 3. Association between Demographic Factors and Anxiety

Demographic	Depression				Chi-	P-
variables		Square	Value			
	Minimal	Mild	Moderate	Severe		
Sex						
Male	288 (28.2)	75 (7.4)	20 (2.0)	5 (0.5)	2.480	-
Female	422 (41.3)	131 (12.7)	56 (5.5)	18 (1.8)		<.05
Age group						
25-30	301 (29.5)	91 (7.1)	34 (3.3)	8 (0.8)		
31-40	229 (22.4)	64 (6.3)	26 (2.5)	7 (0.7)		
<25	90 (8.8)	23 (2.6)	11 (1.1)	5 (0.5)		
41-60	46 (4.5)	10 (1.0)	0 (0.0)	1 (0.1)		
>60	44 (4.3)	18 (1.8)	5 (0.5)	2 (0.2)	12.613	>.05
Education						
Primary	251 (24.6)	65 (6.4)	25 (2.5)	20 (2.0)	7 (0.7)	
Secondary	338 (33.1)	112 (11.0)	42 (4.1)	28 (2.7)	16	
					(1.6)	
Tertiary	121 (11.8)	29 (2.8)	9 (0.9)	0 (0.0)	10.648	>.05
Occupation		_				
Business	443 (43.3)	141 (13.8)	54 (5.3)	16 (1.6)		
Security	63 (6.2)	12 (1.2)	5 (0.5)	1 (0.1)		
Sales Rep	85 (8.3)	22 (2.2)	8 (0.8)	3 (0.3)		
Farmer	58 (5.7)	15 (1.5)	7 (0.7)	0 (0.0)		
Civil Servant	61(6.0)	16 (1.6)	2 (0.2)	3 (0.3)	18.258	>.05

The result in Table 3 showed the association between demographic variables and anxiety among the study population. Gender $X^2 = 12.480$, df= 4, p<.05 has significant association with anxiety among

patients. However, age $X^2 = 12.613$, df = 16, p>.05, education $X^2 = 10.648$, df = 8, p>.05 and occupation $X^2 = 18.258$, df = 16, p>.05 did not have statistically significant association with anxiety.

Table 4. Coping	Strategies Ass	ociated with	Depression	and Anxiety

Outcome:Coping	Regression	Chi-	P-value	Odds Ratio (95% CI)
	Coefficient	square		
Intercept	-3.066	4.518	>.05	-
Minimal	2.191	12.640	<.05	8.948 (2.673, 29.949)
Mild	-0.1053	0.0325	>.05	0.8570 (0.286, 2.829)
Moderate	0.0586	0.0021	>.05	0.9046 (0.104, 3.698)
Intercept	-1.443	1.602	>.05	-
Minimal	-0.081	0.014	>.05	0.9039 (0.244, 3.483)
Mild	-1.563	9.498	>.05	0.1222 (0.066, 0.577)
Moderate	0.587	1.123	>.05	0.0011 (0.628, 4.766)

The only statistically significant difference in coping is between mild depression and severe depression. Patients who are minimally depressed are nearly 9 times more likely to use positive coping than those who are severely depressed. The 95% confidence interval for the odds ratio comparing minimally depressed patients versus patients who were severely depressed is very wide (2.673 to 29.949).

Similarly, there is statistically significant difference in coping between patients with mild and severe anxiety. Patients with mild anxiety are almost 2 times more likely to use positive coping than those with severe anxiety. The 95% confidence interval for the odds ratio comparing mild and severe anxiety is (0.628, 4.766).

Discussion

This study examined the prevalence of depression, anxiety and coping among HIV naïve patients in Abuja. One thousand and twenty-two HIV naïve patients who were currently receiving medication at the national hospital Abuja were selected and examined in a descriptive cross-sectional survey utilizing standardized instruments. In response to identified research gaps, three objectives were identified, formulated and tested using frequency counts and percentages.

Overall, the prevalence of depression in the study was 16.1% and 9.9% for anxiety. On our

first objective, which examined the prevalence of depression, it was established that there was a high 16.1% prevalence of depression among HIV naïve patients in Abuja, corroborating many previous studies [3, 4, 5] which found that people with HIV/AIDS experience a high level of depression. Similarly, there was a high 9.9% prevalence of anxiety among HIV naïve patients, supporting many previous empirical findings [6, 7] which reported a high prevalence of anxiety among HIV naïve patients. On the second objective, findings revealed that female sex was associated with depression and anxiety among HIV naïve patients. This result is supported by a plethora of empirical studies [17, 18].

On the third objective, study results showed that Patients who are minimally depressed were more likely to use positive coping than those who are severely depressed. Similarly, there is a statistically significant difference in coping between patients with mild and severe anxiety. Patients with mild anxiety were more likely to use positive coping than those with severe anxiety.

From these findings, it can be concluded therefore that, depression and anxiety problems are prevalent among HIV naïve patients in Abuja. Also, female sex was found to be associated with depression and anxiety among HIV naïve patients in Abuja. Adoptive coping strategies were associated with patients

with minimal depression and anxiety. Even though the study design prevents suggestion of causation, it has provided preliminary evidence that there is a high prevalence of depression and anxiety among newly diagnosed HIV patients. Therefore, clinicians and governmental and governmental organizations should assess and provide interventions mental health persons living with HIV/AIDS, particularly those newly diagnosed patients to boost their mental health. By so doing, the psychological impact of the disease condition can be suppressed, thereby improving patients' quality of life and well-being.

This present study's strengths include sampling from a patient population where patients are medically and psychologically ill

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and its usage of standardized instruments. The study is not without limitations. One major limitation is its use of a descriptive crosssectional survey design, which lacks absolute control over extraneous variables. Since variables were not manipulated and controlled, the reported depression and anxiety may not be fully explained by the HIV condition. Despite these limitations, the present study is one of the first to present a highlight on the prevalence of depression, anxiety and coping strategies among HIV naïve in Abuja, Nigeria. It has therefore laid a foundation and illustrates the need for psychosocial support as an effective means of preventing mental health problems in HIV naïve patients in Nigeria and beyond.

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