Introduction

The Sub-Saharan Africa is being hit hard by the epidemic of Acquired Immunodeficiency Syndrome (AIDS) and carries the globe’s heaviest burden of HIV/AIDS. Nigeria has the second largest HIV epidemic in the world and one of the highest rates of new infection in sub-Saharan Africa. The prevalence of HIV in Nigeria is 1.5% among the adult population, giving a total estimate of 1.9 million Nigerians living with HIV. Recent studies suggest that variables external to the disease process such as HIV-related stigma are associated with health-related quality of life (HRQoL). Clinicians and primary care physicians have focused on health outcomes that are physically or laboratory measured such as symptoms, viral load and efficacy of treatment. Biomedical measures, however, do not reflect how the affected individual feels and functions in daily life.

Background: The World Health Organization defines health as a state of complete physical, mental, and social well-being and not merely the absence of infirmity and disease. Researchers and clinicians have mainly focused on health outcomes that are physically or laboratory measured. These, however, do not reflect how the affected individual feels and functions in daily life. This study assessed the psychological and stigma profiles of patients attending HIV clinics in a North-central State of Nigeria.

Methods: The study design was descriptive cross-sectional. A total of 384 HIV-positive patients who were systematically recruited at 5 public service delivery sites in Ilorin, Kwara State, North-central Nigeria participated in the study. Data was analyzed using SPSS software version 20.0. Level of significance was pre-determined at P value < 0.05 at a confidence level of 95%.

Results: Fifty-nine percent of respondents reported being anxious about their condition and 25.5% felt depressed. Eighty-six percent received adherence counselling and 82.3% received psychological care from support groups. In the psychological domain, majority (74.5%) of the respondents had high health-related quality of life (HRQoL). There was a statistically significant association between employment status and psychological domain of HRQoL. As regards stigma, majority experienced high stereotype stigma (73.7%) and 67.2% experienced high stigma as pertains disclosure.

Conclusion: Health workers should promote psychological support of HIV patients, for example, in form of support groups and adherence counseling. Efforts by government and corporate bodies should be geared towards employment empowerment of PLWHA which may help improve quality of life.

Keywords: Anxiety, depression, HIV, Nigeria, PLWHA, psychological, stigma

Abstract

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Several chronic medical illnesses like HIV/AIDS, cancer and diabetes mellitus have shown more predisposition to psychological problems.[8] Mental health problems are more than twice as common among people living with HIV/AIDS compared to the general population.[8] Discrimination, lack of social support, poor self-esteem, stigma and health problems can make PLWHA more at risk for mental health problems.[8]

In a hospital-based study in Addis Ababa, Ethiopia, the prevalence of depression among HIV patients was 41.2% and 32.4%, respectively.[8] Perceived HIV stigma, poor social support, poor medication adherence and HIV stage III were significantly associated with depression. Being female, being divorced, perceived HIV stigma and having comorbid TB were significantly associated with anxiety.[8] In a study carried out in southwest Nigeria, the prevalence of depression among PLHIV was 39.6% and prevalence of anxiety was 32.6%.[7] Female gender, being divorced/widowed, unemployed, illiterate, low income and low CD4 count were associated with depression. Lower age, female gender, low income, and low CD4 count were significantly associated with anxiety disorder.[7]

HIV-related stigma has been associated with a lack of proper information regarding the spread of the disease, fear, and moral judgment from those living with the disease.[8] Studies have shown discrimination toward people living with HIV manifested in the form of denial of care, confidentiality breaches, humiliating attitudes by health workers or gossiping from members of the community.[8] Perceived community discrimination (external) stigma leads to internalized stigma (self-exclusion from social gatherings and public events) and this results in adverse health and psychosocial outcomes.[8] Stigma and discrimination in health facilities can affect retention in care of patients, leading to poor adherence and thus poor health outcomes.[8,9]

Tremendous biomedical and clinical advancements in HIV prevention and treatment have led to aspirational efforts to end the HIV epidemic.[8] This goal however, won’t be achieved without addressing the significant mental health problems among PLWHA.[8] Stigma, also, is a major obstacle to effective HIV/AIDS prevention and care. It creates a “hidden epidemic” of the disease based on fear, misinformation, ignorance, and denial.[11] HIV-related stigma negatively affects the HRQoL in people living with HIV.[12] Routine assessment of stigma and psychological profile in clinical practice has been shown to improve communication between PLWHA and their care providers which invariably improves health outcome.[12] This study, therefore, assessed the psychological and stigma profiles of patients attending HIV clinics in a North-central State of Nigeria.

Methods

Description of the study area

The study was conducted in Ilorin the capital city of Kwara State, Nigeria. There are five (5) Public HIV treatment centres in Ilorin metropolis, one tertiary health centre; University of Ilorin Teaching Hospital (U. I. T. H). Other HIV treatment centres are Sobi Specialist Hospital, Kwara State Civil Service Clinic and Children Specialist Hospital, Centre Igboro, Ilorin which are secondary health facilities and Cottage Hospital, Adewole—a primary health centre. These facilities are focused and accredited centres for the treatment of HIV-positive patients in a clinical setting not just providing HCT and PMTCT of HIV. University of Ilorin Teaching Hospital has a designated outpatient ART clinic building for care of patients and runs daily clinic. It also serves as referral centre to other communities outside Kwara and has the highest number of patients’ turnout. Other treatment centres run ART clinic from Monday to Friday as well concurrently with the general clinic.

Study design

This study was a descriptive cross-sectional study carried out to assess the stigma and psychological profile of 384 HIV Patients receiving care at the 5 public service delivery sites.

Study population

Adult HIV patients aged 18 years and older receiving ART services at the various health facilities in the study area.

Sample size determination

The minimum sample size was determined using the Fischer’s formula for obtaining sample size when the population is less than 10,000 for descriptive studies

\[ N_i = \frac{n}{1 + \left(\frac{n}{N}\right)} \]

Value of \( n \) was calculated using the formula\[ n = \frac{Z^2pq}{d^2} \]

A total of 384 respondents was estimated for this study after calculating non-response rate of 10%.

Sampling technique

A systematic sampling technique was used for the selection of respondents.

Study instruments

The data were collected using the WHOQOL-HIV-bref. and the 28-item multidimensional measure of internalized HIV stigma scale. Psychological profile of patients was assessed using the psychological domain of the WHOQOL-HIV-bref. The WHOQOL-HIV-bref evaluates the quality of life from six domains (physical, psychological, level of independence, social relations, environment and spiritual/religion/personal beliefs).[14,15] All questions in this instrument are closed, and each item is rated on a 5-point Likert-type scale that ranges from “Not at all” (1) to” An extreme amount” (5). Mean scores for each items were transformed to 0–100 range, with lower score reflecting lower level of quality of life and higher score reflecting greater level quality of life. The total score was constructed as average of the 29 items.
The multidimensional measure of internalized HIV stigma scale was developed to measure individual’s perception and experience of internalized HIV stigma in four areas: stereotypes, disclosure concerns, social relationships, and self-acceptance. Items are rated on a 5-point Likert-type scale that ranges from “none of the time” (0) to “all of the time” (4). Mean scores for each item and subscales were transformed to 0–100 range, with lower score reflecting lower level of internalized stigma and higher score reflecting greater level of internalized stigma.

Statistical analyses
The data obtained were entered into a personal computer after being manually checked for possible errors. Analysis was done using Statistical Package for Social Sciences (SPSS) version 20.0. Data collected presented in prose and frequency tables. Descriptive statistics such as frequency distribution and other relevant summary statistics generated. Appropriate tests of significance were used to test statistic. Statistical significance was set at $P$ value $< 0.05$.

Ethical considerations
Ethical clearance to conduct the study was obtained from the ethical review committee of University of Ilorin Teaching Hospital before the commencement of the study. Patient interviews were conducted in privacy and anonymously. Respondents were informed about the objectives of the study and that the data collected will be treated with confidentiality. Written informed consent was obtained from all respondents signed or thumb printed before the start of the interview.

Results
A total of 384 patients attending HIV clinics in Ilorin were recruited from 5 public health facilities and completed the questionnaires used for analysis. Patients’ ages ranged from 19 to 72 years with mean age $42.68 \pm 10.76$. The monthly income of respondents ranges from as low as N2, 000 ($5) to N150, 000 ($387.5) with the average monthly income of N24, 900 ($64). Patients travel to the facilities from as close as 3 km to as far as 400 km with average distance of 42.87 km. The number of dependents ranged from none to as high as 12.

Table 1 shows that the modal age group was 41–50 years (34.9%). Majority of the patients were females constituting 58%, 77.6% were married while 11.5% were widowed and over one-fifth (25.3%) were unemployed. Majority (74.7%) of the respondents earned less than N20, 000 in a month and about half (54.7%) practiced Islam [Table 1].

Multiple responses
Fifty-nine percent of respondents reported being anxious about their condition, 25.5% felt depressed, 34.5% experienced rejection, 24.5% reported self-criticism, while 16.9% experienced poor sleep. More than 80% (between 82.3% and 88.5%) of the respondents received some forms of psychological care such as pre and post-test counselling, adherence, family planning counselling and patients support group. About 12.2% received some care from religious leaders [Table 2].

In the psychological domain, majority (74.5%) of the respondents had high QoL, while 25.5% had low QoL [Table 3].

Table 1: Respondents socio-demographic characteristics

| Variables         | Frequency | Percentage |
|-------------------|-----------|------------|
| Gender            |           |            |
| Male              | 162       | 42.9       |
| Female            | 222       | 58.0       |
| Age Groups (years)|           |            |
| 19-30             | 53        | 13.8       |
| 31-40             | 122       | 31.8       |
| 41-50             | 134       | 34.9       |
| ≥51               | 75        | 19.5       |
| Marital Status    |           |            |
| Married           | 298       | 77.6       |
| Divorced          | 9         | 2.3        |
| Widowed           | 44        | 11.5       |
| Single            | 33        | 8.6        |
| Religion          |           |            |
| Christianity      | 172       | 44.8       |
| Islam             | 210       | 54.7       |
| No religion       | 2         | 0.5        |
| Level of Education|           |            |
| No formal education| 57    | 14.8       |
| Primary           | 71        | 18.5       |
| Secondary         | 124       | 32.3       |
| Tertiary          | 132       | 34.4       |
| Employment status |           |            |
| Employed          | 287       | 74.7       |
| Unemployed        | 97        | 25.3       |
| Income (₦)        |           |            |
| ≤20,000           | 287       | 74.7       |
| >20,000           | 97        | 25.3       |

Table 2: Psychological characteristics and care received by Respondents

| Variables                              | Frequency | Percentage |
|----------------------------------------|-----------|------------|
| Anxiety                                | 228       | 59.4       |
| Depression                             | 98        | 25.5       |
| Felt rejected                          | 134       | 34.9       |
| Self-criticism                         | 94        | 24.5       |
| Experiencing poor sleep                | 65        | 16.9       |
| Available psychological care           |           |            |
| Pre and post-test counselling          | 340       | 88.5       |
| Adherence counselling                  | 332       | 86.5       |
| Family planning counselling            | 320       | 83.3       |
| Patient HIV support groups             | 316       | 82.3       |
| Received care from                     |           |            |
| Imam/Pastor                           | 47        | 12.2       |
| Prayer with staff                      | 15        | 3.9        |
| Traditional healer                     | 3         | 0.8        |
There was no statistically significant association between age group, gender, marital status, level of education, income, and psychological domain of HRQoL. There was a statistically significant association between employment status and psychological domain of HRQoL. Those who were employed had higher QoL [Table 4].

As regards the stereotype domain of HIV Stigma, majority experienced high stigma (73.7%). Majority experienced high stigma as pertains disclosure concerns (67.2%) and self-acceptance (59.6%). Most of the respondents experiences low stigma as regards social relationships (77.6%) [Table 5].

There was no statistically significant relationship between stereotype domain of stigma, disclosure concerns, social relationships, and HRQoL. There was a statistically significant relationship between self-acceptance and HRQoL, with those with high stigma having higher quality of life [Table 6].

**Discussion**

Above half of respondents reported being anxious about their condition, a quarter felt depressed about their diagnosis, 34.5% experienced rejection, and 24.5% reported self-criticism. The prevalence of anxiety reported in our study was much higher than a study in Conakry, Guinea which reported a prevalence of 13.8%. The prevalence of depressive symptoms in our study was also higher than another study among PLWHA in Ethiopia which reported a prevalence of 13.3%. The difference in findings may reflect different settings and different degrees of discrimination and stigma. Different ways of assessing depression and anxiety may also explain the difference in findings.

Though a high proportion of our respondents reported feelings of anxiety and a quarter felt depressed about their condition, when the psychological domain of quality of life was assessed, majorit of the respondents had high QoL. Though this finding is not expected, it may be explained by the fact that majority of the respondents experienced some form of psychological care such as pre and post-test counselling, adherence, family planning counselling, and patients support group and some received some support from religious leaders and this may have helped them cope better. Similarly, in a study conducted among PLWHA in Uganda, coping strategies included medication adherence, social support, and spirituality/religiosity.

Employment has been shown to be protective against poor quality of life. In our study, higher proportion of respondents who were employed had higher quality of life (psychological domain of QoL). Similarly, in a study by Passos et al. in Southern Brazil, unemployment was associated with lower quality of life among PLWHA. Also, in a cross-sectional study among HIV-positive patients who were attending the antiretroviral clinics in Ghana, those who were unemployed had poor QoL. In our study, most of the respondents experienced high stereotypic stigma, high stigma as regards disclosure of status and also self-acceptance. Similarly, in a study conducted in a rural area of central China, PLWHA suffered from the burden

| Psychological domain of HRQoL | Frequency | Percentage |
|-------------------------------|-----------|------------|
| Low QoL                       | 98        | 25.5       |
| High QoL                      | 286       | 74.5       |

| Socio-demographic variables | Psychological Domains of HRQoL | χ² | P  |
|-----------------------------|--------------------------------|----|----|
| Age Groups                  |                                |    |    |
| ≤20                         | 3 (50.0)                       | 1.989 | 0.158 |
| 21-30                       | 13 (27.7)                      | 9.267 | 0.026 |
| 31-40                       | 32 (26.2)                      | 18.601 | 0.000 |
| 41-50                       | 35 (26.1)                      | 11.060 | 0.000 |
| 51-60                       | 9 (17.6)                       | 0.173 | 0.681 |
| ≥61                         | 6 (25.0)                       | 3.729 | 0.056 |
| Gender                      |                                |    |    |
| Male                        | 37 (22.8)                      | 2.428 | 0.125 |
| Female                      | 61 (27.5)                      | 1.060 | 0.303 |
| Marital Status              |                                |    |    |
| Married                     | 74 (26.0)                      | 22.4 | 0.026 |
| Separated                   | 3 (19.7)                       | 0.267 | 0.608 |
| Divorced                    | 2 (22.2)                       | 0.026 | 0.874 |
| Widowed                     | 8 (18.2)                       | 1.060 | 0.303 |
| Single                      | 11 (33.3)                      | 2.428 | 0.125 |
| Level of Education          |                                |    |    |
| Uneducated                  | 10 (17.5)                      | 38.7 | 0.000 |
| Primary                     | 14 (19.7)                      | 2.428 | 0.125 |
| Secondary                   | 34 (27.4)                      | 1.060 | 0.303 |
| Tertiary                    | 40 (30.3)                      | 3.729 | 0.056 |
| Employment status           |                                |    |    |
| Employed                    | 64 (22.3)                      | 22.4 | 0.026 |
| Unemployed                  | 36 (27.4)                      | 0.927 | 0.340 |
| *Income (₦)                 | ≤20000                         | 47 (24.9) | 142 (75.1) |
| >20000                      | 17 (17.5)                      | 38.7 | 0.000 |

*Exchange rate=₦ 387 to 1 USD

| Table 5: Respondents perceived Stigma (n=384) | Frequency | Percentage |
|---------------------------------------------|-----------|------------|
| Stereotype                                  | 101       | 26.3       |
| High stigma                                 | 283       | 73.7       |
| Disclosure concerns                         | 126       | 32.8       |
| Low stigma                                  | 258       | 67.2       |
| High stigma                                 | 298       | 77.6       |
| Social Relationship                         | 86        | 22.4       |
| Low stigma                                  | 155       | 40.4       |
| High stigma                                 | 229       | 59.6       |
Stigma and discrimination bars people from accessing health services. Some people living with HIV and are shunned by peers, family and the wider community, while others face poor treatment in educational and work settings, psychological damage and erosion of their rights. These all limit access to HIV testing, treatment and other HIV services.

Table 6: Association between respondents perceived stigma and HRQoL

| Domain             | HRQoL          | χ²  | P   |
|--------------------|----------------|-----|-----|
|                    | Low (%)        | High (%) |     |
| Stereotype         |                |       |     |
| Low stigma         | 5 (5.0)        | 96 (95.0) | 0.719 | 0.396 |
| High sigma         | 21 (7.4)       | 262 (92.6) |     |
| Disclosure         |                |       |     |
| Low stigma         | 13 (10.3)      | 113 (89.7) |     |
| High sigma         | 13 (5.0)       | 245 (95.0) | 3.737 | 0.053 |
| Social Relationship|                |       |     |
| Low stigma         | 17 (5.7)       | 281 (94.3) |     |
| High sigma         | 9 (10.5)       | 77 (89.5) | 2.396 | 0.122 |
| Self-Acceptance    |                |       |     |
| Low stigma         | 16 (10.3)      | 139 (89.7) |     |
| High sigma         | 10 (4.4)       | 219 (95.6) | 5.194 | 0.023 |

Conflicts of interest

There are no conflicts of interest.

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