

Quality of life of HIV/AIDS patients in a secondary health care facility, Ilorin, Nigeria

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This study evaluated the quality of life (QoL) and associated factors for 160 HIV/AIDS patients in Sobi Specialist Hospital, Ilorin, Nigeria. The patients were assessed with the World Health Organization Quality of Life Questionnaire-Short Version. Frequency distribution, percentages, and means were employed for the statistical analysis of the results. The mean age of the HIV/AIDS patients was 38.0 years; 70% were females, 55% were literates, more than three quarters were married, and one third were businessmen/women. The overall mean scores for health-related QoL were 72 for the physical domain, 67 for the psychological domain, 65 for the environment domain, and 47 for the social domain. Significant differences were observed in all domains among patients who had received 12 months of antiretroviral therapy compared with those who had just begun therapy. Marital status, fewer pills, and longer duration of therapy appeared to predict better QoL in this study. The improved QoL in the physical, psychological, and environmental domains is suggestive of the interventions offered to the patients by the pharmacists in this setting.

The pandemic of HIV and AIDS has led to serious health and socioeconomic challenges for more than two decades (1). The epidemic has also facilitated the reemergence of disease conditions such as pulmonary tuberculosis, which cause physical and psychological damage and decreased quality of life (QoL) (2, 3). Based on an overall national prevalence of 4.1%, it is estimated that in 2012, 3.6 million Nigerians were living with HIV/AIDS, 2.5 million children were orphaned, and about 1000 new cases of HIV were discovered daily (4). With this alarming increase of the HIV/AIDS pandemic in developing countries and the limited accessibility and availability of highly active antiretroviral therapy (HAART), the majority of HIV/AIDS patients continue to suffer with the disease, with a serious impact on their QoL (5). Many HIV patients battle numerous social problems such as stigma and depression, which affect their QoL in terms of their physical, mental, and social health (6). QoL is an indicator of not only how well an individual functions in daily life, but also how the individual's perceptions of health status influence his or her life (7, 8).

In Nigeria, QoL has been found to be determined by education, income, family support, HIV serostatus, and patient age (9). Further, a study reported higher QoL scores in the physical,

psychological, and environmental domains and a relatively lower score in the social domain among HIV patients in Nigeria (10). Mweemba et al (11) suggested that periodical assessment of QoL of people living with HIV/AIDS is imperative for holistic care, thereby ameliorating the symptoms of ill health. Such assessments are useful not only in documenting patients' perceived burden of chronic disease, but also in evaluating treatment effects (12). This study was therefore conducted to assess QoL of HIV/AIDS patients in Sobi Specialist Hospital, Ilorin, Nigeria.

METHODS

The study site was the HIV/AIDS treatment center, Sobi Specialist Hospital, Ilorin, Kwara State. Sobi Specialist Hospital, Ilorin is a secondary health care facility established in April 1985 by the Kwara State Government, located in the north central part of Nigeria. The primary ethnic group of Kwara State is Yoruba, with Nupe, Bariba, and Fulani as minorities. The facility provides health services for citizens in Kogi, Niger, Osun, Oyo, and Ekiti States and other neighboring states in Nigeria. The hospital receives referrals of HIV-positive patients from surrounding private hospitals and primary health care centers. The center was funded by Friends in Global Health and supported by the Kwara State Government. As at June 2011, the clinic had registered 616 HIV/AIDS patients, of whom 554 were on HAART.

This cross-sectional study involved 160 patients selected from the population of 616 HIV/AIDS-positive patients receiving services and care from Sobi Specialist Hospital, Ilorin, during the period of April to October 2011. Included in the sample were known HIV/AIDS patients who were 18 years or older and regularly refilled their prescriptions in the pharmacy unit of the center. Newly diagnosed patients and children (less than 18 years) were excluded. At the time of drug refill, an information sheet describing the significance of the study was presented to the patients. Those who showed interest in participating were asked to sign informed consent forms. Ethical approval for the

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study was obtained from the Ethics and Research Committee of Kwara State Ministry of Health, Ilorin.

The patients were interviewed using a pretested structured questionnaire to obtain information on sociodemographic status and treatment variables. During the interview, all drug therapy problems encountered were identified, resolved, and prevented through pharmacist intervention in collaboration with other health care providers. Counseling, education, training, and information interventions on HIV/AIDS, drug adherence, good nutrition, safe drinking water, and malaria prevention were also offered to the patients on a monthly basis.

The English version of the World Health Organization Quality of Life Questionnaire-Short Version (WHOQoL-BREF) was used to assess the QoL of these patients. This questionnaire consists of 26 items in four domains. The physical health domain, with seven items, assesses the impact of disease on the activities of daily living, dependence on medicinal substances, fatigue, restricted mobility, presence of pain and discomfort, sleep and rest, a lack of energy and initiative, and perceived working capacity. The psychological well-being domain includes eight items that assess the patient's thoughts about body image and appearance, positive feelings, negative feelings, self-esteem and personal beliefs, higher cognitive functions, spirituality, anxiety, suicide, and depression. The third domain, social relationships, has three items that assess personal relationships, social contacts, social support, and sexual activity. The final domain, environment, with eight items, assesses areas such as freedom, quality of home environment, physical safety and security, financial status, involvement in recreational activity, health, and social care quality and accessibility. The English version of the instrument was translated to the Yoruba language (the main language understood by most patients); the translated version was validated prior to administration to participants.

The QoL of each patient was assessed monthly during drug refill at the main pharmacy of the hospital. The participants who could not read were interviewed, while literates completed the questionnaire under the supervision of the researchers. Participants selected the number on a 5-point Likert-type scale that best represented their opinion, based on their life over the previous 4 weeks. In the scale, 1 indicated low and negative perceptions, and 5 indicated high and positive perceptions, which denoted better QoL.

Negatively worded items were reverse scored, and all scores were checked for appropriate range (between 1 and 5). Descriptive statistics, including frequency, means, percentages, minimum values, and maximum values, were calculated. Each item contributed equally to the domain score. To transform scores so that they were equivalent to those used for the WHOQOL-100, two steps were used. First, scores were converted to a range between 4 and 20, comparable with the WHOQOL-100. Second, these scores were multiplied by 5 so that the scores were converted to a scale of 0 to 100, where 100 is the highest health-related QoL. Student's *t* test was used to analyze the differences between the mean scores of QoL. $P < 0.05$ was set as the level of statistical significance.

RESULTS

A total of 160 eligible participants completed the questionnaires; most were married (76%) and female (70%). The mean age of the participants was 38.0 years (range 18–53 years). The modal age range was 31–40 years. Other participant demographics are shown in *Table 1*. Almost half of the patients were on HAART for over 12 months and employed self-reminder or alarm methods of medication-taking behavior (*Table 2*). A fixed-dose combination of a zidovudine-based regimen was most tolerated by the patients, and more than three quarters of the patients were taking two pills daily (*Table 3*).

HIV-seropositive married women had the highest QoL scores in all the domains compared to those with a different marital status (*Table 4*). Among the patients included in the present study, however, those on two pills per day of antiretroviral drugs had the best QoL in the four domains. There was no significant difference in the QoL of patients in the various domains when compared based on pill burden (*Table 5*).

When patients' QoL was assessed with respect to duration of antiretroviral therapy, patients who had received treatment for over 12 months had higher QoL scores in the psychological and social domains; the difference was statistically significant for the psychological domain (*Table 6*). *Table 7* reveals the overall QoL of the patients. The highest mean score was observed in the physical domain followed by the psychological and environmental domains, while the social domain had the lowest score.

Table 1. Sociodemographic characteristics of 160 HIV/AIDS patients in Sobi Specialist Hospital, Ilorin

	Variables	N (%)
Gender	Females	112 (70%)
	Males	48 (30%)
Age (years)	18–30	46 (29%)
	31–40	67 (42%)
	41–50	38 (24%)
	>50	9 (5%)
Marital status	Single	19 (12%)
	Married	121 (76%)
	Widowed	12 (7%)
	Divorced	8 (5%)
Education	None	49 (31%)
	Primary school	50 (31%)
	Secondary school	38 (24%)
	Tertiary	23 (14%)
Occupation	Businessmen/women	58 (37%)
	Public servants	25 (16%)
	Self-employed	34 (20%)
	Students	7 (4%)
	Not employed	36 (23%)

Table 2. Treatment characteristics of 160 HIV/AIDS patients in Sobi Specialist Hospital, Ilorin

	Characteristics	N (%)
Therapy initiation period (months)	3–5	15 (9%)
	6–8	18 (11%)
	9–12	60 (37%)
	>12	67 (42%)
Patient's medication-taking behavior	Use of alarm/self-reminder	71 (44%)
	Family/clinic counselor	5 (3%)
	Daily routine	16 (10%)
	All of the above	68 (43%)
Drug allergies	Cotrimoxazole	43 (27%)
	Chloroquine	64 (40%)
	Tetracycline	5 (3%)
	Nevirapine	16 (10%)
	Efavirenz	5 (3%)
	None	27 (17%)

Table 3. Number of antiretroviral drugs taken per day by 160 HIV/AIDS patients

Drugs	Pills per day (n)	N (%)
Fixed-dose combination (AZT + 3TC + NVP)	2	98 (61%)
Lose dose (AZT + 3TC + NVP)	6	2 (1%)
Combined (AZT + 3TC) + EFV	3	15 (9%)
Combined (FTC + TDF) + NVP	3	5 (4%)
Combined (FTC + TDF) + EFV	2	24 (15%)
Combined (FTC + TDF) + LPV/r	5	2 (1%)
Combined (AZT + 3TC) + LPV/r	6	12 (8%)
3TC + ABC + NVP	6	2 (1%)

AZT indicates zidovudine; 3TC, lamivudine; NVP, nevirapine; EFV, efavirenz; FTC, emtricitabine; TDF, tenofovir; LPV, lopinavir; LPV/r, ritonavir-boosted lopinavir; ABC, abacavir.

Table 4. Marital status and quality of life scores of 160 HIV/AIDS patients

Domain	Single	Married	Divorced	Widowed	P value
Physical	70	72	71	71	0.032
Psychological	66	69	66	67	0.355
Social	45	48	46	45	0.011
Environmental	64	65	62	61	0.428

DISCUSSION

The present study showed the prevalence of HIV infection among all age groups but with the highest prevalence for those in their 30s followed by those 18 to 30 years. This is consistent with the findings of Bankole et al (13) and Khan et al (14), who

Table 5. Antiretroviral pill burden and quality of life scores of 160 HIV/AIDS patients

Domain	2 pills	4 pills	6 pills	P value
Physical	73	72	71	0.022
Psychological	67	64	65	0.048
Social	47	44	43	0.242
Environmental	67	66	64	0.006

Table 6. Antiretroviral therapy duration and quality of life scores of 160 HIV/AIDS patients

Domain	3–5 mo	6–8 mo	9–11 mo	≥12 mo	P value
Physical	69	71	71	70	0.033
Psychological	62	60	64	68	<0.017
Social	44	45	46	48	0.008
Environmental	64	64	65	63	0.453

Table 7. Distribution of transformed quality of life scores obtained from WHOQoL-BREF questionnaire for 160 HIV/AIDS patients

Domain	Mean scores (transformed 0–100)	Minimum domain	Maximum domain
Physical	72	43	80
Psychological	67	43	87
Social	47	20	60
Environment	65	47	80

WHOQoL-BREF indicates World Health Organization Quality of Life Questionnaire-Short Version.

reported that people within the age bracket of 15 to 24 years were vulnerable to HIV, while those in their 30s were most susceptible (15, 16). The demographic profile of the participants also showed the predominance of the female gender, which is consistent with other studies. Kelly et al (17) showed that 60% of those living with HIV/AIDS are women. In contrast, in the USA, 87% of the patients are men (18).

Patients who are more educated can better understand the disease state and the instructions given on drug usage, which invariably enhances their QoL. Almost one third of this study population had received no formal education. Patients on HAART for a longer duration, however, had higher QoL in this study. By this time, patients had perceived medications as part of their daily routine and had also developed coping strategies to overcome the adverse effects of HAART that might have affected their QoL. In line with this work was a study conducted by Mannheimer et al (19), who reported significant improvement in QoL after 1 to 4 months of treatment with antiretroviral therapy, and this improvement persisted at 12 months.

In this study, patients on a lower pill regimen had better QoL. The explanation is probably related to fewer side effects, fewer tablets to swallow, and a smaller container (easy to convey and a pocket-friendly package). This study confirms the findings of Jack et al (20) that improvements in overall evaluations of QoL occurred for patients on a single daily dose.

The present study showed better QoL among married HIV/AIDS patients than for unmarried women. It is believed that the physical, emotional, and social support the married women received from their partners likely led to improved QoL. Evidence has shown that support from sources outside the family cannot compensate for what is missing in the family (21). Consistent with the present work was a study reported by Nojomi et al (22) that marital status had a significant effect on patients' QoL. In contrast, Pedram et al (23) showed that marital status had no significant association with any domain of QoL.

Overall, however, the social domain showed the lowest score of the four QoL domains in this study. The social domain was affected by societal discrimination and stigmatization, as well as HIV/AIDS' influences on patients' sexual desire, personal relationships, and family life. In line with this study was that of Fatiregun et al (24) in Kogi State, Nigeria, who reported a lower QoL in the social relationship domain. The better scores observed in the other three domains—physical, psychological, and environmental—could be attributed to pharmacists' impact through comprehensive and consistent counseling on patients' antiretroviral drugs and education on their disease state.

RECOMMENDATION

HIV/AIDS has affected many lives. Therefore, health care providers and other stakeholders should strengthen their efforts by addressing its social consequences to enhance QoL.

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