

QUALITY OF LIFE OF PEOPLE LIVING WITH HIV/AIDS IN NNEWI, NIGERIA

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ABSTRACT

BACKGROUND: *With the appreciable rise in longevity of people living with HIV/AIDS (PLWHA), the need to investigate their quality of life (QOL) has become increasingly important.*

OBJECTIVE: *This study aimed at assessing the QOL of PLWHA attending anti-retroviral (ARV) clinics in Nnewi North Local Government Area of Anambra State, Nigeria.*

METHODS: *The research design for this study was survey. A consecutive non-probability technique was used to recruit 388 PLWHA (113 males and 275 females) for the study. The WHOQOL-HIV Bref was used to obtain data. Subjects' socio-demographic information was obtained using a structured questionnaire.*

RESULTS: *A significant correlation was found between marital status, age and level of education, between level of independence and age, psychological health and level of education, and social relationship and spiritual/religion/personal beliefs. The overall mean scores in the two domains of physical health (15.3±3.4) and spiritual/religion/personal beliefs (15.5±3.2) were found to be high. Lower QOL mean scores were observed in social relationships (13.9±3.3). No significant difference was found between males and females in all the domains of the WHOQOL-HIV Bref.*

CONCLUSIONS: *Discrimination as well as poor living conditions may have an effect on the QOL of PLWHA. Marital and educational status may influence social relationship, spiritual/religion/personal belief and psychological health of PLWHA positively.*

Keywords: *HIV/AIDS, quality of life, discrimination*

INTRODUCTION

The human immunodeficiency virus (HIV) and its consequent acquired immune deficiency syndrome (AIDS) have been known for over three decades¹; an epidemic worldwide which exerts its greatest effects on underdeveloped and developing societies. Even though it was first discovered in 1981, over 16 million people have been estimated to have died of the disease². Uncertainties about modes of transmission of HIV aside the well established routes of unprotected sexual intercourse and needle sharing, combined with the stigma attached to homosexuality and drug use have resulted in widespread discrimination against people living with HIV/AIDS (PLWHA)³. AIDS is characterized by profound immunosuppression leading to opportunistic infections, secondary neoplasm, neurologic manifestation and ultimately death.

The absence of an effective immune system makes the victims vulnerable to overwhelming infection by organisms which would normally have little pathogenic effect⁴. With alarming increase in the HIV/AIDS pandemic in developing countries, and the limited accessibility and availability of high active anti retroviral therapy (HAART), the majority of PLWHA continue to suffer from the disease, with a serious impact on their quality of life⁵.

HIV/AIDS continues to contribute significantly to public health problems in Nigeria. Although HIV was initially limited to people with risky behaviors, such as commercial sex workers and multiple sexual partners, the currently available evidence suggests that this infection has permeated all strata of the Nigeria population⁶. The prevalence of the infection is estimated to have accounted for about 20% of the total disease burden globally⁷. AIDS has a

chronic debilitating cause and as such, determining the impact on the quality of life (QOL) in PLWHA is important for estimating the burden of the disease⁸.

Quality of life (QOL) is a term that is popularly used to convey an overall sense of well-being and includes aspects such as, happiness and satisfaction with life as a whole. QOL relates both to the adequacy of material circumstance and the personal feelings about this circumstance with overall subjective feelings of well-being that is closely related to morale, happiness and satisfaction⁹. QOL has been considered synonymous with health status, functional status, psychological well-being, happiness with life, satisfaction of needs, and assessment of one's own life¹⁰.

Several instruments for measuring QOL have been developed and described¹¹. A number of investigations have been carried out on the QOL of PLWHA in other environments¹⁰, and a few in Nigeria¹². The validity of the WHOQOL-HIV Bref instrument used among HIV/AIDS patients has also been documented¹³. This study assessed the QOL of PLWHA and attending antiretroviral therapy clinics in hospitals in Anambra State, southeastern Nigeria using the WHO QOL-HIV Bref.

METHODOLOGY

Research design

The research design for this study was a survey design.

Population

The population comprised people living with HIV/AIDS and attending routine check-up at Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi, Anambra State.

Sample size and sampling technique

The participants in this study were drawn through a consecutive non-probability sampling technique from all PLWHA at the selected hospitals who were willing to participate.

Research instruments

The WHO QOL-HIV Bref questionnaire was used to estimate the quality of life of people living with HIV/AIDS. This contains 31 items, representing the 30 facets divided into six domains: physical, psychological, social, environmental, level of independence, spirituality/religion/personal beliefs domains. Each item is rated on a 5-point scale where 1 indicates low, negative perceptions and 5 indicated high, positive perceptions. The WHO-QOL-HIV Bref instrument has been reported as presenting good reliability, with cronbach alpha ranging from 0.61 to 0.81 across the domains. Exploratory factor analysis identified four major domains physical, psychological, social and environmental domains corresponding to the four WHO QOL-HIV Bref domains. The four domain scores correlated positively with general health satisfaction and overall quality of life questions. ($P < 0.01$ in all except general health and social domains with $P < 0.05$) and correlated negatively with the frequency and severity of HIV symptom ($P < 0.01$). The domain scores discriminated between patients with higher and lower frequency and severity of HIV symptoms ($P < 0.01$)¹³.

Procedure for data collection

Ethical approval was sought and obtained from the ethical committee of Nnamdi Azikiwe Teaching Hospital, Nnewi campus before commencing the study. The questionnaire was administered by the researchers to those who volunteered to participate in the study after obtaining their informed consent.

DATA ANALYSIS

Data entry and statistical analysis were performed using the statistical package for social science (SPSS) software, version 20.0. The descriptive statistic of mean and standard deviation was used to summarize the scores of the QOL. Domain scores were scaled in a positive direction (higher score denoting a higher QOL). The mean score of items within each domain was used to calculate the domain scores by multiplying them by 4, so that scores

ranged from 4 (minimum) to 20 (maximum), with higher score indicating a better QOL. Spearman's rank order correlation was used to ascertain relationships. The level of statistical significance was set at $p < 0.05$.

Result

More than half of the entire sample size 46.4% were married, 19.6% single, 3.4% separated, 2.3% divorced and 10.1% widowed. A further 18.3% were living with their spouses even though they were not married. 19.6% were single, 3.4% were separated, 2.3% were divorced and 10.1% were widowed.

Respondents' educational status showed that 2.6% were not educated, 35.8% had at least primary school, 17.8% were educated up to tertiary level.

The mean scores in the domains of QOL were 15.3 ± 3.4 in the physical health domain, psychological health 14.5 ± 3.1 , social relationship 13.9 ± 3.3 , level of independence 14.5 ± 3.1 , environmental 14.0 ± 2.4 , spiritual/religion/personal beliefs domain 15.5 ± 3.2 . The mean score in the domains of QOL was higher for spirituality/religion/personal beliefs and physical domains.

Table 1 shows a summary of the QOL domain scores. No significant difference was found between males and females in all the domains of the WHO QOL-HIV Bref. The results of the student t-test between gender and domain scores are summarized in Table 2.

The result for spearman's rank order correlating marital status, age and level of education and QOL of PLWHA, showed significant relationship between level of independence domain and age of PLWHA ($r = 0.144$; $p = 0.005$), between psychological health domain and educational status of PLWHA ($r = 0.147$; $p = 0.004$), between social relationship domain and marital status of PLWHA ($r = 0.112$; $p = 0.027$) and between spiritual/personal beliefs domain and marital

status of PLWHA ($r = 0.202$; $p = 0.000$). Tables 3 - 6 show a summary of the spearman's rank order score.

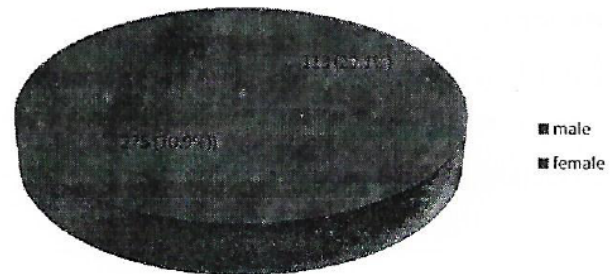


Figure 1: Pie chart showing gender of PLWHA

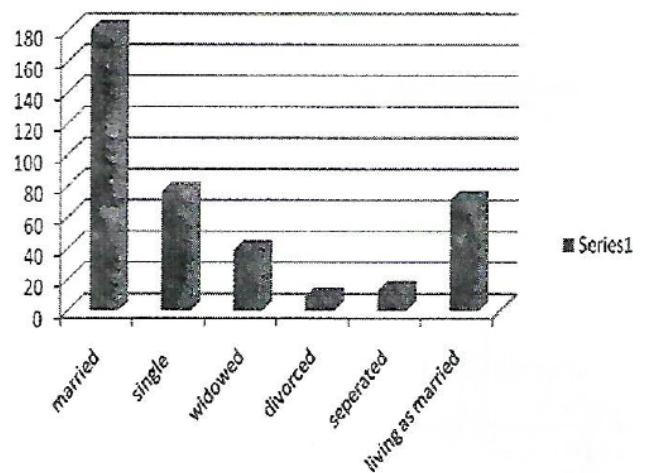


Figure 2: Bar chart showing marital status of the PLWHA

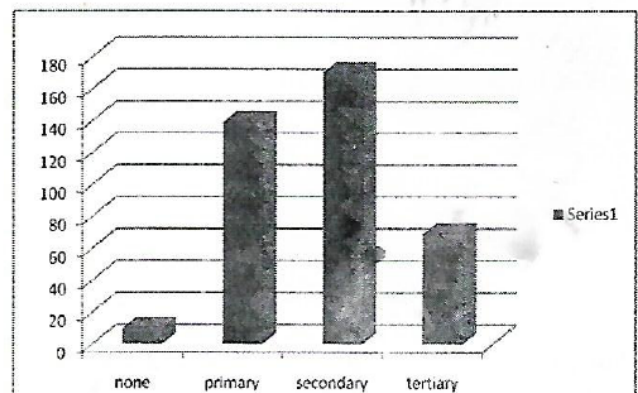


Figure 3: Bar chart showing educational status of the PLWHA

Table 1: Mean scores and standard deviations of the domains of the WHO QOL-HIV Bref

Domain	Mean +SD
Physical health	15.3±3.4
Psychological health	14.3±3.0
Level of independence	14.5±3.1
Social relationship	13.9±3.3
Environmental	14.0±2.4
Spiritual/religion/personal beliefs	15.5±3.2

Table 2: Comparison of domain scores between male and female participants

Domain	Sex	N	Mean(SI)	t-value	P-value
Physical health	Male	113	15.4±2.8	0.5	0.6
	female	275	15.2±3.6		
Psychological health	Male	113	14.2±2.7	0.1	0.8
	Female	275	14.2±3.1		
Level of independence	Male	113	14.2±2.8	-0.9	0.3
	Female	275	14.5±3.1		
Social relationship	Male	113	13.9±3.1	0.8	0.9
	Female	275	13.9±3.4		
Environmental	Male	113	13.7±2.4	-1.1	0.2
	Female	275	14.1±2.5		
Spiritual/religion/personal belief	Male	113	15.1±3.2	-1.1	0.2
	Female	275	15.5±3.2		

Table 3: Correlation of gender and domains of the WHO QOL-HIV Bref

Gender	Dom1	Dom2	Dom3	Dom4	Dom5	Dom6
r-value	-0.006	0.112	0.071	0.002	0.045	0.70
p-value	0.000*	0.014*	0.006*	0.968	0.375	0.170

*indicates significance at the 0.05 level

Key

- Domain 1 - Physical health
- Domain 2 - Psychological
- Domain 3 - Level of independence
- Domain 4 - Social relationship
- Domain 5 - Environment
- Domain 6 - Spiritual/ religion/personal beliefs

Table 4: Correlation of age and domains of the WHO QOL-HIV Bref

Age	Dom1	Dom2	Dom3	Dom4	Dom5	Dom6
r-value	-0.076	-0.046	-0.144	-0.024	-0.077	0.091
p-value	0.134	0.367	0.005*	0.641	0.129	0.074

*indicates significance at the 0.05 level

Key

Domain 1 - Physical health

Domain 2 - Psychological

Domain 3 - Level of independence

Domain 4 - Social relationship

Domain 5 - Environment

Domain 6 - Spiritual/ religion/personal beliefs

Table 5: Correlation of educational status and domains of the WHO QOL-HIV Bref

EDUCATION	Dom1	Dom2	Dom3	Dom4	Dom5	Dom6
r-value	0.044	0.147	0.049	0.087	0.091	0.089
p-value	0.387	0.004*	0.332	0.087	0.000*	0.079

*indicates significance at the 0.05 level

Key

Domain 1 - Physical health

Domain 2 - Psychological

Domain 3 - Level of independence

Domain 4 - Social relationship

Domain 5 - Environment

Domain 6 - Spiritual/ religion/personal beliefs

Table 6: Correlation of marital status and domains of the WHO QOL-HIV Bref

Marital status	Dom1	Dom2	Dom3	Dom4	Dom5	Dom6
r-value	0.064	0.019	-0.008	0.112	0.044	0.202
p-value	0.207	0.703	0.878	0.27	0.385	0.00*

*indicates significance at the 0.05 level

Key

Domain 1 - Physical health

Domain 2 - Psychological

Domain 3 - Level of independence

Domain 4 - Social relationship

Domain 5 - Environment

Domain 6 - Spiritual/religion/personal beliefs

Discussion

The aim of this study was to investigate the QOL of PLWHA who attend anti-retroviral clinics. It also evaluated the factors affecting the QOL of PLWHA in Nnewi Local Government Area of Anambra State.

In this study, the QOL of PLWHA was correlated with gender, age, level of education and marital status across the domains of the WHO QOL HIV-Bref. A significant correlation was found between level of independence and age of PLWHA. This might be because the younger adults usually have more zeal to try to live and as such work harder to take care of their families which is their primary responsibility, when compared to older adults that are weaker and depend on the younger ones for support and have lesser zeal to live. The finding of this study that there is a correlation between age and level of independence is in agreement with some other previous studies, which found out an association between age and level of independence in people living with HIV/AIDS¹⁴.

There is also a significant association between Educational status and psychological health domain. This might be due to the high level of exposure of the respondents through media or counseling sections in the clinic about HIV/AIDS which would increase their knowledge about their health and how best to manage their condition thereby influencing their psychological health positively.

Social relationship correlated well with marital status of people living with HIV/AIDS. PLWHA often experience social isolation, derogation, stigmatization, discrimination and marginalization. Consequently, those that are unmarried may find it difficult to socialize in order not to be identified and stigmatized; so they may find it difficult finding a marriage partner. Occasionally, married people being HIV-positive while the other partner is not could bring about separation and even

divorce, because the other partner would not want to be infected and might feel betrayed and cheated on. This study also shows a significant correlation between marital status and spirituality/religion/personal beliefs of PLWHA. This could be due to that fact that PLWHA get more spiritual after diagnosis and believe that their God will cure them someday of the disease. This finding agrees with the assertion that PLWHA become more spiritual or religious after diagnosis¹⁵.

The PLWHA involved in this study appeared to have good physical health and spiritual/religious/personal beliefs. However, their social relationship was low indicating a possible poor quality of life in this domain. This finding is in line with a previous study which reported better scores in physical and spiritual/religion/personal beliefs, but poor scores in the social relationship domain¹⁶, but disagrees with others¹⁷, which reported low scores in all domains of QOL of PLWHA. However, these findings and that of the current study differ and this may be due to possible differences in the characteristics of the population of study. The resulting high scores in the physical health/spiritual/religion/personal beliefs could be due to the fact that in Nigeria, people tend to be spiritual and religious only when confronted with issues that are beyond them. A study reported that the life of PLWHA was better now than before they were diagnosed with HIV¹⁵. Several factors including spirituality were associated with believing that life has improved. The conceptual model of how spirituality/religion, post-HIV diagnosis and disease progression was examined and observed that nearly one-half of the patients reported an increase in spiritual/religious life following diagnosis¹⁵.

The resulting low scores in the social relationship domain could reflect stigmatization and discrimination faced by the PLWHA. Also, issues like personal relationship, possibility of restricted sexual activities and lack of social support for

PLWHA may have had a negative effect in the social relationship domain.

In the current study, women and men showed high scores in virtually all domains indicating that gender possibly did not have any effect on the QOL of PLWHA. However, previous studies have reported lower scores in the psychological and environmental domains among women¹⁰.

CONCLUSION

It was concluded that:

1. PLWHA in this environment appeared to have good spiritual/religion/personal beliefs and physical health.
2. Age may influence the level of independence of PLWHA.
3. Lower scores in the social relationship domain could be an indication of discrimination faced by PLWHA.
4. Educational status has an effect on the psychological health of PLWHA.
5. Marital status has effect on the social relationship and spiritual/religion/personal beliefs of PLWHA.

RECOMMENDATIONS

Based on the outcome of this study, the following recommendations are made:

1. Further studies should be carried out on a nationwide scale to ascertain the efficacy of intervention for PLWHA.
2. Studies should compare between different regions in Nigeria.
3. There is need for government and non-governmental organizations to strengthen social support for PLWHA.
4. More aggressive anti-stigma measures should be adopted.

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**APPENDIX
WHOQOL-HIV BREF
ABOUT YOU**

Before you begin we would like to ask you to answer a few general questions about yourself: by circling the correct answer or by filling in the space provided.

- | | |
|----------------------------------------------------------------|-----------------------------------------------------------------|
| What is your gender ? | Male/Female |
| How old are you? | (age in years) |
| What is the highest education you received? | None at all/ Primary/Secondary/Tertiary |
| What is your marital status ? | Single/Married/Living as married/ separated
Divorced/Widowed |
| How is your health ? | Very poor/Poor/Neither poor nor Good/Good
Very Good |
| Do you consider yourself currently ill? | Yes/No |
| If there is something wrong with you, what do you think it is? | _____ |

Please respond to the following questions if they are applicable to you:

What is your **HIV serostatus**? Asymptomatic/Symtomatic/AIDS converted

In what year did first test positive for HIV? _____

In what year do you think you were infected? _____

How do you believe you were **infected with HIV**? (circle one only):

Sex with a man/Sex with a woman/Injection drugs/Blood products/Other (specify) _____

Instructions

This assessment asks how you feel about your quality of life, health, or other areas of your life. **Please answer all the questions.** If you are unsure about which response to give to a question, **please choose the one** that appears most appropriate. This can often be

your first response. Please keep in mind your standard, hopes, pleasures and concerns. We ask that you think about your life in the **last two weeks.** For example, thinking about the last weeks, a question might ask:

		Not at all	A little	A moderate amount	Very Much	Extremely
11 (F5.3)	How well are you able to concentrate?	1	2	3	4	5

You should circle the number that best fits how well you are able to concentrate over the last weeks. So you would circle the number 4 if you were able to concentrate very much. You would circle number 1 if you were not able to concentrate at all in the last two weeks.

Please read each question, assess your feelings, and circle the number on the scale for each question that gives the best answer for you.

		Very poor	poor	Neither poor nor good	Good	Very Good
1(G1)	How would you rate your quality of life?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither Satisfied nor dissatisfied	satisfied	Very satisfied
2(G4)	How satisfied are you with your health	1	2	3	4	5

The following questions ask about **how much** you have experienced certain things in the last two weeks.

		Not at all	A little	A moderate amount	Very much	An extreme amount
3(F1.4)	To what extent do you feel that physical pain prevents you from doing what you need to do?	1	2	3	4	5
4(F50.1)	How much are you bothered by any physical problems related to your HIV infections?	1	2	3	4	5
5(F11.3)	How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
6(F4.1)	How much do you enjoy life?	1	2	3	4	5
7(F24.2)	To what extent do you feel your life to be meaningful?	1	2	3	4	5
8(F52.2)	To what extent are you bothered by people blaming you for your HIV status?	1	2	3	4	5
9(F53.4)	How much do you fear the future?	1	2	3	4	5
10(F54.1)	How much do you worry about death?	1	2	3	4	5

		Not at all	A little	A moderate amount	Very much	Extremely
11(F5.3)	How well are you able to concentrate?	1	2	3	4	5
12(F16.1)	How safe do you feel in your daily life	1	2	3	4	5
13(F22.1)	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about **how completely** you experience or able to do certain things in the last weeks.

		Not at all	A little	Moderate	Mostly	Completely
14(F2.1)	Do you have enough energy for everyday life?	1	2	3	4	5
15(F7.1)	Are you able to accept your bodily appearance?	1	2	3	4	5
16(F18.1)	Have you enough money to meet your needs?	1	2	3	4	5
17(F51.1)	To what extent do you feel accepted by the people you know?	1	2	3	4	5
18(F20.1)	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
19(21.1)	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5

		Very poor	poor	Neither poor nor good	Good	Very Good
20(F9.1)	How well are you able to get around?	1	2	3	4	5

The following questions ask you how **good or satisfied** you have about various aspects of your life over the last two weeks.

		Very dissatisfied	Dissatisfied	Neither Satisfied nor dissatisfied	satisfied	Very satisfied
21(F3.3)	How satisfied are you with your sleep?	1	2	3	4	5
22(F10.3)	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
23(F12.4)	How satisfied are you with your capacity for work?	1	2	3	4	5
24(F6.3)	How satisfied are you with yourself?	1	2	3	4	5
25(F13.3)	How satisfied are you with your personal relationships?	1	2	3	4	5
26(F15.3)	How satisfied are you with your sex life?	1	2	3	4	5
27(F14.4)	How satisfied are you with the support you get from your friends?	1	2	3	4	5
28(F17.3)	How satisfied are you with the conditions of your living place?	1	2	3	4	5
29(F19.3)	How satisfied are you with your access to health services?	1	2	3	4	5
30(F23.3)	How satisfied are you with your transport?	1	2	3	4	5

The following question refers to **how often** you have felt or experienced certain things in the last two weeks.

		Never	Seldom	Quite often	Very often	Always
31(F8.1)	How often do you have negative feelings such as blue mood, despair, anxiety, depression?	1	2	3	4	5

Did someone help you to fill out this form?

How long did it take to fill this form?

Do you have any comments about the assessment?

THANK YOU FOR YOUR HELP.