

Original Research Article

Comparative analysis of quality of life of HIV positive support group and non-support group members in a tertiary hospital in Anambra State, Nigeria

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ABSTRACT

Background: Peer support as a component of chronic disease management strategy is fast gaining prominence especially in resource poor settings. It is apt to x-ray the effects if any, of support group memberships on the quality of life (QoL) of HIV positive clients in our clime. This study aims to determine and compare the QoL of HIV positive support group and non-support group members in a tertiary hospital in Anambra state, Nigeria.

Methods: This was an institution based comparative study of 482 HIV positive clients selected using a two-stage sampling. Data were collected by interview using WHOQOLHIV-Bref and semi-structured questionnaire, while data were analysed with statistical package for social sciences version 22.0. Chi square, Pearson chi square and t-test were applied as appropriate to determine statistically significant associations between variables. Level of statistical significance was set at p value of <0.05.

Results: Differences between the two comparison groups include: duration of HAART treatment (p=0.003), in the physical domain (p=0.043), psychological domain (p≤0.001), and the level of independence domain (p≤0.001). More of support group members had good QoL in the physical domain (p=0.04), psychological domain (p=0.001), level of independence domain (p≤0.001) and reported satisfaction with their perceived health status (p=0.000). Clients who were members of support group and those that reported high level of satisfaction with their perceived health status in most domains had higher QoL scores.

Conclusions: We recommend continued counselling and health education on the effect of participation in support group and positive perception cum positive living on QoL.

Keywords: HIV, Nigeria, Peer support group, Quality of life

INTRODUCTION

Quality of Life (QoL) refers to “individuals’ perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, standards, expectations and concerns.”¹ It is a ubiquitous term that has different philosophical, political and health related connotations.²

Health Related Quality of Life (HRQoL) distinctly focuses on the aspects of human experience and a person’s assessment of same that are amenable to health interventions.³ The HRQoL quantifies the degree to which a medical condition or a treatment intervention impacts an individual’s life in a valid and reproducible way.⁴ Recent advances in management of persons living with HIV/AIDS (PLWHA) and the increase in survival rate of

this special group have led to increasing focus on their QoL by researchers and health care providers.⁵

Sub-Saharan Africa accounts for 71% of PLWHA worldwide.⁶ Nigeria bears the second heaviest burden of HIV in Africa, with a HIV prevalence of 3.1% as well as an expanding population of PLWHA estimated at 9% of the global burden.⁷⁻⁹ With institutional reforms and political commitment in tackling this condition in Nigeria, more HIV positive clients are on life saving medication.⁹ The advantages of universal access to antiretroviral could be offset by potentially negative challenges in the lives of PLWHA.¹⁰ In the same light, societal attitudes could adversely affect clients' QoL from the physical social and emotional health points of view.^{8,11}

Several research works have reported that HIV infection affects the QoL of individuals.^{12,13} Maximizing QoL while prolonging survival therefore remains pertinent.¹⁴ Other studies posited that participation in peer support groups is beneficial in several chronic diseases including HIV and this position is on the basis that patients are able to give one another something the clinician may not have shared life experience.¹⁵⁻¹⁹ Peer support assists PLWHA in dealing with stigma and isolation, provides emotional support, improves HIV knowledge and promotes positive living.²⁰

Availability of social support and participation in support groups have been reported as factors that influence the QoL of PLWHA.^{12,16-21} As a result, QoL has become an important outcome in HIV management and research. This research agenda for assessing contribution of peer support to QoL was suggested by Campbell et al.²² Nonetheless, there is still paucity of data on the QoL of these clients and on how membership of peer support groups affect their QoL. The findings of this study were expected to address the knowledge gap that exists in QoL studies in Nigeria. It will provide timely data for HIV care evidence base and social protection that could inform future policy decisions on improvement of HIV care and practice in Nigeria. It is on this backdrop that the researchers set out to determine and compare the QoL of HIV positive support group and non-support group members in a University Teaching Hospital in Anambra State, Nigeria.

METHODS

Study design

This was an institution based cross-sectional comparative study.

Study area and period

This study was conducted between January and July 2016 at the Nnamdi Azikiwe University Teaching Hospital (NAUTH). The NAUTH is a Federal Government of

Nigeria owned tertiary health institution. This level of care requirement suffices that NAUTH employs various cadre of health workers. It attends to a wide range of patients and clients in the State and beyond. Primary activities include a wide spectrum of specialist healthcare delivery, research and training of undergraduate and post graduate students in Medicine and allied sciences. The NAUTH is a multi-complex comprising the main site at Nnewi, Guinness Eye Center Onitsha, Trauma center Oba, Staff annex at Awka and three comprehensive health centers (CHCs) at Ukpou, Neni and Umunya.

The study settings were two CHCs situated at Ukpou and Neni. The CHCs offer comprehensive HIV/AIDS services under the FHI360 strengthening integrated delivery of HIV/AIDS Services (SIDHAS). Each center hosts about 35 bed facility which runs HIV clinic twice a week and receives referrals from surrounding towns, cities and states. Both facilities are manned by the same group of doctors on a rotational basis. At the time of this study the first facility has 779 registered PLWHA accessing care, an average monthly attendance of 392 clients, and runs the 'CHETANWANNE' peer support group comprising a total of 162 registered members. The second facility operates a linkage system with the first CHC, has 689 registered PLWHA accessing care and an average monthly attendance of 264 clients. It runs the 'FAVOUR' peer support group comprising a total of 114 registered members. Membership of the support groups is optional, while clients are free to decline, withdraw or join peer support groups outside that attached to the centers studied.

Validity of the data collection instrument was achieved through the use of questionnaires designed from relevant literature as well as adapted from the WHOQOL HIV-Bref Instrument.²³ The questionnaire was presented to statistician and other research experts who reviewed the items on it in order to ensure clarity and the suitability of items. Suggestions made were used to modify the instrument so as to be able to elicit responses that will provide adequate answers for the research questions.

Study participants

The target population comprises all registered HIV positive clients accessing care at the CHCs Ukpou and Neni.

Inclusion criteria

All HIV positive clients who at the commencement of this study, are accessing care for at least six months and those of age 18 years or older.

Exclusion criteria

Terminally ill clients and those with gross cognitive dysfunction were excluded because they were not able to respond to the questions. Pregnant women were also

excluded because other factors associated with pregnancy e.g. vomiting, excessive tiredness may affect their responses.

Variables

These comprise socio- demographic variables, clinical characteristics, mean QoL domain scores, QoL and general QoL question scores of the respondents,

Data sources or measurement

Frequencies of variables were assessed using univariate analysis, while tests of associations between variables, were done by bivariate analysis.

Bias

Reporting bias could result from the sensitive nature of the questions. This was overcome using anonymous questionnaires and ensuring the respondents that their answers would be strictly confidential and for research purposes.

Study size

Sample size determination

The minimum sample size (n) to determine a difference in the mean quality of life scores between two groups of HIV positive clients that is significant at 5% level and with 90% chance of detecting a difference (power) was calculated using the formula for comparison of two means stated thus $n = \frac{(u+v)^2 (\sigma_1^2 + \sigma_0^2)}{(\mu_1 - \mu_0)^2}$, where $\mu_1 - \mu_0$ = Difference between means; σ_1, σ_0 = Standard deviations; v = Percentage point of the normal distribution (standard normal deviate) corresponding to the two sided significance level set at 1.96; u = One sided percentage point of the normal distribution (standard normal deviate) corresponding to 100% - power ($1 - \beta$); power = 80%, therefore $u = 1.28$.²⁴ This study was on peer support groups, a form of social support, so the social domain of the WHOQoLHIV BREF was considered the primary end point for sample size calculation.²⁵ Secondly, the size of difference between the HRQoL mean scores that is to be detected was derived from the formula to determine effect size $\Delta = \mu_{ns} - \mu_z / \sigma$, where Δ = effect size; μ_{ns} = social domain mean of nonmembers of support group = 16.09 (from a study on QoL of persons living with HIV in Osun State, Nigeria); μ = social domain mean of support group members = 13.6 (from a study on 'QoL of people living with HIV/AIDS in Cross River State, Nigeria, σ = pooled SD = 2.91.²⁵⁻²⁷ Therefore, $\mu_1 - \mu_0 = 0.86$, and the standard deviations of the social domain scores in each group. $\sigma_1 = 2.81, \sigma_0 = 3.01$,^{26,27} calculating $n = 240.6 = 241$ per group.

Because the study compared two groups (support group members and non-support group members), the figure obtained above was multiplied by 2 to obtain the total

sample size for the study: $241 \times 2 = 482$. Thus, the minimum sample size required for the study = 482 clients. Based on the average attendance over 3 consecutive months and the total monthly attendance over the 3 months, the sample size calculated was proportionately allocated to the two study centers. For CHC Ukpo, the average monthly attendance was 392, therefore the minimum number of clients to be interviewed = $392/656 \times 480 = 286$. For CHC Neni, the average monthly attendance was 264, therefore the minimum number of clients interviewed = $264/656 \times 480 = 194$. For each center, the number of clients to be interviewed was split equally into those who belong to a support group and those who do not belong to a support group. A minimum number of patients interviewed per data collection day were obtained by dividing the total number of clients to be interviewed from the center by the number of weeks scheduled for data collection.

Sampling technique

The following sampling technique was then employed: Stage 1: For each data collection day, a list of clients booked for appointment was determined from the Records Department. Based on information from their case notes, stratified sampling technique was used to split this list into two- those that belong to a support group and those that do not. Stage 2: Systematic random sampling technique was then employed as follows: From the frame of each stratum, a sampling fraction was determined by dividing the number of clients booked for appointment on each data collection day by the minimum number of clients to be interviewed in each group. Then, every n^{th} eligible consenting client presenting for care was recruited for interview until the sample size for each center was obtained.

Data collection

A self-administered structured questionnaire was used, Verification of clients status of membership to a peer support group or not was done using their medical records which routinely collect data on whether a client is an active participant in a support group or not. Active participant was defined as a client participating in at least one support group activity in the immediate three months prior to data collection.²³ In addition, they were asked for their membership identity cards The QoL was assessed using the WHOQOL HIV-Bref Instrument, modified by the addition of a section that captured socio-demographic and clinical characteristics of participating clients.²³ The WHOQOLHIV-Bref consists of 31 items with each item using a five point Likert scale where one indicates high positive perceptions. Higher scores depict better QoL. Some questions (pain and discomfort, negative feelings, dependence on medication, death and dying) are not scaled in a positive direction meaning that for these questions, higher scores do not denote higher quality of life. These items are distributed in six domains. Domain I physical domain comprises four items that assess areas

such as presence of pain and discomfort, energy and fatigue, dependence on substances or treatments, sleep and rest and symptoms related to HIV. Domain II psychological wellbeing comprises five items that assess areas such as patient's affect, both positive and negative, self-concept, concentration, and body image. Domain III level of independence consists of four items which measure mobility, activities of daily living, dependence on medication and perceived working capacity. Domain IV social relationships comprises four items that assess areas such as personal relationship, social support, sexual activity, and social inclusion. Domain V environment comprises eight items that assess aspects such as freedom, quality of home environment, physical safety and security and financial status, involvement in recreational activity, and accessibility and quality of health and social care, opportunities for acquiring new information and skills and transport. Domain VI spirituality measures forgiveness and blame, concerns about the future and death and dying. It contains four items. Two questions that examine general quality of life are included: question one asks about an individual's overall perception of quality of life and question two asks about an individual's overall perception of his/her health. It should be noted that the questions of the WHOQOLHIV Bref are not arranged in the questionnaire by domains, they are grouped by type of answer scale.²³

Data were collected by four research assistants carefully recruited from Community health extension workers at the CHCs along with the researchers. All who gave consent and whose appointment fell within the study period were interviewed. Each questionnaire was numbered serially prior to administration for easy recall and identification. To ensure data quality, training of data collection team, pre data collection training and regular field monitoring of data collection were done. There was spot checking and reviewing of the completeness of questionnaires during and at the end of each data collection day.

Statistical methods

After completion, data generated on the questionnaire were cleaned and then coded, sorted, organized, to determine the range and internal consistency of the instrument, and were keyed into the excel spread sheet. Data analysis was carried out with the aid of International Business Machines- Statistical Package for the Social Sciences (IBM-SPSS) Windows version 22.0.²⁸

Quantitative variables

Continuous and categorical variables are displayed as means \pm SD, frequencies and percentages respectively. The t-test was used to assess differences in the mean quality of life scores. Bivariate analysis with Chi square was conducted with age, sex, HIV stage, CD4 cell count and duration of HIV infection as independent variables.

Pearson chi square was applied as appropriate. A p value \leq 0.05 was considered significant.

The HRQoL among HIV/AIDS positive clients can be affected by several factors which for purposes of this study were categorized into community (membership or not of peer support groups), socio-demographic (age, sex, educational attainment), clinical (CD4 count, duration of infection) and individual factors (self-reported symptoms, adherence to medication).^{29,30} The dependent/outcome variable for this study is the quality of life score, while the independent variables are support group membership, socio-demographic factors, CD4 count (CD4 count to be used was obtained from clients case notes and the test was carried out no later than six months prior to data collection). The domain scores are scaled in a positive direction with higher scores denoting better QoL however some questions are not scaled in a positive direction and as such, higher scores here did not denote higher quality of life. The scores of negatively phrased items were reversed so that higher scores denote higher quality of life. The mean scores of items within each domain were multiplied by four in order to make the domain scores comparable with the scores in the full version of World Health Organization Quality of Life instrument (WHOQOL-100).³⁰ In the WHOQOL -100, facet scores are multiplied by four so that, in case of a question that has not been answered, the score of a facet compensates the invalidation of the question by multiplication with the number of valid questions that the facet should have.²⁹ The scores therefore range from four and 20. Domains that had one missing score were replaced using the mean of the scores of other questions in the domain.³¹

Pre-test

A pre-test was conducted on 20 couples (10 support and 10 nonsupport group members) respectively, from the CHC at Umunya. The outcome of the pre-test was used to modify the questionnaire.

Ethical consideration

The study has been examined and approved by the University Teaching Hospital Ethics Committee. A written informed consent was obtained from each participant for the conduct and publication of this research study and assurance of confidentiality given. Study participants were free to refuse or withdraw from the study at any time without any penalty. The study's purpose and objectives were explained to each participant prior to interview. All authors hereby declare that the study has therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

RESULTS

Table 1 shows the socio-demographic characteristics of respondents among support and nonsupport group

members. A total of 486 questionnaires were distributed out of which 482 were filled and thus analyzed. This

gives a response rate of 99.2%. The mean age of the participants was 41.5±9.84 years.

Table 1: Socio-demographic characteristics of HIV positive support group and non-support group members in comprehensive health centers in Anambra state, Nigeria from January to July 2016.

Variables	Total (n=482) N (%)	Support group (n=241) N (%)	Non-support group (n=241) N (%)	Test statistic	P value
Age of respondents					
Mean±SD (years)	41.5±9.84	42.07±9.95	40.93±9.72	1.278*	0.202
Range	18–74	18–74	18–65		
Age group (in years)					
<30	70 (14.5)	31 (12.9)	39 (16.2)	1.475**	0.688
30-39	143 (29.7)	70 (29.0)	73 (30.3)		
40-49	165 (34.2)	85 (35.3)	80 (33.2)		
≥50	104 (21.6)	55 (22.8)	49 (20.3)		
Gender					
Male	176 (36.5)	90 (37.3)	86 (35.7)	0.143**	0.705
Female	306 (63.5)	151 (62.7)	155 (64.3)		
Marital status					
Never married	67 (13.9)	34 (14.1)	33 (13.7)	0.144**	0.931
Currently married	294 (61.0)	145 (60.2)	149 (61.8)		
Others***	121 (25.1)	62 (25.7)	59 (24.5)		
Level of education					
No formal education	18 (3.7)	7 (2.9)	11 (4.6)	1.889**	0.596
Primary	151 (31.3)	81 (33.6)	70 (29.0)		
Secondary	247 (51.2)	120 (49.8)	127 (52.7)		
Tertiary	66 (13.7)	33 (13.7)	33 (13.7)		
Occupation					
Self employed	313 (64.9)	154 (63.9)	159 (66.0)	2.779**	0.249
Salaried Employed	80 (16.6)	36 (14.9)	44 (18.3)		
Unemployed/housewife	89 (18.5)	51 (21.2)	38 (15.8)		
Home ownership					
Rented	265 (55.0)	134 (55.6)	131 (54.4)	0.075**	0.784
Owned	217 (45.0)	107 (44.4)	110 (45.6)		
Support source					
Family	388 (80.5)	198 (82.2)	190 (78.8)	0.846	0.348
Others****	94 (19.5)	43 (17.8)	51 (21.2)		

*= mean difference; **= chi square; ***= divorced, widowed, separated; ****= religious bodies, community, none

Table 2: Clinical characteristics of HIV positive support group and non-support group members in comprehensive health centers in Anambra state, Nigeria from January to July 2016.

Variable	Total (n=482) N (%)	Support group (n= 241) N (%)	Non Support group (n= 241) N (%)	Test statistic	P value
Mean duration of HIV infection (±SD) years	6.61±3.34	6.88±3.20	6.33±3.45	-5.477*	0.071
Year first tested positive					
1998-2002	18 (3.7)	7 (2.9)	11 (4.6)	9.070**	
2003-2006	79 (16.4)	42 (17.4)	37 (15.4)	0.028	
2007-2010	183 (38.0)	105 (43.6)	78 (32.4)		
2011-2015	202 (41.9)	87 (36.1)	115 (47.7)		
Source of infection					
Sexual route	389 (80.7)	202 (83.3)	187 (77.6)	7.356**	
Blood products	36 (7.5)	20 (8.3)	16 (6.6)	0.025	
Others***	57 (11.8)	19 (7.9)	38 (15.8)		
HIV stage					
Asymptomatic	421 (87.3)	213 (88.4)	208 (86.3)	0.469**	
Symptomatic	61 (12.7)	28 (11.6)	33 (13.7)	0.493	
Last CD4 count					
>500	220 (45.6)	115 (47.7)	105 (43.6)	0.836**	
<500	262 (54.4)	126 (52.3)	136 (56.4)	0.360	

Continued.

Variable	Total (n=482) N (%)	Support group (n= 241) N (%)	Non Support group (n= 241) N (%)	Test statistic	P value
Adherence					
Good	429 (89.0)	220 (91.3)	209 (86.7)	2.565**	
Poor	53 (11.0)	21 (8.7)	32 (13.3)	0.109	
Duration on HAART(months)					
Mean±SD	57.7±33.8	62.2±33.75	53.19±31.28	2.950*	
Duration on HAART (months)					
<60	268 (55.6)	118 (49.0)	150 (62.2)	9.650**	
60-119	187 (38.8)	105 (43.6)	82 (34.0)	0.008	
≥120	27 (5.6)	18 (7.5)	9 (3.7)		

*mean difference;** Chi square; ***don't know, injections, barbing salon, local nail cutters

Table 3: Comparison of mean quality of life domain scores between HIV positive support group and non-support group members in comprehensive health centers in Anambra State, Nigeria from January to July 2016.

Domain	Total Mean (±SD)	Support group Mean (±SD)	Non-support group Mean (±SD)	Mean difference (t-test)	P value
Physical	16.98 (2.74)	17.23 (2.60)	16.73 (2.26)	2.034	0.043
Psychological	16.24 (2.63)	16.79 (2.49)	15.70 (2.67)	4.617	<0.001
Level of Independence	16.00 (2.44)	16.44 (2.35)	15.56 (2.46)	3.976	<0.001
Social Relationships	15.60 (2.59)	15.54 (2.45)	15.67 (2.73)	-0.562	0.575
Environment	13.71 (2.32)	13.72 (2.23)	13.69 (2.42)	0.141	0.888
Spirituality	16.84 (2.93)	16.88 (2.79)	16.79 (3.07)	0.341	0.733

Table 4: Comparison of QoL between HIV positive support group and non-support group members in comprehensive health centers in Anambra state, Nigeria from January to July 2016.

Domains	Support group		Test statistic	P value
	Yes (%)	No (%)		
Physical				
Good	146 (60.6)	124 (51.5)	4.076*	0.044
Poor	95 (39.4)	117 (48.5)		
Psychological				
Good	158 (65.6)	123 (51.0)	10.454*	0.001
Poor	83 (34.4)	118 (49.0)		
Level of independence				
Good	171 (71.0)	112 (46.5)	29.793*	<0.001
Poor	70 (29.0)	129 (53.5)		
Social relationships				
Good	132 (54.8)	140 (58.1)	0.540*	0.462
Poor	109 (45.2)	101 (41.9)		
Environment				
Good	145 (60.2)	141 (58.5)	0.138*	0.711
Poor	96 (39.8)	100 (41.5)		
Spirituality				
Good	118 (49.0)	132 (54.8)	1.629*	0.202
Poor	123 (51.0)	109 (45.2)		

*Chi square

Table 2 shows the clinical characteristics of respondents among support and nonsupport group members. The mean duration of HIV infection was 6.88±3.20 years for support group members compared to 6.33±3.45 years for nonmembers (mean difference= -5.477, p=0.071). Three hundred and eighty five (79.9%) participants tested positive between 2007 and 2015, 421 (87.3%) of them were asymptomatic, 429 (89.0%) had good adherence to medication and 268 (55.6%) had been on HAART for less than 60 months. In addition, there were difference in duration of HAART treatment (p=0.003) as well as the

year client first tested positive (p=0.028) for support and non-support group members.

Table 3 summarizes the comparison of mean QoL domain scores between support and non-support group members. The mean difference between the two comparison groups was statistically significant in the physical domain (mean difference=2.034, p=0.043), psychological domain (mean difference=4.617, p≤0.001), and the level of independence domain (mean difference=3.976, p≤0.001), respectively.

Table 5: Comparison of general QoL question scores between HIV positive support group and non-support group members in comprehensive health centers in Anambra state, Nigeria from January to July 2016.

General QoL questions	Total	Support group		Test statistic	P value
		Yes (%)	No (%)		
How is your health?					
Very poor	4 (0.8)	2 (0.8)	2 (0.8)	13.325**	0.010
Poor	18 (3.7)	9 (3.7)	9 (3.7)		
Neither poor nor good	21 (4.4)	11 (4.6)	10 (4.1)		
Good	260 (53.9)	111 (46.1)	149 (61.8)		
Very good	179 (37.1)	108 (44.8)	71 (29.5)		
Do you consider yourself currently ill?					
Yes	54 (11.2)	22 (9.1)	32 (13.3)	2.085*	0.149
No	428 (88.8)	219 (90.9)	209 (86.7)		
Self reported QoL rating					
Very poor	3 (0.6)	0 (0.0)	3 (1.2)	20.823**	<0.001
Poor	31 (6.4)	12 (5.0)	19 (7.9)		
Neither good nor poor	35 (7.3)	11 (4.6)	21 (10.0)		
Good	284 (58.9)	136 (56.4)	148 (61.4)		
Very good	129 (26.8)	82 (34.0)	47 (19.5)		
How satisfied are you with your health?					
Very dissatisfied	8 (1.7)	2 (0.0)	6 (2.5)	13.390**	0.010
Dissatisfied	43 (8.9)	20 (8.3)	23 (9.5)		
Neither satisfied nor dissatisfied	25 (5.2)	11 (4.6)	14 (5.8)		
Satisfied	270 (56.0)	123 (51.0)	147 (61.0)		
Very satisfied	136 (28.2)	85 (35.3)	51 (21.2)		

*Pearson chi square; **likelihood ratio chi square

Table 4 shows the comparison of QoL between support and non-support group members by classification into good and poor QoL. More support group members than non-support group members had good QoL in the physical domain ($p=0.04$), the psychological domain ($p=0.001$), the level of independence domain ($p\leq 0.001$).

Table 5 summarizes the comparison of general QoL question scores between support and non-support group members. Of the 260 (53.9%) participants who reported feeling that their health was good, 149 (61.8%) were non-support group members compared to 111 (46.1%) support group members ($p=0.000$). Also, 219 (90.9%) support group members reported not feeling ill currently compared to 209 (86.7%) non-support group members ($p=0.149$), while 148 (61.4%) non-support group members reported good QoL compared to 136 (56.4%) non-support group members ($p<0.001$). Between the two comparison groups, 147 (61.0%) non-support group members reported they were satisfied with their health compared to 123 (51.0%) support group members ($p=0.000$).

DISCUSSION

This cross sectional comparative study was conducted among HIV positive clients accessing care at two comprehensive health centers of Nnamdi Azikiwe University Teaching Hospital Health related QoL among two groups (support group and non-support members) of HIV positive clients accessing care at these two centers was determined and compared.

Present study findings showed that the lowest mean scores were found in the environment and social relationships domains. This suggests that the severest impact of HIV extends across areas assessed by the environment and social relationships domain. This finding could be due to the social isolation, stigmatization and discrimination experienced by PLWHA. It could also suggest poor living conditions among PLWHA. Several other authors have acknowledged these findings in Nigeria and elsewhere.^{26,28,32,33}

The index study reported the highest mean QoL score in the physical domain. This finding is in keeping with the findings of studies by Bello and Bello among clients attending a specialist hospital in Kwara State Nigeria, as well as Samsung-Akpan et al, in Cross River State Nigeria.^{27,32} They suggested their findings of the highest mean QoL scores in the physical domain could be attributed to accessibility to antiretroviral drugs.²⁷ However, physical domain assesses the presence of pain, energy and fatigue and symptoms related to HIV. This finding is therefore not surprising considering that majority of the respondents in this study were asymptomatic. Contrary to our study findings where spirituality domain had the second highest mean scores, some researchers reported highest mean scores in the spirituality domain.³³⁻³⁵ This could be explained by the fact that Nigerians are generally religious and embrace spirituality when confronted with serious and life threatening issues.

In the index study, support group members had higher mean QoL scores in the physical, psychological, level of independence, environment and spirituality domains. The differences were statistically significant in the physical, psychological and level of independence domains. Even though no study was found to compare QoL in support and non-support group members, several studies have found a positive effect of peer support groups on QoL of people living with HIV and other chronic diseases.^{10,16,36,37} Adedimeji employed a participatory qualitative methodology to explore the impact of social support on QoL outcomes among PLWHV recruited from support groups.¹⁰ He suggested that constant worry, stress and anxiety associated with HIV could contribute to poor QoL initially and at the same time act as catalyst for PLWHV to adopt positive behaviour such as seeking membership of support groups which could in turn contribute to an improvement in QoL.¹⁰ Their study did not have a comparison group, Khamako et al associated social support with improvements in psychosocial functioning.³⁸ In another study by Ndu et al, people who belonged to a support group were less likely than those who did not belong to a support group to be depressed.³⁹ Also, the positive impact of support on self-esteem and the feeling of positive impact that interaction with peers may provide for members of support group cannot be overemphasized.

From present study findings, in the social relationship domain, the mean quality of life score was slightly higher in non-support group members than in support group members. Social relationship domain assesses social contact and family support. It was expected that that since support groups provide an avenue for social interactions; support group members would have a higher mean score in the social relationship domain. This however was not the case in this study. This finding may have been due to the high number of participants who reported the presence of family support in both support and non-support group members. On the other hand, considering that this difference was not statistically significant, it could also be a pointer to the high levels of self-stigmatization still experienced by PLWHA irrespective of their membership of support groups.

The present study also revealed that the environmental domain had the lowest scores in both support and non-support group members. In the WHOQOLHIV Bref, the environment domain assesses the quality of home environment, conditions of living place, security and financial status among other things. The environment plays a role in determining a person's health status. Though the mean quality of life score was higher in support group members compared to non-members, the non-significant difference in our finding could be a reflection of the lack of money and declining standard of conditions of living prevalent in the country. The current research showed that in the spirituality domain, the mean QoL score was also slightly higher in support group. In Africa, its common practice turning to God when

confronted with issues such as chronic illnesses. This finding could be a reflection of the high religious inclinations in our clime irrespective of support group membership status.

Present study revealed that majority of the respondents rated their QoL as 'good' and 'very good. Regarding the level of satisfaction with their perceived health status, majority of the respondents said they were 'satisfied' and 'very satisfied' with their health. The result is not surprising considering the high QoL scores recorded in most domains. This could also be a pointer to the improved level of health care for PLWHA with the result that a lot of PLWHA are asymptomatic. Overall, self-perception of QoL could be a useful screening item for assessing global QoL and it has been used as an outcome variable for QoL analyses elsewhere.⁴⁰ On comparison, though a similar percentage of support group and non-support group members assessed their health as good and very good, a greater proportion of support group members reported good and very good QoL compared to non-members. Support groups are known to help persons with chronic disease to cope better with the disease, leading to a sense of fulfilment, satisfaction and hope. This could also translate to a better QoL as observed in support group members in the current study.

The WHOQOL-BREF instrument measures QoL within two weeks prior to the interview, the information provided by respondents may be influenced by recall bias. Thus participants were given enough time to reflect and think through a sequence of events in their life before answering. Secondly, the cross-sectional design of the study makes it difficult to causally link or draw conclusions on the direction of the relationship of the variables with QoL.

CONCLUSION

In conclusions, this study found that support group membership was associated with higher QoL scores in the physical, psychological, level of independence, environment and spirituality domains compared to non-members. In the social relationships domain, non-support group members had a slightly higher mean QoL score than support group members. Most of the PLWHA interviewed were satisfied with their perceived health status and reported QoL. The highest mean QoL scores were in the physical and psychological domains while the least scores were in the environment and social relationships domains.

Recommendations

We recommend that Health workers should target continued counselling and health education on the role of participation in support group activities on QoL as well as sustained good treatment and follow up of clients by clinicians so that PLWHA do not develop symptoms. The support groups should sensitize communities on myths

concerning HIV to help reduce stigmatization, discrimination and social exclusion associated with living with HIV. While the Government and Non-Governmental Organizations should implement the laws on stigmatization of PLWHA and empower PLWHA by provision of accessible loans through the support groups or other avenues to enable them attain financial self-sufficiency.

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