

DOES MEMBERSHIP OF PEER SUPPORT GROUP AFFECT RETENTION? A STUDY AMONG PLWHA IN ENUGU STATE NIGERIA

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ABSTRACT

BACKGROUND: With the widely acknowledged ART scale up, retention of people living with HIV/AIDS (PLWHA) in care remains a global challenge. The study aimed at assessing and comparing retention among persons living with HIV in peer support groups and their counterparts not belonging to support groups in Enugu State Nigeria.

METHOD: It was across-sectional comparative study. Multi stage study design was used to select 840 PLWHA in peer support groups and non-peer support groups from 8 comprehensive HIV treatment centers in Enugu State. Questionnaires were used to collect data on socio-demographic characteristics while retention over a period of one year was extracted from the participants' medical records. Chi square test of statistical significance and multivariate analysis using binary logistic regression were used in the analysis with the level of statistical significance set at p -value of <0.05 .

RESULTS: A significantly higher proportion of respondents in the peer support groups (89.8%) had adequate retention when compared with those in the non-peer support groups (84.5%). Being self-employed (AOR 2.6, 95% CI: 1.1-6.1) and residing in urban areas (AOR 2.6, 95% CI: 1.2-5.8) predicted retention-in-care among respondents in peer support groups.

CONCLUSION: Belonging to peer support groups enhanced retention among PLWHA. Hence, group approach with peer supporters as a method of improving retention-in-care among PLWHA should be encouraged. Also, there may be the need to pay attention to the socio economic status of PLWHA by economically empowering them through vocational trainings and provision of soft loans with more emphasis on those residing in rural areas.

KEY WORDS: Retention, Peer support, PLWHA, Enugu state, Nigeria

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INTRODUCTION

According to the World Health Organisation (WHO), approximately 36.7 million people were living with HIV/AIDS globally in 2016, with 1.8 million people being newly infected and 1.0 million AIDS-related deaths occurring at the end of the year.¹ Sub-Saharan Africa is the most affected region, with an approximate 70% of all people living with HIV/AIDS (PLWHA) in the world.¹ Findings from the 2014 HIV National sentinel survey shows that Nigeria, Africa's most populous country has an HIV prevalence of 3.0% ranging from 0.9% to 15.4% across the six geopolitical zones.²

The concept of an HIV "treatment cascade" describes the process of HIV diagnosis, linkage to care, initiation of effective anti-retroviral therapy (ART), adherence to treatment and retention-in-care.³ Patient retention, defined as continuous engagement of patients in care, is one of the crucial indicators for monitoring and evaluating the performance of ART programs mainly because high levels of patient retention are related to improved adherence to ART, slow progression to AIDS and increased survival.⁴ It is also the ability to adhere to critical aspects of care, attend regular follow-up appointments, scheduled lab tests, and other monitoring activities, according to health system standards and as prescribed by a health care provider.⁵ Adequate retention does not only reduce individual HIV-related mortality and morbidity, it also delivers "positive prevention" interventions aimed at reducing ongoing transmission⁵ as appointment-keeping rates have been found to correlate with treatment outcomes (i.e., weight gain and CD4 counts).⁶

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Peer support is an individual and group level intervention wherein HIV positive patients on ART provide social support to their “peers” during group meetings, using telephone calls⁷ and going on home visits. The WHO and United Nations Programme on HIV/AIDS (UNAIDS) promote the involvement of PLWHA in their own care.⁸ This reliance on the use of peers in a wide variety of HIV care settings is based in part on their perceived availability, accessibility, low cost and better impact when compared to the use of professional healthcare providers in resource limited settings.^{9,10}

A systematic review of patient retention in ART programs in sub-Saharan Africa, reveals that only about 62% of those commenced on ART remained in care after 24 months of being on treatment.¹¹ In effect, managing and retaining increasing cohorts of patients on ART is among the major challenges faced in ART treatment presently.⁴ Retention has thus attracted increased attention in recent times.

The use of peer health workers as frontline supporters and clinical monitors in order to improve care in underserved settings has been implemented by a number of programs. However, emphasis has been on adherence, education on HIV prevention and behavioural modifications.⁹ Present study is aimed at comparing the retention patterns among PLWHA in peer support and non-support groups in Enugu state, Nigeria. Findings from this study will not only improve the management of PLWHA but also provide possible directions for future research.

MATERIALS AND METHODS

Study Area

Enugu state, one of the five states in south-east geopolitical zone in Nigeria has three senatorial zones; Enugu East, Enugu North and Enugu West, and seventeen Local Government Areas (LGAs). Currently, 21 comprehensive facilities offer HIV/AIDS clinical care and support services out of which fourteen have functional facility-based peer support groups.

Study Design

The study was a cross-sectional, facility-based study conducted among adult PLWHA belonging to peer support and non-support groups in Enugu State Nigeria. Those who have been on highly

active anti-retroviral therapy (HAART) for at least a year prior to the study participated in the study.

Inclusion criteria

A minimum of two-third attendance to monthly support group meetings in the last six months preceding the study qualified a PLWHA for inclusion into peer support groups while not belonging to any support group, within and outside the facility qualified a PLWHA for inclusion into non-peer support groups.

Exclusion criteria

Participants who were in HIV stage 3 or 4 or whose medical records were incomplete or missing were excluded from participating in the study.

Sample size determination

The formula for comparing two independent proportions was used to determine the sample size for this study.¹² From a study among PLWHA in peer support groups, retention was 97.5%¹³ while from a study among PLWHA not belonging to peer support groups, retention was 74.7%.¹⁴ A total of 420 respondents were estimated for each of the study groups based on a type 1 error (α) of 0.05 in a two sided test and a power of 0.8.

Sampling technique

A two-stage sampling technique was used in this study. Simple random sampling was used to select eight health facilities from the fourteen facilities with functional facility-based peer support groups. The sample size for each group was proportionally allocated to the facilities based on the average number of patients currently receiving ART in each facility. Participants were stratified into those belonging to peer support groups and those not belonging to peer support groups using the attendance register for the last three months. In the second stage, systematic random sampling was used to select the study participants as they presented for their clinic visits on each day of data collection.

DATA COLLECTION

Interviewer administered questionnaires were used to obtain information on the socio-demographic characteristics of the respondents over a period of six weeks. Using medical

records, pattern of retention was estimated using 3- month visit interval of time assessment. This counted the number of 3-month interval with at least one “kept” clinic visit during a measurement period of one year prior to the study. This information was extracted from the participants' record to avoid recall bias. Note that a “kept” clinic visit was defined as a visit in which a patient meets with a qualified health worker for ART. This can be used interchangeably with Loss to Follow-Up (LTFU) where patients are absent from treatment for at least 90 days from the last given appointment date.¹⁵ A score of “1” is given to each quarter with at least one kept visit. The sum of the quarterly visits was used to determine the level of retention-in-care. Participants were scored 0, 1, 2, 3 or 4 depending on the sum of the quarters with at least one kept visit. Retention was categorised into adequate (score = 4) and inadequate (score<4).

Data Analysis

Using IBM Statistical Package for Social Sciences version 22 (SPSS), data entry and analysis were done. Chi square test was used to determine the association between the independent categorical variables and retention- in-care. The level of statistical significance was set at a p-value of < 0.05. Dependent variables with p-value< 0.2 in the bivariate analysis were entered into logistic regression model. This model examined predictors of retention among the study population.

RESULTS

Table 1 shows the socio-demographic characteristics of respondents in peer support and non-peer support groups. The mean age of respondents in the peer support group was 38.5±9.6 years and this was comparable with that of the respondents in the non-peer support group which was 38.5±10.2 years. Majority of the respondents were married and the proportions of married respondents was significantly higher among non-peer support group ($\chi^2=12.927$, $p=0.007$). Most respondents had secondary education and are self-employed and there is no statistically significant difference between the two groups. (Table 1)

Table 1: Socio-demographic characteristics of respondents in peer and non-peer support groups

Variable	Peer support Group n=420 N (%)	Non-peer support Group n=420 N (%)	χ^2	p value
Age of respondents				
Mean ±(SD)	38.5±9.6	38.5±10.1	0.063*	0.950
Age in groups				
<30 years	65 (15.5)	71 (16.9)	2.672	0.445
30 – 39 years	176 (41.9)	177 (42.1)		
40 – 49 years	123 (29.3)	105 (25.0)		
≥50 years	56 (13.3)	67 (16.0)		
Gender				
Female	337 (80.2)	304 (72.4)	7.171	0.007
Male	83 (19.8)	116 (27.6)		
Marital status				
Single	87 (20.7)	64 (15.2)	12.927	0.005
Married	206 (49.0)	239 (56.9)		
Separated/Divorced	3 (0.7)	12 (2.9)		
Widowed	124 (29.5)	105 (25.0)		
Education of respondents				
No formal education	19 (4.5)	25 (6.0)	2.944	0.400
Primary education	167 (39.8)	145 (34.5)		
Secondary education	174 (41.4)	188 (44.8)		
Tertiary education	60 (14.3)	62 (14.8)		
Employment status of respondents				
Self employed	326 (77.6)	297 (70.7)	5.673	0.059
Salary earners	54 (12.9)	65 (15.5)		
Unemployed/Student	40 (9.5)	58 (13.8)		
Number of living children				
None	105 (25)	93 (22.1)	2.744	0.254
1 - 4	250 (59.5)	245 (58.3)		
≥5	65 (15.5)	82 (19.5)		
Socio-economic status				
Low socio-economic status	213 (50.7)	211 (50.7)	1.379	0.413
High Socio-economic status	207 (49.3)	208 (49.5)		
Area of residence				
Rural	278 (66.2)	275 (65.5)	0.048	0.827
Urban	142 (33.8)	145 (34.5)		

A significantly higher proportion of participants in the peer support group, (89.8%) had adequate retention when compared with those in the non-peer support group, (84.5%) $\chi^2=5.143$, $p=0.023$. (Table 2)

Table 2: Retention among respondents in peer support and non-peer support groups

Variable	Peer support Group n=420 N (%)	Non-peer support Group n=420 N (%)	χ^2	p value
Adequate retention	377 (89.8)	355 (84.5)	5.143	0.023
Inadequate retention	43 (10.2)	65 (15.5)		

Self-employed respondents had about three times the odds of achieving retention when compared with those who were on salaried employment.(AOR 2.6, 95% CI: 1.1-6.1).Similarly, respondents whose residence were in the urban area had approximately three times the odds of being adequately retained when compared with those who reside in the rural area. (AOR 2.6, 95% CI: 1.2-5.8).(Table 3)

Table 3: Predictors of retention among respondents in peer support groups

Variable	Adequate Retention	Inadequate Retention	p-value*	AOR[95%CI]**
Age in groups***				
<40 years	221 (91.7)	20 (8.3)	0.128	1.6[0.8-3.1]
≥40 years	156 (87.2)	23 (12.8)		
Gender				
Female	307 (91.1)	30 (8.9)	0.069	1.8[0.9-3.9]
Male	70 (84.3)	13 (15.7)		
Education of respondents				
Primary education and less	169 (90.9)	17 (9.1)	0.508	NA
Secondary education and more	208 (88.9)	26 (11.1)		
Employment status of respondents				
Unemployed	35 (87.5)	5 (12.5)	0.520	1.5[0.4-5.2]
Self employed	297 (91.1)	29 (8.9)	0.028	2.6[1.1-6.1]
Salaried employment	45 (83.3)	9 (16.7)		
Number of living children				
None	95 (90.5)	10 (9.5)	0.898	NA
1 - 4	223 (89.2)	27 (10.8)		
≥5	59 (90.8)	6 (9.2)		
Area of residence				
Urban	133 (93.7)	9 (6.3)	0.021	2.6[1.2-5.8]
Rural	244 (87.8)	34 (12.2)		

A higher proportion of respondents in the non-peer support group who reside in the urban area, (89.7%) achieved retention when compared with those who reside in the rural area, (81.8%) and the difference in proportions was found to be statistically significant, ($\chi^2=4.458$, $p=0.035$). (Table 4)

Table 4: Predictors of retention among respondents in non-peer support groups

Variable	Adequate Retention	Inadequate Retention	p-value*	AOR[95%CI]**
Age in groups***				
<40 years	210 (84.7)	38 (15.3)	0.917	NA
≥40 years	145 (84.3)	27 (15.7)		
Gender				
Female	256 (84.2)	48 (15.8)	0.774	NA
Male	99 (85.3)	17 (14.7)		
Education of respondents				
Secondary education and more	218 (87.2)	32 (12.8)	0.066	1.5[0.8-2.6]
Primary education and less	137 (80.6)	33 (19.4)		
Employment status of respondents				
Unemployed	51 (87.9)	7 (12.1)	0.643	NA
Self employed	248 (83.5)	49 (16.5)		
Salaried employment	56 (86.2)	9 (13.8)		
Number of living children				
None	75 (80.6)	18 (19.4)	0.167	0.8[0.4-1.8]
1 - 4	214 (87.3)	31 (12.7)		1.5[0.8-3.1]
≥5	66 (80.5)	16 (19.5)		
Area of residence				
Urban	130 (89.7)	15 (10.3)	0.035	1.8[0.9-3.4]
Rural	225 (81.8)	50 (18.2)		
Socio-economic status				
High socio-economic status	171 (80.7)	41 (19.3)	0.027	1.4[0.8-2.5]
Low socio-economic status	184 (88.5)	24 (11.5)		

DISCUSSION

Based on our findings, belonging to peer support groups (89.8%) yielded better retention than in participants not belonging to peer support groups (84.5%). In Mozambique, a higher prevalence of 97.5% was reported among patients enrolled into support groups after a median follow-up period of 12.9 months, with retention defined here as having at least one visit every 6 months.¹³ Variation in the duration adopted in assessing retention in both studies could have resulted in a higher retention rate in Mozambique than was observed in the present study. Similarly, participation in peer support groups improved retention among PLWHA as observed in other studies.¹⁶⁻²¹ Thus it could be concluded that the use of peer supporters may be an effective intervention to retain patients' in-care in low and high income countries.

Being self-employed and being resident in urban areas positively influenced retention among respondents in peer support group. When logged into multiple logistic regression model, both factors were significant predictors in this study. Respondents in peer support group who reside in urban areas were about three times more likely to achieve adequate retention than those in the rural areas. This could be attributed to the fact that individuals resident in urban areas have higher SES when compared with those in the rural areas. Also, adult literacy level and access to media are higher in the urban than the rural areas in Nigeria.²²

Among respondents in peer support group, self-employed respondents were more likely to be retained than those on salaried employment. This could be attributed to the fact that self-employed individuals determine their work schedule and so could attend clinics without restrictions and inhibitions. In a similar study, employment was cited as a barrier to participation in support group activities because the group activities were held during week days, thereby interfering with their work schedules.²³ There is also the likelihood that self-employed participants may have economic advantage over those receiving salaries, hence transportation cost may not be a hindrance to their clinic attendance, as retention-in-care has been reportedly affected by transport cost in other

studies.^{5,23} Distance to clinic, though not reported in this study is a major barrier to retention in Zambia²⁴ and in other resource limited settings.^{5,21,23} As reported in another study in Ethiopia,²⁵ patients prefer to receive ART in facilities far away from their communities for fear of stigma and also to avoid disclosure to their community members, hence might miss their appointments as a result of this. These concerns about confidentiality and its resultant stigma has been cited as a major barrier to retention among PLWHA in peer support groups.^{5,23,25} These factors combined may equip the urban residents better to manage these diseases than their counterparts in the rural areas.

On bivariate analysis, residing in urban areas and high socio-economic status (SES) was found to influence retention among respondents in non-peer support groups. As residing in urban area also influences retention among respondents belonging to peer support groups as well, it can therefore be concluded that residing in urban areas influences retention among PLWHA generally. Respondents with high SES status had better retention than those with low SES. In a study to determine barriers and facilitators of adherence to antiretroviral drug therapy and retention among adult HIV-positive patients in Ethiopia,²⁵ lack of money for transport was one of the reasons that affected retention among PLWHA. This could be linked to low SES. These variables when logged into multivariate model did not significantly predict retention among PLWHA in Enugu State.

CONCLUSION

Findings from this study reveal the possibility of improving retention among PLWHA in resource limited settings through participation in facility-based peer support groups. Therefore group approach with peer supporters as a method of improving retention among PLWHA should be encouraged. To achieve this, participation in peer support group activities should be a component of routine counselling. Also, there may be the need to pay attention to the SES of PLWHA by economically empowering them. This may be achieved through vocational trainings and provision of soft loans to the patients with more emphasis on those residing in rural areas.

LIMITATIONS

Having conducted the study on patients who have been on HAART for at least a year prior to the study, retention was not assessed among PLWHA who were not on HAART or have been on HAART for less than a year, though enrolled in care. This may limit generalisation of the study as it is not a clear representative of the population of PLWHA. This study relied on self-reported data on frequency of attendance to peer support group meeting hence participants may overestimate attendance to support group meetings due to social desirability bias.

Ethical Considerations

Ethical approval for the study was obtained from the Health Research and Ethics Committee of Enugu State University Teaching Hospital (ESUTH) Enugu, Nigeria. Approval was also obtained from Enugu State Ministry of Health and the management of the selected health facilities. Written informed consents were obtained from the participants which gave a detailed account of the study objectives, procedures, risks and benefits.

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