

Consistent Condom Use and Its Predictors: A Perspective of People Living With HIV/AIDS Assessing Care in A Resource Limited Setting

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Type of Publication: Original Research Paper

Conflicts of Interest: Nil

Abstract

Background: The transmission of HIV/AIDS is significantly a crisis of unsafe sexual behavior particularly in the Sub-Saharan and accounting for about 80% of new cases of HIV infections globally. Condom use has played a significant role in the global efforts targeted at preventing HIV, STI and unwanted pregnancy making it an integral component of HIV/AIDS prevention strategies. In this light, this study assessed the knowledge of condom, its use and predictors among PLHIV on HAART in Jos Plateau state North Central Nigeria.

Methodology: This was a cross sectional study conducted among 100 PLHIV accessing HIV/AIDS treatment, care and support services in Faith Alive Foundation-Nigeria using quantitative method of data collection and SPSS version 20 for data analysis. Crude and adjusted odds ratios as well as 95% confidence interval were used in this study with a p-value of ≤ 0.05 considered statistically significant.

Results: The mean age of the respondents in the study was 35.8 ± 8.9 years with 56 (56.0%) of them being 35 years and above. Good knowledge of condom use was

found among 62.0% of the respondents while consistent condom use was reported among 34 (34.0%) of them. Male sex (AOR-12.09; 95% CI - 3.025 – 48.288) and secondary level of education were found to predict consistent condom use (AOR- 4.48; 95% CI - 1.165 – 17.214).

Conclusion: This study has brought to light the level of consistent condom use among PLHIV which is far from the expected and shown that sex and levels of education were its significant predictors.

Keywords: Condom Use, Predictors, PLHIV, Resource Limited Setting

Introduction

Globally, over 35.3 million persons are infected with HIV/AIDS making it a major public health problem.¹ Nigeria is second to South Africa in the number of people living with HIV/AIDS worldwide constituting about 9% of the global HIV burden.² The transmission of HIV/AIDS is significantly a crisis of unsafe sexual behaviour particularly in the Sub-Saharan accounting for about 80% of cases of new HIV infections globally.³

Condom use has played a significant role in the global efforts targeted at preventing HIV, STI and unwanted pregnancy making it an integral component of HIV/AIDS prevention strategies.⁴ Sexually active persons on Highly Active Antiretroviral Therapy (HAART) are at risk of practicing unsafe sex due to the control of the viral load and increased immunity leading to the absence of symptoms and improvement in quality of life thereby putting them at risk of transmitting HIV infection to their sero-negative partners and re-infecting themselves with new strains of the virus.^{5, 6} In this light, it becomes imperative to assess the knowledge of condom use, its use and the predictors among HIV infected persons on HAART in Jos Plateau state North Central Nigeria with view of developing home grown interventions in promoting condom use among person on HAART.

Methodology

Study Area

The study was carried out in Faith Alive Foundation, a faith based not for profit organization that provides treatment, care and support services for HIV/AIDS patients, as well as other general medical care services.⁷ This facility has an estimated total of about 6,000 People Living with HIV/AIDS (PLHIV) enrolled into the HIV/AIDS treatment, care and support services of which about 5,159 are currently on HAART with monthly enrolment of about 65 persons. Faith Alive also operates small satellite clinics in outlying areas namely Kafanchan and Bakin-kogi in Kaduna state), Yola in Adamawa state, Andaha in Nassarawa state and Fobur and HwoYarje in Plateau state.⁷

Study Population

The study population comprised of PLHIV accessing HIV/AIDS treatment, care and support services in Faith Alive Foundation-Nigeria.

Study Design

This was a cross sectional study to assess the level of consistent condom use among PLHIV accessing HIV treatment care and support services in FAF between March and April 2017 using quantitative method of data collection.

Sample Size Estimation

The sample size for this study was determined using the appropriate sample size determination formula for a cross sectional study.⁸ Where n is the minimum sample size, Z is the standard normal deviate at 95% confidence interval (1.96), q is the complementary probability ($1 - p$), d is the precision of the study set at 0.05 and p is the prevalence of condom use in the last sexual engagement from a previous similar study (6%),⁹ giving a minimum sample size of 100 after 15% addition to cater for non, poor and incomplete responses.

Criteria For Inclusion In The Study

All sexually adult PLHIV accessing HIV treatment, care and services in FAF for at least 6 months prior to the study, who were clinically stable to provide responses and had consented to participate in the study

Sampling Technique

A multi stage approach to sampling was used in this study; Jos North LGA was selected out of the 17 Local Government Areas in the state using simple random sampling technique by balloting. Following which Faith Alive Foundation-Nigeria (FAF-N) was selected by simple random sampling technique by balloting from the list of all the 9 health facilities providing comprehensive HIV/AIDS care and support within Jos North LGA. Thereafter, a list of all the eligible respondents who had been booked for clinic appointments for the two months period of the study was made and serialized using the treatment identification number as the only means of

identification. Furthermore, a computer generated table of random number using WINPEPI statistical software was used to select 100 booked clients. These clients were then sampled on their respective follow up clinic appointment visits. For those who declined consent a repeat selection without replacement was done using computer generated table of random number until the sample size was met.

Data Collection

An adapted semi structured interviewer administered questionnaire was used consisting of four sections;¹⁰ Demographic characteristics of the respondents, knowledge of condom use, level of condom use and factors influencing condom use male. Three research assistants were trained on the content and method of administration of questionnaire prior to the commencement of the study by the principal researcher. The data collection instrument was pretested in the HIV clinic of Plateau State Specialist Hospital among. Ethical clearance was sought and obtained from Jos University Teaching Hospital Institutional Human Research Ethical Committee. Written and verbal informed consents were obtained from all the respondents with confidentiality and anonymity of their responses assured and maintained.

Grading And Scoring Of Responses

Condom use was adjudged as consistent use when condoms were used in all sexual relations, whether vaginal, anal, oral in the last three months.⁶

Knowledge of condom use: A total of 12 stem questions were used to assess the knowledge of condom use with a maximum of possible response of 26 out of which 12 were correct. Two points were allocated to every correct response and one point to every incorrect response giving a maximum attainable score of 24. Furthermore, a percentile graph was then plotted against the scores and scores corresponding to the 50th percentiles and above

were adjudged good knowledge and those below the 50th percentile adjudged poor knowledge.

Data Analysis

The data obtained were processed and analyzed using SPSS version 20 where socio-demographic characteristics of the respondents as well as other variables such as consistent condom use were expressed in frequency and percentage. Mean \pm standard deviation were used as summary indices for age of the respondents and knowledge scores for condom use. Crude and adjusted odds ratios were used as point estimates and 95% confidence interval as the interval estimate of the effects of the identified factors in predicting consistent condom use in a two stepwise logistic regression model. The first step of the model had the identified factors fed into the logistic regression model singly where crude odds ratio were generated and later all factors were then fed into the model together to allow the factors adjust for one another. A probability value of less than 0.05 was considered statistically significant in this study.

Results

The mean age of the respondents in this study was 35.8 ± 8.9 years with 56 (56.0%) of them being 35 years and above. The sex distribution of the PLHIV in the study revealed that 72 (72.0%) were female and 61 (61.0%) of all the respondent were married. Assessment of the employment status of studied participants revealed that 68 (68.0%) were gainfully employed while the corresponding 32 (32.0%) being unemployed. Slightly less than half (46.0%) of the respondents in this study had completed secondary education while 38 (8.0%) and less than a quarter (16.0%) had completed primary and tertiary education respectively. With regards to the duration on ART, 54 (54.0%) had been on ART for their condition for upwards of 3 years while 26 (26.0%) and 20 (20.0%) had

being on this therapy for between 1 – 3 years and less than a year respectively. See Table 1

Assessment of the level of knowledge of condom use in this study using a variety of components questions showed that 63 (63.0%) of the respondents had attended at least one condom demonstration sessions. Furthermore, majority (90.0%) of the respondents were aware that the use of condoms during any form of sexual act could prevent the transmission of HIV virus. Additionally, 92 (92.0%) of them also knew that the use of condoms could prevent the transmission of other STIs. The use of condom as a method of prevention of unwanted pregnancy was affirmed by majority (88.0%) of the respondents while 38 (38.0%) also knew that HIV virus had the ability to pass through condoms during sexual engagement. An assessment of the overall level of the respondents' knowledge of condom use revealed that more than half (62.0%) were adjudged to have good knowledge of condom use while consistent condom use was reported among 34 (34.0%) of them. See Table 2.

Consistent use of condom in the study was found to be influenced by sex of the respondents as the odds of consistent condom use among males was about 12 times the odds among females having adjusted for all other factors in the model such as age, level of education, marital status etc (AOR-12.09; 95% CI - 3.025 – 48.288; $P < 0.001$). Furthermore, level of education was also found to significantly predict consistency of condom use with the odds of consistent condom among those with completed secondary level of education being 2.7 times the odds among those with tertiary level of education with all other factors in the model held constant (AOR-4.48; 95% CI - 1.165 – 17.214; $P=0.029$). See Table 3.

Discussion

Information is essential and pivotal in decision making particularly as it relates to health and wellbeing. Assessment of knowledge of condom use revealed that majority of the PLHIV who participated in this study were aware that the use of condoms in any form of sexual engagement could prevent against transmission of HIV and others STIs as well as pregnancy. These findings were however affirmed by findings of other studies conducted in Nigeria and Ethiopia.¹¹⁻¹⁶ However, in as much as it is a common knowledge that the use of condoms confers dual protection against HIV/STIs and unwanted pregnancy, a Nigerian study reported a contrasting finding where though the knowledge of condom use in preventing the transmission of HIV/STIs was high, that of its ability in preventing unwanted pregnancy was abysmally low.¹⁵ More so, the overall level of knowledge of condom use in the context of PLHIV was found to be good among more than half of the respondents in this study which is in synergy with what was obtained in another study.¹⁷ It is imperative to state that the similarities observed between this study and other studies cited could be attributable to the fact that these studies were hospital based where condom demonstration and repeated health education session providing information on condoms and its use are essential part of the HIV treatment, care and support services. However, it important to note that these studies also used PLHIV at different points in time along the cascade of continuum of care in which some may have not been in HIV care for sufficient length of time to allow participation in condom demonstration and information sharing sessions thereby accounting for the contrasting information on the dual protective effects of condom use in HIV care.

The level of consistent condom use in this study was low, being self reported in just about a third of the respondents. However, studies carried out in Kenya, Nigeria, Ethiopia, Brazil, Guatemala and Asia pacific region reported a much higher level of condom use among PLHIV.^{11,12,15-20} However, a much lower consistent condom use rate in studies conducted in Tanzania, Kenya, Malawi and Nigeria was also reported.^{9,15} Furthermore, another similar study conducted in Nigeria had findings similar to what was obtaining in this study having assessed condom use over a specified period of time.⁵ Consistency of condom use in HIV care could be used as an important indicator for behavioural change though the varying levels of consistent condom use could be influenced by the methods of assessment used in the different studies as well as the study design. It was noted that assessment of condom use was done over a period of 3, 6 and 12 months in some study while some others used last sexual relation for its assessment. Additionally, a few other studies disaggregated the assessment of condom use by categorization of sexual partners as regular and casual, all of which could have been responsible for the variability and synergy observed in relating the finding of this study to others. It is however important to state that all of these studies were conducted among PLHIV which makes consistent condom use essential in achieving reduction in new infections and prevention of acquisition of new strain of the HIV virus. It also important to state that the assessment of condom use in this study was self reported however conducting a study among a cohort of HIV infected couple on condom use eliciting paired responses from the couple would go a long way in validating the consistency of condom use. Furthermore, it is important to acknowledge the strong contributions of cultural,

religious and behavioural dimensions to condom use which was not assessed in this study.

Secondary level of education and sex were factors found to predict consistent condom use in this study among the many factors assessed. Others studies found sex, being on ART, level of education, non availability of condoms, being a refugee, illicit drug use, rural place of residence, disclosure of HIV status to partner, marital status, age and knowledge of HIV as predictors of consistent condom use among PLHIV in care.^{5,11,15,18,20,21} A number of these studies share similarities with factors found to predicting consistent condom use thereby providing a basis for structuring home-grown interventions for improving the level of condom use among PLHIV.

Conclusion

This study has brought to light the level of consistent condom use among PLHIV which is far from the expected and shown that structuring interventions focused on peculiarities of sex and level of education of PLHIV could be vital in addressing this low level of consistent condom use in this setting.

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Legends Table

Table 1: Socio-demographic characteristics of the respondents

Characteristics	Frequency n =100	Percentage
Age Group		
≤ 35 years	44	44.0
36 years and above	56	56.0
Mean Age	Mean ±SD 35.8 ± 8.9years	
Sex		
Female	72	72.0
Male	28	28.0
Marital status		
Single	39	39.0
Married	61	61.0
Employment status		
Employed	68	68.0
Not employed	32	32.0
Level of Education		
Primary	16	16.0
Secondary	46	46.0
Tertiary	38	38.0
Religion		
Christianity	78	78.0
Islam	22	22.0
Duration of ART*		
6 - 11months	20	20.0
1 – 3 years	26	26.0
> 3 years	54	54.0

SD = Standard Deviation, * Antiretroviral Therapy

Table 2: Knowledge and level of condoms use

Characteristics	Frequency	Percentage
Attendance of condom demonstration sessions		
Yes	63	63.0
No	37	37.0
Awareness of condom use as method of preventing transmission of HIV		
Yes	90	90.0
No	10	10.0
Awareness of condom use as a method of preventing transmission of other STIs		
Yes	92	92.0
No	8	8.0
Awareness of condom use as a method of preventing unwanted pregnancy		
Yes	88	88.0
No	12	12.0
Awareness on the ability of HIV virus passing through condom		
Yes		
No	38	38.0
	62	62.0
Level of knowledge of condom use		
Good	62	62.0
Poor	38	38.0
Condom use		
Consistent	34	34.0
Inconsistent	66	66.0

Table 3: Multiple Logistic Regression of Predictors of Consistent Condom Use

Factors	COR (95%CI)	AOR (95% CI)	P – value*
Age group (years)			
< 35	1.19 (0.515 – 2.750)	0.42 (0.124 – 1.433)	0.422
1	1	-	≥ 35
Sex			
Male	5.00 (1.966 – 12.714)	12.09 (3.025 – 48.288)	< 0.001
Female	1	1	-
Knowledge of condom use			
Good	2.71 (1.070 – 6.856)	2.472(0.800 – 7.637)	0.116
Poor	1	1	-
Marital status			
Single	1.54 (0.6461 – 3.672)	2.70 (0.788 – 9.259)	0.114
Married	1	1	-
Level of Education			
Primary	1.21 (0.365 – 4.023)	1.81 (0.395 – 8.283)	0.445
Secondary	2.06 (0.821 – 5.175)	4.48 (1.165 – 17.214)	0.029
Tertiary	1	1	-
Employment status			
Employed	0.83 (0.340 – 2.045)	1.77 (0.434 – 7.207)	0.426
Unemployed	1	1	-
Duration on ART**			
1 – 3 years	1.26 (0.377 – 4.204)	2.79 (0.537 – 14.468)	0.222
> 3 years	1.45 (0.501 – 4.201)	2.02 (0.495 – 8.248)	0.327
< 1 year	1	1	-
Perception of condoms as reducing sexual pleasure			
No	1.30 (0.452 – 3.718)	1.50 (0.328 – 6.850)	0.601
Yes	1	1	-
Partners' HIV status			
Positive	0.60 (0.178 – 2.025)	0.52 (0.117 – 2.300)	0.387
Negative	1	1	-
Desire for children			
No	1.57 (0.643 – 3.844)	1.01 (0.308 – 3.120)	0.987
Yes	1	1	-

COR = Crude Odds Ratio, AOR = Adjusted Odds Ratio, * = P – value for AOR, ** Antiretroviral Therapy