RESEARCH ARTICLE

# KNOWLEDGE, ATTITUDE AND PRACTICES OF HIV CONTROL MEASURES IN RURAL COMMUNITIES IN OSUN STATE, SOUTH WESTERN, NIGERIA

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**ABSTRACT**

**Background:** HIV epidemic is moving from urban to rural population. Assessment of the awareness of HIV/AIDS control measures in rural areas is important to determine the impact of previous and current awareness programs as well as the need for interventions.

**Aims & Objective:** This study aimed to assess the knowledge, attitude and practices of rural dwellers in Osun State regarding HIV/AIDS and to explore the epidemiological determinants of awareness among them.

**Material and Methods:** This is a cross sectional descriptive study. Multistage random sampling procedure was used to select the sample. The instrument of the study was a semi-structured questionnaires administered by interview to 399 respondents (sexually active men and women in the age range 15-55 years). SPSS was used for analysis and the results tabulated. Relevant statistical methods were also used to access associations where necessary and P-value of less than 0.05 was taken as significant.

**Results:** Out of a total of 399 subjects who participated in survey, 57.9% and 36.8% are aware of VCT and ART as HIV/AIDS control measures. More than one quarter of the respondents i.e. 35.1% subjects believed HIV/AIDS is curable while only 15.5% had gone for VCT. Demographic characteristic such as educational status was found to have significant association with knowledge and attitudes towards control measures of HIV infection.

**Conclusion:** Basic knowledge and good attitude on HIV/AIDS is still lacking among rural dwellers in Osun State. Literacy and media exposure are factors that determine awareness of HIV among them and can be helpful to raise their knowledge regarding this scourge.

**KEY-WORDS:** AIDS; Awareness; HIV; Knowledge; Anti-Retroviral Therapy

## Introduction

The first case of Acquired Immune Deficiency Syndrome (AIDS) in Nigeria was reported in 1986. Since then, infection with Human Immuno-deficiency Virus (HIV) has spread to become a generalised epidemic affecting all population groups and sparing no geographical area in the country. HIV/AIDS has negatively impacted every sector of the economy, and continues to threaten the national development gains of the past decades. The effect of HIV and AIDS remain great as it continues to devastate individuals, families and households, affecting their physical, social, psychological, and economic well-being. Unarguably, HIV and AIDS constitute a leading development challenge and a major threat to the general advancement of the nation as well as her capacity to achieve the Millennium Development Goals. Despite mounting various responses over two decades, the challenge of HIV/AIDS has continued to increase in Nigeria, particularly in terms of the number of people infected and affected. Estimates from the Joint United Nations Programme on HIV/AIDS (UNAIDS), for example, show a rise of 400,000 in the number of people living with HIV/AIDS in Nigeria between 2001 and 2008. With an estimated 2.95 million people living with HIV in Nigeria in 2008, Nigeria ranks as one of the countries with the highest burden of HIV infection in the world, next only to India and South Africa.

Nigeria has witnessed fluctuations in HIV prevalence level in the last 15 years, but with an overall picture of significant increase within the

period. The result of the periodic national HIV sero-prevalence survey, which is obtained through sentinel survey of antenatal care attendees, showed an increase from 1.9% in 1991 to 4.1% in 2010.[1] Based on the latest result, NACA estimates that 3.3 million people in Nigeria are currently infected, of which 278,000 are children and 1.72 million (58.3%) are females. Young people are also disproportionately infected, with the prevalence in age group being 5.6 %. In general, the most-at-risk groups include sex workers and their clients, injecting and other drug users, and men who have sex with men (MSM), and mobile populations such as long-distance drivers and uniformed services personnel. Young people, prisoners and people in other custodial settings also constitute highly vulnerable groups. The result of mode of transmission analysis in Nigeria, carried out by the National Agency for the Control of AIDS (NACA) in 2008, showed that about 62% of new infection occur among persons perceived as practicing "low risk sex" in the general population including married sexual partners.

Various government and non-government organizations the world over have undertaken programs to raise awareness among people regarding HIV/AIDS. To stop the spread of HIV/AIDS in Nigeria, the Five Year Plan (2010-2015) was developed with targets set to achieve 90% awareness among the general population in rural areas.[2] Assessment of awareness levels is important because it helps to determine the impact of previous awareness and prevention efforts made by the government and also to gauge the need for interventions. Furthermore, the epidemic is moving from high-risk groups such as sex workers to the general population and from urban to rural populations.[1] Several other studies done in Nigeria examined the level of awareness of HIV/AIDS on selected groups such as students, teachers, health workers and women attending antenatal clinics.[3-5] While no study has been done among rural dwellers in South Western, Nigeria The present study was therefore conducted to fill this research gap by assessing the knowledge, attitude and practices on HIV/AIDS control measures among rural dwellers in Osun State, South Western, Nigeria. The study is important because it could provide baseline information for evaluating the effectiveness of preventive strategies of HIV infection among the rural dwellers as well as guide the introduction of better methods of prevention.

## Materials and Methods

### Study Location

The study was conducted in 3 out of 30 Local Government Areas in Osun state, South-West, Nigeria. The inhabitants are Yoruba's. Majority of the citizens are civil servants and others engage in small scale industries and trading. Large numbers of the rural dwellers are peasant farmers and fishermen.

### Study Population

This is made up of sexually active men and women in rural communities of Olorunda, Ede South and Atakumosa West Local Government Areas of Osun state within the age group of 15-55 years of age residing in Ilie, Kajola and Akoda communities.

### Study Design

The study employed a cross-sectional descriptive design. Any male and female that was 15 years and above and resident in the ilie, Akoda and Kajola communities was eligible for participation in the study. There were no exclusion criteria.

### Sample Size Determination and Sampling Technique

A minimum sample size of 384 was obtained using the Fisher's formula for populations less than 10,00012; this was increased to 450 to make room for attrition. A multistage sampling technique was used. A sampling frame was constructed in stage 1 which is made up of all the Local Government Areas (LGAs) in the 3 Senatorial districts. There are 10 LGA per each senatorial district. One LGA is selected at random from each district and those selected include Olorunda, Ede South and Atakumosa LGAs. In stage 2, the wards in the selected LGAs constitute another sampling frame with the exclusion of Urban based wards. Olorunda LGA has 11 wards; Atakumosa West has 11 wards while Ede South has 10 wards. Three rural based wards were randomly selected from the selected LGAs.

In stage 3, each street in the selected wards was numbered and selection of houses done using systematic sampling method. Each individual in the sexually active age group (15-55years) in the selected houses was included in the study.

**Data collection Instruments**

A semi-structured questionnaire was used in obtaining information from each selected respondent by interview. The questionnaire had been pre-tested at Oba-ile, another rural community in the same state. It collected information on the socio-demographic status, general knowledge on HIV/AIDS, knowledge of control measures and attitude and Practices of the control measures of HIV infection. The interviews were conducted mainly in the evenings of weekdays and on weekends by trained interviewers, who were community health workers working in the area. The knowledge score based on section 3 of the questionnaire attracts 1 for correct answer and wrong responses score 0. Any score equal/above the mean score is regarded as good knowledge while those score below as poor knowledge. The attitude score computed for 6 questions on section 5 of the questionnaire also attracts 1 for good responses while wrong responses attracts 0. Any score equal or above the mean score is regarded as good attitude while those score below as poor attitude.

**Data Analysis**

Data collected were checked manually for errors & then entered and analyzed on a microcomputer using the SPSS v. 11 software package. Discrete variables were expressed as percentages and displayed on frequency tables. The chi-square test was used to test for association between discrete variables on the contingency tables and statistical significance was accepted at p values < 0.05.

## Results

Four hundred and fifty respondents were interviewed, but only 433 questionnaires were sufficiently completed to be used in the analysis, representing a response rate of 96.2%. The distributions according to location are 31.2%, 37.0% and 31.9% at Ilie, Kajola and Akoda Communities respectively. More than one-thirds (44.1%) of the respondents were aged 15-24 years with a mean age of 27.8 years while only 11.1% of them were above the age of 45 years. There were more males (53.8%) than females (46.2%). More than half (57.3%) are married. Some (57.5%) of the respondents had secondary education, least literates. The major occupation is trading (35.5%). A little bit above half of the respondents are Muslims (58%) while (38.1%) are Christians. (Table 1)

When asked on knowledge on control measures, 57.9% were aware of VCCT while 42.1% were not aware. 63.7% of the respondents know a centre where the test can be done while 36.3% does not. On condom usage as a control measure, majority (82.9%) have heard of condom before and 10.8% are not aware. 63.2% respondents are not aware of ARV & 147 (36.8%) are quite aware. (Table 2)

On attitudes of respondents on HIV Control measures, 371 (85.7%) believes that HIV is real while 62 (14.3%) do not. 152 (35.1%) respondents think HIV infection is curable but a larger percentage, 281 (64.9%) believes it is not curable. 265 (61.2%) respondents agree that they can go for VCCT whereas 168 (38.8%) cannot go for the test. 294 respondents think that condom usage can prevent HIV transmission with 139(32.1%) respondents thought otherwise. A high percentage of respondents 279(64.4%) belief disinfecting clippers, needles and sharp instruments can 5prevent transmission of HIV infection but this is not support by 154 (33.6%) respondents. Likewise, 264 (61%) respondents think there is any advantage knowing ones status and 169(39%) does not. (Table 3)

On practice, majority 315 (72.7%) of the respondents have not done VCCT while 67 (15.5%) had been tested. Also, a total of 206 (47.6%) respondents had used condoms before and 197(45.5%) have not. (Table 4)

The impact of socio-demographic status and belief on awareness on VCT was explored; it was observed that people with formal education were more knowledgeable on VCT than those with no education (P < 0.05). There was no statistical difference regarding awareness on VCT with respect to sex and location. (Table 5)

**Table-1: Socio-Demographic Characteristics of the Respondents (N = 433)**

| Characteristics | | Frequency | Percentage |
|---|---|---|---|
| Age group (years) | 15-24 | 191 | 44.1 |
| | 25-34 | 128 | 29.6 |
| | 35 - 44 | 66 | 15.2 |
| | > 45 | 48 | 11.1 |
| Sex | Male | 233 | 53.8 |
| | Female | 200 | 46.2 |
| Marital Status | Single | 165 | 38.1 |
| | Married | 248 | 57.3 |
| | Separated | 13 | 3.0 |
| | Widowed | 7 | 1.6 |
| Educational Status | Literate | 315 | 72.7 |
| | Illiterate | 118 | 27.3 |
| If illiterate, level of education | Primary | 99 | 30.7 |
| | Secondary | 180 | 57.5 |
| | Tertiary | 36 | 11.8 |
| Occupation | Farming | 51 | 12.1 |
| | Trading | 150 | 35.5 |
| | Civil servant | 28 | 6.6 |
| | Students | 114 | 24.4 |
| | Others | 90 | 21.3 |
| Religion | Christianity | 162 | 38.1 |
| | Islamic | 256 | 58.4 |
| | Traditional | 15 | 3.5 |
| Location | Ilie community | 135 | 31.2 |
| | Kajola community | 160 | 37.0 |
| | Akoda community | 138 | 31.9 |

**Table-2: Respondents' Knowledge on HIV/AIDS and the Control Measures (N=399)**

| Respondents' Knowledge | Yes (%) | No (%) |
|---|---|---|
| Are you aware of HIV/AIDS? | 375 (94%) | 24 (6%) |
| Are you aware of VCCT? | 231 (57.9%) | 168 (42.1%) |
| Do you know any VCCT center? | 254 (63.7%) | 145 (36.3%) |
| Have you heard of condom before? | 359 (82.9%) | 47 (10.8%) |
| Are you aware of ARV? | 147 (36.8%) | 252 (63.2%) |

**Table-3: Respondents' Attitudes on HIV/AIDS and the Control Measures (N=433)**

| Respondents' Attitudes | Yes (%) | No (%) |
|---|---|---|
| Do you belief HIV is real? | 371 (85.7) | 62 (14.3) |
| Do you think HIV is curable? | 152 (35.1) | 281 (64.9) |
| Can you go for VCCT? | 265 (61.2) | 168 (38.8) |
| Do you think there is any advantage of knowing ones status? | 254 (61) | 169 (39.0) |
| Do you think condom use can prevent HIV transmission? | 294 (67.9) | 139 (32.1) |
| Do you belief disinfecting clippers, needles and sharp instrument can prevent HIV transmission? | 279 (64.4) | 154 (35.6) |

**Table-4: Respondents' Practices on HIV/AIDS and the Control Measures (N=433)**

| Respondents' Practices | Yes (%) | No (%) |
|---|---|---|
| Have you gone for VCCT before? | 67 (15.5%) | 315 (72.7%) |
| Have you used condoms before? | 206 (47.6%) | 197 (45.5%) |

**Table-5: Determinants of Respondent Awareness on VCT**

| Factors | | Awareness | | $\chi^2$ | df | p value |
|---|---|---|---|---|---|---|
| | | Yes (%) | No (%) | | | |
| Age (years) | 15-24 | 104 (45) | 67 (39.9) | 1.2 | 3 | 0.754 NS |
| | 25-34 | 66 (28.6) | 52 (31.0) | | | |
| | 35-44 | 37 (16.0) | 28 (16.7) | | | |
| | > 45 | 24 (10.0) | 21 (12.5) | | | |
| Formal Education | Yes | 184 (79.7) | 109 (64.9) | 10.88 | 1 | 0.001 S |
| | No | 47 (20.3) | 59 (35.1) | | | |
| Location | Ilie Community | 69 (29.9) | 50 (29.8) | 2.94 | 2 | 0.797 NS |
| | Kajola Community | 95 (41.1) | 57 (33.3) | | | |
| | Akoda Community | 67 (29.0) | 61 (36.3) | | | |
| Yes | | 157 (68.8) | 94 (56.0) | | | |
| No | | 74 (32.0) | 74 (44.0) | | | |

S: Significant; NS: Not Significant

## Discussion

Awareness is the key to prevention of HIV/AIDS. Over three quarter (94%) of the respondents involved in the study had heard about HIV/AIDS which was higher than findings recorded among rural youths, secondary school students and teachers in India but similar to findings among rural farmers in Vandeikya Local Government Area of Benue State.[6-10] In our study, rural dwellers displayed less awareness on HIV/AIDS control methods as 57.9%, 63.7%, 82.9%, 36.8% are aware of VCT, VCT centre, condom usage and ARV drugs respectively. The observation highlights high level of ignorance about control measures among rural dwellers in Osun State. These findings were higher compared to studies conducted by Sudah et al among rural youths in India where 69.67% knew the role of condoms in preventing HIV; 26.67% were aware of the existence of laboratory services for HIV testing in their areas and 17.39% knew about the availability of drugs against HIV.[7] Likewise also, there were misconceptions regarding attitude of respondents on HIV/AIDS control measures. 14.3% believed HIV/AIDS is not real, 64.9% believed it is curable, 32.1% thought condom usage cannot prevent HIV/AIDS, and 33.6% does not support disinfecting clippers, needles and sharp instruments as a way of preventing HIV/AIDS. Similar studies completed by Lal et al. and Banerji et al. also showed presence of

misconceptions among youth regarding HIV/AIDS control measures. [11-12] Illiteracy, inadequate anti-HIV campaigns, stigmatization and other factors were earlier identified as responsible for the high level of misconception and ignorance about HIV/AIDS in rural areas in Nigeria.[13,14]

It was observed that people with formal education were more knowledgeable on VCT than those with no education ($P<0.05$) while exploring the impact of VCT awareness on socio-demographic status.

In the studies performed by Aggarwal et al, Sarkar et al, Glick et al, age, education, wealth and media exposure also emerged as the major predictors of knowledge of HIV among youth.[15-17]

This study was a survey at one period in time so it has the limitations of a cross-sectional study. Likewise, sexual issues are very sensitive and could limit free expression in some matters. The self-administered questionnaire lacks power to detect all misunderstandings despite the presence of a researcher/interviewer in the field. Self-reported assessments of sexual behaviour are prone to a number of biases that could affect the reliability and validity of a measure such as participant's literacy level and comprehension of behavioural terminology, recall biases and self-presentation or confidentiality concerns resulting from stigmatization of sexual behaviour. To minimise the effect of this we ensured full confidentiality of participants, a research assistant was present in the room to respond to possible questions raised by participants during the data collection, and also we reduce our questionnaire to be as simple as possible. The questions were asked directly without any hesitations and starting by the less embarrassing; validation of the instrument was done from our sample.

However, the findings of the study are very relevant to dwellers in rural areas since they are less covered by HIV/AIDS prevention programmes. The study results can be useful in directing future efforts at creating awareness about HIV/AIDS, particularly in rural areas.

## Conclusion

Base on the major findings of this study, the paper concludes that level of education of people in the rural areas is significant to their level of awareness about the HIV/AIDS disease. It should be noted that a correct knowledge of every mode of transmission is very important as a guide against possible infection. Therefore the implementation of more effective health programme to intensify mass education and rural awareness will help to clarify areas of misconception and increase knowledge about HIV/AIDS.

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