

# Knowledge and Attitude of Pregnant Women in Rural Nigeria to Voluntary Counseling and Testing (VCT) for Human Immunodeficiency Virus Infection/Acquired Deficiency Syndrome (HIV/AIDS) .

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## SUMMARY

**Background:** It is not immediately clear if awareness campaigns against the HIV/AIDS have filtered down the rural communities.

**Methods:** This study ascertained awareness and attitude of pregnant women in rural Nigeria to voluntary counseling and testing (VCT), for Human immunodeficiency virus infection.

**Results:** Six hundred expectant mothers who consented were interviewed using semi structured questionnaire in a cross sectional study that spanned six months in eight rural communities of Ebonyi State. Five hundred and two women (82.3%) have heard of HIV/AIDS. The churches were the primary source of information. Prior to the interview, only thirty-one expectant mothers have heard of VCT. However, after education, 66.3% and 57.0% respectively believed it would be of benefit to their babies and themselves and 69.8% would want to have VCT for Human immunodeficiency virus infection.

**Conclusion:** There is need for more organized health education on HIV/AIDS among pregnant women in the rural communities to increase uptake of VCT services.

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**KEYWORDS:** Knowledge, AIDS, prevention, counseling, testing, rural Nigeria.

## INTRODUCTION

Infection with the Human immune deficiency virus and the Acquired immunodeficiency syndrome (HIV/AIDS) has today assumed global importance as they continue to ravage many nations especially in sub Saharan Africa. Even though the figures of infected people are falling globally from 40 million to 33.2 in 2007, in sub Saharan Africa, 6800 new cases and 2500 deaths are still recorded daily, making it the leading cause of death in this region<sup>1</sup>. In all regions of the world, women are increasingly affected, and majority of these are within the reproductive age group<sup>2</sup>.

In Nigeria about 3.4 million people are infected with HIV<sup>3</sup> and a national prevalence of 4.4% recorded among antenatal

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clinic attendees<sup>4</sup>. UNAIDS<sup>2</sup> reported that about 2000 children in developing countries become infected with HIV daily, majority of these via vertical transmission. In the developed world the use of antiretroviral drugs and other interventions have drastically reduced the mother to child transmission from 15-35% to less than 2%<sup>5</sup>. Vertical transmission rate appears higher in the developing world and only little success has been recorded with interventions to reduce mother to child transmission<sup>6</sup>. The key to reducing vertical transmission remains early detection. Voluntary Counseling and Testing is an important entry point into the numerous HIV prevention care and support services including the prevention of mother to child transmission (PMTCT) of HIV/AIDS and anti-retroviral therapy. Massive awareness campaigns have been mounted in the recent past but these have hardly impacted positively on the reduction of the scourge<sup>3</sup>. It is not immediately clear if these campaigns have filtered down the rural communities in the country where majority of the population dwell. This study therefore was to assess the level of awareness of the HIV infection/AIDS among pregnant women in rural communities in Southeast Nigeria as well as their knowledge and attitude to voluntary counseling and testing.

## MATERIALS AND METHODS

### Study Background

Ebonyi State in South East Nigeria comprises mainly rural agrarian communities. All but two of its 13 administrative components ( Local Government Areas) are rural. Its 2.1 million inhabitants are mainly of the Igbo ethnic group. Orthodox health facilities are widely interspersed within the rural areas. There is a high level of poverty-related diseases and maternal health indices are poor. A 1999 sentinel survey revealed a HIV prevalence rate of 11.1% among the adult population, making it one of the six 'hot spots' in the country and the worst affected of the six South east States. Recently, Prevention of mother-to-child-transmission (PMTCT) programme including VCT was introduced at the Teaching Hospital in the State capital, with plans to scale up to other sites. A Faith based organization in one of the rural communities operates a mobile health outreach programme involving similar rural communities.

### Study Design

This was a cross sectional study carried out between January 2005 and June 2005. Eight towns each from the eight rural local government areas covered by the mobile health

## KNOWLEDGE AND ATTITUDE OF PREGNANT WOMEN IN RURAL NIGERIA TO VOLUNTARY

outreach programme were randomly selected for the survey. The mobile clinic served as a base to recruit consenting expectant mothers who attended antenatal clinics at the mobile facility or elsewhere into the study. Trained Senior Community Health Extension Workers (SCHEW) conducted the interviews using a semi structured questionnaire. This was administered in the local dialects of the respondents to ensure proper understanding. Respondents were educated on VCT before proceeding to the section on VCT. The initial sections of the questionnaire centred on the socio socio-demographic variables of the respondents and their awareness of the HIV/AIDS pandemic.

Data was obtained on the socio biological variables of the respondents, their knowledge on HIV/AIDS, the source of information thereupon as well as their knowledge and attitude to voluntary counseling and testing. Their health-seeking behaviour in pregnancy was also examined. Data was analyzed using the epi info statistical programme version 3.2. The stratified Chi square test with Fisher exact correction was used to test for significance where applicable. A P value of <0.05 was taken as significant.

### RESULTS

Six hundred and eighteen (618) pregnant women were interviewed. Eight filled questionnaires were discarded for inconsistencies. Six hundred and ten were analyzed. The socio demographic characteristics are depicted in table 1. Most of the expectant mothers (58.2%) were aged between 25 years and 29 years. Teenagers constituted 7.0%. Only two were aged 40 years or above. The mean ages of the subjects who were aware of HIV/AIDS and those who were not were  $26.9 \pm 3.2$  years and  $26, 1 \pm 4.0$  years respectively. The age distribution in both groups was not statistically different ( $X^2 = 0.0$ , P value 0.977, df = 4). Forty three of the women (7.0%) were single mothers. Grandmultiparas predominated (33.0%) while 10.3% were nulliparous. The mean parities were 3.8 and 1.8 in the two groups respectively. Differences in parity and marital status were not significant (P values of 0.950 and 0.322 respectively). Education showed a strong influence on the level of awareness among the two groups. All subjects who had at least secondary education were all aware of the disease. The difference in the educational attainment showed strong statistical significance ( $X^2 = 26.77$ , P value = 0.000, df = 1). Religion also demonstrated statistical significance, with the Christians (82.8%) having better awareness than their counterparts who practiced African Traditional Religion (P value = 0.000).

Five hundred and seventy-eight (94.8%) were booked for the index pregnancy either in the Mission hospital (79.1%), Health centers (11.6%), private clinics/ maternity centers (7.4%), or with a Traditional Birth Attendant (TBA) only, in 1.9% of cases. However, 39.3% intended to deliver at the Traditional Birth Attendants' facilities or their various homes. Two hundred and sixty-four mothers (43.3%) would like to deliver at the mission hospital while 11.5% were undecided.

In table 2, it was evident that 82.3% of the mothers had knowledge about HIV/AIDS. Majority of them have heard of some one suffering from the disease (82.9%) or dying from the disease (63.1%). The churches were the primary source

of information for 36.9% of the mothers. Other sources of information included peers, radio, health personnel/facilities and television in 27.1%, 19.1%, 13.3% and 3.6% respectively. None learnt of the diseases from the newspapers. Prior to the interview, thirty-one expectant mothers (5.1%) have heard of VCT and only eight of them knew of the VCT sites in the State (Table 3). However, after education on VCT, 66.3% and 57.0% respectively believed it would be of benefit to their babies and themselves respectively. Some 24.8% and 36.6% were undecided on the two issues respectively. Meanwhile

**Table 1: Socio biological Characteristics of the Respondents.**

Parameters	Aware of HIV/AIDS N=502 (%)	Not Aware N=108 (%)	Total N=610(%)
Age (years)			
<19	30 (6.0)	13(12.0)	43(7.0)
20 – 24	83 (16.5)	30(27.8)	113(18.5)
25 – 29	314 (62.5)	413(8.0)	355(58.2)
30 – 34	65(12.9)	22(20.3)	87(14.3)
35 – 39	7(1.4)	1(0.9)	8(1.3)
> 40	1(0.2)	1(0.9)	2(0.3)
Not Stated	2(0.4)	-	2(0.3)
Mean age $\pm$ 2SD	<b>26.9 <math>\pm</math> 3.2</b>	<b>26.1 <math>\pm</math> 4.0</b>	
Marital Status			
Single	33(6.6)	10(9.3)	43(7.0)
Married	469(93.4)	98(90.7)	567(93.0)
Educational Status			
No formal education	106 (21.1)	78(72.2)	184(30.2)
Primary	269(53.6)	27(25.0)	296(48.5)
Secondary	77 (15.3)	0(0.0)	77(12.6)
Post secondary/tertiary	27(5.4)	0(0.0)	27(4.4)
Not stated	26(5.2)	-	26(4.3)
Parity			
0	13(2.6)	50(46.3)	63 (10.3)
1-2	138(27.5)	41(38.0)	179(29.3)
3-4	152 (30.3)	15(13.9)	167(27.4)
> 5	199(39.6)	2(1.9)	201(33.0)
Religion			
Christianity	441(87.8)	34(31.5)	475(77.9)
African Traditional	29(5.8)	70(64.8)	99(16.2)
Islam	0	0	0
Not stated	32(6.4)	4(3.7)	36(5.9)

**Table 2: Knowledge of HIV/AIDS among the Study Population.**

	Number	Percent (%)
Have you heard of HIV/AIDS		
Yes	502	82.3
No	108	17.7
For those that have heard of HIV/AIDS		
Have you heard of or seen anyone who had HIV/AIDS n = 502		
Yes	416	82.9
No	86	17.1
Have you heard of or seen anyone who died of AIDS n = 502		
Yes	317	63.1
No	185	36.9
Primary Source of Information n = 502		
Radio	96	19.1
Television	18	3.6
Newspaper	0	0
Churches	185	36.9
Health personnel/facility	67	13.3
Peers	136	27.1

**Table 3: Knowledge and Attitude to Voluntary Counseling and Testing**

	Number	Percentage (%)
Have you heard of VCT before now?		
Yes	31	5.1
No	579	94.9
Do you know of any VCT site? n = 31		
Yes	8	25.8
No	23	74.2
Do you think that knowing your HIV status will be of any benefit to you?		
Yes	348	57.0
No	39	6.4
Not sure	223	36.6
Do you think that knowing your HIV status will be of any benefit to your baby?		
Yes	405	66.3
No	54	8.9
Not sure	151	24.8
Would you want to undergo VCT?		
Yes	426	69.8
No	40	6.6
Not sure	144	23.6

69.8% would want to participate in VCT while 23.6% were undecided.

## DISCUSSION

The awareness of the human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV and AIDS) was quite appreciable in our study population. Many of them have either heard or seen people living with or dying from the infection. Such experiences make indelible impact. The level of awareness here of 82.3% of the respondents compared with that noted among antenatal clinic attendees in Ogun State<sup>7</sup> and higher than the 41% recorded among adults in rural Kano State<sup>8</sup>. However at the Federal Medical centre Ilorin, all the respondents at that centre were aware of HIV/AIDS<sup>9</sup>. The differences in the awareness level could be attributable to the demographic variables among the studied population especially with regards to educational attainment. The Nigerian Federal Ministry of Health had earlier acknowledged such high level of awareness in the Nigerian population<sup>3</sup>. The influence of education on the knowledge of the disease was proven in this study in which a very significant difference existed in the educational level of those who were aware of HIV/AIDS and those who were not. In our study all the respondents who had up to secondary level education were aware of the disease. Religion was another factor that influenced level of awareness with the followers of Christian religion being at a better pedestal than their African traditional religion counterparts. This was not surprising in this study as the churches remained the leading source of information on HIV/AIDS. In the Ilorin centre, the billboards and posters were the primary sources of information<sup>9</sup>. Such posters/billboards are hardly seen in rural Ebonyi State and where present may not be appreciated by the largely uneducated population. Over 30% of our study population had no formal education. Even though the differences in parity distribution between those who were aware of HIV/AIDS and those who were not was

not significant, it was evident that those of higher parity had a higher level of awareness. It is possible that prenatal care and education in previous pregnancies in such women could have been responsible.

Though the awareness level was high, the content and depth of such knowledge were uncertain as subsequently the knowledge of voluntary counseling and testing was abysmal in this study. Only thirty one respondents (5.2%) had any knowledge of voluntary counseling and testing at the time and only a quarter of those knew of any VCT site in the State. All those who knew of VCT had at least up to secondary level education. In the work of Adeneye in Ogun State<sup>7</sup>, 70% were not aware of VCT. Education has been identified as very relevant in HIV/AIDS knowledge and uptake of VCT<sup>8</sup>. Our population was mainly illiterate. Prevention strategies while recognizing the importance of factual knowledge of the pandemic really go more than that and should involve behavioural change. This likely follows knowledge and acceptance of one's sero status, thereby making VCT a very important component in the fight against this dreaded disease<sup>10</sup>. It is the gateway to knowledge of one's HIV sero status, a negative test engendering and reinforcing healthy and safe lifestyle. When positive, the individual comes to term with the reality and can access prevention strategies including positive behavioural change, antiretroviral therapy and infant feeding options. The quality of her life is not only improved but also the risk of mother-to-child-transmission is greatly reduced.

The role of Faith based Organizations in health information dissemination cannot be discountenanced. Many of the respondents learnt of the disease from the churches as well as from peers. While these are welcome in increasing the community awareness of the pandemic, the content of such information cannot be quickly ascertained. In previous studies, appreciation of the disease, appreciating the risk of acquisition as well as preventive measures have been deeply coloured by religious beliefs and personal interpretations<sup>11</sup> and in some cases pose real dangers leading to inconsistent protective and preventive strategies<sup>12</sup>.

The willingness of a majority (69.8%) of the expectant mothers to accept voluntary counseling and testing after enlightenment on the accruable benefits was encouraging. This was due to the perceived benefits to themselves and babies. It implies that with proper education, the uptake of VCT in rural communities will increase and if backed with appropriate referrals to VCT site, the preventive strategies for HIV/AIDS must have been placed on sure footings. In Awka, another urban settlement in Southeast Nigeria, 87% of the respondents approved of VCT after due education<sup>13</sup>. The corresponding figure in the among antenatal attendees in Ogun State was 90%<sup>7</sup>. Education enhances the appreciation and perception of HIV/AIDS.

## RECOMMENDATIONS AND CONCLUSION

There is a need for more organized health education of the rural population to ensure veracity of information passed on. The mass media especially radio stations can be put into better use with programmes in local dialects to ensure adequate

## KNOWLEDGE AND ATTITUDE OF PREGNANT WOMEN IN RURAL NIGERIA TO VOLUNTARY

understanding. Mission hospitals, private clinics and health centers where these mothers book for prenatal care should be recruited to play pivotal role in the programme. The place of traditional birth attendants in such communities cannot be overlooked<sup>14</sup>. It is noteworthy that while most women attend antenatal clinics in orthodox health facilities, almost 40% of them would rather deliver at home or in a center supervised by the traditional health attendant. The traditional birth attendants are well integrated in these communities and are culturally acceptable to majority of the parturients in the rural communities<sup>15</sup>. Till that time when literacy level in community so improves, this cadre of community health workers should be recruited, trained and counseled to pass on proper advice on HIV/AIDS prevention to their teeming clients.

While the general knowledge of HIV/AIDS was high in the rural communities, the depth and content of such knowledge could not be guaranteed. Awareness of voluntary counseling and testing – an important aspect of preventive strategies was very low. There is urgent need for more organized health education on HIV/AIDS especially voluntary counseling and testing among pregnant women especially those of poor educational attainment and low parity in the communities to increase uptake of VCT – a gateway to preventive options.

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