

Awareness and Attitude of Antenatal Clients Towards HIV Voluntary Counselling and Testing in Aminu Kano Teaching Hospital, Kano, Nigeria.

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ABSTRACT

Background: Mother to child transmission accounts for the majority of HIV infections in children in the developing countries. This study assessed pregnant women's knowledge of HIV/AIDS, awareness and attitudes towards Voluntary Counselling and Testing (VCT) in a teaching hospital in northern Nigeria.

Methods: A pre-tested structured interview questionnaire was administered on a cross-section of 210 antenatal clients in Aminu Kano Teaching Hospital, Nigeria.

Results: All respondents were aware of HIV/AIDS. Fifty seven percent had good knowledge, 32% had fair knowledge and the remaining 11% had poor knowledge of the infection. Most respondents were aware of VCT through health workers, mass media and friends. Similarly, most respondents (81.0%) approved of VCT, 13.0% disapproved of it and the remaining (6%) was undecided. The main reasons for disapproval were; fear of stigmatisation, isolation and effect on marriage security. Those that had tertiary level of education were three times more likely to accept VCT compared to those with lower levels of education (O.R=3.2, 95% confidence interval =1.3-8.0).

Conclusions: Although the awareness of VCT for HIV was quite high with most antenatal clients harbouring positive attitudes towards it, there is a need to intensify health education to convince the remaining minority who are still sceptical or ignorant of the benefits of VCT.

KEY WORDS: Awareness; Attitude; HIV; Voluntary counselling and testing; antenatal clients; Kano.

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INTRODUCTION

The continuing global pandemic of Human Immuno-deficiency Virus (HIV) infection is a serious public health challenge, particularly, in countries of sub-Saharan Africa. The Joint United Nations Programme on HIV/AIDS and the World Health Organization estimated that by the end of the year 2003, 40 million people were living with the virus worldwide¹. Women of childbearing age constitute about half of adults currently living with HIV globally¹. Since the official report of HIV/AIDS occurrence in Nigeria in 1986, the prevalence of infection has shown a steady increase among pregnant women from 1.8% in 1991, 4.5% in 1995 to 5.4% in 2003². This increasing number of HIV-infected adults, particularly women, makes the prevention of mother-to-child transmission of HIV a public health priority in this country.

Voluntary Counselling and Testing (VCT) is offered routinely to all pregnant women in most developed countries^{3,4} to determine the HIV status of the mother. This is an important primary preventive step for the unborn child and a secondary preventive strategy for the mother. This is critical considering the fact that 98% of HIV positive children acquire the infection from their mothers during pregnancy, at delivery or through breastfeeding⁵. Several studies have shown that mother to child transmission of HIV can be prevented by administering antiretroviral drugs to pregnant women. Administration of Zidovudine during pregnancy, at delivery or to the newborn has been shown to significantly reduce vertical transmission of HIV³⁻⁵. Paediatric AIDS Clinical Trials Group Protocol 250 Team has proved the success of a simple cost-effective two-dose Nevirapine in the prevention of mother to child transmission

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of HIV infection⁶. Without antiretroviral treatment, mother to child transmission occurs in 21-32% of HIV positive pregnancies⁷. With antiretroviral treatment, this risk is reduced by 67%⁸. Similarly, the avoidance of breastfeeding and use of caesarean section as a mode of delivery may reduce vertical transmission rates⁹.

In October 2003, the Department of Obstetrics and Gynaecology of Aminu Kano Teaching Hospital adopted a policy to routinely offer VCT to pregnant women attending the antenatal clinics as part of the prevention of mother to child transmission (PMTCT) programme. The other components of the programme include antiretroviral therapy and replacement feeding options. This study assessed the knowledge of HIV/AIDS, awareness and attitude towards VCT among antenatal clients in Aminu Kano Teaching Hospital, Kano.

MATERIALS AND METHODS

Study setting

Aminu Kano Teaching Hospital (AKTH) is a 500-bed hospital established in 1988. Located in Kano, the largest commercial centre of northern Nigeria, this hospital receives clients from within Kano, the neighbouring states of Jigawa, Katsina, Kaduna, Bauchi and Zamfara states. Majority of the patients are indigenous Hausa and Fulani, although the Ibos and Yoruba ethnic groups also constitute a substantial proportion of the clientele. Most of the people are traders, farmers, businessmen and civil servants. The hospital operates specialist antenatal clinics three times a week seeing an average of 120 clients per clinic day. Other services offered include family planning, postnatal care, immunization, cervical cancer screening and voluntary counselling and testing for HIV infection as part of the PMTCT programme. The study population included all pregnant women attending antenatal care at the hospital. The study took place between November 1st and December 15th 2003.

Study design

A cross sectional descriptive study.

Sample size and sampling technique

The required sample size of 210 was obtained using an appropriate statistical

formula for estimating minimum sample size in health studies [$n = Z^2pq/d^2$]¹⁰. Where Z is the standard normal deviate at 95% confidence level, d is the desired precision or margin of error tolerable (5%) and (p) represents the prevalence of positive attitude towards VCT (84%) obtained during a pilot study in a similar setting described below. Ten final year Medical students previously trained for this purpose administered the questionnaires. The systematic sampling strategy was used to select patients on each antenatal clinic day until the required 210 respondents were obtained.

Instrument description/Data collection

Selected pregnant women were interviewed using a pre-tested, structured, mostly closed ended questionnaire after obtaining informed consent from the participants. The questionnaire was in four parts. The first part obtained information on socio-demographic variables such as age, place of residence, ethnicity, religion, occupation, educational attainment and parity. The second part explored respondent's knowledge about causative agents, mode of transmission and methods of prevention and treatment of HIV/AIDS. The third part inquired about awareness of VCT and its purpose. The fourth part assessed respondent's attitude towards VCT using questions relating to her willingness to have the test or ascertaining her reasons if she declines. In addition, the respondents were asked whether they have had a VCT done already.

The study instrument was validated during a pilot study on 15 pregnant women in a similar setting (Abdullahi Wase Specialist Hospital, Kano). Results of the pilot study were used to modify content and wording of the questionnaire.

In the second part of the questionnaire, correct responses to questions on knowledge were given a score of one point if answered correctly. No point was given for wrong answers. Based on this grading, a total of 10 points were allocated to the section on knowledge of HIV/AIDS, such that those who scored 7-10 points were considered as having good knowledge, 4-6 points had fair knowledge, while a score of 0-3 points was

considered as representing poor knowledge. In the third part they were categorised into those that were aware of VCT and its purpose and those that were not. Attitude was considered positive if the respondent was willing or had previously undergone VCT. Conversely, unwillingness or refusal of VCT for whatever reason was considered a negative attitude.

Data analysis

Data was analysed using Epi-Info version 6.0 statistical software (CDC Atlanta, Georgia, U.S.A). Absolute numbers and simple percentages were used to describe categorical variables. Similarly, quantitative variables were described using measures of central tendency (mean, median) and measures of dispersion (range, standard deviation) as appropriate. The Chi-square test was used in assessing the significance of associations between categorical groups. A *p*-value of 0.05 or less was considered statistically significant.

RESULTS

A total of 210 pregnant women participated in this study. Table I shows that the majority of respondents (83.0%) were between 20-34 years of age with a mean age (\pm SD) of 27.0 ± 2.4 years. All respondents were literate with more than half of them (59%) having had tertiary education. Most of the respondents (35%) were housewives, civil servants (30.0%) or students (18.6%). The Hausa ethnic group constituted the majority (48.0%) followed by Igbo (20.0%) and Yoruba (13.0%). The remaining (19.0%) were from other minority Nigerian tribes including Tiv, Egbira and Babur. Most respondents were either nulliparous (30.0%) or had one to four previous deliveries (63.3%). Most of the women (60.0%) were Muslims while the remaining (40.0%) were Christians. Majority of the respondents (96.7%) were married, the rest were either (1.9%) divorced or (1.4 %) widowed. None of them was single.

All respondents were aware of HIV/AIDS. Based on the criteria described under methodology, 57% had good knowledge, 32% had fair knowledge and the remaining 11% had poor knowledge of the disease. Most respondents were aware of VCT. Out of the 210 pregnant women, 183 (87.0%) were knowledgeable about VCT and its purpose.

The remaining 27 (13.0%) neither knew what it was nor could state the usefulness of the test.

Respondents obtained information about HIV/AIDS and VCT mainly from health workers (73.0%), followed by mass media (17.0%), Non-governmental organizations (NGOs) (8.0%) and friends (2.0%) as shown in Table II.

In general, most of the respondents (81.0%) approved of VCT, 13.0% disapproved of it and were not willing to undergo the take the test. The remaining (6%) were undecided as shown in Table III. Of those disapproving of the test, the main reasons given were; "I am afraid of stigma if the result comes out positive", "I am afraid of isolation", "It may affect my marriage", "It is not necessary" and "I just don't want it".

Sixty-seven of the 86 (78.0%) respondents that had primary or secondary education had a positive attitude towards VCT compared to 114 of the 124 (92.0%) respondents who attained tertiary education. Those that had tertiary education were three times more likely to harbour positive attitude towards VCT compared to those with lower levels of educational attainment (O.R=3.2, 95% confidence interval=1.3-8.0). This difference was statistically significant ($\chi^2=6.5$ df=1 $P<0.01$). However, a comparison of the attitude of younger mothers (<30 years) with their older counterparts showed that 112 out of the 133 (84.2%) younger mothers had a positive attitude towards VCT compared to 67 of the 77 (87.0%) older ones. This difference was of no statistical significance ($\chi^2=0.3$ df=1 $P=0.58$).

Table I. Socio-demographic characteristics of respondents (n=210)

Variable	No. (%)
15-19	13(6.0)
20-24	66(31.0)
25-29	54 (26.0)
30-34	54 (26.0)
35-39	15 (7.0)
40-44	8 (4.0)
Educational level	
None	-
Primary	4 (2.0)
Secondary	82 (39.0)
Tertiary	124 (59.0)
Occupation	

Housewife	74 (35.2)
Trader	18 (8.6)
Civil servant	63 (30.0)
Student	39 (18.6)
Others	17 (8.1)
Religion	
Muslims	126 (60.0)
Christians	84 (40.0)
Ethnicity	
Hausa	101 (48.0)
Igbo	41 (20.0)
Yoruba	28 (13.0)
Others	40 (19.0)
Parity	
0	63 (30.0)
1	59 (28.1)
2-4	74 (35.2)
5 or over	14 (6.7)

Table II. Sources of information about VCT

Source of information	No. (%)
Health workers	153 (73.0)
Mass Media	36 (17.0)
NGOs	17 (8.0)
Friends	4 (2.0)
Total	210 (100.0)

Table III. Approval of VCT among antenatal clients, AKTH*, 2003

Responses	No. (%)
Approved of VCT	170 (81.0)
Does not approve	27 (13.0)
Not sure	13 (6.0)
Total	210 (100.0)

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DISCUSSION

This study found a high proportion of antenatal clients (89%) knowledgeable about HIV/AIDS. A similar proportion (87%) was also aware of VCT and its usefulness. This is higher than the findings of the 1999 Nigerian National Demographic and Health Survey (NDHS)¹¹, which found that overall, 90% of men but only 74% of women knew of AIDS. The difference could be explained by the fact that all our clients were literate compared with the national female literacy rate of 40%. The NDHS¹¹ also found considerable Zonal and urban/rural

differences, which is also probably reflective of the different levels of education in these areas. For instance, only 69% of rural women knew about AIDS, compared with 87% of urban women. In the North East and the North West, only 47% and 50% of women respectively knew about AIDS, compared with over 90% of sampled women in the South East of Nigeria. The level of knowledge about HIV/AIDS was also reported to be high among pregnant women in Uganda¹², South Africa¹³ and the U.K.¹⁴. Most of our respondents heard about VCT from health workers with a minority getting their information from the mass media, Non-Governmental Organizations and friends. This emphasizes the importance of antenatal clinics as the main source of information about VCT. At present, only about sixty percent of pregnant women in Nigeria receive any antenatal care from a trained health worker¹¹.

The approval rate for VCT in the present study was 81%. This is similar to the rate of 79% reported by Chama and colleagues from Maiduguri¹⁵. It is however; lower than an acceptance rate of 99.3% obtained in metropolitan Stockholm¹⁶, but higher than a median acceptance rate of 69% reported from Cote d'ivoire, Kenya, Tanzania, Zambia, South Africa and Thailand¹⁷. Our finding is comparable with the acceptance rate of 86% reported from southern India¹⁸, and 82.6% from Hong Kong¹⁹. In contrast, a study of the acceptability of VCT for HIV in London showed only 30% acceptance rate, these rates being higher among hospital clinic attendees (41%) than in midwifery group practice (10%) and community clinics (30%)¹⁴. Nevertheless, 36% of the clients changed their mind after counseling. In Norway²⁰, although 75% of women agreed to undergo the HIV test during the prenatal period, only 30% were satisfied with the information provided to them about the test. Similarly, Abdool Karim and others¹³ reported from South Africa that despite assurances that participation was voluntary, 88% of women felt they were compelled to undergo the test. This underscores the importance of providing adequate information and being explicit about the voluntary nature of the test to enable the clients arrive at informed decisions. Otherwise, the test can hardly be ethically justifiable.

We found a disapproval rate of 13% in this study with 6% of respondents undecided whether to accept the test or not. Reasons for refusal include fear of stigmatization, fear of isolation, effect of a positive test result on marriage security. Some respondents opined that the test was unnecessary or they just didn't want it. These reasons are similar to reports from Abidjan²¹, where it was reported that most women who refused to be tested thought they were probably HIV positive. Other reasons reported include the fear that the disease process would accelerate once they were informed of their HIV infection status. Some were also afraid of the reactions of their husbands and relatives to a positive test result. There were also concerns about possible breach of confidentiality. Others said the disease couldn't be cured; therefore, there was no point in knowing that you are infected. In contrast, Yin *et al*¹⁹ reported that women declined the test in Hong Kong mainly because they considered themselves at low risk.

We also found that awareness about VCT and educational level of respondents was significantly associated with attitude towards VCT. This could be explained by the fact that educated people tend to be more receptive to health education messages which in turn facilitates behavioral change. Although Kowalczyk²² and others reported that acceptance of VCT was three times higher among women 35 years or older compared to their younger counterparts, we did not observe any such association among our clients. It is however noteworthy that their study population were women in labour.

Although there has not yet been a comprehensive national study on mother to child transmission rates, the large number of women of childbearing age living with HIV in Nigeria and a high total fertility rate of 5.2 indicates that a large number of children are already acquiring HIV from their mothers. Unfortunately, the health system is by no means prepared to cope with the potential scale of the problem. Efforts are ongoing by the National Action Committee on AIDS (NACA) and partners to expand access to the Prevention of the Mother to Child Transmission (PMTCT) programme, which is currently only available in a few pilot sites. Our study shows

that the majority of our women are ready to protect their unborn babies against HIV infection when given the opportunity. Even the minority that rejected the test were mostly unaware of its benefits. Nonetheless, even if the centres providing PMTCT services are scaled up to include secondary and primary health care facilities across the country, meaningful progress will depend on a concomitant increase in the coverage of antenatal care services. At present, over one third of expectant mothers do not receive any antenatal care from a trained health worker. This rises to more than a half in northern part of Nigeria where this study was conducted. In short the necessary interventions for prevention of mother to child transmission would not be able to reach a large proportion of pregnant women with HIV/AIDS under present conditions. VCT services should also be available to unbooked patients who present during labour because that may be the only time they come in contact with any health facility. Similarly, there is a need for integration of PMTCT services at these centres with Adult and Paediatric antiretroviral treatment programmes to cater for HIV positive mothers after delivery and children who acquire the infection in spite of the prophylaxis.

Although the awareness of VCT for HIV was quite high with most antenatal clients harboring positive attitude towards it, there is a need to intensify health education efforts to convince the remaining minority that are still skeptical or ignorant of its value. Similarly, confidentiality, quality of counseling, and access to clinical services are some of the key issues that need to be evaluated to improve patient satisfaction. Exit interviews with clients can determine the impact of the session on the client, as well as their satisfaction with the services. Interviews of counsellors and other providers regarding their attitudes and practices are also necessary to identify areas that need to be improved. There is also a need to share experiences between centres and to track mother and child pairs beyond infancy to evaluate the effectiveness of the PMTCT programme in our local settings.

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