

ATTITUDE AND PRACTICE OF ANTENATAL HIV SCREENING AMONG PREGNANT WOMEN ATTENDING A SECONDARY HEALTH FACILITY IN BENIN-CITY

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ABSTRACT

Objective: To assess the awareness, attitude and practice of HIV testing among antenatal clients in Benin-city.

Methodology: A cross-sectional, descriptive study was carried out among 200 pregnant women. Respondents were selected at the weekly booking clinic using systematic sampling technique. Pre-tested, semi-structured and researcher-administered questionnaire was tool for data collection.

Results: All the respondents were aware of HIV testing. Majority (85.5%) supported antenatal HIV testing with a higher proportion supporting mandatory testing (51.0%). About 25.0% of the respondents had undergone HIV testing and only 27.5% of them were counseled. Previous HIV testing was associated with higher educational status ($p = 0.0443$) and a higher parity ($p = 0.0191$). About 59.1% of those who had not been tested were willing to undergo the test. Predictors of willingness to test were a positive reaction to a positive test result ($p = 0.0015$) and support for mandatory testing ($p = 0.0021$). Age, educational status and parity were not associated with willingness to test. ($p > 0.05$)

Conclusion: The practice of HIV testing was low and indicates the need to increase public enlightenment programmes on voluntary HIV testing and its benefits.

Key Words: Awareness, Attitude, Practice, VCCT, HIV/AIDS.

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INTRODUCTION

Since the advent of Acquired Immunodeficiency Syndrome (AIDS) in the 1980s, the condition has evolved into a global pandemic of unprecedented severity affecting all ages, sexes and social classes. In 2005, the global population of people living with HIV/AIDS (PLWHAs) was estimated at 40 million, which was more than double the number 10 years earlier.¹

The Sub-Saharan region of Africa is the most devastated with more than 60% of all PLWHAs residing there.² In Nigeria, the prevalence of HIV infection was put at 5.0% based on data obtained from antenatal clinics.³

Women are especially vulnerable to HIV infection and they are three times more likely to be HIV-positive than their male counterparts.¹ Vertical transmission is the major route through which children less than 15 years of age acquire HIV infection.⁴ Therefore, the most effective way to reduce the number of children infected will be to prevent their mothers from acquiring the infection. However, where mothers are already infected,

Preventing mother to child transmission will provide the solution.

Voluntary confidential counselling and testing (VCCT) is an important element of Preventing Mother to Child Transmission (PMTCT) of HIV. VCCT involves HIV testing that is confidential, complemented by counseling and carried out with informed consent.⁵

Pregnancy is one of the infrequent occasions where women in developing countries come in contact with health-care services, therefore, providing VCCT in antenatal care centres will benefit all pregnant women who accept it, irrespective of their eventual HIV sero-status. This will provide opportunity for interaction to minimize mother to child transmission of HIV, decision on future fertility and prevention of HIV transmission to partners.

Studies have reported positive attitudes towards VCCT for HIV amongst pregnant women,⁶⁻¹⁰ however, setbacks to effectiveness of VCCT do exist and major factors responsible for these are stigma and discrimination.^{11,12} In addition, absence of follow-up services, such as antiretroviral therapy, prevents a number of people from seeking VCCT as a positive result is seen to be equivalent to a death sentence.¹

If the programme for preventing mother to child

transmission is to succeed and its accruing benefits be obtained, the populace must be aware of the existence of HIV/AIDS, their own risks of contracting the deadly infection, choices about prevention and/or care and support services available through VCCT.¹

Our aim was to study the awareness, attitude and practice of VCCT for HIV/AIDS among pregnant women attending antenatal clinic in Central Hospital, Benin City, Nigeria.

METHODOLOGY

This cross-sectional, descriptive study was conducted between March 2005 and April 2006 among pregnant women attending the antenatal clinic at Central Hospital, Benin City, Edo State. Edo State lies roughly between longitude 06° 04'E and 06° 43'E and latitude 05°44' N and 07°34' N. It is bounded in the south by Delta State, in the west by Ondo State, in the north by Kogi State and in the east by Kogi and Anambra States. It occupies a land area of about 17,802 square kilometers. The state has a population of 3,218,332 (2006 Census) and is made up of 18 Local Government Areas. Edo State is home to several ethnicities, among them the Binis, Esan and Afemai.

The Central hospital is a state government owned secondary health facility located in Benin City, the administrative headquarter of Edo state. It has several departments Internal medicine, Surgery, Child health, Obstetrics and Gynaecology, Radiology, etc. It is well staffed with specialist doctors and serves as a referral centre for the primary health care facilities (both government and privately owned) within the state. It has a 20 bed maternity wing and has a well developed HIV counseling unit.

Approval for the study was sought and obtained from Obstetrics and Gynaecology Department of Central Hospital, Benin City. Informed consent was also obtained from the subjects prior to participation in the study.

Minimum sample size was calculated using the formula for calculating sample size for a descriptive, cross-sectional study where minimum sample size = $\frac{p \times q}{(0.05/1.96)^2}$

p = proportion of pregnant women attending antenatal clinics who were willing to undergo VCCT for HIV/AIDS = 96.1%⁷ and q = 1-p.

The minimum sample size was 58 and we proposed to study 200. About 60 pregnant women are usually registered every week at the booking clinic. It was not possible to select all the patients without causing delays at the booking clinic. Respondents were therefore chosen using a systematic sampling technique to select 20 women weekly. To achieve

this, every third pregnant woman coming to register for antenatal care was selected until the sample size of 200 was obtained.

Data were collected from the pregnant women using a semi-structured questionnaire pre-tested at a similar setting in the University of Benin Teaching Hospital. The questionnaire was researcher-administered and questions sought to elicit the biodata, knowledge of, attitude to and intended practices of the pregnant women towards antenatal HIV screening. Reactions to test results were assessed and categorized as "positive", "negative" and "indifferent".

Data analysis was performed using SPSS software version 11.0 and chi-square tests were performed to test associations at level of significance of p less than 0.05.

RESULTS

A total of 200 pregnant women with mean age of 29.3 ± 5.61 years participated in the study. Respondents ranged in age from 17 to 48 years.

All the respondents had one form of formal education or the other with the highest proportion 134 (67.0%) having more than six years of schooling while the rest 66 (33.0%) had six or less years of schooling. Majority of the respondents 187 (93.5%) were married, with 11.1% of them in polygamous settings. A higher proportion of the women 125 (62.5%) had given birth before while 75 (37.5%) were primigravidae. (Table 1)

All the respondents had heard of HIV testing. Majority of the respondents 171 (85.5%) supported HIV testing in pregnancy. Reasons proffered included knowledge of her HIV status by the pregnant woman (81.9%), preventing transmission to the baby (20.5%), for the sake of the baby's health (9.4%) and treatment of the mother, if positive (8.2%). (Table 2)

Of those who were not in support of HIV testing in pregnancy, reasons given for this opinion included stigmatization (55.2%), attitude of health workers (34.5%), perceived lack of personal risk (24.1%), not necessary if no sign of illness (6.9%), pregnant women were immune against HIV (3.4%) and testing causes anxiety (3.4%). (Table 2)

One hundred and two (51.0%) of respondents were in support of mandatory HIV testing, 85 (42.5%) supported voluntary testing while 13 (6.5%) were uncertain about which type of test they preferred. Among those who supported mandatory HIV testing, reasons given included the fact that everyone gets to know his or her own status (54.9%) and those positive can be identified (24.5%). Fourteen respondents (13.7%) said mandatory testing would prevent the spread of HIV. Access to treatment (6.9%) and early detection of infection

(4.9%) were also mentioned as reasons. (Table 3) Those in support of voluntary testing believed that it is a personal decision to do the test (56.5%), not everyone could afford the test (7.1%), not everyone was at the same risk of infection (4.7%) and fear of being positive (4.7%). (Table 3)

When asked how they would react to a positive HIV test result, 48.0% of the respondents were assessed to have positive attitude. This assessment was based on responses like seeking treatment, seeking counseling and informing spouse and relatives. Responses connoting negative reactions were noted in 26.0% of the respondents. These ranged from denial, worry and suicide.

Fifty-one (25.5%) of the respondents had undergone HIV testing prior to the interview. Of these, 33 (64.7%) had voluntary testing, 14 (27.5%) had mandatory testing and 4 (7.8%) were not informed prior to testing. Overall, only 14 (27.5%) of those who had undergone HIV testing were counseled before and after testing.

The proportion of those who had tested for HIV increased from 20.0% in those less than twenty years of age to 27.6% in those thirty-five years or more but the difference was not statistically significant. ($X^2 = 0.2258$, $df = 2$, $p = 0.8933$). (Table 4)

Those who had more than six years of schooling (29.9%) had a significantly higher proportion of those who had tested for HIV compared with 16.7% of those who had less than six years of schooling. ($X^2 = 4.046$, $df = 1$, $p = 0.0443$). Previous HIV testing was significantly higher in those who had given birth before (31.2%) than in the primigravidae (16.0%), $X^2 = 5.701$, $df = 1$, $p = 0.0191$. (Table 4)

Only 88 (59.1%) of the women who had not been tested for HIV were willing to undergo the test. Willingness to test was higher among those less than 20 years of age (75.0%) than in those 35 years or more (57.1%) but the difference was not statistically significant. ($X^2 = 0.8988$, $df = 2$, $p = 0.6380$). (Table 5)

Those who had more than six years of schooling (60.6%) had a higher proportion of those who were willing to undergo HIV test than those who had less than six years of schooling (56.4%), but the difference was not statistically significant. ($X^2 = 0.2622$, $df = 1$, $p = 0.6086$). (Table 5)

Willingness to test was higher among the primigravidae (61.9%) than in those who had previously given birth (58.1%) but the difference was not statistically significant. ($X^2 = 0.07133$, $df = 1$, $p = 0.7894$). (Table 5)

Those with positive attitude towards a positive HIV test result (73.5%) were significantly more willing to undergo HIV test than those with negative attitude (38.5%), ($X^2 = 13.053$, $df = 2$, $p = 0.0015$). (Table 5)

Those in support of mandatory testing (71.2%) were

significantly more willing to take the test than those who supported voluntary testing (51.5%). ($X^2 = 12.337$, $df = 2$, $p = 0.0021$). (Table 5)

For those unwilling to test, reasons given included faith in being HIV-negative (57.4%), stigmatization (31.4%), not ill (27.9%), and fear of testing positive /fear of dying before one's time (19.6%). Other reasons were cost of testing (3.3%), lack of trust in test results (3.3%) and (3.3%) of the respondents felt it was their husbands' decision.

Table 1: Demographic Profile of Respondents

Characteristics	Frequency (N=200)	Percent
Age group (years)		
< 20	10	5.0
20-34	161	80.5
> 35	29	14.5
Years of schooling		
6	66	33.0
> 6	134	67.0
Marital status		
Married	187	93.5
Not married	13	6.5
Religion		
Christianity	177	88.5
Islam	10	5.0
African traditional	9	4.5
Religion		
Others	4	2.0
Parity		
Primigravidae	75	37.5
≥1	125	62.5

Table 2: Reasons Given For and Against Antenatal HIV Testing.

Support For Antenatal HIV Testing (N = 171)		
Response	Frequency	Percent
Knowledge of HIV status	140	81.9
Preventing mother to child transmission	35	20.5
Health of the baby	16	9.4
Treatment, if positive	14	8.2
Prevention of transmission to others	3	1.8
Prevention of later infection, if negative	3	1.8
Early detection, if positive	1	0.6
Protection of health workers	1	0.6
High prevalence of HIV	1	0.6
No support for antenatal HIV testing (N = 29)		
Response	Frequency	Percent
Stigmatization	16	55.2
Attitude of health workers	10	34.5
Perceived lack of personal risk	7	24.1
Not necessary	2	6.9
Pregnant women are immune	1	3.4
HIV testing causes anxiety	1	3.4

Table 3: Reasons for Supporting Mandatory/Voluntary HIV Testing.

Mandatory HIV Test (N = 102)		
Response	Frequency	Percent
Everyone knows own status	56	54.9
Knowledge of those positive	25	24.5
Prevents the spread of HIV	14	13.7
Access to treatment	7	6.9
Early detection	5	4.9
Force is necessary	4	3.9
High prevalence of HIV	2	2.0
Improves public awareness of HIV	2	2.0
Protection of health workers	1	1.0
Prevents mother to child transmission	1	1.0
Voluntary HIV Test (N = 85)		
Response	Frequency	Percent
Personal decision to do test	48	56.5
Cost of test	6	7.1
Risk of HIV infection not uniform	4	4.7
Fear of being positive	4	4.7
Only necessary if unsure of status	3	3.5
Only necessary if ill	2	2.3
To avoid stigmatization	2	2.3

Table 4: Association between Previous HIV Testing and Demographic Characteristics.

Characteristics	Had HIV Test (N=51) Freq %	No HIV test (N=149) Freq %	Total (N=200) Freq %	p-value
Age group (Years)				
< 20	2 (20.0)	8 (80.0)	10 (100.0)	0.8933
20-34	41 (25.5)	20 (74.5)	161 (100.0)	
> 35	8 (27.6)	21 (72.4)	29 (100.0)	
Years of schooling				
< 6	11 (16.7)	55 (83.3)	66 (100.0)	0.0443*
> 6	40 (29.9)	94 (70.1)	134 (100.0)	
Parity				
Primigravidae	12 (16.0)	63 (84.0)	75 (100.0)	0.0191*
> 1	39 (31.2)	86 (68.8)	125 (100.0)	

* Statistically significant

Table 5: Factors Associated With Willingness To Undergo HIV Testing.

Characteristics	Willing (N=88)	Not willing (N=61)	Total (N=149)	p-value
Age group (years)				
< 20	6 (75.0)	2 (25.0)	8 (100.0)	0.6380
20-34	70 (58.3)	50 (41.7)	120 (100.0)	
> 35	12 (57.1)	9 (42.9)	21 (100.0)	
Years of schooling				
≤ 6	31 (56.4)	24 (43.6)	55 (100.0)	0.6086
> 6	50 (58.1)	36 (41.9)	86 (100.0)	
Parity				
Primigravidae	38 (60.3)	25 (39.7)	63 (100.0)	0.7894
≥ 1	50 (58.1)	36 (41.9)	86 (100.0)	
Attitude to positive test				
Positive	50 (73.5)	18 (26.5)	68 (100.0)	0.0015*
Negative	15 (38.5)	24 (61.5)	39 (100.0)	
Indifferent	23 (54.8)	19 (45.2)	42 (100.0)	
Types of test supported				
Mandatory	52 (71.2)	21 (28.8)	73 (100.0)	0.0021*
Voluntary	34 (51.5)	32 (48.5)	66 (100.0)	
Uncertain	2 (20.0)	8 (80.0)	10 (100.0)	

* Statistically significant

DISCUSSION

It is encouraging to note that all the pregnant women were aware of HIV testing and majority of them (85.5%) supported HIV testing in pregnancy. This is in keeping with several related studies from different parts of the world.⁶⁻¹⁰ This is worth noting since attitude to HIV testing is an important determinant to the uptake of test. Knowledge of one's HIV status

was the major reason given for this belief while preventing mother to child transmission of HIV was proffered as a reason by only about one-fifth of respondents.⁸ Treatment of HIV, if positive, was mentioned as a benefit of HIV testing by only 1.2% of respondents. This highlights poor awareness of PMTCT programme which includes antiretroviral drug therapy for pregnant women who are HIV sero-

positive. Reasons given by those who were not in support of HIV testing in pregnancy were related to stigma associated with the condition, discrimination by health workers and perceived lack of personal risk.^{6,8,13}

Our study revealed a preference for mandatory over voluntary testing. In contrast, a study in Ile-Ife, Nigeria⁸ showed greater support for voluntary over mandatory testing. However, our findings were in keeping with some studies in mainland China and the US.^{14, 15} The major reasons given for support of mandatory over voluntary testing were knowledge of one's status, identification of those positive, preventing the spread of HIV, early detection and access to treatment. The commonest reason given by those who preferred voluntary testing was that it was a personal decision to do the test.⁸ The cost of test, differences in risk of infection and fear of being positive were other reasons for preferring voluntary testing.⁸

Our study also revealed that more than a quarter of respondents would react negatively to a positive HIV test result. Reactions ranged from denial, worry to suicide. Similar findings were noted in Ile-Ife.⁸ The reason for this may be a continued perception of HIV infection as a death sentence as well as the societal stigma associated with it.

Only 25.5% of our respondents had previously been tested for HIV. The factors significantly associated with previous HIV testing were having given birth before ($p = 0.0191$) and higher educational status ($p = 0.0443$). Those who had given birth before may have had previous exposure to HIV testing during antenatal care.

Though a higher proportion of the respondents were tested voluntarily, a significant proportion (27.5%) underwent mandatory test. This is in contrast to the UNAIDS/WHO Policy on HIV Testing⁵ and the Nigeria Country Policy on HIV/AIDS¹⁶ which do not support mandatory testing but recommends voluntary confidential counseling and testing. Our results indicate non-compliance of health institutions to these policies. A possible reason is compulsory premarital testing often requested by religious bodies. Another possibility is that respondents may have undergone HIV testing as employment or exit visa requirements.

It is worth noting that only a minority of those who had been tested received any pre- and/or post-test counselling. We may infer that many centres still carry out testing without counselling. It also may be possible that some individuals may have been counselled in such a manner that they failed to recognize it as such. This may be an indication that counselling services are still inadequate and many health providers are yet to fully understand the importance of counselling. Routine HIV testing

without counselling is an unacceptable practice and the disadvantages may nullify any benefits from knowing one's HIV status. Pre- and post-test counselling are essential elements of the management of HIV in pregnancy. Pre-test counselling enables women and men to make informed decision about an HIV test. Post-test counselling is an integral part of management of the HIV-positive person and provides an important opportunity for risk reduction messages for those found to be HIV-negative.

Only about half of those who had not been tested were willing to undergo HIV test. This is lower than what was reported in a study carried out in two health facilities in Lagos.⁷ Predictors of willingness to undergo HIV test were a positive attitude to a positive test result ($p = 0.0015$) and support for mandatory HIV testing ($p = 0.0021$). Age, educational status and parity were not significantly associated with willingness to undergo HIV test. The major reason given for not wanting to test was perceived lack of risk of infection.¹³ It could be that these respondents felt that being married protected them from the infection.

This study has revealed high levels of awareness and support for HIV testing in general, though with greater support for mandatory testing. Also, the practice of HIV testing was not impressive and indicates the need to increase public knowledge about voluntary HIV testing and its benefits. The low rates of pre- and post-test counseling noted highlights the need to train and re-orientate health providers on the importance and unique role of counseling in HIV management and prevention.

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