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Barriers to and Determinants of HIV Counselling and Testing among Adults in Ayedaade Local Government Area, Osun State, Nigeria

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HIV counselling and testing (HCT) uptake has been consistently poor in Nigeria. The aim of this study is therefore to identify the barriers to and determinants of HCT uptake among adults in Ayedaade Local Government Area (LGA), Osun State, Nigeria. The study employed a cross-sectional descriptive design. A pre-tested, interviewer administered questionnaire was used to elicit information from 500 respondents of reproductive age group recruited from Ayedaade LGA, Osun State, Nigeria by multi-stage sampling technique. The results were analysed using SPSS version 15.0 and determinants of HCT uptake were evaluated using the Chi-square test of association. The results showed that 16% of the respondents ever had HCT while 84% had never accessed HCT. The most important reasons for not accessing HCT were the perception of being in good health without a need for the test (35.6%), non perception of risk of infection (32.1%) and lack of time (11.4%). The determinants of HCT uptake were respondents' level of education ($p = 0.001$), marital status ($p = 0.001$), partner's approval of HCT ($p = 0.001$) and partner's screening status ($p = 0.001$). The study concluded that adults in the study area did not access HCT basically because of poor risk perception and lack of time. Factors which determined HCT uptake were both personal and partner related. Health education to make people appreciate their risk of HIV infection and importance of HCT should be intensified.

Key words: Determinants, HIV counselling and testing, adults, barriers

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INTRODUCTION

The scourge of the Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) is a major global public health problem. With a death toll of three million per year, HIV/AIDS has claimed about 25 million lives worldwide with staggering economic and social impacts (Over, 2000). The disease affects individuals, families, communities, nations and their economies by causing disease and premature death when people are in their most productive ages (Yamano and Jayne, 2004).

The Sub-Saharan African region continues to be the most affected by the pandemic. It constituted about 67% of all people living with HIV and 72% of AIDS related deaths in 2008. In addition, there were about 1.9 million new infections in 2008, bringing to a total of over 22 million, the number of people living with the virus in the region (UNAIDS, 2008).

Nigeria is presently one of the most affected countries in the world, ranking second among Sub-Saharan countries, in the number of HIV infected adults (UNAIDS, 2008). Though the HIV prevalence fell from 4.4% in 2008 to 4.1% in 2010; the number of people living with the virus was still 3.1 million while the estimated number of new infections was 281,180 (NACA, 2011). These figures underscore the fact that more efforts are required in the battle against this deadly virus.

In order to effectively control the infection, knowledge of one's HIV's sero-status is essential. This is made possible through the process of HIV Counselling and Testing (HCT). HCT forms the gateway to HIV/AIDS prevention, treatment, care and support interventions and has been found to be effective in the primary and secondary prevention of HIV/AIDS (UNAIDS, 2002). HCT consists of two processes: HIV counselling and testing. The counselling process is confidential and also in two parts: pre-test and post-test counselling. The pre-test counselling assists individuals and/or couples to consider their risk of acquiring or transmitting HIV. It also helps them determine whether to be tested or not. The post-test counselling provides support when the individuals receive the test results. HIV testing involves analysis of blood or body fluids for the presence of antigens or antibodies produced in response to HIV.

HCT services help people to know their HIV status and to cope with their results, whether negative or positive (UNAIDS, 2002). They help to determine those who require further care and treatment and link them with these interventions. Through risk reduction counselling, they encourage infected people to change their behaviour and motivate those who are uninfected to remain so. They may also promote a positive community response to the disease and so help to reduce stigmatization and discrimination.

Even though the number of HCT sites in the country has increased from just a few in 1999 to about 576 in 2010, HCT uptake by the populace is still low (FMH, 2006; Ijadunola *et al.*, 2007). While efforts are being made to further scale up HCT services in the country, it is pertinent to find out what constitute barriers to the utilization of existing HCT facilities and proffer possible solutions to them.

There are national studies on HCT uptake and those conducted among different segments of the population like students and pregnant women who all reported low uptakes of HCT (NPC, 2009; Adeneye *et al.*, 2007). However, these studies did not collect information on the determinants of HCT uptake among adult Nigerians. The present study was conducted to fill up the existing knowledge gap by looking at various facets of the determinants of HCT among adults of reproductive age in Ayedaade LGA Osun State, Nigeria.

MATERIALS AND METHODS

Background information about the study area: Ayedaade Local Government Area (LGA) is one of the 30 LGAs in Osun State, one of the six states in the South West geo-political zone of Nigeria. The head quarter is at Gbongan and the estimated population is about 150, 392 (NPC, 2007). It is made up of eleven wards. The climate is tropical with heavy rainfalls stretching from March to November and the vegetation is that of Tropical Rain Forest. The native inhabitants are mainly Yorubas while others are Hausas, Igbos and people of other ethnic groups. The major religions are Christianity and Islam. The people are mainly farmers, traders and artisans, others are civil servants.

Health facilities in the LGA: Two comprehensive health centers, twenty-two primary health centers, three model health centers and seven private hospitals. There are no HCT services in the LGA except in some maternity homes.

Study design: The study employed a descriptive cross-sectional design.

Study population: The study population consisted of adults of reproductive age; females 15-49 years and males, 18-59 years (NPC, 2004).

Sample size determination: The formula for estimating single proportions by Abramson and Gahlinger (1999) was used. We assumed a 95% level of confidence, an estimate of HCT uptake of 17.8% (NPC, 2004) and a maximum acceptable difference from true proportion of 5%. A minimum estimated sample size of 225 was obtained but a total of 500 participants were eventually interviewed.

Sampling technique: Multi-stage sampling procedure was used to recruit respondents. Simple random sampling was used to select six out of the 11 wards in the LGA. Eight streets from each ward, 10 houses from each street and one eligible respondent from each house were selected by simple random sampling. Starting with the first house on the street, every other house was selected. Where a house had more than one household, the first willing contact was interviewed.

Data collection methods: A pre-tested, semi-structured questionnaire that was first translated into Yoruba and back translated into English was applied to each respondent by previously recruited and trained research assistants. The questionnaire elicited information on respondents' socio-demographic characteristics, previous uptake of HCT, reasons why they accessed or did not access HCT and reproductive behaviour.

Ethical issues: Approval for the research was obtained from the Ethics and Research Committee of the Obafemi Awolowo University Teaching Hospital, Ile-Ife. Written informed consent was obtained from each respondent prior to data collection.

Data analysis: Data were analysed using the Statistical Package for Social Sciences (SPSS) version 15. Continuous data such as age were summarized as means. Discrete data were summarized as proportions and presented as frequency tables. The relationship between respondents' socio-demographic and other intervening variables and their HCT uptake was tested using the Chi-square test of association. A p-value of <0.05 was considered statistically significant.

RESULTS

A total of 480 out of 500 questionnaires administered were correctly filled and returned (response rate of 96.0%). The respondents consisted of 275 males (57.3%) and 205 females (42.7%) aged 15-59 years, (mean: 30.2±9.9 years). More than half, (57.3%) of the respondents were currently married, 39.2% were never married and 3.5% were previously married. A total of 349 (72.7%)
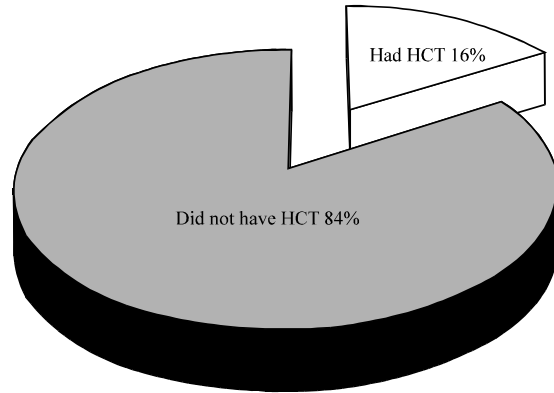

Fig. 1: Uptake of HCT among respondents

Table 1: Reasons given by the respondents for not accessing HCT

Reasons for not accessing HCT	Frequency *n = 402	Percentage
I am healthy	143	35.6
1 am not at risk of being infected	129	32.1
I don't have the time	46	11.4
Fear of forceful detention	33	8.2
I can't afford it	29	7.2
I am not aware of where the test is available	21	5.2
Fear of testing positive	7	3.2
Fear of death	6	1.5
Fear of breach of confidentiality	3	0.7
My partner did not approve	3	0.7
Fear of stigmatization	3	0.7
Fear of rejection by partner	2	0.5

*There were multiple responses

respondents were Christians, 26.3% were Muslims while the rest belonged to other religions. Only 12.7% had tertiary education; about 388 (80.8%) had both primary and secondary education while 31 (6.5%) respondents had no formal education.

Figure 1 shows the uptake of VCT among respondents: only 78 (16.3%) of the respondents had ever accessed HCT services.

The most important reasons for not accessing HCT services by the respondents were perception of being in good health without need for HCT (35.6%), perception of not being at risk of infection (32.1%) and lack of time (11.4%), amongst others (Table 1).

Concerning the relationship between socio-demographic factors and HCT uptake, 21.8% of respondents who were currently married had HCT compared with 9.6% of those were never married and 0% of those who were previously married. They were thus more likely to access HCT compared with those who were previously or never married (p = 0.001). Forty one percent of those with tertiary education had HCT compared to 13.7% of those with less than tertiary and 0% of those with no formal education. They were thus more likely to access HCT compared with those who had less

Table 2: Relationship between respondents' socio-demographic characteristics and HCT uptake

Socio-Demographic Characteristics	Had HCT No.	Had HCT %	Never had HCT No.	Never had HCT %	Total %	χ^2	p-value
Age (years)							
15-19	2	3.6	54	96.4	56	8.78	0.067
20-29	31	16.1	161	83.9	192		
30-39	28	20.7	107	79.3	135		
40-49	13	17.1	63	82.9	76		
50-59	4	18.0	17	81.0	21		
Total	78	16.3	402	83.7	480		
Sex							
Male	38	13.8	237	86.2	275	2.78	0.094
Female	40	19.5	165	80.5	205		
Total	78	16.3	402	83.7	480		
Religion							
Christianity	58	16.6	292	83.4	350	LR 1.46	
Islam	20	15.9	106	84.1	126		0.482
Traditional religion	-		4	100	4		
Total	78	16.3	402	83.7	480		
Marital status							
Currently married	60	21.8	215	78.2	275	LR 18.84	0.001
Never married	18	9.6	170	90.4	188		
Previously married	-		17	100.0	17		
Total	78	16.3	402	83.7	480		
Level of education							
No formal education	-		31	100.0	31	LR 34.05	0.001
Less than tertiary	53	13.7	335	86.3	388		
Tertiary	25	41.0	36	59.0	61		
Total	78	16.3	402	83.7	480		

Likelihood Ratio χ^2 was used

Table 3: Relationship between selected variables and HCT uptake among adults of reproductive age in Osun State

Variable	Had HCT No.	Had HCT %	Never had HCT No.	Never had HCT %	Total %	χ^2	p-value
Current partner's screening status							
Current partner has been screened	48	55.8	38	44.2	86	LR 105.6	0.001
Current partner has not been screened	14	6.3	209	93.7	223		
I don't know if current partner has been screened	16	12.6	117	88.0	133		
I don't have a partner	-	38	100.0		38		
Total	78	16.3	402	83.7	480		
Partner's approval of HCT							
Partner will approve of HCT	65	19.5	268	80.5	333	LR 18.9	0.001
Partner will not approve of HCT	8	15.7	43	84.3	51		
I don't know if partner will approve of HCT	5	8.6	53	91.4	58		
I don't have a partner	-	38	100.0		38		
Total	78	16.3	402	83.7	480		

Likelihood ratio chi-square was used

than tertiary or no formal education (p = 0.001). HCT uptake was not significantly influenced by age, sex or religion (Table 2).

Table 3 depicts the relationship between some selected variables and HCT uptake. The uptake among respondents whose partners approved of HCT was 19.5%. This was higher than that obtained among those whose partners did not approve (15.6%), those unsure if their partners will approve (8.6%) and those without partners (0%). Those whose partners approved of HCT are therefore more likely to access HCT compared with the others (p = 0.001). HCT uptake among respondents whose partners had been screened for HIV was 55.6%. This was higher than that obtained among those whose partners had not been screened (6.3%), those unsure of their partner's screening status (12.6%) and those without partners (0%). Those whose partners had been screened for HIV are therefore more likely to access HCT compared with the others (p = 0.001).

DISCUSSION

The study revealed that less than a fifth of the overall respondents had ever been counselled or tested for HIV. Research conducted in Kenya, Ghana and Uganda equally reported low uptakes of HCT as well (Bwambale *et al.*, 2008). In South Africa on the other hand, the HCT uptake is much higher than that obtained in this study, about 50% (Shisana *et al.*, 2009).

About a third of the respondents in this study felt they were healthy and so did not need to access HCT services. This is similar to the findings of some studies conducted in South Africa, Nigeria and Zambia which reported that those who felt they were healthy did not access HCT. This mind set has grave implications for the control of HIV infection, a disease with a long incubation period such that most infected people look healthy for a long time (Meiberg *et al.*, 2008; Fylkesnes and Siziya, 2009). Such people do not realize their need for HCT services until they become symptomatic and much cannot be done to help them. The policy implication is that HIV/AIDS education should be intensified via the media, especially the fact that people can be infected and yet look healthy. The benefits of accessing HCT services early should also be stressed.

Another third of the respondents did not access HCT because felt they were not at risk of becoming infected with HIV. Other authors noted similar findings in their studies carried out in Zambia, China and Venezuela respectively (Ma *et al.*, 2007; Bonjour *et al.*, 2008). Though many people are at high risk for negative health outcomes including HIV infection, they perceive themselves as having little or no risk. Lack of accurate assessment of personal risk and inability to link behavior and susceptibility to the infection prevents people from taking the important first steps in preventing the disease. Programmatic efforts to enable people accurately assess

their levels of risk based on prior behavior should be intensified as this may lead to increased use of HCT services.

Lack of time to go for HCT services has not been documented much in the literature. In Nigeria, utilizing public health care facilities involves a lot of time: in terms of getting transportation to the hospital, obtaining cards, waiting to see the doctor, obtaining drugs and getting back home. All the waiting time spent at the hospital could preferably be spent at peoples' places of work. Since most HCT services are located within hospital premises, people probably feel that they would have to experience similar constraints before accessing HCT services. They are therefore quick to report that they do not have enough time. This finding was further corroborated by Ogundipe and Obinna (2008) (unpublished) who reported that the time consuming and complicated nature of assessing health and HCT services in Nigeria prevents people from utilizing them.

Those respondents who were currently married were more likely to access HCT than those who were previously or never married. This finding is consistent with those of other authors who similarly reported that being currently married is positively associated with HCT uptake (Thuong *et al.*, 2007; Demisse *et al.*, 2009). Currently married people are more likely to access HCT services than their unmarried counterparts because the Prevention of Mother to Child Transmission (PMTCT) programme available during antenatal care necessarily brings the married women into contact with HCT services, while knowledge of one's HIV status, a requirement for marriage in most churches today, must have brought many couples into contact with HCT services which is not the case with those who are still single. The policy implication is that strategies to encourage HCT uptake which target singles should be intensified.

Education significantly influenced uptake of HCT in this study. Those respondents with tertiary education were more likely to access HCT than those with no formal education or less than tertiary education. This finding is consistent with those of other authors who similarly reported that higher educational levels were positively associated with HCT uptake (Masiye *et al.*, 2009). People with higher educational levels are more likely to use HCT services because they may have more understanding of the benefits and are more likely to respond to health promotion messages (De Walque, 2006). This implies that strategies to encourage HCT uptake should target the less-educated, with simple, appropriately tailored messages on the benefits of HCT.

Respondents whose sexual partners approved of HCT were more likely to access HCT than those whose partners did not or those who had no partners. This is also consistent with reports of studies conducted in Ghana and Burkina Faso (Baiden *et al.*, 2005; Sarker *et al.*, 2007). In another study from Ethiopia, it was reported that lack of discussion with husband to seek his approval before HIV testing was an independent predictor for refusal of HIV testing (Fanta and Worku, 2012). Especially for women, discussion with and approval from their partners is important in order to cushion the effects of the HCT results; especially if positive. Negative after-effects like rejection, abandonment, divorce and stigmatization by partners are less likely to occur where couples have thoroughly discussed about the tests and its implication before testing. Couple discussion about HCT and where possible couple counselling should be encouraged.

Respondents whose sexual partners had been screened for HIV were more likely to access HCT compared with those who had no partners or those whose partners had not been screened. People tend to take up those behaviors which their spouses, peers or relations practice; or approve of (Jegede, 1996). The fact that respondents' sexual partners had been screened could have motivated them to do likewise. On the other hand, those without sexual partners or those whose partners had not been screened might not have had this motivating influence. Moreover, those without current sexual partners might possibly suppose they were not at risk of HIV since they were not currently sexually exposed. This however does not rule out their risks from previous sexual and non-sexual exposure.

CONCLUSION

The most important barriers to HCT uptake in this study among those who had not done so were perception of being in good health without need for HCT, non perception of risk of infection and lack of time to go for HCT amongst others. The determinants of HCT uptake were respondents' marital status, level of education, partner's approval of HCT and partner's screening status. Health education to make people appreciate their risk of HIV better and recognize the benefits of HCT should be intensified. Strategies to increase HCT uptake should target the unmarried and the less educated.

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