KNOWLEDGE AND UTILISATION OF HIV COUNSELLING AND TESTING SERVICES AMONG PUBLIC PRIMARY SCHOOL TEACHERS IN IBADAN NORTH LOCAL GOVERNMENT AREA, NIGERIA

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DEDICATION

This work is dedicated to God Almighty for His abundant mercy and love. I also dedicate it to my late parents, my brothers and sisters and especially my loving children and late wife.

ABSTRACT

HIV Counselling and Testing (HCT) is the entry point for the treatment and prevention of HIV transmission. The role of teachers in national development can be jeopardized if there is a high prevalence of HIV infection among this group. Presently, teachers are not regarded as high risk group as far as HIV/AIDS education is concerned and the possibility of contracting this disease is high as many of them are sexually active and may predispose to other means of HIV transmission. This study was therefore designed to assess knowledge and utilization of primary school teacherson HCT services in Ibadan North Local Government Area (LGA).

The study was a descriptive survey. A multi-stage sampling technique was used to select 400 teachers in selected public primary schools in the LGA for interview. The instrument for data collection was a pre-tested semi–structured questionnaire. Data were analysed using descriptive statistics and Chi square test with level of significant set at $p \leq 0.05$.

Age of respondents was 44.3±7.3 years, 89.0% were females and 90.8% were married. Most (99.0%) respondents were aware of HIV/AIDS. The overall knowledge score on HIV causation, transmission and prevention was 19.1±2.0 with 80.8% having good knowledge. Specifically, 46.5% knew the causative agent of AIDS and 26.9% knew that HIV could be detected through laboratory test. Only 10.3% mentioned sexual abstinence as a way of preventing HIV transmission. Other preventive measures listed by the respondents include, use of condom (23.3%) and avoidance of contaminated needles (22.3%). Only 32.5% of the respondents had ever received any training on HIV/AIDS or reproductive health issues and 13.4% had ever involved in school-based outreach programmes on HIV/AIDS. Above half (56.8%) of the respondents were aware of HCT. The electronic media (radio/TV) constituted their main source of information (30.9%). Only 26.3% knew what the HIV acronym stand for and another 42.5% knew where HCT services were located in their vicinity. Sex, religion and marital status of respondents were found to be significantly associated with knowledge of HIV/AIDS. Perception of self-vulnerability to HIV was low as only 28.6% perceived themselves as susceptible. Marital status was significantly associated with perception of susceptibility to HIV ($p<0.05$). Majority (89.5%) of the respondents believed sexually active persons should go

for HIV testing every six months. Only 32.2% had voluntarily tested for HIV. Reasons adduced for unwillingness to go for HCT included: belief in God's protection (27.7%), non-involvement in risky behaviours (23.3%), unreliability of test results (10.3%) and feeling that report might be positive (8.3%). Proximity to their homes (40.4%) and schools (25.0%) was the main factor that influenced some respondents' choice of HCT.

Studied primary school teachers knowledge about HIV/AIDS, awareness, and utilisation of HIV counselling and testing services were low. Health promotion strategies such as HIV/AIDS education and behaviour change communication programme to improve knowledge and use of HIV Counselling and Testing services among teachers are recommended.

Keywords: Primary school teachers, HIV counselling and testing, HIV knowledge, Perceived susceptibility.

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Cosmas Taiwo OMOGE

CERTIFICATION

I certify that this work was carried out by**Cosmas Taiwo OMOGE**in the Department of Health promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan, Nigeria, under my supervision.

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CHAPTER ONE

INTRODUCTION

Background to the study

The HIV and AIDS pandemic remains a major public health problem worldwide, more so in sub-Saharan Africa where more than 70 percent of all people living with HIV and AIDS reside (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2005). It is a global health problem complicated by socio-economic factors. The AIDS epidemic has reversed the gains of life expectancy and its impact is much greater where there is poverty and social inequality.

Nigeria has the largest population in the African continent with a population estimated to be about 140 million from the provisional report of the 2006 National Census (NPC, 2006). The first case of HIV was identified in Nigeria in 1986. Since then the HIV prevalence has grown exponentially from 1.8% in 1991 to 3.4% in 1993. The national Human Immunodeficiency Virus (HIV) prevalence in 2003 was 5.0%, and young people (15-24 years) continue to be most affected (FMoH, 2004). In 2005, the national HIV prevalence fell to 4.4% (FMoH, 2006). The high prevalence among young people has led to the surge of priority intervention activities (National Agency for the Control of AIDS [NACA], 2005) for both in-school and out-of-school young people. These activities focus on awareness creation, access to information and services, and life skills development for behaviour change. The school and the broader education system adopted various strategies for promoting HIV and AIDS awareness and prevention among young people. The central principle of these interventions is that they should help the respondents to behave in ways that would protect them from HIV infection (Kirby,2000).

In Nigeria, a National Family Life and HIV and AIDS Education (FLHE) curriculum has been developed by the Nigerian Educational Research and Development Council (NERDC) and the Federal Ministry of Education (FME). The goal of the FLHE curriculum is the promotion of preventive education by providing learners with opportunities to develop a positive and factual view of self; acquire information and skills they need to take care of their health including preventing HIV and AIDS; respect and value themselves and others; and acquire the skills needed to make healthy decisions

about sexual health and behaviours (NERDC, 2003). Complementary to the FLHE curriculum, is the HIV and AIDS peer education activities implemented in schools nation-wide by volunteer corps members of the National Youth Service Corps (NYSC), with support from UNICEF, National Agency for the Control of AIDS (NACA), and other partners. Moris, Ulmer and Chimnami (2003) have documented that health corps volunteers are well acceptable by students for HIV and AIDS prevention education.

Teachers have been identified as a major source of information on HIV and AIDS for children and young people in Nigeria. NPC (2006) reported that 41% of parents and guardians in Nigeria cited teachers as a major source of information on HIV and AIDS for children. However, a significant proportion of the Nigerian population lack adequate knowledge of the epidemic. The National HIV and AIDS and Reproductive Health Survey (NARHS) among 15 - 64 year old in Nigeria reported that only 53% of respondent met the UNAIDS indicator on knowledge of HIV prevention methods. The same survey also reported that misconception about the modes of transmission of HIV is still high (FMoH, 2005).

Among teachers, Ssengozi, Schlegel, Anyamele and Olson (2004) reported that some HIV experts have posited that HIV prevalence among teachers in Nigeria could be higher than that in the general population because of characteristics that may put teachers at a higher risk of being infected. These characteristics include higher level of mobility due to work transfers, which at times makes it hard to move with their spouses/partners; relatively higher level of earning and education that makes them attractive partners; and high level of authority in society that at times could be misused to engage in non-consensual sexual unions (Ssengozi *et al*., 2004).

The purpose of this study is to assess HIV and AIDS knowledge among teachers in public primary school in Ibadan, Nigeria. HIV counselling and testing services of satisfactory quality must involve the development of and support for efforts to improve the awareness of the benefits of HIV counselling and testing. This helps to normalize HIV and the corresponding counselling and testing services and to reduce stigma and discrimination; this happen when people are better informed, then there will be no cause

for stigma and discrimination and at best reduced to barest minimum. Involving people with HIV, communities and other key stakeholders in planning, implementing, monitoring and evaluating HIV counselling and testing services is critical for ensuring appropriate and effective services and achieving engagement in services being offered. The exercise is intended to inform better implementation of HIV and AIDS prevention interventions in schools. The HIV prevalence trend in Oyo state has always been higher (5.6%) than the national average (3.4%) and this informed the choice (FMOH, 2010; Hygea Publication and Services, 2014).

In the past few years in Nigeria, concerted efforts have been made to tackle the problem of HIV and AIDS. There has been an increase in the level of awareness for HIV and AIDS following massive sensitization programmes; this is yet to translate to significant changes in risky behaviours. An important contributory factor has been inadequate access to HIV Voluntary Counselling and Testing services (HCT). The current international consensus on HIV voluntary counselling and testing is that more people urgently need to learn their HIV status so they can benefit from prevention, care and treatment. Historically, in Nigeria and around the world, the primary way people have learnt their HIV status was by making decision to seek HIV voluntary counselling and testing (HCT) services (DiScenza *et al*., 1996).

HIV voluntary counselling and testing services plays a vital role in preventing HIV infection. The primary focus of HCT is on knowledge development and risk assessment in order to promote HIV testing. If a person tests positive for HIV, then counselling focuses on behavioural change and supportive adherence counselling with therapeutic regimes. As one group of researchers states, HCT "is a tool in controlling the spread and effects of this disease" (DiScenza *et al*., 1996). This simultaneously addresses 3 basic and inter-related dynamics of the epidemic for an "expanded response" to HIV and AIDS.

Statement of the problem

In Nigeria, huge investments have been made on HIV and AIDS prevention interventions in schools. However, the ability of teachers to effectively support the interventions has remained a source of concern. The concern is occasioned by the lack of appropriate

knowledge and attitude on HIV and AIDS among teachers. The National Commission for Colleges of Education (NCCE) Nigeria revised the curriculum of teacher education in 2006 and incorporated modules on HIV and AIDS education to bridge the gap.

Similarly, the attitude of teachers towards PLWHA is of concern. A study of educators' view on the impact of HIV and AIDS in primary education in three (Kano, Lagos and Nasarawa) States in Nigeria reported that 56% of teachers in Lagos State were of the view that HIV-positive teachers should not be allowed to teach. In the same study, 34% of teachers in Kano State lacked the willingness to discuss HIV and AIDS issue in the workplace (Ssengozi *et al*., 2004).

In some southern African countries, reports show that more teachers are absent from duty due to HIV and AIDS health conditions leaving the educational system in those countries dying. Statistics also revealed that a high proportion of skilled and highly educated manpower is infected. A high number of teachers are infected and are dying and there is a reduction of pupils and students (Murimba, 2010; Caillods, Kelly and Tournier, 2008; UNAIDS/WHO, 2008; Castro, Duthilleul, and Caillods, 2007; World Bank, 2007; UIS/UNESCO, 2006).

Oni and Opatola (2002) cited in Obioha (2004) enumerated that the HIV/AIDS epidemic could impact negatively on the accumulation of human capital if there is lack of AIDS prevention education in Nigeria. The assumption was based on the fact that education and health are critical components of human capital, and any failure in either of them would lead to general collapse in human progress and change. In addition, Ssengozi *et al.*, (2004) argued that school-based interventions have direct impact on the quality and quantity of the nation's future human capital.

Justification

The primary school teachers' knowledge on HIV counselling and testing is not known therefore this study will serve as a baseline. Their level of knowledge, attitude and willingness to participate in the study will serve as further intervention for the same group of people. Classroom teachers have the responsibilities far broader than just

"teaching the subject". Presiding as the only authority figure in classroom for hours each day, the teacher is responsible for the welfare of students. When the teacher has been informed about HIV and AIDS and he/she has been or is prepared to be tested, it serves as an entry point for the prevention of HIV and AIDS pandemic in education sector. It also reduces fear, ignorance and stigma surrounding HIV; contribute to an environment supportive of safer sexual behaviours; preventing transmission through the provision of information, and improving quality of life. It has become clear that prevention is essential and that education might potentially be the single most powerful weapon against HIV transmission. HIV and AIDS affect the educational system as it affects the health of both the student and staff body.

A study of the knowledge of HIV and AIDS, awareness of HCT and the adoption of HIV voluntary counselling and testing services among teachers is therefore required to strengthen the human resource capacity for school based HIV and AIDS prevention interventions in Nigeria. The study therefore intended to proffer baseline information that will eventually assist in implementing prevention intervention programme among teachers in both primary and secondary educational levels.

Significance of the study

The role of teachers in disseminating HIV and AIDS information is critical for the success of school-based program. The review of literature in Peltzer (2003) noted that teachers often lack adequate knowledge of the disease (HIV and AIDS). The review stated that teachers lacked formal training on HIV and AIDS issues and relied on traditional teacher-centred instructional methods for HIV and AIDS education. The scenario in Nigeria is not different. Since the inception of both the curricular (FLHE) and co-curricular (peer-led) HIV and AIDS education in Nigeria, little effort has been focused on teachers. Therefore, there is a risk that the huge investment in HIV and AIDS prevention intervention' in schools might not yield the desired result in Nigeria if the concerns of teachers are not addressed.

This study provided information on extent of knowledge and utilisation of HIV counselling and testing services among primary school teachers in Ibadan North Local

Government Area. The result of this study is expected to provide necessary modification to the strategies for school based HIV and AIDS prevention interventions in Nigeria. Apart from this, the study's end result also made provision for more education about HIV and AIDS, that possibly positioned teachers better to inform their pupils and widen teachers' scope. The result of the study without iota of doubt is useful for future interventions on prevention of HIV among academia.

Research questions

1. What is the level of primary school teachers' knowledge about HIV and AIDS?
2. What is the perception of primary school teachers about self susceptibility to HIV infection?
3. To what extent has primary school teachers utilize HIV voluntary counselling and testing (HCT) services?

Broad objective

The broad objective of this study is to assess the knowledge of primary school teachers' utilisation of HIV counselling and testing services.

Specific objectives

The specific objectives are to:

1. Assess knowledge of primary school teachers on HIV and AIDS
2. Determine the perception of primary school teachers on self-susceptibility to HIV infection
3. Examine pattern and level of utilization of HCT services among primary school teachers

Hypotheses

$H_0$1 There is no significant relationship between respondents' selected socio-demographics of sex, marital status and knowledge on HCT services.

$H_0$2 There is no significant relationship between respondents' selected socio-demographics of sex, marital status and willingness to go for HCT services.

CHAPTER TWO

LITERATURE REVIEW

According to World Bank (2002), countries' education sectors have a strong potential to make a difference in the fight against HIV and AIDS. They offer an organized and efficient way to reach large numbers of school-aged youth - the group either most at risk (secondary) or most receptive to efforts that seek to influence behaviour (primary). Therefore, school-based HIV and AIDS prevention intervention provides opportunity for curbing new HIV infection among children and youth. In Nigeria, teachers have been identified as major sources of HIV preventive information for learners (NPC and ORC Macro, 2004). Likewise, the importance of appropriate HIV and AIDS knowledge and attitude among teachers in the implementation of HIV and AIDS prevention interventions in schools is very important. This chapter presents the review of literature on HIV and AIDS knowledge and attitude among teachers; as well as the conceptual framework that guides this study.

The review explored HIV and AIDS knowledge and attitude among teachers. Due to the fact that teachers are subset of the adult population and the availability of limited literature on HIV and AIDS knowledge and attitude among teachers in Nigeria, the review also included literature among adult population. In addition, literatures on HIV and AIDS knowledge and attitude among learners were reviewed as a reflection of the findings among teachers who are responsible for impacting knowledge and skills on them (learners) (Mulumba, 2008; UNAIDS Inter-Agency Task Team on Education, 2010).

Specific attributes related to HIV and AIDS knowledge and attitudes were reviewed to provide focus for the study. HIV and AIDS knowledge was explored around the level of awareness and source of HIV and AIDS information; the routes of HIV transmission; misconception related to HIV transmission; methods of prevention of HIV transmission; identification of signs and symptoms of HIV and AIDS and knowledge of someone with HIV or who have died of AIDS. Attitude related to HIV and AIDS explored in the review were stigma and discrimination towards PLWHA and PABA; perception of the risk of HIV infection and HIV testing and disclosure. The willingness of teachers to discuss was also discussed.

The burden of the AIDS epidemic and the importance of HIV and AIDS prevention intervention in schools are explored in this section to provide an insight into the research problem. Specifically, this section focuses on the global and national trends of the HIV and AIDS epidemic including the impact on young people in Nigeria; the rational for HIV and AIDS prevention interventions in schools more importantly HIV voluntary counselling and testing.

UNAIDS (2005) reported that one of the greatest health challenges of this age is that posed by infection with Human Immunodeficiency virus (HIV) which is the causative agent of Acquired Immune Deficiency Syndrome (AIDS). It has not only been a challenge to health but also to economic development and social progress. HIV is a lentivirus, like all viruses of this type, it attacks the immune system. Lentiviruses are in turn part of a larger group of viruses known as retroviruses. The name "Lentiviruses" literally means ‘slow virus’ because they take such a long time to produce an adverse effects on the body.

This virus produces massive cellular deficiency in its victim and as a consequence of immune failure, the patient is susceptible to, and is defenceless from a wide range of opportunistic disease, including pneumocystic pneumonia kaposi sarcoma and a host of other illnesses. Over time and without treatment, HIV gradually destroys the body’s defences against diseases, leaving it vulnerable to many infections and cancers that would not normally develop in healthy people. Without treatment, some people with HIV infection have no symptoms at all; some have wild health problems while others have severe health problems associated with AIDS (UNAIDS, 2008).

According to UNAIDS (2008), Acquired Immune Deficiency Syndrome (AIDS) is a state of HIV infection presenting with the many diseases. By the time a diagnosis of AIDS is made, HIV must have seriously damaged the body’s immune system. Often a person with AIDS must have already had a life - threatening infection or concern. In the past, to get effective treatment, it may take over 10 years or more from the time of initial HIV infection to a diagnosis of AIDS and on the average it might take another two of four

years before death. With new treatment, however, the destruction of the immune system, caused by the HIV is slowed down, thereby increasing life expectancy of the AIDS victims. Some people with HIV may never develop AIDS (UNAIDS, 2008).

HIV is transmitted when infected blood, semen, vaginal fluids, or breast milk enter another person's body. This occurs many times during unprotected sex or during injection of drugs when needles or other tools, cottons and other instruments are shared. Anyone infected with HIV can transmit it, even when they are not sick; they are not diagnosed for AIDS or even when they are undergoing treatment for the infections. Infected pregnant women can also transmit HIV to their babies (Centre for Disease Control and Prevention [CDC], 2014).

Since the first cases of AIDS were diagnosed in USA in 1981, the disease has spread so rapidly that it is currently a pandemic of serious public health importance and since the beginning of the pandemic; more than 47 million people globally have been infected with HIV. By the end of 1999, the total number of people living with HIV estimated at 33.4 million out of which 24.5million were in Africa (UNAIDS Report: A joint response on AIDS. UNAIDS/99). HIV and AIDS is a disease that recognizes no territorial, social, political and economic boundaries and for which there is to date no known cure. Larger numbers of people with HIV and AIDS live in developing countries and infection rates continue to rise due to poverty, poor health systems and limited resources for HIV and AIDS prevention and care (UNAIDS, 2008).

Globally, AIDS has been adjudged one of the most destructive epidemics in recorded history, accounting for the death of over 25 million people since 1981 (UNAIDS, 2005). The 2006 AIDS report states that 'the number of people living with HIV continues to grow, as does the number of death due to AIDS'. By the end of the year 2006, the UNAIDS estimated that about 39.5 million people were living with HIV globally, 2.4 million more than in 2004. This population included 4.3 million adult and children newly infected in 2006 (UNAIDS, 2008). It was also reported that the AIDS epidemic claimed 2.6 million lives in 2006 alone; 380,000 of this population were children (UNAIDS, 2008).

Magnitude of HIV and AIDS Epidemic-Global, National and State Levels

Global epidemic of HIV and AIDS

Acquired Immunodeficiency Syndrome (AIDS) continues to be a major global health priority, although important progress has been achieved in preventing new HIV infections and in lowering the annual number of AIDS related deaths. The number of people living with HIV continued to be on the increase. AIDS-related illnesses remain one of the leading causes of death globally and are projected to continue as a significant global cause of premature mortality in the coming decades (Bolarinwa, 2013; World Health Organization(WHO) and UNAIDS, 2010).

AIDS has caused the death of more than 25 million people since it was first discovered in 1981, making it one of the most destructive epidemic in human history (UNAIDS, 2005). As at December, 2011; the total number of people with Human Immuno-deficiency Virus (HIV) was estimated at 34 million as against the 40.3 million people living with HIV in 2005 (UNAIDS, 2011). Sub-Saharan Africa still bears an inordinate share of the global HIV burden. Although the rate of new HIV infections has decreased, the total number of people living with HIV continues to rise. In 2009, the number reached 22.5 million accounting for 68% of the global total. The adult (15-49) years prevalence as at 2007 was 5.0% as against 7.2% in 2005. The total adult and child death due to AIDS in the sub-Sahara Africa were estimated at 1.3 million in 2009 as against 2.4 million in 2005 (UNAIDS, 2010).

The number of people living with HIV worldwide continued to grow in 2008, reaching an estimated 33.4 million [31.1 million–35.8 million]. The total number of people living with the virus in 2009 was more than 20% higher than the number in 2000, and the prevalence was roughly three fold higher than in 1990 (UNAIDS, 2008). In 2009, an estimated 2.6 million [2.4 million–3.0 million] new HIV infections occurred while 1.8 million [1.7 million–2.4 million] deaths were estimated due to AIDS-related illnesses worldwide. The epidemic appears to have stabilized in most regions, although prevalence continues to increase in Eastern Europe and Central Asia and in other parts of Asia due to a high rate of new HIV infections. Sub-Saharan Africa remains the most heavily affected region, accounting for 68% of all new HIV infections in 2009.

The following is the Global summary of the AIDS epidemic as at December 2009 as stated by UNAIDS 2010.

- Adults and Children living with HIV = 33.3 million
- Adults and Children newly infected with HIV = 2.6 million
- Percent Adult Prevalence (15-49years) = 0.8%
- AIDS related deaths among Adults and Children = 1.8 million.

Table 2.1: Global Statistics on HIV Prevalence (UNAIDS, 2010)

Region	Adults & children living with HIV/AIDS	Adults & children newly infected	Adult prevalence*	AIDS-related deaths in adults & children
Sub-Saharan Africa	22.5 million	1.8 million	5.0%	1.3 million
North Africa & Middle East	460,000	75,000	0.2%	24,000
South and South-East Asia	4.1 million	270,000	0.3%	260,000
East Asia	770,000	82,000	<0.1%	36,000
Oceania	57,000	4,500	0.3%	1,400
Central & South America	1.4 million	92,000	0.5%	58,000
Caribbean	240,000	17,000	1.0%	12,000
Eastern Europe & Central Asia	1.4 million	130,000	0.8%	76,000
North America	1.5 million	70,000	0.5%	26,000
Western & Central Europe	820,000	31,000	0.2%	8,500
Global Total	33.3 million	2.6 million	0.8%	1.8 million

The Situation in sub-Sahara Africa

In 2011 there was an estimated 23.5 million people living with HIV in Sub-Saharan Africa (UNAIDS, 2012). This has increased since 2009, when an estimated 22.5 million people were living with HIV, including 2.3 million children (UNAIDS, 2012).

The increase in people living with HIV could be partly due to a decrease in AIDS-related deaths in the region. There were 1.2 million deaths due to AIDS in 2011 compared to 1.8

million in 2005 (UNAIDS, 2012). Almost 70% of people living with HIV worldwide live in sub-Saharan Africa (UNAIDS, 2012). The latest figures for each sub-Saharan African country were published in 2012 and refer to the end of 2011. They are shown below (UNAIDS, 2012) (Table 2.2).

Sub-Saharan Africa is more heavily affected by HIV and AIDS than any other region of the world. An estimated 22.5 million people are living with HIV in the region; this is around two thirds of the global total. In 2009 around 1.3 million people died from AIDS in sub-Saharan Africa and 1.8 million people became infected with HIV. Since the beginning of the epidemic 14.8 million children have lost one or both parents to HIV/AIDS (UNAIDS, 2010). Sub-Saharan Africa still bears an inordinate share of the global HIV burden. The epidemics in sub-Saharan Africa vary considerably, with southern Africa still the most severely affected. An estimated 11.3 million people were living with HIV in southern Africa in 2009 (UNAIDS, 2010). This figure is nearly one third more than the 8.6 million people living with HIV in the region a decade earlier. Globally, 34% of people living with HIV in 2009 resided in the 10 countries in southern Africa, 31% of new HIV infections in the same year occurred in these 10 countries, as did 34% of all AIDS-related deaths (UNAIDS, 2010). About 40% of all adult women with HIV live in southern Africa.

HIV incidence is falling in 22 countries in sub-Saharan Africa. The HIV incidence appears to have peaked in the mid-1990s, and there is evidence of declines in incidence in several countries in sub-Saharan Africa (UNAIDS, 2010). Between 2001 and 2009, the incidence of HIV infection declined by more than 25% in an estimated 22 countries. With an estimated 5.6 million (5.4 million-5.8 million) people living with HIV in 2009, South Africa's epidemic remains the largest in the world (UNAIDS, 2010). The epidemics in East Africa have declined since 2000 but are stabilizing in many countries. The national HIV prevalence in Kenya fell from about 14% in the mid-1990s to 5% in 2006 (UNAIDS, 2010).

The HIV prevalence in West and Central Africa remains comparatively low, with the adult HIV prevalence estimated at 2% or under in 12 countries in 2009 ,these countries

are Benin, Burkina Faso, Democratic Republic of the Congo, Gambia, Ghana, Guinea, Liberia, Mali, Mauritania, Niger Senegal, and Sierra Leone (UNAIDS, 2010).

Table 2.2: HIV prevalence and incidence by region/Sub-Sahara Africa's HIV and AIDS Statistics 2011

Country	People living with HIV/AIDS	Adult (15-49) prevalence %	Women with HIV/AIDS	Children with HIV/AIDS	AIDS deaths	Orphans due to AIDS
Angola	230,000	2.1	120,000	34,000	12,000	140,000
Benin	64,000	1.2	33,000	9,400	2,800	47,000
Botswana	300,000	23.4	160,000	15,000	4,200	100,000
Burkina Faso	120,000	1.1	56,000	23,000	6,800	130,000
Burundi	80,000	1.3	38,000	19,000	5,80000	120,000
Cameroon	550,000	4.6	280,000	60,000	34,000	340,000
Central African Republic	130,000	4.6	62,000	20,000	10,000	140,000
Chad	210,000	3.1	100,000	34,000	12,000	180,000
Comoros	<500	0.1	<100	...	<100	<100
Congo	83,000	3.3	40,000	13,000	4,600	51,000
Côte d'Ivoire	360,000	3.0	170,000	61,000	23,000	410,000
Dem. Republic of Congo (2009)	(430,000-560,000)	(1.2-1.6)	(220,000-300,000)	(33,000-86,000)	(26,000-40,000)	(350,000-510,000)
Equatorial Guinea	20,000	4.7	10,000	2,600	<1,000	6,000
Eritrea	23,000	0.6	12,000	4,000	1,400	19,000
Gabon	46,000	5.0	24,000	3,100	2,500	21,000
Gambia	14,000	1.5	7,700	...	<1,000	4,500
Ghana	230,000	1.5	110,000	31,000	15,000	180,000
Guinea	85,000	1.4	41,000	11,000	4,000	52,000
Guinea-Bissau	24,000	2.5	12,000	3,100	<1,000	7,500
Kenya	1,600,000	6.2	800,000	220,000	62,000	1,100,000
Lesotho	320,000	23.3	170,000	41,000	14,000	140,000
Liberia	25,000	1.0	12,000	5,200	2,300	33,000
Madagascar	34,000	0.3	9,500	...	2,600	12,000
Malawi	910,000	10.0	430,000	170,000	44,000	610,000
Mali	110,000	1.1	55,000	...	6,600	100,000
Mauritania	24,000	1.1	13,000	...	1,500	5,500

Mauritius	7,400	1.0	2,200	...	<1000	2,700
Mozambique	1,400,000	11.3	750,000	200,000	74,000	800,000
Namibia	190,000	13.4	100,000	20,000	5,200	75,000
Niger	65,000	0.8	33,000	...	4,000	60,000
Nigeria	3,400,000	3.7	1,700,000	440,000	210,000	2,200,000
Rwanda	210,000	2.9	110,000	27,000	6,400	170,000
Senegal	53,000	0.7	28,000	...	1,600	7,600
Sierra Leone	49,000	1.6	27,000	4,300	2,600	18,000
South Africa	5,600,000	17.3	2,900,000	460,000	270,000	2,100,000
Swaziland	190,000	26.0	100,000	17,000	6,800	75,000
Togo	150,000	3.4	73,000	19,000	8,900	89,000
Uganda	1,400,000	7.2	670,000	190,000	62,000	1,100,000
United Rep. Of Tanzania	1,600,000	5.8	760,000	230,000	84,000	1,300,000
Zambia	970,000	12.5	460,000	170,000	31,000	680,000
Zimbabwe	1,200,000	14.9	600,000	200,000	58,000	1,000,000
Total sub-Saharan Africa	23,500,000	4.9	12,100,000 (2009)	2,300,000 (2009)	1,200,000	14,800,000 (2009)

Source: UNAIDS Report on the Global AIDS Epidemic, (2012)

Nigeria has over 373 ethnic groups spread around the country. The major indigenous languages are Yoruba, Ibo and Hausa. However, English is the official language in the country. In addition to the human resource, Nigeria is endowed with a lot of other natural resources, the major ones being crude oil, bitumen and agricultural products. The main exports include petroleum, petroleum products and cocoa.

National pandemic of HIV and AIDS

The HIV pandemic in Nigeria is believed to have started in the 1980s with the first AIDS case reported in 1986. Like many other developing countries, Nigeria has passed through several phases in her response to the epidemic of HIV/AIDS. The stages included an initial period of denial; a largely medical response; a public health response; and recently a multi-sectoral response that focused on prevention, treatment and impact mitigation (National Policy on HIV/AIDS, 2003). Nigeria as a country faces many challenges in dealing with its HIV/AIDS pandemic. Factors fuelling the epidemic of HIV/AIDS are largely behavioural; hence, public education which would engender positive behavioural

change therefore plays a key role in curtailing the spread of HIV infection. In Nigeria, the pandemic of HIV continues to grow despite concerted efforts to control it. Sentinel surveillance among antenatal clinic attendees rose from 1.8% in 1991 to 5.8% in 2001 and recently to 4.4% in 2005;4.6% as at 2008 and 4.1% in 2010 (FMOH, 1995; 2001; 2003, 2010).

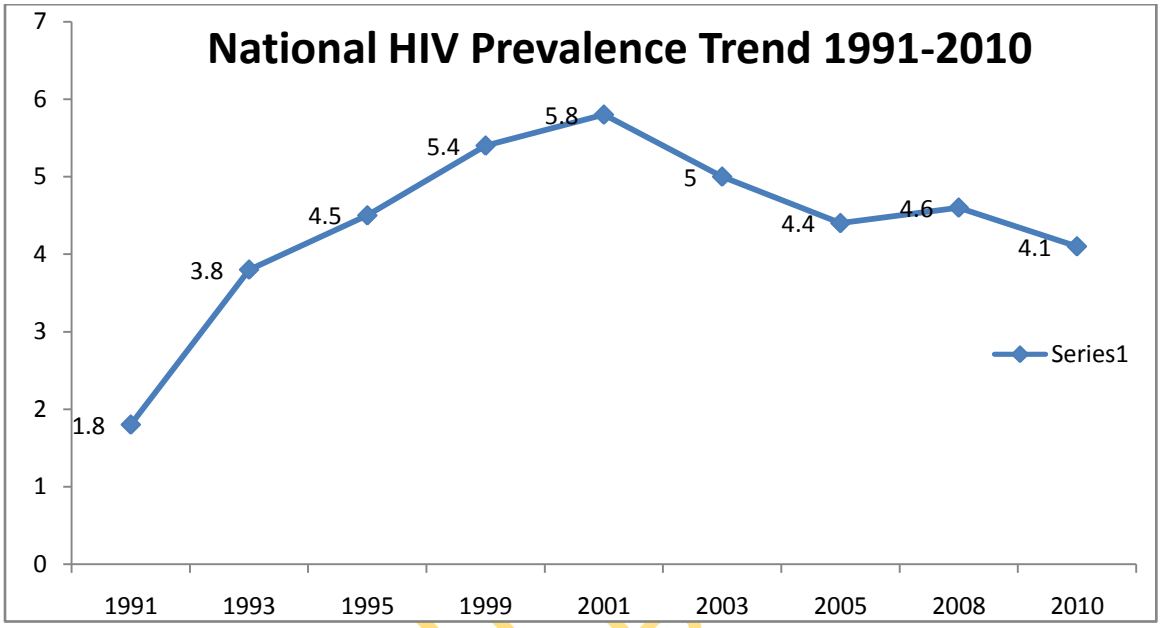


Figure 2.1: National HIV Prevalence Trend 1991-2010

Source: GLOBAL AIDS RESPONSE Country Progress Report Nigeria, NACA, 2012

For the twenty six year period dated 1986 till December 2011, that AIDS was first reported in Nigeria, 3,459,363 people now live with HIV and an estimated 1,449,166 require ARV. 388,864 new infections occurred in the year ended 2011 and records show 217,148 AIDS related deaths. Between 1991 and 2001, Nigeria witnessed an increase in the prevalence of HIV in the country. The first case of AIDS in Nigeria was reported in 1986 thereby establishing the presence of the epidemic in the country. Consequently, and in line with guidelines from the World Health Organization (WHO), the government adopted ANC sentinel surveillance as the system for assessing the epidemic. The national HIV Seroprevalence level, obtained from sentinel surveys of antenatal care attendees, increased from 1.8 percent in 1991 to 5.8 percent in 2001 and then declined to 5.0 percent in 2003 and further to 4.4 percent in 2005. This was followed by a rise to 4.6 percent in

2008 and then a recent decline to 4.1 percent in 2010 (NACA, 2012). Although most-at-risk populations contribute to the spread of HIV, heterosexual sex, particularly of the low-risk type, still makes up the bulk of infections (about 80 percent). Mother-to-child transmission and transfusion of infected blood and blood products are generally estimated as ranking next as common routes of infection; arguably, each of these two are believed to account for almost ten percent of infections. Even as HIV prevalence in the general population has decreased from the 1990s, it has risen in sex workers and men having sex with men, hence, who have become very important bridge groups (NACA, 2012).

In the country, women below the age of 49 years have the highest HIV prevalence rates and mother–to-child transmission now accounts for 10% of new infections. The North central zone has the highest prevalence rates per zone while urban areas had more HIV prevalence than rural (NACA, 2012). Three strategies namely: abstinence, faithfulness and the use of condoms have been adopted to prevent further transmission in the community based on the high proportion of cases transmitted via sexual intercourse (NACA, 2012).

Governance

The country is a Federation, operating a 3-tier governance system at the National, State and Local Government level. It has 36 states including the Federal Capital Territory and 774 local government areas; though Lagos is the largest city. For ease of administration and accelerated development, the states have been divided broadly into six geopolitical zones namely North-East (NE), North-Central (NC), North-West (NW), South-East (SE), South-South (SS) and South-West (SW). Interestingly, the HIV and AIDS coordination also takes along the governance structure. The country is currently under a democratic government for a third consecutive term of 4 years each after about 30 years of military rule. The emerging economic and political reforms arising from the democratic rule since 1999 have made significant impact in the health, financial, transport, environment and agricultural sectors etc.

Development indicators

There are more than 100 national and local newspapers and publications, some of them state owned. Radio is the key source of information for many Nigerians. The GNI per capita is US $560. Life expectancy for men is 46 years and for women 47 years. According to the 2007/2008, Human Development Index Report, the country's Human Development Index Value (2005) is 0.470 (NACA, 2008).

HIV and AIDS knowledge

Knowledge refers to a recall of factual information, and is a pre-requisite to appropriate behaviour. It is the most important tool to effect behaviour change (Gbefwi, 2004). Bertrand (1926) defined knowledge in Encyclopaedia Britannica as belief which is in agreement with fact. The linkage between knowledge and behaviour has been stated in the cognitive - behaviour theory, where behaviour was stated to be mediated through cognition; and that knowledge is necessary but not sufficient to produce behaviour change (National Cancer Institute, 2005). Hence, UNAIDS (2005) stated that sound knowledge about HIV and AIDS is an essential pre-requisite - albeit, often an insufficient condition for adoption of behaviour that reduces the risk of HIV transmission, This section reviewed available literature on the awareness of HIV and AIDS, the knowledge of HIV transmission, clarification of misconceptions about HIV transmission and methods of prevention. It also explored the knowledge of the signs and symptoms of HIV and AIDS as well as the knowledge of someone infected with HIV or who have died of AIDS (Mbonu, van den Borne and De Vries, 2011).

Awareness and source of information about HIV and AIDS

The awareness of HIV and AIDS is the first step in acquiring knowledge of the AIDS epidemic. Sustaining the knowledge require identification of different sources of HIV and AIDS information. This section explored the levels of HIV and AIDS awareness and the common sources of HIV and AIDS information among teachers and other relevant population.

Awareness of HIV and AlDS

In Nigeria, majority of teachers (97%) were aware of HIV or AIDS. Slightly more female teachers (97%) than males (95%) were aware of HIV, There was no difference in the proportion of male and female respondents who have heard about AIDS (FME 2006), Among primary school teachers in Kano, Lagos and Nasarawa States in Nigeria, Ssengozi *et al.*, (2004) reported that more than 99% of respondent have heard of HIV and AIDS, In South Africa, Peltzer (2003) reported that life skills teachers in secondary schools were well informed about HIV and AIDS, Among adult population, the National Demographic Health Survey (NDHS) in Nigeria in 2003 (NPC and ORC Macro, 2004) reported that more men (97%) than women (86%) have heard of AIDS, Interestingly, all respondents who have acquired higher (tertiary) education were aware of AIDS (NPC and ORC Macro, 2004). The high awareness level among respondent who have attained tertiary level of education is significant as tertiary education is a minimum qualification for teachers in secondary schools in Nigeria. The NARHS reported a slightly higher proportion of adult women (90%) have heard of HIV or AIDS when compared to the population reported in NDHS 2003. The NARHS reported similar findings to the NDHS 2003 among adult males (96%) and respondents who have acquired tertiary education (99.6%) (FMOH, 2005). Among migrant young adults in Kano and Aba cities in Nigeria, Smith (2003) reported that over 99% of them have heard of HIV and AIDS.

Sources of information on HIV and AIDS

The electronic media (television 88% and radio 87%), newspaper (78%), and public campaigns (71%) were the common sources of HIV and AIDS information among teachers in Nigeria. About 54% of the teachers also reported sourcing HIV/AIDS information from religious bodies (FME, 2006). Almost all primary school teachers (93%) in Kano, Nasarawa and Lagos States in Nigeria mentioned the mass media as their source of information on HIV and AIDS (Ssengozi *et al.*, 2004). In South Africa however, Peltzer (2003) reported that in-service training was identified by 63% of secondary school teachers as a source of HIV and AIDS information. In China, Huang *et al.*, (2005) reported that undergraduate students sourced HIV and AIDS information from family members (40%), posted bulletins in school (43%), and health professional (65%).

The media (television and newspapers) were indicated by more than 92% of the respondents as important source of information.

Knowledge of the routes of HIV transmission

The common routes of transmission of HIV in Nigeria are unprotected sex, mother-to-child transmission, transmission through blood and blood products, and sharing of sharp instruments including hypodermic needles, and the use of unsterilized tattoo and grooming equipment (FGN, 2003; UNICEF, 2005). Generally, many teachers (80%) in Nigeria knew about each of the major routes of HIV transmission routes (FME, 2006). However, a lower proportion of adult population (62%) in FMOH (2005) knew all the routes of HIV transmission. In Kano, Nasarawa and Lagos States Nigeria, Ssengozi *et al.*, (2004) reported that two thirds of primary school teachers interviewed correctly mention at least two ways of transmitting HIV when prompted. The knowledge of the different routes of HIV transmission is explored further below.

HIV transmission through unprotected sex

According to FGN (2003), unprotected, penetrative sexual intercourse is the most common mode of transmission of HIV in Nigeria. It is estimated that 80% or more of the transmission of HIV in Nigeria is through heterosexual mode (NACA, 2004). Therefore, the knowledge of sexual transmission of HIV among teachers is essential. Over 90% of teachers in Nigeria knew HIV can be transmitted through unprotected sex (FME, 2006; Ssengozi *et al.*, 2004). Similarly, 91% of adult respondents in NARHS (FMOH, 2005) recalled that HIV can be transmitted through sexual intercourse. Among high school students Savaser (2003) reported that 95% of respondents knew that sexual intercourse is one of the common routes of HIV transmission. Though a lower proportion of migrant young adults (85%) in Kano and Aba cities in Nigeria knew that HIV could be transmitted through sexual intercourse, the respondents identified some risky sexual behaviour that can increase the risk of contracting HIV. They reported that sexual promiscuity or immoral sex (or both) is a common route of spreading HIV. Specifically, 29% of respondents in Kano and 21% in Aba knew that sex with prostitute is a means of contracting HIV (Smith, 2003). In China, Huang et al., (2005) reported that 12% of undergraduate students knew that anal sex is a likely route of transmitting HIV.

Mother-to-child transmission of HIV (MTCT)

UNAIDS (1998) have estimated that the probability of an HIV-positive woman's baby becoming infected will ranges from 15% to 25% in industrialized countries and from 25% to 35% in developing countries. In 2006, about 74,000 babies were born with HIV in Nigeria (FMOH, 2006). It has been postulated that MTCT is the second major mode of transmission of HIV in Nigeria with possible routes of transmission during pregnancy, during birth, and through breastfeeding of the baby (NACA, 2004). About two thirds of the adult population (69%) in Nigeria knew that HIV can be transmitted from mother to unborn child (FMOH, 2005). Among teachers, 66% of the respondents knew about MTCT during pregnancy, 60% through breastfeeding and 44% during delivery (FME, 2006). A higher proportion of adult respondents in the NARHS knew about the three routes of MTCT, 72% knew about transmission during pregnancy, 64% through breast feeding, and 63% during delivery (FMOH, 2005). In the 2003 NDHS, about half of the adult respondents knew that HIV can be transmitted through breast feeding (NPC and ORC Macro, 2004).

In India, Ananth and Koopman (2003) reported that 76% of women of childbearing age were knowledgeable of the vertical transmission of HIV at delivery. Among undergraduate students in China, Huang *et al*., (2005) reported that 90% of respondents knew about the likelihood of HIV transmission from infected pregnant mother to her baby, this includes 79% that knew about transmission through breast feeding.

Transmission through blood

Studies from Nigeria have reported that 81% of adult respondents (FMOH, 2005) and 93% of teachers (FME, 2006) were knowledgeable of HIV transmission through blood. However, Ssengozi *et al*., (2004) reported that only 60% of primary school teachers in Kano, Lagos and Nasarawa states Nigeria knew about this route of HIV transmission. Smith (2003) also reported that 61% of migrant young adults in Kano city knew about HIV transmission through blood transfusion.

Transmission through sharing of *sharp objects*

Among teachers in Nigeria, FME (2006) reported that 95% of respondents knew about HIV transmission through sharing of sharp objects. Similar findings have also been reported in the NARHS with 85% of adult respondents (FMOH, 2005) knowing that HIV can be transmitted through sharing of sharp objects. Likewise, Savaser (2003) reported that high school students in Turkey knew that using needles previously used by others (82%), and other instruments contaminated by the AIDS virus (64%) were common routes of HIV transmission. However, only 30% of primary school teachers in Kano, Nasarawa and Lagos states in Nigeria 'had the knowledge of HIV transmission through sharing of sharp object (Ssengozi *et al*., 2004). Among migrant young adults, Smith (2003) reported that 46% of the respondents in Kano and 43% in Aba cities in Nigeria knew that sharing sharp object can transmit HIV.

Knowledge of misconceptions about HIV transmission

Addressing misconceptions related to the transmission of HIV is an important issue in the context of HIV-related knowledge and has implications for promoting behaviour change especially among learners. In Nigeria, FME (2006) reported that misconception about HIV is common among some teachers. Misconceptions that HIV is transmitted through mosquito bites (16%), kissing (18%) and witchcraft (6%) were reported in the survey. In South Africa, 25% of secondary school teachers (Peltzer, 2003) had a misconception that HIV can be contracted through mosquito bite. Among learners in California, Hancoock *et al.*, (1999) reported that 72% of the freshmen and 92% of senior students held erroneous belief that mosquitoes and other pest can infect people with HIV. Misconceptions about HIV transmission are also common among adult population in Nigeria. FMOH (2005) reported that HIV transmission through mosquito bites (30%), kissing (25%), sharing of toilets (22%), sharing eating utensils (20%) and witchcraft (13%), and hugging (6%) were common misconceptions among adult respondents in the NARHS.

However, fewer proportions of respondents who had attained tertiary education reported these misconceptions. The rejection of these misconceptions is an important component of HIV and AIDS knowledge. The 2003 NDHS reported that 28% of male and 21% of female respondents (NPC and OPC Macro, 2004) rejected two common misconceptions

about HIV transmission. They knew HIV cannot be transmitted through mosquito bites and witchcraft/other supernatural means, and knew a healthy looking person can have HIV. In a study among high school students in Turkey, 57% of respondents knew HIV cannot be transmitted from eating in the same plate with an infected person and 40% knew HIV is not transmitted through insect/mosquito bite (Savaser, 2003).

Knowledge of the methods of HIV prevention

According to UNICEF (2005) the methods of prevention of HIV include prevention of mother-to-child transmission (PMTCT); behaviour change strategies like abstinence, being faithful to a partner and consistent use of condom; transfusion of screened blood, use of sterilized sharp object, and taking universal precaution by health workers. In Nigeria, NACA (2004) stated that the transmission of HIV and AIDS will be prevented through the promotion of safe sexual behaviour, appropriate use of condoms, safe supply of blood and blood products, implementation of voluntary counselling and testing, prevention of mother-to-child transmission, early treatment of sexually transmitted infections (STI), and youth focused interventions.

Abstinence from sex

Abstinence is an important HIV prevention method that needs to be promoted among young people including learners in schools. About 69% of teachers in FME (2006) were aware of sexual abstinence as a method of preventing HIV. Similarly, Ssengozi *et al.*, (2004) reported that 79% of primary school teachers in Kano state, 52% in Nasarawa state and 33% in Lagos state knew that sexual abstinence is a method of preventing HIV. The adult population interviewed in the NARHS knew that sexual abstinence (78%) and delaying sexual debut (52%) can prevent HIV transmission. The survey also reported that more respondents who had tertiary education (87%) knew about sexual abstinence for the prevention of HIV transmission (FMOH 2005). Smith (2003) reported that 37% of migrant young adult in Kano and 44% in Aba cities in Nigeria also knew that abstinence from sex can prevent the transmission of HIV.

Promotion of safe *sexual behaviours*

Being faithful to sexual partner and reduction in the number of sexual partners were identified as safe sexual behaviours by teachers in Nigeria (FME 2006; Ssengozi et al., 2004). Among teachers interviewed in the study (FME, 2006), staying faithful to sexual partner (87%) and reducing the number of sexual partners (44%) were identified as methods of preventing HIV transmission. Ssengozi *et al.*,(2004) reported that 52% of primary school teachers in Kano, 56% in Lagos and 64% in Nasarawa States in Nigeria reported faithfulness to sexual partner as a method of HIV prevention. Majority of high school students (76%) in Turkey also identified safe sex as a method of preventing HIV (Savaser, 2003). The 2003 NDHS reported that more females (80%) than males (60%) knew that HIV can be prevented by limiting sex to one uninfected partner (NPC and ORC Macro, 2004). Migrant young adults in Kano and Aba cities in Nigeria reported keeping one sexual partner (9% in Kano and 10% in Aba), and avoiding 'immoral sex' with prostitutes (22% in Kano and 8% in Aba) as methods of preventing HIV transmission (Smith, 2003).

Use of *condom during sex*

The knowledge of condom use as a method of preventing HIV transmission varied among teachers in Nigeria. While FME (2006) reported that 74% of teachers knew the importance of condom in the prevention of HIV transmission, less than half of primary school teachers interviewed in Kano state (25%), Lagos state (39%) and Nasarawa state (48%) Nigeria had similar knowledge with regards to the use of condom (Ssengozi *et al.*, 2004). Smith (2003) also reported that 29% of migrant young adult interviewed in Kano city knew about condom use in preventing HIV. The low proportion of respondent in Kano city who knew about condom use might be associated with the religious bias towards public promotion of condom use in Northern Nigeria (Renowned Islamic Scholars (ULAMA), 2004). Among adult population in Nigeria, 55% of respondents knew that HIV transmission can be prevented by using condom (FMOH, 2005) interestingly, more females (63%) than males (45%) respondents in the 2003 NDHS, knew that using condom during sex prevent the transmission of HIV (NPC and ORC

Macro, 2004). Among high school students in Turkey, 87% of respondent knew that condom use is a method of preventing HIV infection (Savaser, 2003).

Avoidance of *blood contact*

The avoidance of contact with blood as a method of preventing HIV transmission was reported among 83% of teacher in Nigeria (FME, 2006). However, Ssengozi *et al.*, (2004) reported that fewer primary school teachers in Kano (51%), Lagos (42%) and Nasarawa (39%) states in Nigeria knew about this method of preventing HIV transmission.

Avoid sharing of *sharp objects*

In Nigeria, 84% of adult respondents in FMOH (2005) knew that avoidance of sharing of sharp object can prevent HIV transmission. Among teachers, FME (2006) reported that respondents knew that HIV transmission can be prevented by avoiding sharing sharp objects (84%) or skin piercing instruments (83%). However, fewer primary school teachers in Kano state (14%), Lagos state (41%) and Nasarawa states (29%) Nigeria knew that avoidance of piercing instruments can prevent HIV transmission (Ssengozi *et al.*, 2004). In Turkey, 79% of interviewed high school students knew that not sharing syringes is a method of preventing HIV.

Knowledge of signs and symptoms of HIV and AIDS

The knowledge that a healthy looking person can be infected with HIV is important in promoting positive behaviour associated with HIV and AIDS. The knowledge of common health problems of people living with HIV and AIDS is likewise important. Among student teachers in Zimbabwe, Chifunyise *et al.*, (2002) reported that 60% of respondents in the baseline survey and 71% of those in the follow up survey knew that a person with HIV could look completely normal. Among adult population in Nigeria, 70% of respondents in FMOH (2005) and 53% in NPC and ORC macro (2004) knew a healthy looking person could be HIV positive. FME (2006) have documented that at least 70% of teachers in Nigeria knew at least one health problem of PLWHA. They knew that PLWHA can have weight loss (83%), diarrhoea (82%), coughing (81%), fever (77%) and lack of energy (70%).

Knowledge of someone infected with HIV or died of AIDS

Contact with someone with HIV and AIDS or who have died of AIDS is a strong method of exploring the personal experience of people with the AIDS epidemic. In Nigeria, 62% of teachers knew a PLWHA. 44% have worked with a PLWHA while only 19% knew someone who died of AIDS (FME, 2006). Among primary schools teachers in three states in Nigeria, Ssengozi *et al.*, (2004) reported that 76% of teachers in Nasarawa State knew someone infected with HIV, a much higher proportion when compared to 45% of teachers in Kano State and 23% in Lagos State. Among adult respondents in NARHS, less than a quarter (21%) reported they had seen someone with HIV or knew someone who died of AIDS. The percentage was slightly higher among respondent who had acquired higher education (28%) (FMOH, 2005).

HIV and AIDS attitude of people living with HIV

Attitudes are feelings of emotions and beliefs which influence the determination of series of behaviour towards objects, persons or the environment (Gbefwi, 2004). Attitudes are also defined as favourable or unfavourable evaluative reaction towards something or someone exhibited in one's belief, feelings, or intended behaviour. According to Naidoo and Wills (2000), peoples' attitudes are made up of two components: Cognitive – the knowledge and information they possess; and affective - their feelings and emotion and evaluation of what is important. Several attributes have been used to explore HIV and AIDS related attitude among teachers and adult population. Such attributes include stigma and discrimination towards PLWHA and PABA, perception of the risk of HIV infection and the value associated with HIV testing and disclosure and the willingness of teachers to discuss HIV and AIDS issues.

Stigma and discrimination against people living with HIV and AIDS

HIV related stigma refers to "prejudice, discounting, discrediting, and discrimination directed at people perceived to have HIV and AIDS, as well as the individuals, groups, and communities with which they are associated (Herek and Capitanio (1997) cited in Liu, Hu, Li, Stanton, Naar-King and Yang, 2006). This review is focused on stigma towards teachers who are HIV positive in the work place as well as other PLWHA in the community.

HIV and AIDS stigma attributed to *teachers in the work place*

Regarding work experience, more teachers compared to the general adult population were of the opinion that HIV-positive teachers should continue teaching. Among teachers, 83% of respondents in FME (2006) and 57% in Ssengozi *et al*., (2004) were of the opinion that HIV-infected teachers should continue teaching. However, only 27% of male and 23% of female respondents in the 2003 NDHS believed that HIV positive female teachers should continue teaching (NPC and ORC Macro, 2004). On other forms of interaction in the work place, 57% of teachers were willing to share eating utensils with infected colleagues, 70% will share work tools like pen and pencils and 85% are willing to care for them. However, 30% of the respondents were of the opinion that teachers infected with HIV should be treated different (FME, 2006). Although findings among primary school teachers in Kano, Lagos and Nasarawa States Nigeria reported that similar proportion of teachers were willing to share work tools with, and care for infected colleagues, they however expressed reservations about sharing eating utensils with HIV-infected teachers. Specifically, 44% of teachers in Kano State, 28% in Lagos state and 54% in Nasarawa State will share eating utensils with infected colleagues (Ssengozi *et al*., 2004).

Stigma towards PLWHA in the community

HIV and AIDS related stigma towards PLWHA in the community still persists among teachers and other adult population in Nigeria. Teachers were of the view that HIV infected people were disappointing (51%), promiscuous (35%) and immoral (51%). Furthermore, 13% of teachers were of the view that PLWHA should be isolated and 2% expressed the opinion that PLWHA should be killed. With regards to other attitude towards PLWHA in the community, 60% of teachers were willing to relate with a shop keeper who is HIV positive (FME, 2006). The 2003 NDHS explored positive attitude among adult population using four questions. Respondents were asked whether or not they were willing to (i) care for family members with HIV and AIDS at home; (ii) buy vegetable from a shopkeeper with AIDS (iii) believe HIV-positive teachers should be allowed to keep teaching; and (iv) believe the HIV positive status of a family member does not need to remain a secret. Only 7% of male and 3% of female respondent

expressed acceptable attitude to the four questions, 20% of women and 28% of men however stated they would relate with a shop keeper with AIDS (NPC and ORC Macro, 2004). In the examination of the changes in nursing students' perception, knowledge of and attitude towards HIV and AIDS in Nigeria, Uwakwe (2000) reported that more than half of the respondents in both the pre- and post-test survey stated they would treat HIV-positive patient not differently from other patients.

In China, Huang *et al*., (2005) reported that over 80% of interviewed undergraduate students were sympathetic towards PLWHA, agreed that such individual should have access to quality care and should be treated with respect like everyone else. In Turkey, Savaser (2003) reported that more than half of high school students believed that people with HIV and AIDS should be able to attend school and should not have to stop work.

Perception of risk of HIV and AIDS infection

In Nigeria, few teachers (6%) perceived themselves at higher risk of HIV infection when compared to other population groups, and about half of all the teachers perceived themselves at lower risk (FME, 2006). In Kano, Lagos and Nasarawa States Nigeria, Ssengozi *et al*., (2004) reported that 22% of primary school teachers perceived themselves to be at higher risk of HIV infection than health workers. Among undergraduate students in China, Huang *et al*., (2005) reported that 24% of the respondents considered themselves to be at moderate to very high risk of contracting HIV, 45% viewed themselves at low risk and 31% viewed themselves at no risk of contracting HIV. Interestingly, only 2% of adult respondents in FMoH (2005) rated their chances of being infected with HIV as being high while 67% viewed themselves at no risk of contracting HIV. Likewise, 70% of migrant adult respondents in Kano and Aba cities in Nigeria were of the opinion that their risk of contracting HIV and AIDS was small or none at all (Smith, 2003).

HIV voluntary counselling and testing and disclosure

Undertaking HIV test is a major step in confronting stigma and initiating appropriate attitude on HIV and AIDS issues. Overall, a tenth of adult respondents had ever been tested for HIV in Nigeria (FMoH, 2005; NPC and ORC macro, 2004). Among teachers in

Nigeria, 37% reported they had been tested for HIV (FME, 2006). Similar finding were reported in the 2003 NDHS among adult respondents (25% of men and 32% of females) who had attained higher educational qualifications (NPC and ORC Macro, 2004). The circumstances under which HIV test were undertaken is as important as the reason for seeking the test in attitude formation. FME (2006) reported that 39% of teachers tested asked for the HIV test. Among adults, desire to have an HIV test was to know HIV status (83%) and reduce fear (11%) associated with HIV and AIDS. Respondents who did not desire an HIV test were of the view that it was not necessary (71%), feared the result (9%) and do not want to know their HIV status (9%) (FMoH, 2005). These reasons are important issues in forming attitude on HIV and AIDS. The role of significant others in forming and sustaining attitude is essential. With regards to HIV and AIDS, exploring persons with whom respondents shared their HIV test results is informative. 38% of teachers that undertook HIV test in Nigeria shared their HIV test result with spouse, 20% with their mother, 18% with their father, and 18% with close friends (FME, 2006).

Willingness to discuss HIV and AIDS issues

Discussing HIV and AIDS issues in the public as well as disclosing result of HIV test is an important manifestation of HIV and AIDS knowledge and a major step in adopting appropriate HIV and AIDS related attitude. This review focused on the proportion of teachers who teach HIV and AIDS education and their level of willingness to discuss HIV and AIDS issues with family and friends. Similar findings among adult population were also explored. According to Peltzer (2003) secondary school teachers in South Africa felt moderately comfortable to teach HIV and AIDS education. Specifically, about 29% of the teachers interviewed in the study had been teaching HIV and AIDS education for one year or less and about 48% for two years or less. Findings from Nigeria revealed 20% of teachers in FME (2006) and 17% in Ssengozi *et al.*, (2004) teach FLHE or sexuality 'education in their schools. Furthermore, 87% of the primary school teachers reported they were supportive of conducting HIV and AIDS education in schools, and believed they were well suited to teach HIV and AIDS education (Ssengozi *et al.*, 2004). The proportion of teachers who were comfortable teaching or discussing HIV and AIDS or sexuality issues varied, 51% of teachers interviewed were very comfortable to teach

sexuality issues, 25% were comfortable and 25% were not at all comfortable (FME, 2006). Among primary school teachers, Ssengozi *et al.*, (2004) reported 34% of respondents in Kano state, 31% in Lagos state and 16% in Nasarawa state Nigeria lacked the willingness to discuss HIV and AIDS with their colleagues. It is interesting to note that 36% of married women and 58% of married men in Nigeria reported they had discussed AIDS prevention with their partner (NPC and ORC macro, 2004).

HIV test provides a special opportunity for counselling. Sometimes it is the only chance to speak to people in depth about the ways HIV spread. Because it can be hard to decide to take the test, people are often ready to think about changing behaviour that puts them at risk. Offering testing will attract people to other HIV services, such as treatment for sexually transmitted diseases, family planning, or social services (Granich and Mermin, 2006).

The counselling that precedes and follows testing of subjects for HIV has become, quite unexpectedly, a focal point for assessment of the ethical propriety, availability, and appropriateness of health services during the AIDS epidemic. It can be anticipated that in the worst affected regions, HIV Voluntary Counselling and Testing (HCT) will be an integral component of "...access to comprehensive, essential, quality health care" which is WHO's goal of "Health for All" in the next century. The role, purpose, location, and methods of HCT, which were reviewed at the previous Global Strategies Conference in 1997, are summarized. Currently understood objectives of HCT include acceptance of the test, provision of care for HIV-infected individuals (particularly pregnant women), prevention of HIV transmission, and psychosocial support. Many countries in Africa are gradually instituting HCT as part of their Primary Health Care package. For example "...access to care, counselling and support" for HIV and AIDS and sexually transmitted diseases is one of the top 10 national priorities in South Africa (Datye, Kielmann, Sheikh, Deshmukh, Deshpande, Porter and Rangan, 2006).

However, closer examination in the country reveals personnel and skill shortages, inability of half the primary health care clinics to provide antenatal services, and HIV testing being offered in only 56% (Sarki, 2008; Coovadia, 2000). Condom availability is

generally good, but termination of pregnancy is undertaken in a bare 27% of hospitals. In other regions of Africa, HCT is also deficient in many respects: medical services are often unavailable, support is absent, availability is restricted and there are few trained counsellors. Consequently, workloads are heavy. Requirements for effective counselling will be listed. The global determinants of inequities in accessing HCT, such as the gross national product and the crushing debt burden borne by poor countries, are discussed (Sarki, 2008; Coovadia, 2000). A third of women worldwide receive no antenatal care, and just 60% of the roughly 133 million annual births throughout the world are attended by trained health personnel. Even when HCT services are available, they are often not acceptable. The overwhelming majority of African women appear to accept HIV testing, but only a proportion (59-61% in recent intervention trials) return for the results. Obstacles to be overcome for provision of HCT services are identified. Evidence for a positive impact of HCT services includes facilitated decision-making, acceptance and coping with HIV, improved family and community acceptance, increased condom use, and reduced gonorrhoea rates and HIV transmission (Coovadia, 2000).

Bennell (2005) in the first of two articles that consider the impact of the AIDS epidemic on the education sector in sub-Saharan Africa observed that teachers are regularly singled out as being particularly vulnerable to HIV infection and as such they are considered to be a 'high-risk group'. However, this study presents recent evidence from high HIV prevalence countries in eastern, central and southern Africa that suggests that this is not the case. Teacher mortality rates are considerably lower than those for the adult population as a whole. Furthermore, while demographic projections show AIDS-related mortality for teachers increasing very sharply during the next 5-10 years, teacher mortality rates are in fact declining in a number of high prevalence countries mainly as a result of behaviour change and the increasing availability of anti-retroviral drugs. The second article critically reviews the available evidence on the impact of the epidemic on the education of orphans and other directly affected children.

In his report, Asuquo (2007) suggested that there is a need to institutionalise HCT because of its overwhelming benefits in both prevention and care. Voluntary counselling and testing services in Nigeria exist on a small scale. Most HCT services are stand-alone

sites operated by NGOs in a few states in the country. Institutionalising HCT services will include building the capacity of NGOs already involved in HCT and linking them up with institutions to provide continuum of care. The Federal Government of Nigeria and a few developmental partners are now addressing this and it is hoped that in the next couple of months several of these linked to the PMTCT and ARV sites as well as stand-alone sites will become widely available. Initial projections are for the establishment of a minimum of 100 sites spread evenly across the country (Asuquo, 2007).

Screening methodologies are not uniform. WHO has provided technical assistance in the development of appropriate screening methodologies but these are yet to be universally implemented. The Federal Ministry of Health, on a cost reimbursable basis to health institutions, has provided most screening kits. The kits until 2001 were mainly procured by DFID, though the US Centres for Disease Control (CDC) provided kits used during the 2001 and 2003 sentinel surveys and will likely be providing more under the new US Presidential Initiative on PMTCT and the rapid expansion of the ARV program.

The overall goals of HCT are: (i) to prevent HIV transmission: (ii) To prevent HIV acquisition; (iii) To provide early and appropriate uptake of services for people testing positive; (iv) To provide emotional care, family planning advice and enhanced coping strategies for those testing seropositive; (v) To provide social benefits; and (vi) to counsel PLWHAs to support adherence to treatment and prevention therapies and to cope with any adverse effects (UNAIDS, 2002).

Benefits: Potential benefits of HCT for different populations in reproductive age (Menziesa. Abang, Wanyenze, Nuwaha, Mugisha, Coutinho, Bunnell, Mermin and Blandford, 2009)

(i) Potential benefits for women and men

Voluntary HIV counselling and testing can help women and men who may be considered forming or expanding their families to:

- Weigh up the risks and advantages of a pregnancy;
- Make choices about contraception;

- Make choices about preventing future HIV infection, including condom use.

(ii) Potential benefits for pregnant women

Counselling a woman after a negative test can help her:

- Decide whether to share her HIV status with anyone and, if so, with whom;
- Choose to continue or terminate the pregnancy, where it is safe and legal;
- Learn more about HIV infection and its implications for her health;
- Seek early appropriate medical care for HIV- related conditions, e.g. tuberculosis;
- Choose ARV therapy where it is available and affordable;
- Join the continuum of care such as referral for specialist medical help, or to NGOs for on-going HIV care and emotional and social support;
- Access support groups and health services that promote positive living;
- Make choices about sexual behaviour and future fertility;
- Understand infant feeding options, and choose what is best in her circumstances;
- Seek diagnosis, treatment and follow –up for her infant.

(iii) Potential benefits for partners of pregnant women.

HIV Voluntary Counselling and testing of partners of pregnant women helps couples to:

- Support one another in decisions about care and infant feeding;
- Make decisions about future fertility;
- Choose behaviours that reduce the risk of contracting or spreading HIV.

(iv) Potential benefits for the wider community.

Widespread availability and use of HCT for HIV in a community can:

- Reduce fear, ignorance and stigma surrounding HIV;
- Stimulate a community response in support of those needing care;
- Contribute to an environment supportive of safer sexual behaviours;
- Encourage breastfeeding (and reduce the spill-over of artificial feeding) for HIV – negative mothers.
-

Thus, HCT addresses three key issues:

- Preventing transmission through the provision of information, and engaging in a shared problem – solving approach on the constraints people face in practicing safe behaviours;
- Improving clients' quality of life through shared problem solving on constraints to treatment maintenance.
- Sustaining treatment adherence through shared problem solving on constraints to treatment maintenance.

Increasing knowledge of HIV status: Experts estimate that close to 90% of people living with HIV in developing countries are unaware of their infection (WHO, 2002). Because inadequate knowledge of HIV status impedes prevention and HIV treatment efforts, the percentage of people in developing countries who know their HIV status must significantly increase. Numerous factors currently impede widespread knowledge of HIV status, including the perception that knowledge of sero-status is not useful where HIV treatment is unavailable. However, studies demonstrate that knowledge of HIV status has an independent HIV prevention benefit, leading people to reduce their risk behaviour, even when HIV treatment is not available (Voluntary HIV-1 Counselling and Testing Efficacy Study Group, 2000) Anti-Retroviral Therapy (ART) availability will provide much greater incentive to increase knowledge of HIV status.

Universal offer of voluntary testing in health care settings where ART is available: While stand-alone HCT sites have long provided an important means of promoting knowledge of HIV status, exclusive reliance on these venues is unlikely to generate the levels of testing and counselling needed to achieve prevention and HIV treatment goals (De Cock et al 2003). HCT depends on the individual's own volition in coming forward to be tested. In areas where ART has been introduced, providers should always offer testing in a broad range of health care settings, including hospitals, STD and TB clinics, family planning and reproductive health service settings, prenatal care settings, and mobile health programs in rural areas. Patients should be given the opportunity to opt not be tested, and confidentiality must in all cases be maintained. Programs should make

maximum use of rapid testing technologies to increase knowledge of HIV status, (Branson, 2003) and donors should prioritize training in use of such technologies.

According Adamchak (2005), Ghana, like many countries facing the potential devastation of the HIV and AIDS epidemic, is taking a multi-dimensional approach to foster prevention and care efforts. Many programs are in place to meet the needs of those most at risk in what remains a largely localized epidemic, concentrated among prostitutes and highly mobile populations. At the same time, efforts are underway across the country to implement education and appropriate risk self-assessment within the general population. A key component in this strategy is the expanding introduction of HIV and AIDS education in schools, through the efforts of trained teachers, peer educators, and local civil society organizations (CSOs).

Education specialists in Ghana for instance are concerned that the country may experience damaging effects in the education sector as a consequence of the HIV and AIDS epidemic. Other countries in Africa have seen major losses among the cadre of public sector teachers, driven in large measure by the sexual risk behaviours demonstrated by these professionals. The loss of large numbers of teachers has a ripple effect throughout the system, with the remaining teachers assuming responsibility for ever larger class sizes, resulting in poorer quality education for students. In some cases, entire schools have had to close, due to an insufficient number of staff able to maintain services or standards. Students, many of whom have to cope with the loss of one or both parents, lose one of the few remaining sources of stability and safety in their lives. This study is one component of a multi-faceted research strategy designed to collect baseline data for a newly expanded project carried out by World Education, a nongovernmental organization (NGO) established in Ghana in 2001. Working in partnership with local institutions, World Education strives to prevent the spread and mitigate the impact of HIV and AIDS in the education sector. In collaboration with 12 civil society organizations (CSOs), activities are carried out in nearly 250 schools in four regions that target students, teachers and parents through an innovative program, Strengthening HIV and AIDS Partnerships in Education (SHAPE).

Informed consent

The Centre for Disease Control and Prevention (CDC) defines "informed consent" as "[a] process of communication between patient and provider through which an informed patient can choose whether to undergo HIV testing or decline to do so. Elements of informed consent typically include providing oral or written information regarding HIV, the risks and benefits of testing, the implications of HIV test results, how test results will be communicated, and the opportunity to ask questions."

What the CDC recommends regarding consent and counselling for HIV testing

The CDC continues to state that:

- Testing must be voluntary and free from coercion.
- Patients must not be tested without their knowledge.
- Obtaining informed consent is an ethical obligation (CDC, 2006).

The CDC now recommends:

- Testing should be "opt-out," with specific signed consent for HIV testing not required.
- Consent for HIV testing should be incorporated into the patient's general informed consent for medical care.
- "Prevention counselling" -- which CDC defines as a process focused on risk assessment and developing a plan for risk reduction -- should not be required prior to testing.
- But prior to testing, patients should receive information, orally or in writing, which includes "an explanation of HIV infection and the meanings of positive and negative test results" and "should be offered an opportunity to ask questions and to decline testing."

Why specific written consent and pre-test counselling are beneficial

The risk of testing patients without their knowledge is avoided by requiring specific, written consent for an HIV test. This is a real concern. Up to 16% of the pregnant women tested under an opt-out testing system without a written consent requirement in Arkansas did not even know that they had been tested for HIV (CDC, 2002).

Health care providers benefit from requiring specific written informed consent, by documenting that they have satisfied their ethical and legal obligations to obtain informed consent (American Medical Association, 1998).

Communication between the patient and health care provider, which CDC acknowledges is an important part of informed consent, is more likely when specific written consent and counselling are required. Trust between patients and health care providers are greater if they have a dialogue about health care; with greater trust comes an increased likelihood that the patient will seek and continue needed treatment.Studies show that patients' rates of adherence to prescribed treatment are higher where their trust in their physician is high. This is especially important given the low rates at which newly diagnosed HIV-positive patients are linked to follow-up care in some settings (http://www.aidschicago.org/pdf/2007/aclu_summary.pdf Accessed on February, 2013).

Trust in a personal physician was the strongest predictor of willingness to initiate antiretroviral treatment in a population of primarily African-American and Hispanic inmates and was a strong predictor of preventive services use among African Americans.

A person who is tested without realizing it or without understanding the possible significance of the test is more likely to be alienated from care. This is especially of concern because some of the populations facing increased infection rates are already mistrustful of public health efforts (Bogart and Thorburn, 2005; Malebranche, 2005 and Klonoff and Landrine, 1999).

The significant emotional and legal dimensions to an HIV diagnosis – which make HIV infection different from many other diseases – can be addressed.There is no cure for HIV and anyone who tests positive will need to follow a care regimen -- often very complicated, expensive, and with significant side effects -- for the rest of his or her life.

The significant legal consequences include mandatory confidential reporting of the names of anyone diagnosed with HIV; in order to give truly informed consent, people should be informed of those and be informed that in many states they have the option of anonymous testing.

Stigma still attaches to an HIV diagnosis and people living with HIV still experience discrimination; 26% of adults with HIV believed they had experienced discrimination from a health care provider since being diagnosed with HIV, according to a 2005 study. 41% of the respondents in a 2006 study agreed "people often behaved negatively around them once they learned of their HIV status"
(http://www.aidschicago.org/pdf/2007/aclu_summary.pdf Accessed on February, 2013)

Fifty-six percent of the skilled nursing facilities, 26% of the plastic and cosmetic surgeons, and 47% of the obstetricians surveyed in Los Angeles County from 2003 to 2005 refused to treat any people living with HIV (Sear and Ho, 2006).
From 2002 to 2006, HIV-related employment discrimination claims were filed at an average rate of about one per day, according to data obtained from the U.S. Equal Employment Opportunity Commission. This is only a small decline from the number of claims filed during the period 1994 to 2001 (Lambda Legal, 2006).

A 2006 survey found that only 1 in 4 respondents reported that they would be very comfortable having an HIV+ roommate and only 29% reported that they would be very comfortable with their child having an HIV+ teacher (Kaiser Public Opinion Spotlight, 2006).

People are more likely to agree to be tested if they understand more about HIV and its treatment. One study of prenatal testing found that 92% of the women surveyed reported they would be more likely to get tested if they knew about treatment to reduce mother to child infection. Another study found acceptance of prenatal HIV testing greater among women with a strong belief about the benefits of testing and knowledge about how transmission from the mother occurs and can be prevented (http://www.aidschicago. org/pdf/2007/aclu_summary.pdf Accessed on February, 2013).

Information about HIV disease and the nature of HIV testing is important for all tested patients, not just those who test positive. Many patients have serious misconceptions about the nature of HIV testing and pre-test counselling can clear those up. One study of patients in an urban intensive care setting found that patients doubted the accuracy of

rapid HIV tests and did not understand the importance of being tested for HIV when no physical symptoms of the disease were present (http://www.aidschicago.org/pdf/2007 /aclu_summary.pdf Accessed on February, 2013).People who test negative need counselling so they fully understand that they might still be infected and highly infectious and understand how to avoid transmitting the virus.

The HIV tests typically used look for antibodies to the virus, which usually develop six weeks to six months after infection. Before the antibodies develop, a person infected with HIV will not test positive, but may be highly infectious (Pope and Haase, 2003). Studies have estimated that almost half of all HIV transmissions occur when a person with acute HIV infection unknowingly transmits HIV to others (http://www.aidschicago.org/ pdf/2007/aclu_summary.pdf Accessed on 01/06/2007).

This risk needs to be explained to all persons tested, so that those who test negative understand that they may still have HIV, how transmission can be avoided, and that testing negative is not a form of prevention. Increased offers of testing provide an excellent opportunity to educate patients about HIV and thus change risk behaviours and reduce the HIV and AIDS stigma that is fuelled by misinformation about the routes of HIV transmission.

Many people still lack basic knowledge about what does and does not put them at risk for HIV. The 2006 Kaiser survey found that 37% of the public believed that HIV could be transmitted through kissing; 22% believed that transmission could occur through sharing a drinking glass; and 16% believed that transmission could occur through touching a toilet seat. More than 4 in 10 adults held at least one of these misconceptions (Kaiser Public Opinion Spotlight, 2006).

A 2005 study revealed that 33% of male respondents and 46% of female respondents incorrectly believed HIV transmission could occur through unprotected sex between two uninfected men. The Kaiser survey found that those with misconceptions about HIV transmission were much more likely to express discomfort with working with someone with HIV (Kaiser Public Opinion Spotlight, 2006).

Patient concerns about specific consent and pre-test counselling are not significant barriers to testing. 2006 Kaiser Family Foundation survey found that the biggest reason people reported for not getting tested is that they did not think they were at risk (Kaiser Public Opinion Spotlight, 2006). This shows the need for more information, not less. The same study showed that most people did not think that they would experience stigma because they were tested for HIV. However, the study found that stigma against those who test positive still exists and roughly half of those surveyed said that there is a lot of discrimination against people with AIDS. Offering testing to everyone, rather than offering it only to those considered at risk will reduce or eliminate any stigma associated with testing.

There are successful models that result in more people being tested without abandoning safeguards ensuring that testing is informed and voluntary. New York City Health and Hospitals Corporation (HHC) increased the number of patients tested in HHC hospitals by 63% in 2006, by using rapid testing and streamlining pre-test counselling, while continuing to use HIV specific written consent, which is required by New York law (NYC Health and Hospitals Corporation2006 *available at* http://www.nyc.gov/html/hhc/html/pressroom/press-release-20061003.html)

Authors of a study found that routinely recommending HIV counselling and testing can be feasible and effective in an emergency department setting, despite the time constraints present in that setting, and concluded that emergency room testing can be increased by streamlining counselling and providing some information in writing, as well as by involving non physician staff in counselling (Rothman 2004).

Peri-natal transmission of HIV has been virtually eliminated in the United States, including in states that require specific written informed consent, such as Massachusetts, Pennsylvania and Michigan (Massachusetts STD and HIV and AIDS Surveillance Report, 2005; Commonwealth of Pennsylvania, 2005; Status of the HIV and AIDS Epidemic in Michigan, 2005).

The implications of HIV and AIDS on teachers

"The Window of Hope" for use in all teacher training colleges in Ghana for instance, has mandated comprehensive HIV and AIDS education to be introduced in all schools during the next several years. Education specialists in Ghana are concerned that the country may experience damaging effects in the education sector as a consequence of the HIV and AIDS epidemic. Other countries in Africa have seen major losses among the cadre of public school teachers, drive in large measure by the sexual risk behaviours demonstrated by the professional. The loss of large number of teachers has a ripple effect throughout the system, with the remaining teachers assuming responsibility forever larger class sizes, resulting in poorer quality of education for the students. In some cases, entire schools have had to close, due to an insufficient number of staff able to maintain services or standards.

According to UNICEF (2002) "a broader approach is needed to contain the spread of HIV and address the socio-economic impacts of HIV and AIDS." "The education sector must be seen, and must see itself, as central player in this global priority." "Protecting a new generation from HIV and AIDS is imperative to the future of education systems, which are themselves falling victim to the effects of HIV and AIDS." To facilitate development of country-level strategic plans for HIV and AIDS prevention and impact management in education systems, as part of an expanded global response to the pandemic. By seriously affecting the supply and quality of education, AIDS is threatening recent gains that provided the most disadvantaged with access to school. Education itself can reduce vulnerability to HIV/AIDS. Education is the key to reducing stigma, promoting greater understanding of HIV and AIDS and providing skills necessary to protect oneself and care for others. Schools have the opportunity to reach young people early, in the "window of hope" between the ages of 6-14 when few young people are infected. Well-implemented school-based HIV and AIDS prevention programs have shown to reduce key HIV and AIDS risks.

In a study conducted in some West Africa and Central Africa countries, findings show that the HIV and AIDS situation is serious in all the countries studied although the prevalence rates range from 0.5 in Senegal, 5.8% in Nigeria and 11.8 % in Cameroon.

Generally, it was found that infection rates in the education system reflect the national rates. However this was not the case in Ghana where the education sector has a prevalence rate of 9.2 % while the national rate is 3.0 (Tamukong, 2004).In a related study conducted in South Africa to assess secondary school teachers' comfort in teaching adolescents about sexuality and HIV and AIDS, behavioural control and outcome beliefs about HIV and AIDS education and teacher knowledge about HIV and AIDS, findings suggest that most secondary school teachers are knowledgeable about AIDS, feel moderately comfortable teaching students about AIDS-related topics, have the knowledge and ability to teach about HIV and AIDS, but lack some material and community support. Teacher in-service training was found to have a significant impact on perceived behavioural control of HIV and AIDS education and HIV and AIDS knowledge (Peltzer and Promtussananon 2003).

However, there are studies that suggest that teachers are no high risk group. In an article assessing the extent to which teachers in Sub-Saharan Africa are a 'high-risk' group with respect to HIV infection and AIDS-related mortality, Bennell (2003), concluded that little hard evidence exists to support the contention that teachers are more vulnerable to the epidemic than other occupational groups.

“Faced by these appeals, coupled with the rampant death roll recorded amongst teachers (colleagues) and the students, the National Executive Council of Cameroon Teachers' Trade Union (CATTU) in its statutory session of 29th September 2002, thought it will be irresponsible and immoral for the union to be indifferent in the face of such catastrophes plaguing our community. During the statutory session, a ten man committee was assigned by the council to reflect on reasons why, despite so many appeals by the government on preventive measures to eradicate the spread of the HIV virus, it is still on the rise. The committee in their reflection realized that teachers, by their professional nature resist any education out of their professional fold. Teachers believe that they are too knowledgeable to receive any lessons from "outsiders". Therefore, only a frank discussion within the professional bracket can create any meaningful behavioural change.

The teachers agreed that HIV and AIDS with its frightening feature of 'no cure' was no longer essentially a medical problem. It has become clear that prevention is essential and that education might potentially be the single most powerful weapon against HIV transmission. Therefore, it is important to see how to protect the educational system itself from the ravages of the pandemic. HIV and AIDS affects the educational system as it affects the health of both the student and staff body. More teachers are absent from duty, leaving the educational system or dying. Statistics reveal that a high proportion of skilled and highly educated manpower is infected. A high number of teachers are infected and are dying and there is a reduction of pupils and students" Simon (2002).

Of the teachers who participated in the study conducted by Adamchak (2005), one third were women, and two thirds were men. This is consistent with the overall sex distribution of teachers in Ghana. In 1999, 65 percent of primary school teachers, and 75 percent of junior secondary school teachers were male. The men were slightly younger than the women. Fifty-four percent of men were aged 39 or younger, compared with 49 percent of women. More than one-fourth of the males reported never having been married, compared with about one-sixth of the females. Sixty-three percent of females, and 70 percent of males were married or living with a partner. Women were eight times more likely to report being separated, divorced or widowed than men. Women married younger than their male counterparts; 30 percent married before age 25, while only 17 percent of the men married by that age. Nearly 80 percent of women were married by age 29, while only slightly more than half the men, 54 percent, had done so.

Teachers in this study believe that the responsibility to teach youth about HIV and AIDS is spread throughout the adult community. Two thirds of teachers believe that it is the responsibility of parents to teach about HIV and AIDS. Nearly 60 percent believe that doctors, health workers, and religious leaders also have important roles to ply. More than half also see themselves, as teachers, conveying the information. Considering the inverse, however, implies that nearly half the teachers (45 percent) do not think that this is the responsibility of teachers.

Virtually all teachers reported that they would feel very or somewhat comfortable speaking to students about HIV and AIDS and pubertal development. Ninety percent indicated that they would be comfortable discussing voluntary counselling and testing, but it was observed that a shift toward a higher proportion (about 20 percent) reporting being "somewhat comfortable". Teachers noted greater discomfort in speaking about family members who might have HIV and AIDS, masturbation, and romantic relationships. Two in five acknowledged that they would not feel comfortable demonstrating how to use a condom.

The reluctance to participate in condom demonstrations was conveyed even more strongly when the respondents were asked whether they should participate in specific HIV and AIDS education activities. Just over half agreed or somewhat agreed that teachers should demonstrate proper use of condoms. In contrast, there was nearly universal agreement that teachers should encourage students to attend HIV and AIDS events, and very high levels of agreement with teaching students or assisting with clubs. Teachers also revealed mixed opinions about teaching their colleagues. Most agreed this was an appropriate role, but a sizeable minority, 15 percent, disagreed.

Only slightly more than half of the teachers fully agreed that parents support teaching of HIV and AIDS education in schools. This contrasts with the findings of a series of focus groups carried out with mothers and fathers of children in some of the same schools surveyed (Adamchak, 2005). Parents expressed nearly universal approval AIDS education in schools. Like teachers, parents believe that many avenues should be used to convey accurate information to their children, and teachers were an important and respected resource.

Teachers were asked to provide information about their sexual experience and partners during the 12 months prior to the survey. They were ensured that the responses would be confidential and were asked to respond truthfully, but it is possible that some underreporting may have taken place. Eighty-six percent of the teachers affirmed that they had ever had sexual intercourse, and of those, 88 percent had sex within the past 12 months. Three-fourths identified their most recent sexual partner as their husband or wife,

and another 20 percent claimed a boyfriend or girlfriend. Only one percent indicated their most recent partner was a casual acquaintance, or someone they had paid for sex. Respondents were least likely to report ever using condoms with their husband or wife. Half the respondents who were living together said they used condoms, and nearly 70 percent of those with boyfriends or girlfriends used them. Condom use with casual partners was low, with only one-third of respondents with a partner, already a very small proportion of the total sample, indicating they used condoms. Condom use at most recent intercourse with these partners dropped in all cases except neighbour or casual acquaintance, which represented only one person.

Eight percent of the teachers thought their regular sexual partner may have had other partners, and 11 percent did not know. The greatest suspicion was among those very few respondents who had casual sex with or without paying for it. One quarter of those whose main partner was a boyfriend or girlfriends were also suspicious. Fifteen percent of the teachers acknowledged having had sex with more than one partner (that is, someone in addition to their previously referenced partner) during the prior twelve months. Half reported having a boyfriend or girlfriend, and one quarter considered their spouse to be their second partner. Fifty-one percent used condoms the first time they had sex with this partner, and 45 percent reported they used condoms at most recent sex. A greater proportion reported believing their second partner had other partners, compared with their concerns for first partners (25 percent vs. eight percent). Fewer than five percent of the sexually active teachers reported having given or received something in exchange for sex: money, gifts, and incentives such as better grades or social status.

One purpose of the study conducted by Adamchak was to assess teachers' risk behaviours, particularly alcohol and drug use, and unprotected sex with multiple partners. About one third of the teachers (35 percent) reported that they had consumed alcohol during the two weeks prior to completing the questionnaire. The vast majority had no more than three drinks, regardless of whether it was a bottle (87 percent), glass (88 percent), to (75 percent) or calabash (88 percent). Only a small minority had seven or more drinks, ranging from 6 percent consuming bottled drinks, to 14 percent having drinks by the glass. Eighteen percent acknowledged that they had consumed sufficient

alcohol in the prior two weeks to become boozed or drunk. Only one percent of the sample (five persons) indicated they had used hard drugs during the prior two weeks, with most (4) saying they had done so one to three times.

More than 90 percent of all respondents believe that people are more likely to engage in risky sexual behaviour after alcohol or drug use. Five percent said there was a time when they did not remember having sex because of alcohol use, and three percent said the same regarding drug use. Nearly half the teachers reported receiving counselling by a health worker about HIV and AIDS during the prior year.

Given the high positive response to this question, one might speculate that health workers are increasingly incorporating HIV and AIDS messages in their patient contacts, presumably across a broad spectrum of medical contexts. Only about 12 percent of teachers reported they had been voluntarily tested for HIV and AIDS, and nearly all had been notified of their test results. About 10 percent thought their sexual behaviour may have exposed them to HIV during the previous 12 months; a further 16 percent were not sure whether they had been exposed.

Among the 211 teachers who said they would not like to be tested, or who didn't know if they wanted to be tested, just over half reported that they did not engage in risky behaviour or had never had intercourse. Nearly eighty percent said that they would not want to know the results or they feared learning that they had HIV and AIDS.

Slightly more than one quarter (27 percent) did not trust the results of the test. Nearly one fourth (22 percent) worried that people might think they had HIV and AIDS if it were known they had been tested. For one-fifth of the respondents, the perceived cost of the test was prohibitive. Fewer than three percent mentioned either that the distance to the test centre was too far, or that they counsellors were unfriendly. The majority of teachers (85 percent) believed that they could go for testing at a hospital or clinic, and 70 percent also mentioned voluntary and counselling centres as providing this service (data not shown). Sixteen percent also thought that family planning centres might provide

counselling and testing services. Fewer than three percent of teachers said they did not know where to go for testing.

Most teachers (85 percent) also thought they had the ability to avoid HIV and AIDS (data not shown). More than half indicated this was because they were faithful to their partner, 17 percent said they were not currently or never had been sexually active, and 12 percent noted that they always use condoms. Six percent each claimed that they said know when they didn't want to have sex, and that God protects them. Most teachers demonstrated egalitarian attitudes about women's sexual role. Eighty-seven percent responded affirmatively that women have the right to refuse sex or to 14 propose condom use if her partner has a sexually transmitted disease. However, almost one in five (19 percent) did not think that an unmarried woman should be able to buy condoms at any time and an additional 11 percent did not know. Stated differently, nearly one-third of the teachers questioned the circumstances under which an unmarried woman could have access to condoms.

Increasingly, educators worldwide are turning their attention to whether safe schools, and the connectedness students feel, contribute a protective shield that guards against risk behaviours. Teachers were asked about teachers' and students' perceptions of their schools. Nearly all teachers, 97 percent, reported that teachers at their schools cared about students. Ninety percent indicated that students felt safe in their schools, and that students planned to complete secondary school. About two-thirds concurred that teachers respected them, and that students are active in school clubs and community organizations. Nearly three-fourths do not think that students worry about being able to continue attending school.

HIV and AIDS Policy in School

HIV and AIDS has become a generalised epidemic in Nigeria that affects the health and well being of large numbers of people from all social classes and occupational groups throughout the country. However, HIV and AIDS is not only a health problem it is a developmental issue that affects the social, cultural, political, and economic fabric of the nation.

In an effort to meet the challenges associated with HIV and AIDS in the Education sector and its possible erosion of the Education system, the focus is on developing stronger links between education and other sectors, especially health, in order to make more resources for HIV and AIDS available to the education sector and to mainstream HIV and AIDS activities in the programmes and services.

The United Nations General Assembly Special Session on HIV and AIDS (UNGASS) Declaration of Commitment on HIV and AIDS (July 2002) calls for vastly expanded access to information and education, especially youth-specific HIV and AIDS education, necessary to develop the life skills required to reduce risk and vulnerability to HIV infection.

For instance, the Ministry of Education in Nigeria has taken the decision to position HIV prevention within the context of, a holistic programme of Health and Family Life Education (HFLE) and sees the education sector as having a vital role to play in the country's response to the epidemic (FMoE, 2008; NERDC, 2004 MoE, 2010). The priority placed on the education sector's response, is based on evidence that education contributes towards the knowledge and personal skills essential for the prevention of HIV, and protects individuals, families, communities, institutions and nations from the impact of AIDS. Education helps to overcome the conditions that facilitate the spread of HIV and can create the understanding and tolerance that contribute to reduced stigma and discrimination against vulnerable and marginalised communities and people living with HIV (UNESCO, 2007). Children of school-age have the lowest HIV infection rates of any population sector. For them, there is a "window of hope", a chance to live a life free from AIDS, if they can acquire knowledge, skills, and values that will help to protect them as they grow up. Providing young people with the „social vaccine" of education, offers them a real chance at a productive life (World Bank, 2002). Young people who fail to complete a basic education, are more than twice likely to become infected with HIV, and the Global Campaign for Education has estimated that some 7 million cases of HIV and AIDS could be avoided by the achievement of Education for All (MoE, 2010; GCE, 2004).

The Ministry of Basic Education, Sport and Culture, Nigeria, acknowledges the seriousness of the HIV and AIDS epidemic, and international and local evidence suggests that there is a great deal that can be done to influence the course of the epidemic by creating and enabling a supportive environment. The Ministry is, therefore, committed to minimizing the social, economic and developmental consequences of HIV and AIDS on the education system, on all learners, students and teachers and provide leadership to implement an HIV and AIDS Policy for Schools (National Policy on HIV/AIDS, 2009).

Background and purpose of development of policy on HIV/AIDS in school

The purpose for the development of policy document on HIV/AIDS in school is for the management of HIV in schools as part of the education sectors pro-active measure in stemming the impact of the HIV and AIDS epidemic on the education system. Nigeria, for instance, the decision to make Health and Family Life Education the main vehicle for age appropriate HIV and AIDS education for children and youth has also led to the revision of the National Health Family Life Education (HFLE) Policy (FMoE, 2010).

At present there is no cure or vaccine for HIV and AIDS and the only way to stop its spread is through attitudinal and behavioural changes as well as management that can be secured effectively through education. In the policy document on HIV/AIDS in school in Nigeria, the purpose of this policy is to promote and ensure a clear understanding of:

- a comprehensive approach to HIV and AIDS in the education sector which comprises effective prevention, treatment care and support and impact mitigation at the level of the workplace and in the management of the epidemic;
- the rights and responsibilities of all stakeholders in the sector;
- expected standards of ethical and social behaviour;
- commitments by the Ministry of Education and other institutions in terms of human and financial resources.

Nigerian policy on the management of HIV/AIDS in school is derived from and is consistent with all national legislation and regulations on HIV and AIDS, as well as Education priorities and strategies. It is also backed by a National Strategic Plan on HIV and AIDS and a Strategic Plan on HIV and AIDS for the Education Sector developed by a number of education stakeholders in May 2007. The policy applies to all students including those with special needs, teachers, non-teaching staff, managers, employers, and other providers of education and training in all public formal and non-formal educational institutions that enrol students in one or more grades and at all levels of the education system in Nigeria (MoE, 2010).

Abuja, 13 November 2007 - The Federal Government today launched two important policy documents, related to the integration of health into the education system: the National School Health Policy and the National Education Sector HIV/AIDS Strategic Plan. These new policies developed by the Federal Ministry of Education, with UNICEF support, are designed to put in place a national framework for the formulation, co-ordination, implementation and effective monitoring and evaluation of School Health Programme (SHP), including an elaborate and concrete response to the HIV-AIDS scourge.

Schools can provide many benefits to children and adolescents in addition to formal education. These include: healthy and safe environments - often combining good nutrition with clean water and sanitation; health education and life skills training; sports and recreational facilities; monitoring the growth, health and development of the child, basic health interventions and counseling. With an increasing enrolment level, the potential of the school to reach a large proportion of children with adequate health education and services is particularly high.

“Health and education are equally important for the development of a child. A child that is sick cannot fully profit from the teaching and he is likely to miss school. On the opposite, a healthy child will make the most of his classes”, said Robert Limlim, UNICEF Deputy Representative. “This is why it is so crucial that health problems can be

dealt with at school level and that a true synergy is created to promote health at all levels: school, community and family". An HIV/AIDS focused School Health Baseline Survey show a low risk perception among school pupils towards contracting the HIV virus, a high tendency for to discriminate and stigmatise HIV positive persons and some level of misconception about the mode of transmission of the HIV virus. For instance 26% of respondents thought that mosquitoes could transmit the virus.

The National Education Sector Strategic Plan on HIV-AIDS is an integral part of the School Health policy. Drawing from the baseline survey, the plan seeks to increase the proportion of teachers and pupils who have correct knowledge of HIV and AIDS knowledge, as well as appropriate attitude, behaviour and life skills to protect themselves from HIV. "Education is the only effective preventive vaccine against HIV/AIDS because it informs, empowers and builds skills", said the Honourable Minister of Education, Dr. Aja-Nwachukwu. Together with the two policies, the Federal Ministry of Education also launched the National Guidelines for School Meal Planning with the objective to reduce malnutrition and hunger among school children, particularly among those living in poor rural communities, through the provision of at least one adequate meal a day. The National Guidelines for School Meal Planning provide clear directions for planning and implementing school feeding programmes, which could be undertaken by Education authorities, Parents-Teachers Association or School Based Management Committees. Such programmes would impact positively on school enrolment, attendance and retention rates.

Responses from the Educational Sector in Nigeria

The above challenge from Kelly (2003) has spurred many African universities and the larger educational sector to respond to the HIV/AIDS epidemic. In Nigeria, the Educational Research Network for West and Central Africa contains elaborate review of policy and research documents for the educational sector's response to the epidemic. The alarming spread of HIV/AIDS, which saw the prevalence rate skyrocket from 1.8 percent in 1998 to 5.8 percent in 2001, compelled the Nigerian Government to shift its mechanisms and strategies to prevent the spread of HIV, mitigate its consequences, and provide care and support for those living with, or affected by, AIDS. It is within this

context that education was identified as a central method for achieving the requisite behavioural changes needed to stem the epidemic, both inside and outside the classroom. Consequently, the first national workshop on HIV/AIDS and education organized by UNESCO and Federal Ministry of Education (FMoE) with support from UNAIDS and UK's Department for International Development, was held in Abuja, Nigeria, with the aim of identifying appropriate preventive education response to HIV/AIDS challenges in Nigeria (Ohiri-Anichi and Odukoya, 2004). As a demonstration of its commitment to addressing the epidemic on continental Africa, Nigeria hosted the Organisation of African Unity (OAU) Summit on HIV/AIDS in June 2001, during which the Abuja Declaration (2001) was made.

The Nigerian government also established an elaborate multi-sector response that focuses on prevention, treatment, and intervention. It established the Presidential Council on AIDS and the National Action Committee on AIDS, the latter comprised representatives from the Presidency, Federal Ministry of Health, Federal Ministry of Education, Federal Ministry of Youths and Sports, Federal Ministry of Finance, and other relevant federal, state, and local parastatals, NGOs, and international organizations working on HIV/AIDS in Nigeria. The HIV/AIDS Emergency Action Plan, coordinated by National Action Committee on AIDS, is the country's current HIV/AIDS policy.

Tangible efforts have since been recorded by the educational sector in Nigeria in prevention, treatment, and intervention. A few worth mentioning in this study are:

a) The Federal Ministry of Education has a full-fledged HIV/AIDS Unit, which supervises and coordinates all HIV/AIDS activities in Nigeria's schools

b) Following the approval of the National Council on Education in March 1999 at its 46th session for the incorporation of sex education into Nigeria's national school curriculum, the Nigerian Educational Research and Development Council (NERDC) collaborated with other government agencies, NGOs, and UN agencies, to develop curriculum on sex education. Sex education is deemed critical in helping young people acquire adequate

knowledge, skills, and responsible attitudes, needed to prevent sexually transmitted infections, including HIV/AIDS.

c) In 2002, the National Youth Service Corps (NYSC) in collaboration with UNICEF introduced a peer education program entitled, 'Empowering Youth through Young People.' The objective of this program was to reach new graduates of university programs serving the one-year compulsory NYSC program with reproductive health and HIV/AIDS messages, train some to be trainers themselves, and for all to act as 'peer educators' in and out of school.

d) Many NGOs, faith-based organizations, and educational institutions have been active in outreach programs, setting up youth counseling centers, promotion of behavior change via radio and television programming, peer education, discussions, awareness, and so forth.

e) UNESCO supported the establishment of a Preventive Education Unit at the National Teachers Institute (NTI), Kaduna (another single mode DE institution in Nigeria), to assist in the training of teachers in HIV/AIDS.

f) In 2003, the National Institute for Educational Planning and Development (NIEPA) held two seminars in Abuja and Ondo to accelerate Nigeria's educational sector's response to HIV/AIDS pandemic in sub-Saharan Africa. The objectives of these seminars was to develop managerial capacity, prevention, planning and impact mitigation, and facilitate access to education for vulnerable children and orphans.

g) In 2003, National Universities Commission/UNESCO/ National Action Committee on AIDS, established 'Youth Friendly Centers' in three universities: Ahmadu Bello University Zaria, University of Nigeria Nsukka, and University of Ibadan.

h) The MacArthur Foundation grant funding to Nigerian universities such as University of Ibadan, Bayero University Kano, and others, to support and strengthen their human capital, institutional facilities, and university systems. The Foundation and the Association of African Universitis, gave the University of Ibadan, to conduct a 'situation

analysis' of HIV/AIDS and the development of HIV/AIDS policy. AUU has since extended this grant to University of Ilorin.

i) The National Universities Commission and UNESCO introduced HIV/AIDS training program for all staff of educational institutions in SSA, including primary, secondary, universities, polytechnics/tecnikons, and colleges of education. This program specifically targets teachers and teacher-trainers involved in the delivery of basic and higher education in Africa.

j) Nigerian universities have also benefited from the initiative from African universities Training of Trainers Course (TOT) involving the UNDP and University of Natal for three individuals from each of 31 African universities identified on HIV/AIDS and development. The overall aim of TOT is to contribute to the prevention of HIV/AIDS amongst students and staff within a broader vision/framework designed to address issues of prevention, care and mitigation of the pandemic. The specific aims include: 1) train academic staff in methodology and methods of curriculum development and teaching HIV/AIDS; 2) empower university teachers to integrate HIV/AIDS into their own teaching and provide similar training to colleagues; and 3) enhance research related to HIV/AIDS within the university and among other related stakeholders.

k) Some Nigerian universities have developed and implemented systematic programs to fight HIV/AIDS through the development of HIV/AIDS curriculum for inclusion in a compulsory general studies course.

As commendable as these efforts from the educational sector are, the former Minister of Education, O. Ezekwesili (2007), stated that HIV/AIDS requires imaginative and creative solutions, which demand that the regulatory agencies, the National Action Committee on AIDS, and the educational sector to think outside-the-box. Nigeria's universities, therefore, are being called upon to show more commitment through the development of a comprehensive HIV/AIDS policies designed to fight HIV/AIDS.

Vision statement national HIV and AIDS policy

The vision statement of the HIV and AIDS in school is to support the vision of the National Policy by protecting the rights of all pupils, students, educators and staff, including those infected and affected by HIV or AIDS; to foster an enabling environment of services, administrative and management structures which are free of stigma and discrimination in each learning institution and to provide access to prevention knowledge and skills, treatment, care, support and other services.

Policy goal

The goal of this policy is to promote effective prevention and care within the context of the educational system, by ensuring that children, youth and resource personnel have access to age appropriate information education and services necessary to develop the life skills required to reduce their vulnerability to HIV infection.

Policy objectives

The objectives of the policy are to:

i. Highlight the existence of the HIV and AIDS epidemic in Jamaica and in particular in the education system;
ii. provide guidelines for the delivery of age appropriate life skills Education in schools;
iii. provide guidelines for institutions on the treatment of students and school personnel living with HIV/AIDS;
iv. reduce the spread of HIV infection by increasing access to prevention strategies and interventions which promote abstinence and /or consistent condom use;
v. instil non-discriminatory attitudes towards persons living with and affected by HIV;
vi. ensure the provision of systematic and consistent information and educational material on HIV and AIDS to students and school personnel throughout the system;
vii. promote the use of universal precautions in all potentially infectious situations;
viii. reduce the vulnerability of children at risk-gender stereotypes and abused and street children.

- **Access to Education**

Every child has the right to education. No student shall be denied access to education on the basis of his or her actual or perceived HIV status.

- **Access to Information**

All Ministry of Education staff and students have the right to relevant and factual HIV and AIDS information and behaviour change communication that is appropriate to their age, developmental level, gender, culture, language and context.

- **Participation**

The meaningful involvement of people living with and affected by HIV and AIDS and most vulnerable groups, including youth, in the design, implementation, monitoring and evaluation of the response to achieve stated outcomes.

- **Equity**

All responses to HIV and AIDS should ensure that no student or staff will be denied access to prevention, knowledge, skills and services or treatment, care and support services on the basis of their real or perceived HIV status, gender, age, disability, religious or other beliefs, socio-economic status, geographical location, level of literacy, capacity to understand the nature of HIV/AIDS and how it is prevented and treated or vulnerability to exposure. This includes orphans, wards of the state, street and working children, out of school youth and children living with disabilities.

- **Promotion and Protection of Human Rights**

An important aspect of the response to the epidemic requires that the rights to equality before the law and freedom from discrimination are respected, protected and fulfilled. Discriminatory practices create and sustain conditions leading to vulnerability to HIV infection and to inadequate treatment, care and support as well as access to preventive services. Promotion and protection of human rights ensures that there is no discrimination based on race, class, gender, sex, sexual orientation, religious or cultural beliefs.

- **Political Leadership and Commitment**

Strong political leadership and commitment at all levels of Education is essential for a sustained and effective response to HIV and AIDS.

- **Good Governance, Transparency and Accountability**

An effective national response to the epidemic requires leadership to mobilize and manage human, financial and organizational resources in the Education sector in an effective, transparent and accountable manner.

- **Multi-Sectoral Approach and Partnerships**

The active involvement of all sectors of society is necessary to ensure an effective response including effective partnerships, consultation and coordination with all stakeholders in the design, implementation, monitoring and evaluation of the response.

Components of knowledge

Concepts from several theories of knowledge and attitude were utilised to describe the components of knowledge and attitude.

Knowledge is defined in the Wikipedia (online encyclopaedia) as (i) facts, information, and skills acquired by a person through experience or education towards the understanding of a subject; (ii) what is known in a particular field or (iii) awareness or familiarity gained by experience of a fact or situation. Knowledge is also used to mean confident understanding of a subject, potentially with the ability to use it (the knowledge) for a specific purpose. The concepts making knowledge and their linkage with the different forms of knowledge are discussed below.

Concepts forming the framework on HIV and AIDS Knowledge

Three concepts have been identified as conditions that must be satisfied in order for one to possess knowledge. These concepts include belief, truth and justification. According to the tripartite theory of knowledge, if one believe something, with justification, and it is true, then one possesses the knowledge of it, otherwise one do not possess the knowledge (Tripartite theory of knowledge).

a. Belief

According to the Webster dictionary (online), belief in philosophy refers to 'accept as true'. Most philosophers assume that in order to know that something is the case; you have to accept it or believe that it's the case. According to the tripartite theory of knowledge, belief is the first condition for knowledge. Naidoo and Wills (2000) have

argued that belief is based on the information a person has about an object or action and it links the object to some attributes. In this study, the researcher will explore the sources of HIV and AIDS information among the research respondents as the basis for their belief on HIV and AIDS issues.

b. Truth

Truth refers to fact that has been verified (Webster dictionary online). Truth therefore, is an epistemological criterion upon which scientific knowledge is based. Scientific knowledge like the routes of transmission and methods of prevention of HIV are statements which are better or worse approximations of reality (TRUTH). These facts on HIV and AIDS were explored in the review of literature for this study.

c. Justification

Philosophers have argued that in order to know a thing, it is not enough to merely believe it; one must have a good reason for doing so (justification) (Pryor 2004; Tripartite theory of knowledge). This concept links knowledge with learning or experience. It is the view of the researcher that HIV and AIDS knowledge of respondents is defined by their personal contact with PLWHA or experience with HIV and AIDS issues.

Forms of Knowledge

a. Conceptual knowledge

Conceptual knowledge refers to a person's representation of the major concepts in a system. This form of knowledge is rich in relationships and understanding. It is a connected web of knowledge (a network) in which the linking relationships of the discrete bits of information about a phenomenon are made. This implies that a teacher possessing this knowledge would be able to rationalize the cause and effect of the processes within that phenomenon. Therefore, conceptual knowledge on HIV and AIDS pertains to the pathogenesis of AIDS from HIV. This includes the actual process by which the virus destroys the white blood cells thereby weakening the immune system. It also includes the understanding that HIV causes AIDS and that a weakened immune system is prone to variety of opportunistic infections which constitute AIDS. Other conceptual knowledge a teacher needs to posses about HIV and AIDS are the differences

and relationship between HIV and AIDS; and the understanding of how HIV is transmitted and the methods of prevention.

b. Procedural knowledge

Procedural knowledge is the knowledge exercised in the performance of some task (Procedural knowledge). The implication of this type of knowledge is that instructions on the specified task or situation lead to increased understanding of the phenomenon and adoption of the procedure.

Thus, teachers with this form of knowledge will be able to teach learners about HIV and AIDS issues. Possessing this type of knowledge imply that the teachers will discuss sexuality and HIV and AIDS issues with colleagues and family without any fear or limitation. The use of condom during un-safe sexual intercourse and seeking early treatment for sexually transmitted infections (STI) are other task that indicate the possession of this type of knowledge.

c. Episodic knowledge

Episodic knowledge refers to the memory of events, time, places, associated emotions, and other conception based knowledge in relation to an experience (Episodic memory), This type of knowledge is associated with the awareness of trends of HIV prevalence in a given period in Nigeria, Teachers with episodic knowledge will be aware of someone infected with HIV or who have died of AIDS, The teacher will also be aware of the trends of the AIDS epidemic in Nigeria including the different age groups mostly affected, This form of knowledge was explored above under the knowledge of someone with HIV or who have died of AIDS.

Propositions on HIV and AIDS Knowledge for the study

These are statements that illustrate the relationship between the different concepts used so that the phenomenon (HIV and AIDS knowledge) in this study can be understood. The following statements have been proposed to facilitate understanding of HIV and AIDS knowledge in this study.

- Information on HIV and AIDS is received by a teacher in the form of conceptual, procedural and episodic information through various sources that include the mass media, teaching / learning materials, seminars and trainings;
- The new information is internalised and form the basis for belief the teacher has on HIV and AIDS issues - the first component of knowledge
- The belief is reinforced if the received information are fact that have been verified or proven scientifically – truth
- A justification for the new belief also results when the teacher comes in contact with someone infected with HIV or who have died of AIDS.

New knowledge on HIV and AIDS is thus formed based on the belief, the available evidence (truth) and the justification. The new knowledge is manifested in the form of conceptual, procedural and episodic knowledge.

Conceptual Framework

Conceptual framework describes the relationship of a problem to the concepts in a model and the conceptual framework relevant to this study is Theory of Reasoned Action (TRA).

Theory of Reasoned Action

The theory of reasoned action (TRA) was developed by Martin Fishbein and Icek Ajzen in 1975 to examine the relationship between attitudes and behaviour. TRA looks at behavioural intentions rather than attitudes as the main predictors of behaviour. According to this theory, attitudes toward a behaviour (or more precisely, attitudes toward the expected outcome or result of a behaviour) and subjective norms (the influence other people have on a person's attitudes and behaviour) are the major predictors of behavioural intention.

The theory is based on the premonition that in social behaviour, people in general are rational and use the information that is available to them in a systematic way. Therefore Ajzen and Fishbein called their approach “a theory of reasoned action”. They presume that most social relevant actions are consciously controlled, and therefore that someone's

intention to carry out the (HIV voluntary counselling and testing) act is a positive determining factor for predicting behaviour. In other words, if you want to predict behaviour (uptake of HCT), you have to know the intention of the person involved.
To understand behaviour, nevertheless also need to know what determines the intention. According to Ajzen and Fishbein, there are two important factors:
1. a personal factor; and
2. a factor that expresses social influence.

The first is called the attitude towards the behaviour and expresses the judgement of the person whether the intended behaviour is good or bad. The second factor is called the subjective norm and expresses the perception that someone has of the social pressure s/he is under to express the behaviour.

Summarised, people (in this case primary school teachers) will show behaviour (uptake of HIV voluntary counselling and testing) if they feel themselves that it is good and if they think that important others also want her/him to behave that way. The attitude towards the behaviour is not determined by objective facts, but by the subjective estimation of what the behaviour will lead to and an evaluation of those outcomes. The subjective estimations are called beliefs. The subjective norm is formed by beliefs (not a 100% sure knowledge) about whether specific referents think I should or should not perform the behaviour, plus the motivation to comply with what these referents think. The referents are always people that are in that situation important for the person. The motivation can be positive or negative.

In case one factor (attitude or subjective norm) is positive and the second negative, we need to know the relative weight of each of the factors to be able to predict the behaviour. To understand attitude, subjective norm and relative weight, one need to take in that these are influenced by external variables. One can gain more understanding for how attitude, subjective norms and weighing are formed by looking at demographic variables, general attitudes and personality traits of the person involved – short: by comparing the person with others in her/his environment.

Theory of Reasoned Action applied to HIV voluntary confidential counselling and testing
Behavioural belief: an individual's belief about consequences of particular behaviour. The concept is based on the subjective probability that the behaviour will produce a given outcome.

Attitude toward behaviour: an individual's positive or negative evaluation of self-performance of the particular behaviour. The concept is the degree to which performance of the behaviour is positively or negatively valued. It is determined by the total set of accessible behavioural beliefs linking the behaviour to various outcomes and other attributes.

Normative belief: an individual's perception about the particular behaviour, which is influenced by the judgment of significant others (e.g., HCT counsellors, healthcare workers, parents, spouse, friends, co-teachers).

Subjective norm: an individual's perception of social normative pressures, or relevant others' beliefs that he or she should or should not perform such behaviour.
Control beliefs: an individual's beliefs about the presence of factors that may facilitate or impede performance of the behaviour (Ajzen, 2001). The concept of perceived behavioural control is conceptually related to self-efficacy.

Behavioural intention: an indication of an individual's readiness to perform a given behaviour. It is assumed to be immediate antecedent of behaviour (Ajzen, 2002b). It is based on attitude toward the behaviour, subjective norm, and perceived behavioural control, with each predictor weighted for its importance in relation to the behaviour and population of interest.

Behaviour: an individual's observable response in a given situation with respect to a given target. Ajzen said behaviour is a function of compatible intentions and perceptions of behavioural control in that perceived behavioural control is expected to moderate the effect of intention on behaviour, such that a favourable intention produces the behaviour only when perceived behavioural control is strong.

Table 2.3: Theory of Reasoned Action

Concept	Definition	Measure approach
Behavioural intention	Perceived likelihood of performing behaviour	Are primary school teachers likely or unlikely to (uptake HCT)?
Attitude	Personal evaluation of the behaviour	Do primary school teachers see (uptake HCT) as good, neutral, or bad?
Subjective norm	Beliefs about whether key people approve or disapprove of the behaviour; motivation to behave in a way that gains their approval	Do primary school teachers agree or disagree that most people approve of/disapprove of (uptake HCT)?

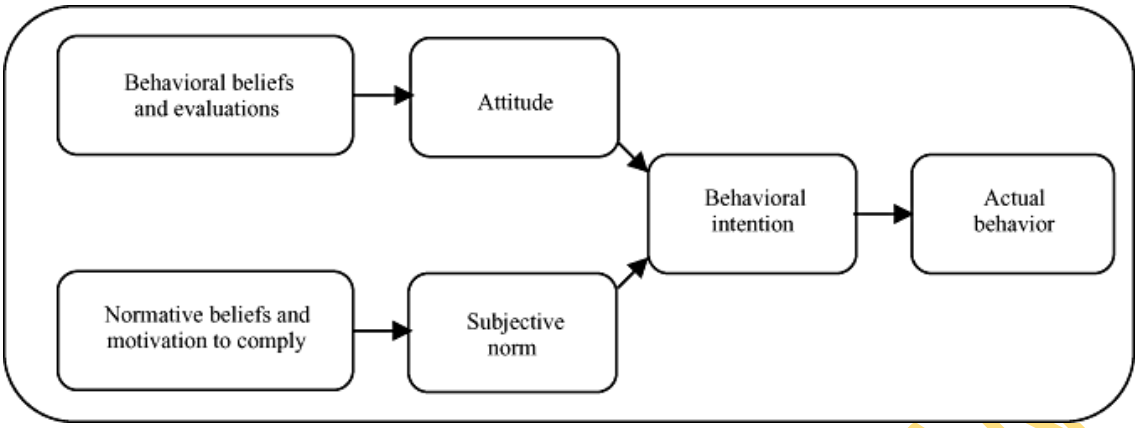


Figure 2.2: The Theory of Reasoned Action as applied to knowledge of primary school teachers in Ibadan North local government area about their preparedness to uptake HIV counselling and testing services

Source: (Concepts adapted from National Institute of Health (2005) Theory at a glance: A guide for health promotion practice. National Institute of Health. U.S. Department of Health and Human Services).an create any meaningful behavioural change.

CHAPTER THREE

METHODOLOGY

Study Design

The study was a descriptive survey designed to assess the level of knowledge of primary school teachers in Ibadan North local government area in utilisation of HIV counselling and testing services.

Study Site

Ibadan North Local Government Area (LGA) constitutes the study setting. The LGA is one of the five LGAs in Ibadan metropolis. Ibadan, of which the LGA is a part. It is the largest city in black Africa. The Ibadan North LGA was founded by the Federal Military government of Nigeria on 27th September 1991. This LGA was carved out of the defunct Ibadan Municipal Government along with others.

The components of the LGA cover areas between Beere roundabout through Oke – Aare to Mokola, Oke Itunu and Ijokodo. The other component areas from Beere roundabout to Gate, Idi –Ape to Basorun and up to Lagos – Ibadan expressway, Secretariat, Bodija, University of Ibadan and Agbowo areas. The headquarters of the local government is Bodija. As a result of accommodation problem, LGA headquarters is temporarily accommodated at Quarter 87 at Government Reservation Area at Agodi where the secretariat is located.

The local government is bounded by other local governments. In the North it is bounded by Akinyele LGA. In the West by Ido and Ibadan North West LGAs, and bounded in the South by Ibadan North West and Ibadan South West LGAs. The LGA is bounded in the East by Ibadan North East and also Lagelu LGAs.

The Ibadan North local government area has a population of 306,795 people. The males are 153, 139 people while the females population are 153, 756 people; projection for LGA as at 2008 is 164, 027 for males while the females population is 164, 998 (NPC, 2006). The Ibadan North LGA comprises of 12 wards (see table 3.1)

Table 3.1: The 12 wards in Ibadan North LGA

Ward	Area covered
1	Beere, Kannike, Agbadagbudu, Oke Aare, and Odo Oye
2	Ode Oolo, Inalende, Oniyarin and Oke Oloro
3	Adeoyo, Yemetu, Oke Aremo, and Oke Alfa
4	Itutaba, Idi Omo, Oje Igosun, Kube, Oke Apon, Abenla, Ali Iwo/Total Garden, and NTA area
5	Basorun, Oluwo, Ashi, Akingbola, Ikolaba, and Gate
6	Sabo area
7	Oke Itunu, Coca Cola, and Ore Meji
8	Sango, Ijokodo
9	Mokola, Ago Tapa, and Premier Hotel area
10	Bodija, Secretariat, Awolowo, Obasa and Sanusi
11	Samonda, Polytechnic and University of Ibadan
12	Agbowo, Bodija market, Oju Irin, Barika, Iso Pako, Lagos /Ibadan Expressway

The LGA consists of multi–ethnic nationalities predominantly dominated by the Yorubas. The Igbos, Edos, the Urhobos, Itsekiris, Ijaws, Hausas, Fulanis and foreigners who are from Europe, America, Asia and other parts of the world live within the LGA.

Majority of the population of Ibadan North LGA are in the private sector. They are mainly traders and artisans. A good number of their workers are civil servants who live predominantly around Bodija Estate, Agbowo, Sango, Mokola, the University of Ibadan and the Polytechnic Ibadan. Also there are six major markets in the local government area, namely Bodija (which is the largest in Ibadan), Mokola, Sabongeri, Gate, and Ijokodo/Gbaremu markets. Thousands of people patronise these markets on daily basis irrespective of their local governments. Some people travel from outside Ibadan and other states to buy and sell in all these markets.

Generally, there are numerous educational institutions in Ibadan North LGA (IBNLGA). Some of these institutions include University of Ibadan, secondary and primary schools. Moreover there are a number of health facilities both at the tertiary, secondary and primary health care level within the LGA. There are 62 public primary schools in the LGA and these are divided into six (6) zones for administrative purposes. There are a total of 1821 teachers in all the public primary schools (273 male teachers and 1548 female teachers). All these teachers are with teaching qualification and majority are holders of bachelor degree in various fields. The sketch map of Ibadan North Local Government Area and HIV Counselling & Testing centre in the LGA are in appendices B & E.

Study Population

The study population consisted of all public primary school teachers in IBNLGA. This comprises of all class teachers and head teachers in public schools in the LGA.

Sample Size

The sample size was calculated with this formula:

The sample size for this study will be determined using (Kasiulevicus et al., 2006) sample size formula below:

$$n = \frac{Z^2_{\alpha/2} P(1-p)}{d^2}$$

where,

n= required sample size

$Z^2_{\alpha/2}$ is the standard normal value corresponding to 95% confidence level = 1.96

P = Prevalence of teachers' knowledge about HIV and HCT in the state (assumed 35%)

d = decree of error tolerance 5%

$$n = \frac{(1.96)^2(0.35)(1- 0.35)}{(0.05)^2}$$

$$n = \frac{(3.38416)\ 0.2275}{0.0025}$$

$$\frac{0.873964}{0.0025}$$

n = 349.6

To cater for non-response and attrition, 14.5% of the sample was added. Thus,

350 x 14.5% = 50

n = 400

A total of 400 respondents were selected to make room for attrition and non-response.

Sampling Procedure

Multistage random sampling technique was used in selecting the respondents. The procedure was as follows:

Step 1 – Simple random sampling involving balloting was used to select IBNLGA as the study site among the 5 major local government areas that make up Ibadan metropolis. Thereafter a community diagnosis was conducted to document the number of public primary schools in Ibadan North Local Government Area which involved going through records of Ibadan North Local Government Area Universal Basic Education Authority. In the record, the whole public primary schools were stratified into 9 zones.

Step 2 - Following the zoning of the schools, 62 public primary schools were identified and for easy selection, the whole 9 zones were later clustered into 3 based on their largeness and locations, this stratification was illustrated in the table below.

Table 3.2 Cluster/zoning of primary schools selected by location

Cluster	Location	School
UI/Bodija	a. Abadina zone	Abadina School I, UI
		Abadina School III, UI
		Immanuel School, UI
	b. Bodija zone	St. Thomas School III, Agbowo
		Olive School II, Bodija
		Methodist School II, Bodija
	c. Sango	CAC School III Sango
		Oluyole Cheshire Home School, Ijokodo
		Poly Staff School I, Ijokodo
Yemetu/Oke-Are	a. Kube zone	IMG School I, Oje Igosun
		Methodist School Agodi 5
		Salvation Army School II, Oje Igosun
	b. Yemetu zone	Salvation Army School I, Yemetu
		St. Michael School I, Yemetu
		St. Paul School I, Yemetu
	c. Oke-Aare zone	St. Peter's School II Oke-Aare
		St. Mary School II, Oke- Aare
		Islamic Mission School II, Odoye
Inalende/Mokola	a. Oniyanrin zone	CAC School II, Oniyanrin
		IMG School I Oniyanrin
		Ebenezer AC School Nalende
	b. Inalende zone	The Apostolic School, Nalende
		United Brothers School, Nalende
		Salvation Army School, Nalende
	c. Mokola zone	St. Bridges' Girls School, Mokola
		C and S New Eden, Bodija
		IMG School II, Mokola

From each zone, three schools were randomly selected through balloting and a sampling frame was prepared from the data gathered during this stage (Appendix A for list of all schools in the LGA).

Step 3: According to the record at the IbNLGUBEA, there were 273 male teachers and 1,548 female teachers (total number of 1821 teachers). In order to obtain a good representation from the population, proportionate sampling procedure was used based on the numbers of males and females teachers in each of the schools selected.

Step 4: A list of teachers in the selected schools was drawn. The proportion of teachers to be selected in each school was calculated using the sample size calculated formula below:

School sample size =

For male teachers: $\frac{\text{Total number of male teachers in each school x total population of male teachers in the LGA}}{\text{total population of teachers in the LGA}}$

For female teachers: $\frac{\text{Total number of female teachers in each school x total population of female teachers in the LGA}}{\text{total population of teachers in the LGA}}$

Sampling interval

Sampling interval (K) was calculated for each school using the formula K = N/n.

Where:

K = Sampling interval.

N = Total no. of eligible teachers in a particular school.

n = Total no. of selected teachers (males versus females) in a particular school.

Systematic Random Sampling was carried out using K =1-2 for school teachers. The procedures taken were presented below in steps:

Step 1: On school basis, the teachers were asked to pick number e.g. in a school of thirty teachers (20 females and 10 males); the numbering would be from 1-10 (males); 1–20 (females).

Step 2: The calculated "K" is between 1 to 2. With the eyes closed, the researcher with a pencil touched a number from the Kish Table of Random numbers that fell within the sampling interval. When "2" was picked, among female teachers, the teachers that picked "2" when they were asked to pick number was first selected. In the same vein, those who picked "1" among the male teachers was also selected. This was done all through the schools selected for the study till the sample size was fully selected.

Male and female teachers were stratified based on their gender so that each of the gender will be given equal opportunity; then, balloting was done by an individual who was neither part of the research team nor a teacher.

Instrument for Data Collection

The instrument for data collection was a self-administered questionnaire. The questionnaire was divided into sections A – E.

Section A: consisted of demographic information while all other sectionswere considered in line with the study objectives.

Section B: included questions to measure factors such as knowledge and reproductive health, the questions relating to these were pooled and then analyzed further. Knowledge scale drawn on a 30-point scale to assess the respondents' knowledge about HIV and HCT, whereby every correct answer was given a score of one point and an incorrect one a zero score. Primary school teachers who scored between 1 – 15 points were considered to have poor knowledge, while those with good knowledge of HIV counselling and testing must scored between 16 – 30 points.

Section C: comprises of indicators used to measure knowledge on belief in HIV/AIDS and self-susceptibility of the teachers.

Section D: explored variables on utilisation of HCT services, this was worded to measure respondents who had or had not utilised HCT services and their intention to utilise it (for those who have not done so).

Validity of the instrument

Several measures were taken to ensure that the instruments are valid and reliable. Experts–a medical statistician and a health education specialist were consulted to review the instrument for face and content validity. The instrument was pre-tested among 40 subjects in Ibadan South West local government area in order to check the psychometric properties of the instrument. . Necessary corrections were made following the pre-test exercise based on the analysis of the results of the pre-test.

Reliability of the instrument

The questionnaire used in pre-testing were coded and analysis using Cronbach's alpha coefficient of the Statistical Package for Social Sciences (SPSS) in other to ascertain the psychometric properties of the instrument. Alpha (Cronbach's) is a model of internal consistency, based on the average inter-item correlation. This was done to ascertain the psychometric properties of the instrument. According to this approach, a result showing correlation coefficient equal or greater than 0.05 is said to be reliable. The result of the analysis of the data collected during the pre-test was 0.862 which shows that the instrument is very reliable

Methods for data collection

The administration of the questionnaires was done by the researcher with the help of research assistants that were trained prior to the commencement of the study. Four research assistants were used. They were trained on the objectives of the study, understanding of the instrument for data collection, building rapport with respondents, interviewing skills, and other ethical issues involved in research prior to the time of data collection.

The team visited each selected school in each zone where respondents were met. The questionnaires were given to each respondent to fill personally since the wordings are straightforward and easy to comprehend. Assistance was rendered where necessary to guide them in any difficult area or where they have problems of understanding. The questionnaires were retrieved back from the respondents immediately on completion.

Data collection which was intended to last for a period of one month could not be achieved but was delayed for about 2 months as a result of teachers' nationwide strike action. Visits were made to all the selected schools in company of the research assistants that were trained before they are deployed to the field for data collection. The study respondents were given the questionnaire at a time considered convenient for them so as not to disrupt academic activities and at a place that ensures confidentiality.

Visits were made to the Education Secretary, Ibadan North Local Government Area Universal Basic Education Authority to intimate him of the research and seek him permission to conduct the research in the schools he provides oversight for. Schools for the study were identified and visits were made to each of the selected primary schools. Head of schools of each of the primary schools was met personally by the researcher and they were brief on the purpose of the research. Permission was sought in each of these schools before the commencement of data collection. Introduction of the study was made to selected teachers and respondents' consents were obtained before questionnaire administration. Completed questionnaires were retrieved back from the respondents immediately after completion. They were cross-check for any error and completeness before leaving each of the schools.

Data analysis and presentation

Several measures were made in ensuring that quality data were collected and managed for analysis. A data dictionary/coding guide was prepared for the instrument after the researcher checked the quality of information collected. Problems discovered during this stage were resolved immediately before data entry. Serial numbers were written on the questionnaires for easy identification and recall in case there are issues with any of the questionnaire. Administered questionnaires were edited and hand coded by the researcher. In processing data into the computer, the Statistical Package for Social Sciences (SPSS) version 12 was used for entry and running the analysis. Data was analysed using both descriptive and inferential statistics (mean, frequency, percentage and Chi-square respectively). Descriptive statistics such as pie chart and Chi-square test at $p=0.05$ were used to facilitate the presentation of the findings. The questionnaires were stored in a place that is safe from destruction by water or fire and where unauthorised persons will not have access to them.

Limitation of the study

The study focused on HCT, which is more personal issue. Some respondents were not willing to give all information required by the researcher for one reason or the other. Efforts were made to reduce this problem through persuasion and educating respondents on the objectives of the study.

Ascertaining the authenticity of responses provided by the respondents was a daunting challenge in survey research. This study however was no exception. It was assumed that since participation was voluntary, and necessary ethical issues were given consideration, then all the responses provided which form the basis of the finding of this study were honestly made.

CHAPTER FOUR

RESULT

The findings from this study are presented in this section. They are organised into the following subsections: socio-demographic characteristics; knowledge about HIV and AIDS and reproductive health, awareness about HCT, belief about HIV and AIDS and HIV counselling and testing.

Socio-demographic information

The socio-demographic characteristics of primary school teachers who participated in the study are presented in table 4.1. A majority (89.0%) of the respondents were females. The mean age of the respondents was 44.3 ± 7.3 years ranged between 22-59 years with above half (53.5%) of the respondents within the 40 – 49 years age group followed by 50–59 years age group (24.3%). Majority (89.0%) of the respondents were females and Christian religion proclaimers were majority (79.5%) among the respondents. Most (90. 8%) of the respondents were currently married. A very large proportion (94.3%) of the respondents was made up of Yoruba ethnic group.

Table 4.1: Respondents' socio-demographic information(N = 400)

Socio-demographic Characteristics	№	%
Sex		
Male	44	11.0
Female	347	89.0
Age group		
20 – 29 years	12	3.0
30 – 39 years	77	19.3
40 -49 years	214	53.5
50 -59 years	97	24.3
Religion		
Christianity	318	79.5
Islam	62	15.5
Traditional religion	20	5.0
Marital status		
Never Married	12	3.0
Currently married	363	90.8
Married but not with spouse	25	6.3
Ethnic group		
Yoruba	377	94.3
Igbo	6	1.5
Hausa	8	2.0
Others *	9	2.2

* Esan and Ibiobio

Respondents' knowledge about HIV and AIDS and reproductive health

Those who correctly gave the full meaning of HIV as Human Immunodeficiency Virus were 26.3% and in the same manner61.3% were able to give the correct full meaning of AIDS as Acquire Immune Deficiency Syndrome. Top on the list of mode of attack of HIV on human body as indicated by participant were virus destroying the body immunity (29.3%) followed by virus destroying muscles causing weight loss, causes body weakness (9.0%). About half of the respondents (48.5%) indicated that infected person can remain in HIV status for life while others did not. Moreover, less than half (39.8%) of the respondents stated that infected person liable to die of AIDS (Table 4.2). Table 4.3 highlights the frequencies and percentages of suggested signs and symptoms of AIDS by the respondents (Table 4.3).

Table 4.2: Respondents' knowledge about HIV and AIDS and reproductive health

Knowledge about HIV and AIDS	№	%
Name of causative agent		
Virus	186	46.5
Blood/Intercourse	4	1.0
AIDS	4	1.0
Bacteria	3	0.8
Gonorrhoea	1	0.3
Don't know	202	50.5
Full meaning of HIV		
Human Immunodeficiency Virus	105	26.3
Human Immun-deficiency Syndrom	89	22.3
Human Inefficiency Virus	2	0.5
Hormon Immune Virus	12	3.0
Hydro Infection Virus	3	0.8
Don't know	189	47.3
Full meaning of AIDS		
Acquired Immune Deficiency Syndrome	245	61.3
Acquired immune deficiency	3	0.8
Immune deficiency	1	0.3
Acquired deficiency syndrome	2	0.5
Acquired immunity deficiency syndrome	3	0.8
Acquired immune deficiency symptom	12	3.0
Don't know	134	33.5
Mode of attack of HIV		
Destroys muscles causing weight loss	36	9.0
Destroys body immunity	117	29.3
Causes diarrhoea	10	2.5
Causes body weakness	12	3.0
Causes tuberculosis	5	1.3
Causes malaria attack	6	1.5
No idea	214	53.5
Infected person maintain status for life		
Yes	194	48.5
No	206	51.5
Infected persons must die of AIDS		
Yes	159	39.8
No	241	60.2

Table 4.3: Signs and symptoms of AIDS as listed by respondents

Listed signs and symptoms	№	%
Weight loss	242	23.0
Body rashes	152	14.4
Cough/tuberculosis	130	12.3
Diarrhoea	123	11.7
Loss of appetite	94	8.9
Body weakness	92	8.7
Constant malaria	66	6.3
Fever	53	5.0
Constant headache	40	3.8
Vomiting	19	1.8
Short of blood	11	1.0
Body sores/boils	10	0.9
Loss of hair	7	0.7
Spotted skin	6	0.6
Pelvic infection	2	0.2
Psychological insanity	2	0.2
Loss of sight	2	0.2
Dizziness	2	0.2
Total	**1053**	**100.0**

Mutual exclusive responses

Knowledge of detecting HIV/AIDS

The three top from the list of probable ways of detecting HIV/AIDS in the body of an infected person by the respondents are: through laboratory test (26.9%); through weight loss (20.8%) and body rashes (17.6%).

Table 4.4: Knowledge of detecting HIV/AIDS

Signs	№	%
Weight loss	288	20.8
Laboratory test	372	26.9
Urine test	137	9.9
Rashes	244	17.6
Loss of appetite	230	16.6
Mere looking	112	8.1
Total	1383	100.0

Mutual exclusive responses

Respondents' knowledge about the route of HIV transmission

Respondents' response to items on route of transmission of HIV showed a varied level knowledge about the perceived channel of transmitting HIV. Among mentioned routes were:by having unprotected sex (42.7%) and sharing same blade with infected persons (41.9%). Common ways by which a person can avoid being infected with HIV according to the respondents were: having single sex partner (23.6%); using condom (23.3%) and avoid use of contaminated needles (22.3%). Greater percentage (83.5%) of the respondents admitted that a person who looks healthy can be infected with HIV and AIDS (Table 4.5 for details).

Table 4.5: Respondents' knowledge about the route of HIV transmission

Knowledge about the route of HIV transmission:	№	%
Ways uninfected person can contact HIV from an infected person		
Using same bed with infected person	43	5.1
Mosquito bite	86	10.3
Sharing same blade with infected persons	351	41.9
Unprotected sex with infected person	357	42.7
Total*	837	100.0
Ways a person can avoid being infected with HIV		
Using condom	345	23.3
Having single sex partner	350	23.6
Abstinence	152	10.3
Drinking concoction after sex	34	2.3
Avoid use of contaminated needles	330	22.3
Having unprotected sex with commercial sex workers	99	6.7
Praying	114	7.7
Taking traditional medicine	21	1.4
Have sex with only virgins	36	2.4
Total*	1481	100.0
A person who looks healthy can be infected with HIV and AIDS		
Yes	334	83.5
No	66	16.5
Total	400	100.0

**Mutual exclusive responses*

Respondents overall knowledge mean score about HIV and AIDS

Respondents'knowledge about HIV/AIDS was tested with a 30 point scale and majority, 323 (80.8%) had good knowledge about HIV and AIDS as well as reproductive health issues(1 – 15 points) with mean score of 19.1± 2.0 (Table 4.6).

Table 4.6: Respondents overall knowledge mean score about HIV and AIDS

Knowledge score	№	%	Mean
Poor	77	19.2	12.5 ± 1.0
Good	323	80.8	20.5 ± 2.0
Total	400	100.0	19.1 ± 2.0

Respondents' belief on HIV and AIDS

Respondents hold varying degrees of belief about HIV and AIDS; a few (6.3%) belief that HIV is a superstition while a large majority (93.7 %) were of the opinion that it is not. Also a large majority (87.8 %) belief that it is not only immoral persons that can be infected with HIV; Belief that sexually active persons should go for HIV test every six monthswere (89.5%); Few (28.6%) of the respondents presumed that they were vulnearable to HIV and about 72.8% believed that HIV is chronic(Table 4.7 for details).

Table 4.7: Respondents belief about HIV and AIDS

Belief about HIV and AIDS		Yes (%)	No(%)
Belief that HIV is superstition	(n=366)	23 (6.3)	343 (93.7)
Belief that only immoral person can get HIV	(n=353)	43 (12.2)	310 (87.8)
Belief self susceptible to HIV	(n=364)	104 (28.6)	260 (71.4)
Belief that HIV is chronic	(n=324)	291 (89.8)	33 (10.2)
Belief that sexually active persons should go for HIV test every six months	(n=352)	315 (89.5)	37 (10.5)

* All total were not equal to 400 because no responses had been deleted

Perceived routes of contacting HIV and its avoidance

Mentioned reasons by the respondents for likelyhood of contacting HIV include use of contaminated sharp instrument (40.9%), unprotected sex (22.0%), carelessness (14.2 %), careless of health personnel (5.5%), transfusion of unscreened blood (5.5%). Others were; through injection (3.9%), if one did not abstain from sex (3.1%), eating excessive rice (2.4%), ignorance (1.6 %) and mosquito bite (0.8%).

Some reasons mentioned by the respondents who were of the opinion that they are not vulnerable to HIV was that they were; universal following precautions (25.1%); keeping faithful partner (23.4%); divine intervention (19.6%); knowing how to be free from HIV (11.1%), do not share razor with people (8.1%); being careful (6.0%); use of condom (3.4%); old age (2.1%) and no opposite friend (1.3%). A large number of the respondents' (93.8%) perceived the health condition of HIV victim as being serious.

Table 4.8: Perceived routes of contacting HIV and its avoidance

Variable	№	%
Route of getting HIV		
Use of contaminated sharp instruments	52	40.9
Unprotected sex	28	22.0
Carelessness	18	14.2
Transfusion of unscreened blood	7	5.5
Careless health personnel	7	5.5
Through injection	5	3.9
If one did not abstain from sex	4	3.1
Eating excessive rice	3	2.4
Ignorance	2	1.6
Mosquito	1	0.8
Total*	127	100.0
Avoidance of HIV infection		
Following precautions	59	25.1
Keeping faithful partner	55	23.4
Divine intervention	46	19.6
I know how to be free from HIV	26	11.1
Refusal to share razor with people	19	8.1
To be careful	14	6.0
By using condom for sex	8	3.4
Old age	5	2.1
No friend of opposite partner	3	1.3
Total*	235	100.0

* Multiple responses(The total did not equal to 400 because non responses were not included in the multiple responses)

Respondents' sexual behaviour

Very few (0.8%) of the respondents indicated that they had multiple sexual partner in the last 3 months and not more than 2 partners. Concerning discussions on HIV and AIDS, 27.1% declared that they had discussed using condoms with their partners, 26.0% had discussed going for HIV test while 24.4% had discussed being at risk of STIs including HIV and AIDS.

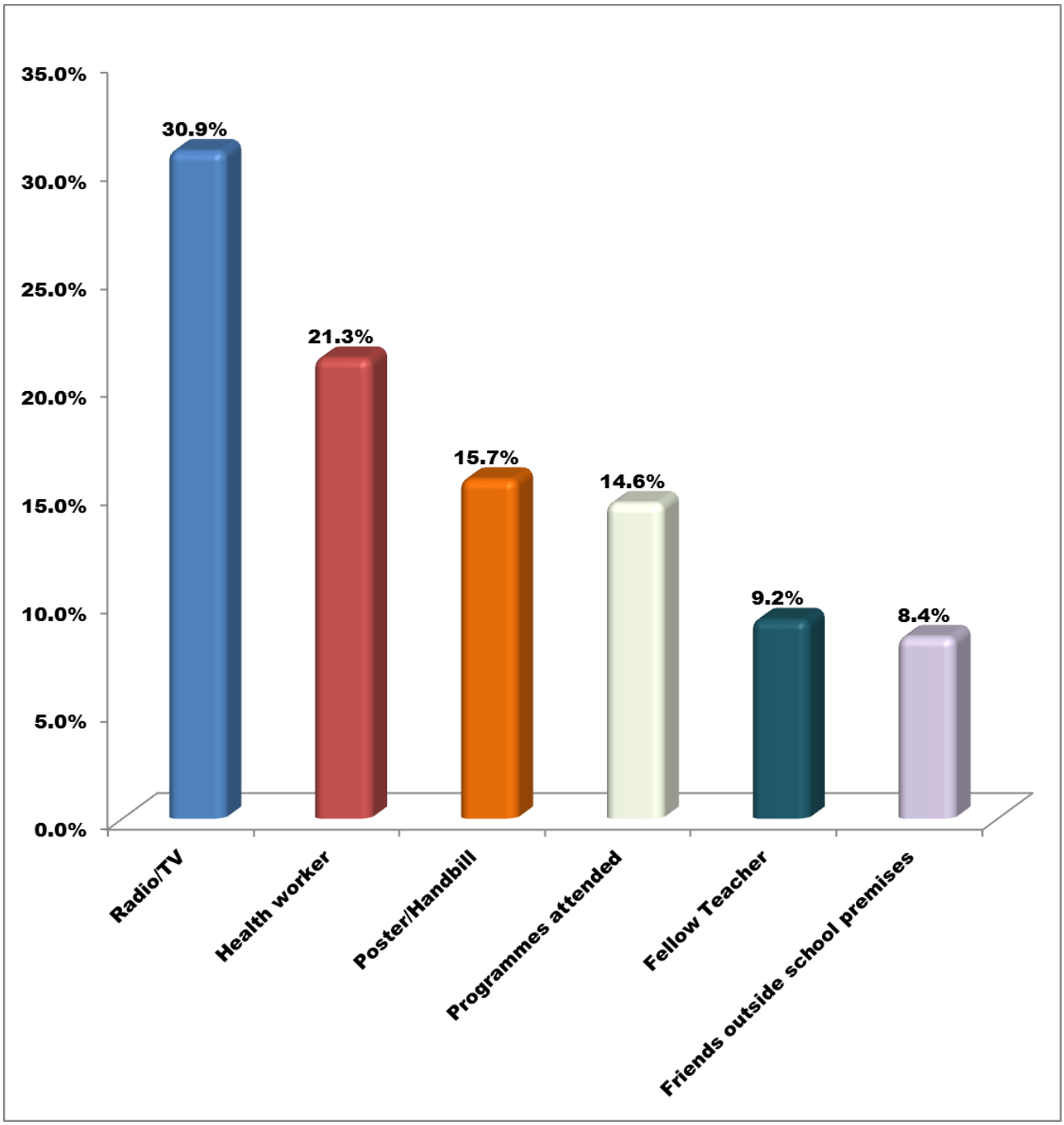
Respondents' awareness of HCT

Above half (56.8%) of the respondents have heard about HIV Counselling and Testing prior to the study. When asked about what HCT stands for, 53.4% of the respondents were able to give the meaning of HCT as HIV counselling and testing. Top on the list of sources of information mentioned was radio/television (30.9%) while the least mentioned source was friends outside school premises (8.4%). Less than one-third (29.5%) were aware of HCT location around them (Table 4.9 and Figure4.3).

Table 4.9: Respondents' awareness of HCT

Statements on HIV Counselling and Testing	№	%
Awareness about HCT		
Yes	193	56.8
No	147	43.2
Total	340	100.0
Meaning of HCT		
HIV counselling and testing	103	53.4
Human counselling and testing	1	0.5
Health counselling and testing	7	3.6
Don't know	82	42.5
Total	193	100.0
Awareness of HCT location around respondents		
Yes	57	29.5
No	136	70.5
Total	193	100.0

All total were not equal to 400 because no responses had been deleted



Multiple responses

Figure 4.1: Source of information about HCT (n=479)

Respondents'up-take of HCT

When asked about whether they had ever been counselled by a health worker regarding HIV and AIDS before, majority (73.2%) indicated that they had ever been counselled by a health worker at one point or the other. Among the respondents, a few, (32.2%) had ever had voluntary gone for HCT while others, 287 (71.7%), had not. Among those who had never gone for HCT, 48.9% were willing to go for HCT if granted the opportunity.

Table 4. 10: Respondents'up-take of HCT

	Yes **№ (%)**	**No** **№(%)**	**Total** **№ (%)**
Ever received counselling by a health worker regarding HIV/AIDS	260 (73.2)	95 (26.8)	355 (100.0)
Ever voluntarily tested for HIV	113 (32.2)	238 (67.8)	351 (100.0)
Willingness to go for HCT	113 (48.9)	118 (51.1)	231 (100.0)

Respondents' preparedness to adopt HCT services

The three common reasons for not willing to go for HCT by the respondents were; believing on God's protection (27.7%), not trusting the results of the HCT (10.3%) and believing not engaging in risky behaviour (23.3%). Nevertheless, the three highly preferred places to have HCT by those who were willing to go for it were registered hospital (70.4%), laboratory (12.0%) and HCT office (9.5%). The preferred location of such HCT centre by the respondents should be the one nearer to house (40.4%) and followed by those who wished to go centre far away to their houses/ schools/mosques/churches (9.5%).

Table 4.11: Respondents preparedness to adopt HCT services (N=400)

If not prepared, reasons for decision not to be tested:	**№**	**(%)**
I believe God will protect me	70	27.7
I don't engage in risky behaviour	59	23.3
Do not trust the results	26	10.3
I am afraid that result might be positive	21	8.3
Costly/expensive	16	6.3
People might think I have HIV and AIDS	16	6.3
I don't want to know the result	14	5.5
Counsellors are unfriendly	9	3.6
Testing centre too far	8	3.2
The disease can't be cured, so I don't want to know	6	2.4
I am a virgin	5	2.0
I can't afford the treatment	3	1.2
Total*	253	100.0
If prepared for HCT, places to go for HIV testing		
Hospital	193	70.4
Laboratory	33	12.0
HCT office	26	9.5
Health centre	17	6.2
Don't know	3	1.1
Anywhere	2	0.7
Total	274	100.0
Preferred centre/location to go for HIV test		
Centre nearer to house	92	40.4
Centre nearer to school	57	25.0
Centre nearer to church	5	2.2
Centre nearer to mosque	2	0.9
Centre far from school/house/Church/Mosque	72	31.6
Total	228	100.0

* Mutually exclusive responses

Table 4.12: Respondents' preparedness to disclose HIV status

Statement on HCT	**№**	%
Confident to disclose HIV status if positive		
Yes	107	47.6
No	118	52.4
Total	225	100.0
If not confident, reason for lack of confidence to disclose HIV status if positive		
What people will say	2	1.7
Stigmatisation	38	32.2
Telling others will not heal one	5	4.2
Shame/disgrace	32	27.1
Only God can assist	2	1.7
I don't belong to the disease	13	11.1
For security reasons	5	4.2
Don't know	21	17.8
Total	118	100.0

Respondents experience of given opportunity to trainor conduct HIV prevention activities

Few of these respondents (32.5%) had ever been trained to conduct HIV and AIDS or reproductive health education and 12.0%had ever been asked to conduct HIV prevention activities like club or outreach effort.

Table 4.13: Respondents'permission/authority to trainor conduct HIV prevention activities

Training on HIV and AIDS	№	%
Ever been trained to conduct HIV/AIDS or reproductive health education		
Yes	122	32.5
No	253	67.5
Total*	375	100.0
Ever been asked to conduct HIV prevention activities like club or outreach effort		
Yes	48	13.4
No	309	86.6
Total*	357	100.0

* All total were not equal to 400 because no responses had been deleted

Testofhypotheses

Hypothesis 1:

There is no significant relationship between respondents' selected socio-demographic characteristics of sex, marital status and knowledge on HCT services.

Relationship between respondents' selected socio-demographic characteristics of sex, marital status and knowledge on HCT services

Knowledge onHCT services were tested along respondents'sex and marital status differences. The result of the Chi-square table below on relationship between sex of the primary school teachers and their knowledge onHCT services shows that respondents' knowledge onHCT was significantly related to their sex. Moreover, respondents' marital status was significantly related to their knowledge on HTC services. Therefore the null hypothesis was rejected.

Table 4.14: Relationship between respondents' sex, marital status and knowledge on HCT services

	Knowledge about HCT			
	Good	Poor	Total	
Variable	**№ (%)**	**№ (%)**	**№ (%)**	**Statistic**
Male	101 (89.4)	12 (10.6)	113 (100.0)	χ^2= 6.079
Female	186 (78.1)	52 (21.9)	238 (100.0)	df = 1
Total	287 (81.8)	64 (18.2)	351(100.0)	p-value = 0.017
Never married	7 (58.3)	5 (41.7)	12 (100.0)	
Currently married	217 (68.0)	102 (32.0)	319 (100.0)	χ^2= 0.657
Married but not with spouse	14 (70.0)	6 (30.0)	20 (100.0)	df = 2 p-value = 0.043
Total	238 (67.8)	113 (32.2)	351 (100.0)	

Hypothesis 2

There is no significant relationship between respondents' selected socio-demographic characteristics of sex, marital status and willingness to uptake HCT services.

Relationship between respondents' selected socio-demographic characteristics of sex, marital status and uptake of HCT services

The second hypothesis which stated that there was no significant relationship between selected socio-demographic variables and willingness to go for HCT services was tested for significance. Result showed that there was no significant relationship between socio-demographic characteristics of sex, marital status and willingness to go forHCT services. Therefore we fail to reject the null hypothesis.

Table 4.15: Relationship between respondents' sex, marital status and willingness to go for HCT services

	Willingness to go for HCT			
	Yes	No	Total	
Variable	№ (%)	№ (%)	№ (%)	Statistic
Male	17 (56.7)	13 (43.3)	30 (100.0)	χ^2= 0.825
Female	96 (47.8)	105 (52.2)	201 (100.0)	df = 1
Total	113 (48.9)	118 (51.1)	231 (100.0)	p-value = 0.364
Never married	5 (71.4)	2 (28.6)	7 (100.0)	
Currently married	100 (47.8)	109 (52.2)	209 (100.0)	χ^2= 0.153
Married but not with spouse	8 (53.3)	7 (46.7)	15 (100.0)	df = 2 p-value = 0.696
Total	113 (48.9)	118 (51.1)	231 (100.0)	

CHAPTER FIVE

DISCUSSION

This chapter is organised into the following sub-sections:

1. Socio-demographic characteristics
2. Knowledge about HIV and AIDS and reproductive health
3. Awareness about HIV counselling and testing (HCT)
4. Believe in HIV and AIDS and HIV counselling and testing
5. HIV Counselling and Testing
6. Implications of the findings for health education and workplace policy on HIV and AIDS
7. Conclusion
8. Recommendations and
9. Suggestions for further studies.

Socio demographic characteristics of the respondents

A large majority (86.8%) of the study respondents were females. They constituted an important sub-group of teaching profession. This however is in sharp contrast with the findings of the study conducted by Adamchak, (2005) where she found that one third were women, and two thirds were men. According to her "this is consistent with the overall sex distribution of teachers in Ghana. In 1999, 65 percent of primary school teachers, and 75 percent of junior secondary school teachers were males". The sex distribution of those not completing the questionnaire is not known, so it is not possible to determine whether females disproportionately chose not to participate in the survey. However, even if all of the non-respondents were women, they would still represent a smaller proportion of the total than men. The men were slightly younger than the women. Fifty-four percent of men were aged 39 or younger, compared with 49 percent of women. The distribution by ethnic group is very similar for males and females, with Akan and Ewe representing the majority of the sample.

Respondents' knowledge about HIV and AIDS and reproductive health

An overwhelming majority of the respondents indicated that they had ever heard about HIV and AIDS. This is not strange with the frequent jiggles, information, education and communication materials that are available to the populace (literate and illiterate) on both print and electronic media. Moreover, the study was conducted in Ibadan which houses many educational institutions, many of HIV prevention programmes are targeted for varying populations. Teachers who are instructors/pseudo parents were used for the study because according to UNAIDS (2004), "Young people (15-24 year old) account for nearly half of all new HIV infections worldwide, pupils, students, adolescents are more closer to their teachers and spend substantial number of their days with them. They are the largest youth generation in history and need a protective environment – regular schooling, access to health and support services – If they are to play their vital part in combating the epidemic.

Awareness about the existence, seriousness and susceptibility to HIV and AIDS was high among the respondents. It has been reported that people's overall knowledge about the nature of HIV and AIDS is often low despite their high level of awareness of the disease condition (Isibor and Ajuwon, 2004; Kermode, Holmes, Langkham, Thomas and Gifford, 2005). Ibadan has witnessed a lot of HIV and AIDS public enlightenment programmes in recent years. It is to be noted that Ibadan is home to several NGOs which carry out HIV and AIDS enlightenment activities. Some of the HIV and AIDS programmes are targeted at difference populations in Ibadan in both private and public sectors.

Adequate knowledge of HIV and AIDS has great potential for facilitating the prevention and control of the pandemic. On the other hand inadequate and/or faulty knowledge of the disease may militate against prevention and control efforts and promote stigmatisation and discrimination against PLWHAs. Knowledge is a key behavioural antecedent (Green and Kreuter, 1999) within the context of HIV and AIDS.

Considering that HIV or sex itself is a subject rarely discussed in the home or community, it is important that children have access to the information from somewhere. Schools are arguably the best setting to provide children with HIV and AIDS and sexual

education because it is a pre-existing institution where theoretically a large percentage of children attend. In addition, Avert claims, “Men are targeting increasingly younger sexual partners whom they assume to be HIV negative, and the "virgin cure" myth (which claims that sex with a virgin can cure AIDS) fuels much of the abuse.” A young girl, already scorned by society and abused by the people she turns to, is unable to get information she might need. In addition, breaking the cycle of myths starts with educating the next generation.

According to the World Bank (2002), “education is a proven means of stopping the spread of HIV and AIDS… It has been proven to provide protection against HIV infection… It is among the most powerful tools for reducing girls’ vulnerability. Girls’ education can go far in slowing and reversing the spread of HIV by contributing to female economic independence, delayed marriage, family planning, and work outside the home. It offers a readymade infrastructure for delivering HIV and AIDS prevention efforts to large numbers of the uninfected population – schoolchildren – as well as youth, who in many countries are the age group most at risk. It is highly cost-effective as a prevention mechanism, because the school system brings together students, teachers, parents, and the community, and preventing AIDS through education avoids the major AIDS related costs of health care and additional education supply”.

A few of the respondents had ever received any training on HIV and AIDS or reproductive health education issues and a few had ever conducted any outreach programme on same. It is not strange as well because despite the fact that many had better knowledge of the disease condition, not many will be willing to participate in the training or get involved in HIV and AIDS issue.

Awareness about HIV Counselling and Testing

Eighty-nine per cent of the respondents believed sexually active persons should go for HIV test every six months. A few of the respondents perceive themselves not vulnerable to HIV infection; different reasons were given for such perception but the most common reason was that they followed universal precaution, not sharing razor blade with people, use of condom, being careful, among others. Only a few perceived themselves as

susceptible to HIV infection. This is consistent with the assertion made by the UNESCO (2006) which states that "Educators are at risk of HIV. In some settings, high rates of staff mobility, isolated locations and separation from spouses are factors that may increase risk". Marital status was significantly associated with this perception ($p<.05$).

Belief in HIV and AIDS

The respondents hold a strong belief about the disease condition in that some of the respondents perceived HIV and AIDS to be serious; many believed that the disease condition is chronic. A large majority believed that sexually active person should go for HIV test every six months although overwhelming majority did not engage in multiple sexual partnerships.

HIV Counselling and Testing

A few respondents had discussed with their partners about being at risk of STIs; a few respondents had ever discussed with their partners about going for HCT and only few had ever voluntarily tested for HIV before and just a few indicated their willingness to go for HCT. About a quarter of them were not willing to go for HCT and reasons for unwillingness to go for HCT included: God's protection (17.5%), not engaging in risky behaviours (14.8%), not trusting the results (6.5%) and health care providers' attitude (2.3%). Some of the respondents had ever received counsel from a health worker regarding HIV and AIDS. A few of the study respondents knew what HCT stand for and where HCT services are located in their vicinity. Some were willing to go for HCT and the preferred site for HCT by respondents included near their houses (23.0%), near their schools (14.3%) and far from home, school and mosques (18.0%). Reasons for preference for a nearby site are for proximity and convenience while to keep the result secret (10.0%) was the main reason for the preference for far distance.

Conclusion

In conclusion, teachers, educators and other staff who are infected/affected or not infected/affected by HIV and AIDS need access to counselling support. One approach is to train a cadre of counsellors to make regular visits to schools. Teachers coping with infected and affected learners may also need counselling and psychosocial support.

Findings from this study showed that teachers had limited understanding of the concept of HCT and other vital issue about HIV and AIDS, teachers should be willing to be open about their HIV status and to participate in the HCT service so as to encourage other to be willing to uptake HCT as a starting point in the prevention of the spread of HIV.

Recommendations

Based on the findings of the study, the following recommendations were made to improve teacher education on HIV and AIDS prevention education in Nigeria and explore the relationship between HIV and AIDS knowledge and attitude and background characteristics of teachers in Nigeria.

Teachers represent an untapped potential in the education sector in the fight against HIV/AIDS. The role of teachers in providing HIV/AIDS education could be enhanced if given the necessary training and re-training. This is reflected in the number of trained teachers on the FLHE curriculum, low coverage of teachers trained on the FLHE curriculum remains a concern. Teacher training on FLHE curriculum and HIV should be expanded to all schools and across teachers in all cadres.

Moreover, the training content of teacher education on HIV/AIDS prevention education in Nigeria should be revised to address the major areas of concern in this study. The revision should ensure that procedural and episodic components of HIV/AIDS knowledge as well as HCT and issues surrounding HIV/AIDS-related stigma and discrimination are adequately addressed.

Suggestions for further studies

The following studies are recommended to improve understanding of HIV and AIDS knowledge and attitude among teachers in Nigeria.

- A comparative study of the HIV and AIDS knowledge among teachers with different educational qualifications. The study will seek to establish the causal relationship between HIV and AIDS knowledge and the educational qualification of teachers in Nigeria.

- Participatory Action Research on the factors that affect HIV and AIDS attitude among teachers in Nigeria. The research will generate qualitative information about the key determinants of HIV and AIDS related stigma and discrimination among teachers as well as empower teachers on how to improve their HIV and AIDS attitude.
- Evaluations of the implementation of FLHE curriculum among teachers in Nigeria is recommended to determining factors impeding coverage, as well as explores the status of implementation of the curriculum in school.

Implication of the findings for Health Education

It has been observed that educators are at risk of HIV. In some settings, high rates of staff mobility, isolated locations and separation from spouses are factors that may increase risk. Wrong perception and false belief about the disease condition are good opportunity for the spread of the disease underground. When an individual perceive him or herself not vulnerable to HIV infection and in one way or the other he or she engages risky sexual behaviours, he or she stands the chance of infecting other unsuspecting partners. The readiness of teachers to up-take the HCT services will ultimately serve as a precursor for the adoption of such services by the school children in that pupils see teachers as their role model and tend to copy their lifestyle or do what their teachers instruct them to do. Education does more than just reduce HIV and AIDS transmission rates; it benefits an entire country and community. Education seems the only way to break the vicious cycle which HIV and AIDS use to trap a society. This will ultimately have the most long-term benefit to the children and country in the end.

The findings of this study could be used as a training needs assessment for the design and development of a training curriculum for upgrading the knowledge and skills of policy makers relating to the design and implementation of workplace HIV and AIDS education programmes.

According to UNAIDS (2001) there are three reasons why it is necessary to deal with HIV and AIDS in workplaces. Firstly, HIV and AIDS has a huge impact on the world of work because it reduces the supply of labour and available skills, increase labour costs,

reduces productivity, threatens the livelihoods of workers and employers, and creates environments which undermine the rights of workers. Secondly, the workplace is an appropriate place to tackle HIV and AIDS. This is more so because there are a set of standards for working conditions and labour relations. Workplaces are communities where people come together, interact and share experiences. This provides an opportunity for awareness raising, the conduct of education programmes, and the protection of human rights.

As far as HIV and AIDS control and prevention in workplace is concerned, the goal of health education include using factual information to discourage unethical practices such as denial of benefits to staff and HIV screening and denial of jobs opportunities to applicants who are living with HIV. Workplace information and education programmes are essential for combating the spread of the epidemic and to foster greater tolerance among workers. Effective education can contribute to the capacity of workers to protect them against HIV infection. It can significantly reduce HIV related anxiety and stigmatisation, minimizes disruption in the workplace, and brings about attitudinal and behavioural changes. This approach has potential for promoting sustained implementation of HIV and AIDS intervention programmes in the workplace. Information and education should be provided in a variety of ways. Programmes should be tailored to suit the age, gender and other characteristics of the workforce as well as the cultural context taking the peculiarities of the study population. It should be delivered by trusted and respected individuals. Peer education has been found particularly effective for working with people living with HIV and AIDS (International Confederation of Free Trade Unions-African Regional Organisation [ICFTU-AFRO], 2002).

HIV and AIDS programmes in workplaces should be based on correct and up-to-date information about how HIV is transmitted, the impact of AIDS on individuals, and possibilities of all stakeholders to ensure that the disease conditions is controlled and prevented in workplaces. As far as practicable, information programmes, courses and campaigns should be integrated into existing education and human resource programmes as well as occupational safety and health and anti-discrimination strategies of organisations. HIV prevention and control activities or programmes in workplaces should

involve methods that are as interactive and participatory as possible. Such programmes should take place during working hours. Attendance should be considered as part of the work obligations.

Health education activities undertaken in organisations must be based on facts, non-judgemental and involve the use of the human rights approach. It should be capable of changing negative perceptions including attitudes of employers in both private and public sectors regarding HIV and AIDS and PLWHA. More specifically and importantly, health education activities should aim at achieving defined objectives. According to the UN (2004), an effective HIV and AIDS education programme should be aimed at:

a. providing accurate knowledge about HIV and AIDS (stages of disease development, modes of transmission with special focus on the demystification of the likelihood of being infected through casual contacts, etc.) and reduction of misconceptions about the epidemic;
b. highlighting the risk of HIV infection;
c. changing perceptions of co-workers regarding their human capacity, need for support and care of those who are infected and affected by HIV; and
d. providing legal education related to HIV and AIDS within the context of the human rights approach. This should address not only the needs of employers but also management staff as well as the staff/employees and health staff of organisations, and clients, and should encourage the participation of the PLWHA themselves.

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Appendix A

Name of Primary Schools in Ibadan North Local Government Area by zoning

A. Kube zone

1.CACSchool Oje Igosun

2.IMGSchool IOje Igosun

3. IMGSchool IIOje Igosun

4. Methodist School Agodi 5

5. St. John School Agodi 5

6. Salvation Army School IOje Igosun

7. Salvation Army School II Oje Igosun

B. Yemetu zone

8. IMGSchool Adeoyo 4

9. Salvation Army School IYemetu

10. Salvation Army School IIYemetu

11. St. Michael School IYemetu

12. St. Michael School IIYemetu

13. St. Paul School IYemetu

14. St. Paul School IIYemetu

C. Oke Aare zone

15. St. Peter's School IOke- Aare

16. St. Peter's School IIOke- Aare

17. St. Mary School IOke- Aare

18. St. Mary School IIOke- Aare

19. Islamic School IOdoye

20. Islamic Mission School IIOdoye

D. Oniyanrin zone

21. CACSchool IOniyanrin

22. CACSchool IIOniyanrin

23. CACSchool for handicapped

24. IMGSchool IOniyanrin

25. IMGSchool IIOniyanrin

26. Ebenezer ACSchool Nalende

E. Nalende zone

27. St. Stephen School Nalende
28. The Apostolic School Nalende
29. UNASchool Nalende
30. United Brothers School Nalende
31. St. John's School Nalende
32. Salvation Army School Nalende

F. Mokola zone

33. Alaafia Int. School Nalende
34. St. Brigit'sGirls School Mokola
35. St. Brigit's Boys School Mokola
36. C and SNew Eden School Mokola
37. IMGSchool IMokola
38. IMGSchool IIMokola
39. IMGSchool IIIMokola

G. Bodija zone

40. C and SNew Eden Bodija
41. Olive School IBodija
42. Olive School IIBodija
43. St. Thomas School IAgbowo
44. St. Thomas School IIAgbowo
45. St. Thomas School IIIAgbowo
46. Community School Ikolaba
47. Methodist School I Bodija
48. Methodist School II Bodija

H. Abadina zone

47. Abadina School IUI
48. Abadina School IIUI
49. Abadina School III UI
50. Immanuel School, UI

I. Sango zone

53. CACSchool ISango
54. CACSchool IISango
55. CACSchool IIISango
56. Community School ISango
57. Community School IISango
58. Oluyole Cheshire Home School Ijokodo
59. Home School for Handicapped
60. Ibadan School for the Deaf
61. Poly Staff School IIjokodo
62. Poly Staff School IIIjokodo

Appendix B

Names of HCT facilities types and their locations in Ibadan North LGA

Names of facility and Location	Type	Ownership
University College Hospital Orita-Mefa,Ibadan	Tertiary	Federal
University Health Services Jaja, UI	Secondary	Federal
Fed secretariat Staff Clinic, Ikolaba	Primary	Federal
National Blood Transfusion Clinic, Agodi	Secondary	Federal
Adeoyo Teaching maternity Hospital, Ibadan	Secondary	State
Infectious disease clinic, Ibadan	Primary	State
Secretariat Clinic, Ibadan	Primary	State
Iderade Clinic,Ibadan	Primary	State
Government House Clinic, Agodi GRA	Primary	State
Blood Transfusion clinic, Agodi	Primary	State
PHC Idi Ogungun, Agodi	Primary	Local Government
PHC, Yemetu, Alaadorin	Primary	Local Government
PHC, Sango Patako	Primary	Local Government
PHC, Barika, UI	Primary	Local Government
PHC, Samonda, UI	Primary	Local Government
PHC, Cerehad, Bodija	Primary	Local Government
PHC, Agbowo, Express	Primary	Local Government
PHC Olive Bodija	Primary	Local Government
PHC, Oke Aremo, Ibadan	Primary	Local Government
Staff Clinic NPI/M&E LG SEC	Primary	Local Government
Health post, Ashi	Primary	Local Government
Group Medical, Mokola	Private	
Medical Counselling, Bodija	Private	
Vine Branch, GRA, Agodi	Private	
Association of Reproductive Health Clinic, Ikolaba	Private	

Appendix C

KNOWLEDGE AND UTILISATION OF HIV COUNSELLING AND TESTING SERVICES AMONG PUBLIC PRIMARY SCHOOL TEACHERS IN IBADAN NORTH LOCAL GOVERNMENT AREA, NIGERIA

Consent form for Survey Respondents

Name of Principal Investigator: Cosmas Taiwo Omoge

Name of Organization: University of Ibadan

Greetings. My name is **Cosmas Taiwo Omoge** and I am a graduate student of the department of Health Promotion and Education, College of Medicine, University of Ibadan. I am part of a team doing a research study on the knowledge, attitude and willingness to participate in HIV counselling and testing (HCT) among primary school teachers in Ibadan North Local Government area of Oyo State. Based on the findings of the study, we also plan to educational programmes that will enable policy makers initiate implementable policy on HIV and AIDS in the educational sector.

1. Purpose of the research:

We are planning to carry out a study to know the knowledge, attitude and willingness to participate in HIV counselling and testing (HCT) among primary school teachers in Ibadan.

2. Duration of the research:

The duration of this research, which you are being requested to participate in is 1 month.

3. Procedures:

We invite you to take part in this research project and participate in the questionnaire. If you accept, you will be asked to participate in the filling of the questionnaire which will be given to you. If you do not wish to answer any of the questions posed in the questionnaire, you may say so and can move on to the next question. No one else but the researcher alone will be present. The information recorded is considered confidential, and no one else except Mr. Cosmas Taiwo Omoge and his colleagues will have access to the information documented during the research.

We will record your answers to these questions on this questionnaire. This is done so that we can remember everything that you have told us. Although it is important for the research that you answer all questions, if you do not wish to answer any of the questions included in the survey, you may ask to move on to the next question. Filling the questionnaire will last for approximately 25 minutes.

4. Risks and Discomforts:

There is a slight risk that you any feel uncomfortable talking about some of the topics. However, we do not wish this to happen, and you may refuse to answer any question or not take part in a portion of the interview if you feel the question(s) makes you uncomfortable.

5. Benefits:

There will be no direct benefit to you but the information obtained from this study will help to provide suggestions that will enable the researcher develop appropriate programme policy makers, bureaucratic and other stakeholders in educational sector to develop policy on HIV and AIDS in school for both teachers as well as pupils. You will not be provided with any incentives to take part in the research.

6. Confidentiality:

We have taken the following steps to ensure that are safe and that the information you provide is confidential.

1. Filling of questionnaire will take place in a private place
2. The information that we collect from this research project will be kept confidential.
3. Information collected from you will be stored in a file that will not have your name on it, but a number assigned to it instead.
4. The questionnaire containing the interview will be stored for the duration of 2 years after which it would be destroyed.
5. The name associated with the number assigned to each file will be kept under lock and key and will not be disclosed to any one except colleagues working on this study.

6. You may talk to the leader of the research team in case you have any concern or question.

7. Alternative to participation:

You do not have to take part in this research if you do not wish to do so. Even if you do not wish to answer these questions you may still benefit from the study. You may stop participating in the interview at any time that you wish, and there will be no negative consequences for you in any way.

8. Who to contact:

If you have any question you may ask those now or later. If you wish to ask questions later, you may contact any of the following:

Mr. Cosmas Taiwo Omoge
Address: Department of Health Promotion and Education, College of Medicine, University of Ibadan, Ibadan.
0805 350 8016
E-mail: simpletai@yahoo.com

Or

Dr. (Chief) Isaac Olaseha
Address: Department of Health Promotion and Education, College of Medicine, University of Ibadan, Ibadan.
08064629401
E-mail:

9. Certificate of Consent for Qualitative Study.

I have been invited to take part in the research on the knowledge, attitude and willingness to participate in HIV counselling and testing (HCT) among primary school teachers in Ibadan North Local Government Area of Oyo State. I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions I asked had been answered to my satisfaction. I consent voluntarily to be a participant in this

study and understand that I have the right to withdraw from the interview at any time without in any way affecting my medical care.

Print name of Respondent	Date and Signature of Respondent
……..	……..
	------/ -----/ ---------- (dd/mm/yy)
Print Name of Researcher/Moderator	Date and Signature of researcher/moderator
----------	----------
	------/ -----/ ---------- (dd/mm/yy)

Appendix D

QUESTIONNAIRE

KNOWLEDGE AND UTILISATION OF HIV COUNSELLING AND TESTING SERVICES AMONG PUBLIC PRIMARY SCHOOL TEACHERS IN IBADAN NORTH LOCAL GOVERNMENT AREA, NIGERIA

Dear respondent,

I am **Cosmas Taiwo Omoge,** a student of the department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, and Ibadan. The purpose of this study is to learn from teachers in primary school about their knowledge, attitude and willingness to use HIV counselling and testing (HCT) services. The findings from this study will help in the formulation of programmes aimed at combating the scourge of HIV and AIDS in our country.

I wish to inform you that there are no right or wrong answers to the questions I will ask you. Please, be informed also that participation is voluntary. Your identity, responses and opinions will be kept confidential and no name is required in filling the questionnaire. Please try and give honest responses to the questions I will ask you as much as possible. You are free to ask questions as the interview progresses.

Thank you for cooperation.

Section A: Socio – demographic information

For the following questions, please tick one☑.

1. Sex: 1. Male ☐ 2. Female ☐

2. Age (at your last birthday):

3. Religion: 1. Catholic ☐ 2. Protestant ☐3. Pentecostal ☐4. Charismatic ☐
6. Muslim ☐7. Traditional ☐8. Other (please specify) _____

4. Ethnic group: 1. Yoruba ☐ 2.Igbo ☐ 3. Hausa ☐
4. Other (please specify) _____

5. Marital status: 1. Never married ☐ 2. Living with partner ☐ 3 Married ☐
4 Separated ☐ 5 Divorced ☐ 6 Widowed

6. How many years have you been married or living together as if you were married?

1. Less than 1 year ☐2. 1-3 years ☐3. 4 -6 years ☐ 4. 7-10 years ☐

5. More than 10 years ☐6. No longer married ☐

Section B: Knowledge about HIV and AIDS and Reproductive Health

For the following questions, please tick one☑.

7. Have you heard of the virus called HIV or an illness called AIDS?

1. Yes ☐ 2. No ☐

(If No, stop the interview)

8. What is the causative agent of HIV and AIDS? ……

9. What does HIV stands for? ……

10. What does AIDS stands for? ……..……...

11. Name 4 major signs and symptoms of HIV

a. ……

b. ……..

c. ……

d. ……

12. Can HIV be detected through weight loss? 1. Yes ☐ 2. No ☐

13. Can HIV be detected through laboratory test? 1. Yes ☐ 2. No ☐

(*For this question, please pick the right option)*

14. The virus attacks the body system

a. By destroying the muscles causing weight loss ……

b. By destroying the immunity…….

c. By causing diarrhoea ……

d. By causing body weakness.……

15. Infected person can remain in HIV status for life. 1. Yes ☐ 2. No ☐

16. Infected person must die of AIDS. 1. Yes ☐ 2. No ☐

17. Can an uninfected person contact HIV from an infected person

a. By using the same bed? 1. Yes ☐ 2. No ☐

b. Through mosquito bite? 1. Yes ☐ 2. No ☐

c. By sharing the same blade? 1. Yes ☐ 2. No ☐

18. What are the ways a person can avoid being infected with HIV?

(*For this question, please ticks ☑ all those apply to you).*

i. Use of condom _____

ii. Having only one faithful sexual person _____

iii. Don't have sex (abstinence) _____

iv. Drink strong concoction after sex _____

v. Avoid the use of contaminated needles _____

vi. Pray _____

vii. Do not have sex with prostitutes _____

viii. Take traditional medicines _____

ix Have sex with only virgins _____

x. Others (please specify) _____

19. A person who looks healthy can be infected with HIV and AIDS.

1. Yes ☐ 2. No ☐

Section C: Belief in HIV and AIDS

20. Do you believe that it is myth? 1. Yes☐ 2. No☐

21. Do you believe that it is only promiscuous person can be infected? 1. Yes☐ 2.No☐

22. Do you believe that you can get HIV? 1. Yes ☐ 2. No ☐

23. If Yes, how? _____

24. If No, why not? _____

25a. How do you perceive the severity of HIV and AIDS? 1. Serious ☐2. Not serious ☐

25b. What are the perceived routes of contracting HIV?

Route of getting HIV (Tick all that apply)

a. Use of contaminated sharp instruments
b. Unprotected sex
c. Carelessness
d. Transfusion of unscreened blood
e. Careless health personnel
f. Through injection
g. If one did not abstain from sex
h. Eating excessive rice
i. Ignorance
j. Mosquito

25c. How do we avoid being infected with HIV?

Avoidance of HIV infection(Tick all that apply)

a. Following precautions
b. Keeping faithful partner
c. Divine intervention
d. I know how to be free from HIV
e. Refusal to share razor with people
f. To be careful
g. By using condom for sex
h. Old age
i. No friend of opposite partner

26. Do you believe that it is devastating as any of the long time illness?

1. Yes ☐ 2. No ☐

Section D: Risky sexual behaviour

27. Based on your sexual activity over the past 3 months, do you think you should be tested for HIV and AIDS? 1. Yes ☐ 2. No ☐

28. Do you have multiple sexual partners? 1. Yes ☐ 2. No ☐

29. If Yes, how many? ……..……

30. In the past 3 months, have you spoken to your sexual partner about?

i. Using a condom for sexual activity
ii. Being at risk of HIV transmission
iii. Being at risk of sexually transmitted infections
iv. Going for HIV test

Section E: Knowledge about HCT

31. Have you heard about HCT? 1. Yes ☐ 2. No ☐

32. Where did you get to know about HCT?

a. Health worker
b. Radio / TV programme
c. Poster / handbill
d. Fellow teacher
e. Friend outside the school premises
f. HIV and AIDS programme attended

33. If Yes to above, what is HCT? ……

34. If someone wanted to be tested, where could that person go for the test? _____

35. Do you know any HCT location around you? 1. Yes ☐ 2. No ☐

Section F: HIV Counselling and testinguptake

For these questions please ticks ☑all that are apply to you.

36. Have you ever received any counselling by a health worker regarding HIV and AIDS? 1. Yes ☐ 2. No

37. Have you ever gone for voluntarily tested for HIV and AIDS? 1. Yes ☐ 2. No ☐

38. If yes, to the above question, which of the following influences your decision not to be tested? (Tick ☑all that are apply)

i. Do not trust the results

ii. Cost to be tested is too expensive

iii. People might think I have HIV and AIDS

iv. I don't engage in risky behaviour

v. The testing centre is too far

vi. The counsellors are unfriendly

vii. I can't afford the treatment

viii. I don't want to know the results

ix. I believe God will protect me

x. I'm afraid I might get to know that I have HIV and AIDS

xi. It can't be cured so I don't want to know

xii. I have never had sexual intercourse (virgin)

xiii. Other (please specify_____

39. If your answer to question ... is no, if you are given the opportunity to be tested would you like to go for a HCT? 1. Yes ☐ 2. No ☐

40. If willing to go for HCT, will you go to _____

i. The centre nearer to your school

ii. The centre nearer to your house

iii. The centre nearer to your church

iv. The centre nearer to your mosque

v. The centre far away from all of the above

41. What inform your choice of the centre chosen? ……...

……

42. Will you be confident to tell people your HIV status if positive? 1. Yes ☐ 2. No ☐

43. If No, why?…….

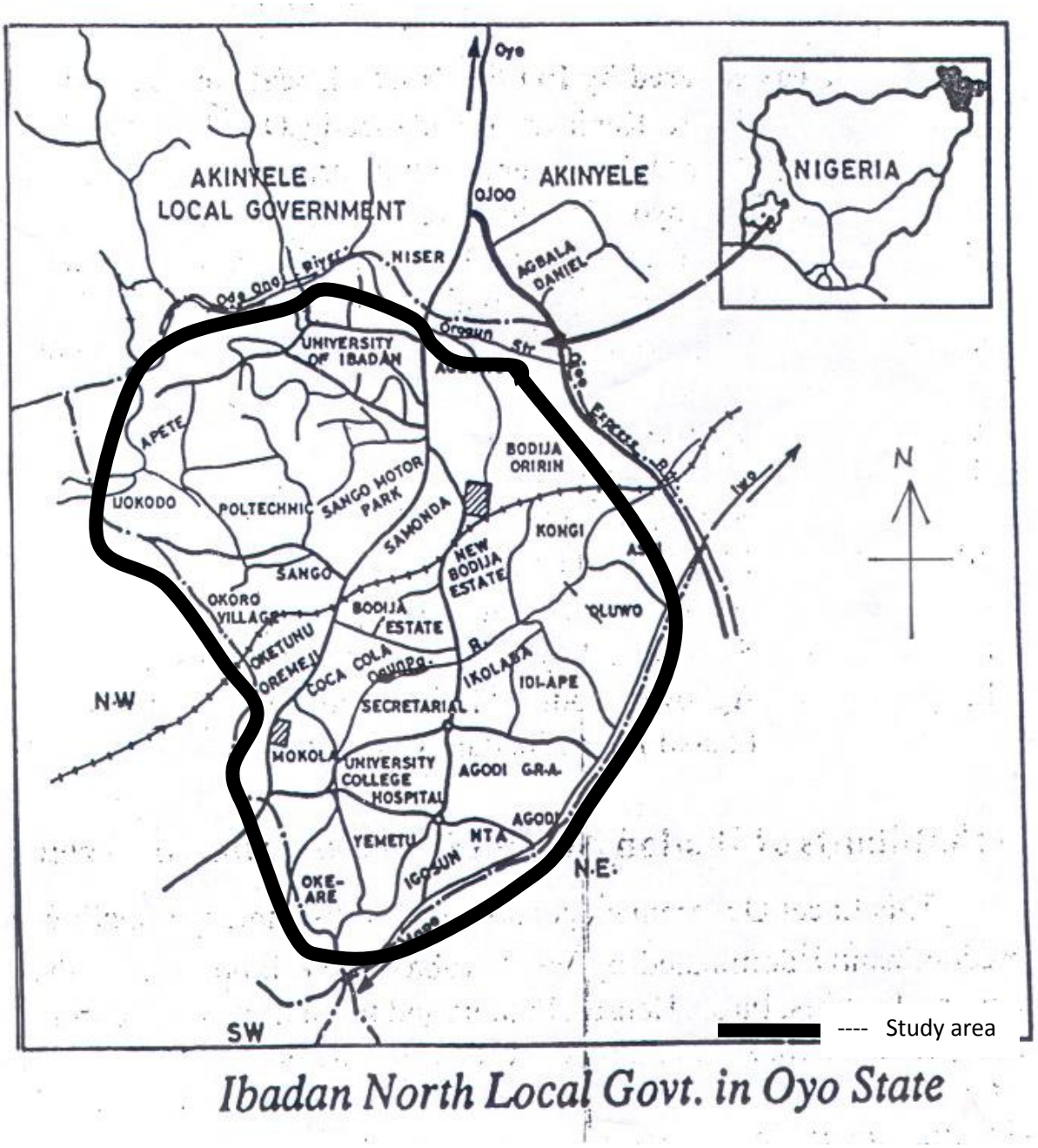
44. Have you ever been trained to conduct HIV and AIDS or reproductive health education? 1. Yes ☐ 2. No ☐

45. Have you ever been asked to conduct HIV prevention activities like club or outreach effort? 1. Yes ☐ 2. No ☐

Thanks for your time spents in answering all these questions.

Appendix E

Sketch map of Ibadan North Local Government Area showing the major communities and neighbourhoods



(Source: Abiola, 2001; Fourchard, 2003)