

**HIV/AIDS KNOWLEDGE AND ATTITUDE
AMONG TEACHERS IN ABUJA, NIGERIA**

by

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submitted in part fulfilment of the requirements

for the degree of

MASTERS OF PUBLIC HEALTH

at the

UNIVERSITY OF SOUTH AFRICA (UNISA)

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February 2008

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DECLARATION

I declare that **THE STUDY OF HIV/AIDS KNOWLEDGE AND ATTITUDE AMONG TEACHERS IN ABUJA, NIGERIA** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.



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STUDY OF HIV/AIDS KNOWLEDGE AND ATTITUDE AMONG TEACHERS IN ABUJA, NIGERIA

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Abstract

The study sought to describe HIV/AIDS knowledge and attitude among teachers in Abuja, Nigeria. The study noted that teachers were knowledgeable about HIV/AIDS and poor HIV/AIDS attitude persist. Among the respondents, statistically significant relationship exist between education qualification and knowledge of MTCT of HIV during pregnancy; between geographic location and the knowledge to clarify misconception about HIV transmission; between gender and the knowledge of condom use; and between the receipt of HIV/AIDS information or training on FLHE curriculum and the procedural knowledge of discussing / teaching sexuality and HIV/AIDS issues with fellow teachers or students. However, there is no statistical significant relationship between the teachings of HIV/AIDS issues and the feeling that HIV/AIDS education promotes sexual promiscuity.

Key Concepts

HIV, AIDS, HIV/AIDS knowledge, HIV/AIDS attitude, teachers, FLHE curriculum.

ACKNOWLEDGEMENTS

I would like to give thanks to the following people for their invaluable support and unending encouragement:

- Professor TR MAVUNDLA, my supervisor, for all he taught me
- Professor S HUMAN the coordinator of the MPH program for her support during the course, and all the lecturers in the MPH program at UNISA
- My family and friends for their encouragement and support; special mention is made of Mr and Mrs BWAKRIA for ensuring that I enrol in UNISA; my sons Ibraheem and Imran OYEWALE; my parents Mr and Mrs OYEWALE; my supervisors at work – Dr D MULENGA, Ms G AKINBOYO, Mr J EMMANUEL, Dr J ACKERS, Dr R LIMLIM, Dr BG REYNOLDS, and Dr M SIDIKOU for their support in different ways,
- Mrs ZU MOMODU and Mr J AMEH of the HIV/AIDS Unit of the Federal Ministry of Education, for facilitating my access to schools in Abuja, Nigeria; and the principals in all the schools where data were collected, and
- Mr I OLAREWAJU who helped me with interpreting the statistics, Dr A FATUSI and all the field personnel for their assistance.

To you all, my sincere thanks and love.

Dedication

This work is dedicated to God Almighty the lord of the worlds who has granted me the gift of life to complete this study

and

my wife, Mrs Bimpe Aderine OYEWALE

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List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
AMAC	Abuja Municipal Area Council
CSO	Civil Society Organisations
EDB	Education Data Bank
FCT	Federal Capital Territory
FGN	Federal Government of Nigeria
FLHE	Family Life and HIV/AIDS Education
FME	Federal Ministry of Education
FMOH	Federal Ministry of Education
HIV	Human Immuno-deficiency Virus
JSS	Junior Secondary Schools
KABS	Knowledge, Attitude, Behaviour and Practice Survey
KAP	Knowledge, Attitude and Practice Survey
MDG	Millennium Development Goals
MTCT	Mother to Child Transmission
NACA	National Action Committee on AIDS
NARHS	National HIV/AIDS and Reproductive Health Survey
NCCE	National Commission for Colleges of Education
NCE	National Certificate in Education
NDHS	National Demographic Health Survey
NEEDS	National Economic Empowerment and Development Strategy
NERDC	National Educational Research Development Council
NPC	National Population Commission
NYSC	National Youth Service Corps
PABA	People Affected by AIDS
PLWHA	People Living with HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission of HIV
STI	Sexually Transmitted Infection
UNAIDS	Joint United Nations Programme on AIDS
UNGASS	United Nation General Assembly Special Session on HIV/AIDS
UNICEF	United Nation's Children's Fund
UNISA	University of South Africa
WHO	World Health Organization

List of Annexures

Annexure A: Instrument

Annexure B: Permission Letter from Federal Ministry of Education

CHAPTER 1

BACKGROUND INFORMATION

1.1 INTRODUCTION

Nigeria has the largest population in the African continent with a projected population of 134 million in 2005 (NPC 2002:14). The population is estimated to be about 140 million from the provisional report of the 2006 National Census. The national **H**uman **I**mmuno-deficiency **V**irus (HIV) prevalence in 2003 was 5.0% (FMOH 2004:55), and young people (15 – 24 years) continue to be most affected (FMOH 2001:51). In 2005, the national HIV prevalence fell to 4.4% (FMOH 2006:13). The high prevalence among young people has led to the surge of priority intervention activities (NACA 2005a:19) 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/AIDS awareness and prevention among young people. The central principle of these interventions is that they should help the participants to behave in ways that would protect them from HIV infection. (Kirby 2000:35). In Nigeria, a National **F**amily **L**ife and **H**IV/AIDS **E**ducation (FLHE) curriculum has been developed by the **N**igerian **E**ducational **R**esearch and **D**evelopment **C**ouncil (NERDC) and the **F**ederal **M**inistry of **E**ducation (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/AIDS; respect and value themselves and others; and acquire the skills needed to make healthy decisions about sexual health and behaviours (NERDC 2003:2). Complementary to the FLHE curriculum, is the HIV/AIDS peer education activities implemented in schools nation-wide by volunteer corps members of the **National Youth Service Corps (NYSC)**, with support from UNICEF, the **National Action Committee on AIDS (NACA)**, and other partners. Morris, Ulmer and Chimnami (2003:41) have documented that health corps volunteers are well acceptable by students for HIV/AIDS prevention education.

Teachers have been identified as a major source of information on HIV/AIDS for children and young people in Nigeria. NPC (2004a:148) reported that 41% of parents and guardians in Nigeria cited teachers as a major source of information on HIV/AIDS for children. Therefore, appropriate HIV/AIDS knowledge and attitude among teachers are important because it affects the knowledge and skills acquired by learners.

While information on HIV/AIDS knowledge and attitude among teachers in Nigeria is limited, studies (FME 2006:174; FMOH 2005:46; NPC 2004b:169.) have shown that awareness level on HIV/AIDS is generally high in the country. However, a significant proportion of the Nigerian population lack adequate knowledge of the epidemic. The **National HIV/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 2005:53). Among teachers, Ssengozi, Schlegel, Anyamele and Olson (2004:2-1) 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 teacher 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.

The purpose of this study is to describe the HIV/AIDS knowledge and attitude among teachers in **Junior Secondary School (JSS)** in Abuja, Nigeria. The exercise is intended to inform better implementation of HIV/AIDS prevention interventions in schools. The HIV prevalence trend in Abuja has always been higher than the national average and this informed the choice. In 2001, the HIV prevalence in Abuja was 10.2% compared to the national average of 5.4% (FMOH 2001:36), and 8.4% in 2003 as compared to the national average of 5.0% (FMOH 2004:57). Findings from the 2005 sentinel survey also show that the HIV prevalence in Abuja was 6.3% as compared to 4.4% national average (FMOH 2006:16).

1.2 BACKGROUND AND MOTIVATION

The burden of the AIDS epidemic and the importance of HIV/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/AIDS epidemic including the impact on young people in Nigeria; the rationale for HIV/AIDS prevention interventions in schools; and the statement of the research problem.

1.2.1 Burden of the HIV/AIDS epidemic

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 2005a:2). 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 2006:3). It was also reported that the AIDS epidemic claimed 2.6 millions lives in 2006 alone; 380,000 of this population were children (UNAIDS 2006:1).

In 2006, almost two – thirds (63%) of all persons infected with HIV were living in Sub-Saharan Africa. The same region was responsible for 72% of the global AIDS death. Southern Africa was reported to remain the epicentre of the global AIDS epidemic. (UNAIDS 2006:10). While the Adult HIV sero-prevalence rate in the region was fairly stable, 7.3% in 2003, and 7.2% in 2005, the population of people infected has risen from 24.9 million in 2003 to 25.8 million in 2005. Among young people aged 15 – 24 years, an estimated 4.6% of women and 1.7% of men were living with HIV in 2005.

(UNAIDS 2005A:17). According to Ajakaiye (2002) in Obioha (2004:43) , 50 million people would have died of HIV/AIDS before the end of the present decade; and assuming that about five people within each immediate family are affected for every one person who dies, some 250 million Africans will be closely affected by HIV/AIDS within 10 years.

The spread of HIV poses a serious world wide challenge (FMOH 2001:13). The interconnectivity between HIV/AIDS epidemic and poverty has been argued by Ajakaiye (2002) in Obioha (2004:44). This relationship reinforced the concern that the AIDS epidemic posse a major challenge to the achievement of the Millennium Development Goals (MDGs) (NACA 2005b:15). The recognition of this challenge is evident in the National Economic Empowerment and Development Strategy (NEEDS), the 'people's plan for prosperity', and framework for development and poverty reduction in Nigeria. The NEEDS document entrenched the strategies for the achievement of the MDGs in Nigeria. According to the NEEDS document cited in NACA (2005b:15) 'HIV/AIDS is a major social and health problem that threatens the country's productivity and economy'.

Nigeria is home to more **People Living With HIV (PLWHA)** than any other country in the world, except South Africa and India (UNAIDS 2006:20). At the end of 2003, between 3.2 and 3.6 million Nigerians were estimated to be living with HIV (FMOH 2004:23). In 2005, about 2.9 million Nigerians were estimated to be living with HIV (FMOH 2006:32). The national adult HIV sero-prevalence rate rose from 1.8% in 1990 to 3.8% in 1993, 4.5% in 1995, 5.4% in 1999 and 5.8% in 2001 (FMOH 2001:51), with a slight drop to

5.0% in 2003 (FMOH 2004:55). The 2005 sentinel survey reported a national adult prevalence rate of 4.4% (FMOH 2006:13). Regional disparities in the sero-prevalence rate however do occur, with the North Central geopolitical zone of the country reporting the highest rate over the years.

Young people especially women below the age of 24 years, were among the most vulnerable groups to HIV (NACA 2005a:9) and youth-focused interventions are important strategies to curb the spread of HIV in Nigeria. UNAIDS (2006:3) documented that new HIV infection were heavily concentrated among young people (15 – 24 years of age). Kirby (2000:34) justified several reasons to focus interventions on children and young people. These reasons include high population; high vulnerability to HIV/AIDS; the impact of HIV/AIDS on their family, friends or as orphans; and because they (children and young people) are the ‘window of hope’ for the future. The national age-specific HIV prevalence among the 5 – 19 year cohort (young people) was 6.0% in 2001 (FMOH 2001:31), 4.0% in 2003 (FMOH 2004:46) and 3.6% in 2005 (FMOH 2006:24) in Nigeria. Though the drop in prevalence in this age group is considered an encouraging trend with regards to the level of new infection (NACA 2005b:10), sub-national age-specific prevalence in this cohort remain a source of concern, especially for the education sector. According to FMOH (2006:26), the age-specific prevalence for young people 15 – 24 years in North-Central Nigeria ranged from 3.2% to 9.0% in urban areas; and from 2.0% to 9.7% in rural areas. In Abuja, the age specific prevalence for the 15 – 24 year old was 5.7% in urban and 3.9% rural areas.

1.2.2 Why HIV/AIDS Prevention Intervention in Schools?

Oni and Opatola (2002) cited in Obioha (2004:52) 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* (2004:2-2) argued that school-based interventions have direct impact on the quality and quantity of the nation's future human capital. More so, Kirby (2000:33) documented that educational programmes for in-school and out-of-school young people provide readily available channel for consciously influencing students. Such programmes delivered in a suitable way, will help to develop personally held value systems which would empower students to make correct and safe choices that would reduce their likelihood of contracting HIV.

School-based HIV prevention interventions have the potential of reaching large population of young people in Nigeria. The national gross enrolment rate during the 2005 academic year was 96% in primary schools and 36% in junior secondary schools (JSS). This translates to 22 million pupils in primary schools and 3.6 million students in JSS in Nigeria. (FME 2005:21-22). Likewise, UNICEF (2002:2) estimated that 200,000 HIV/AIDS peer educators were being reached in schools annually by the volunteer corps member through the NYSC. Thus, effective implementation of HIV/AIDS prevention interventions in schools has the potential of reducing new infection among young people, and halting the spread of the AIDS epidemic in Nigeria.

1.2.3 Statement of the Research Problem

In Nigeria, huge investments have been made on HIV/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/AIDS among teachers. Peltzer (2000) as cited in Peltzer (2003:351) reported that teachers often lack adequate knowledge of the disease (HIV/AIDS). The non-availability of HIV/AIDS education in pre-service teacher training until recently may account for the limited knowledge level among teachers in Nigeria. The National Commission for Colleges of Education (NCCE) Nigeria revised the curriculum of teacher education in 2006 and incorporated modules on HIV/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/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/AIDS issue in the workplace. (Ssengozi *et al*/2004: 4-38).

A study of the HIV/AIDS knowledge and attitude among teachers is therefore required to strengthen the human resource capacity for school based HIV/AIDS prevention interventions in Nigeria.

Specifically, the study will attempt to answer the following research questions:

- i. What is the HIV/AIDS knowledge among teachers?
- ii. What is the attitude of teachers towards HIV/AIDS issues?

1.3 PURPOSE OF THE STUDY

The purpose of this study is to describe HIV/AIDS knowledge and attitude among teachers in junior secondary schools (JSS) in Abuja, Nigeria.

1.4 OBJECTIVES OF THE STUDY

The achievement of the purpose of the study will be explored through specific objectives that include:

- i. To describe HIV/AIDS knowledge among teachers in junior secondary schools in Abuja, Nigeria; and
- ii. To describe attitude related to HIV/AIDS issues among teachers in junior secondary schools in Abuja, Nigeria

1.5 SIGNIFICANCE OF THE RESEARCH

The role of teachers in disseminating HIV/AIDS information is critical for the success of school-based program. The review of literature in Pelzer (2004:351) noted that teachers often lack adequate knowledge of the disease (HIV/AIDS). The review stated that teachers lacked formal training on HIV/AIDS issues and relied on traditional teacher-centred instructional methods for HIV/AIDS education. The scenario in Nigeria is not

different. Since the inception of both the curricular (FLHE) and co-curricular (peer-led) HIV/AIDS education in Nigeria, little effort has been focused on teachers. Therefore, there is a risk that the huge investment in HIV/AIDS prevention intervention in schools might not yield the desired result in Nigeria if the concerns of teachers are not addressed.

This study seeks to provide an insight into the HIV/AIDS knowledge and attitude among teachers in Abuja, Nigeria. The result of this research will contribute to the review of teacher education on HIV/AIDS prevention education in Nigeria. The result will also inform necessary modification to the strategies for school based HIV/AIDS prevention interventions in Nigeria.

1.6 OPERATIONAL DEFINITION OF KEY TERMS

Key terms used in this research are knowledge, belief, attitude, stigma, teachers, school, and PLWHA. The operational definitions of these terms in this study are defined as follows:

1.6.1 Knowledge

According to Oxford Advanced Learners Dictionary (2000:693) knowledge refers to organized body of information on an issue. Knowledge might also be defined as belief which is in agreement with fact (Bertrand 1926 cited in theory of knowledge [sa]). Guided by the knowledge indicators for monitoring the **United Nations General Assembly Special Session** on HIV/AIDS (UNGASS), knowledge will include

identification of ways of preventing sexual transmission of HIV and clarification of major misconceptions about HIV transmission (UNAIDS 2005b:29). In this study therefore, HIV/AIDS knowledge among teachers included the knowledge of transmission and prevention of HIV, as well as ability of teachers to correctly clarify misconceptions about HIV/AIDS.

1.6.2 Attitude

The Oxford Advanced Learners Dictionary (2000:65) defined attitude as ways of thinking or behaving. Attitude was also defined as physical expression of an emotion (Darwin 1872 cited in Relationship of attitude to behaviour [sa]). Attitude related to HIV/AIDS in this study included feelings, opinions, intentions, belief and thoughts about people infected with HIV and actions related to HIV/AIDS issues.

1.6.3 Stigma

HIV related stigma referred to “prejudice, discounting, discrediting, and discrimination directed at people perceived to have HIV/AIDS, as well as the individuals, groups, and communities with which they are associated (Herek & Capitanio (1997) cited in Liu, Hu, Li, Stanton, Naar-King & Yang 2006:133). This definition is applied in this study.

1.6.4 Teachers

According to the Oxford Advanced Learners Dictionary (2000:1228) teachers are persons whose job is teaching in a school. That is teachers give lessons to students in

schools, colleges and universities. In this study, teachers refer to male and female persons teaching in junior secondary schools in Abuja, Nigeria.

1.6.5 Schools

Schools are places where children go to be educated (Oxford Advanced Learners dictionary 2000:1051). In this study, schools refer to junior secondary schools (JSS) owned by the public and private sectors in Abuja. It excludes schools for special education and non-formal education centres.

1.6.6 People Living with HIV/AIDS (PLWHA)

PLWHA are people who have been tested and confirmed to be living with HIV/AIDS. They are people with the HIV antibodies in their blood.

1.7 CHAPTER OUTLINE

This research report is presented in five chapters:- (1) Background Information; (2) Literature Review; (3) Research Design and Methodology; (4) Presentation of Research Findings and Discussion (5) Conclusions, Limitations and Recommendations.

Chapter 1: Background Information provides an introduction to the study. The chapter analysed the global, regional and national trend of the AIDS epidemic, as well as the importance of school-based HIV/AIDS prevention intervention. The purpose and objectives of the study were also stated in the chapter.

Chapter 2: Literature Review explored literature on HIV/AIDS knowledge and attitude among teachers and other adult population. The review focused on HIV/AIDS knowledge; HIV/AIDS attitude and presented the conceptual framework that guided the study of HIV/AIDS knowledge and attitude among teachers in Abuja, Nigeria.

Chapter 3: Research Methodology outlined the research design. The study population and study sample; the process of data collection and analysis; as well as the ethical consideration in the research were defined and discussed in the chapter.

Chapter 4: Presentation of Research Findings and Discussion detailed key findings of the research. The findings were clustered as background characteristics of the respondents; HIV/AIDS knowledge of the respondents and HIV/AIDS Attitude of respondents. A technical discussion of the findings of the research in relation to existing information and trends was also made.

Chapter 5: Conclusions, Limitations and Recommendations presented the conclusions drawn from the study as well as the limitation of the study. In addition, recommendations based on the findings of the research were formulated.

1.8 CONCLUSION

The global concern on the AIDS epidemic and its impact on young people as well as the role of teachers in school-based HIV/AIDS prevention intervention have been presented in this chapter. It has been argued that the HIV/AIDS knowledge and attitude among

teachers is a threat to effective implementation of school-based HIV/AIDS prevention interventions. Therefore, a study of HIV/AIDS knowledge and attitude among teachers is necessary to effectively reduce new HIV infection among young people.

The next chapter presents a review of literature on HIV/AIDS knowledge and attitude among teachers and other adult population. Where appropriate, information among learners as a reflection of that among teachers was explored. The conceptual framework for this study was also presented in the next chapter.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

According to World Bank (2002:7), countries' education sectors have a strong potential to make a difference in the fight against HIV/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/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 2004a:148). Likewise, the importance of appropriate HIV/AIDS knowledge and attitude among teachers in the implementation of HIV/AIDS prevention interventions in schools has been argued in the previous chapter. This chapter presents the review of literature on HIV/AIDS knowledge and attitude among teachers; as well as the conceptual framework that guides this study.

2.2 PURPOSE OF THE LITERATURE REVIEW

The review explored HIV/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/AIDS knowledge and attitude among teachers in Nigeria, the review also

included literature among adult population. In addition, literatures on HIV/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).

Specific attributes related to HIV/AIDS knowledge and attitudes were reviewed to provide focus for the study. HIV/AIDS knowledge was explored around the level of awareness and source of HIV/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/AIDS and knowledge of someone with HIV or who have died of AIDS. Attitude related to HIV/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.

2.3 HIV/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 2004:36). Bertrand (1926) defined knowledge in Encyclopaedia Britannica as belief which is in agreement with fact. The Tripartite theory of knowledge [sa] defined knowledge as justified true believe. 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 (Glanz and Rimer 2001:16; National Cancer Institute 2005:12.). Hence, UNAIDS (2005b:41) 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/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/AIDS as well as the knowledge of someone infected with HIV or who have died of AIDS.

2.3.1 Awareness and Source of Information about HIV/AIDS

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

2.3.1.1 Awareness of HIV/AIDS

In Nigeria, majority of teachers (97%) were aware of HIV or AIDS. Slightly more female teachers (97%) than male (95%) were aware of HIV. There was no difference in the proportion of male and female respondents who have heard about AIDS (FME

2006:174). Among primary school teachers in Kano, Lagos and Nasarawa States in Nigeria, Ssengozi *et al* (2004:4-29) reported that more than 99% of respondent have heard of HIV/AIDS. In South Africa, Peltzer (2003:354) reported that life skills teachers in secondary schools were well informed about HIV/AIDS.

Among adult population, the **National Demographic Health Survey (NDHS)** in Nigeria 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 2004b:169). 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. The NARHS reported similar findings to the NDHS among adult males (96%) and respondents who have acquired tertiary education (99.6%). (FMOH 2005:46). Among migrant young adult in Kano and Aba cities in Nigeria, Smith (2003:352) reported that over 99% of them have heard of HIV/AIDS.

2.3.1.2 Sources of Information on HIV/AIDS

The electronic media (television 88% and radio 87%), newspaper (78%), and public campaigns (71%) were the common sources of HIV/AIDS information among teachers in Nigeria. About 54% of the teachers also reported sourcing HIV/AIDS information from religious bodies. (FME 2006:174). 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/AIDS (Ssengozi *et al* 2004:4-29). In South Africa however, Peltzer (2003:354) reported that in-service training was identified by 63% of secondary school teachers as a source of HIV/AIDS information.

In China, Huang *et al* (2005:772) reported that undergraduate students sourced HIV/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.

2.3.2 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 unsterilised tattoo and grooming equipment (FGN 2003:17; UNICEF 2005:76). Generally, many teachers (80%) in Nigeria knew about each of the major routes of HIV transmission routes (FME 2006:177). However, a lower proportion of adult population (62%) in FMOH (2005:50) knew all the routes of HIV transmission. In Kano, Nasarawa and Lagos States Nigeria, Ssengozi *et al* (2004:4-29) 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.

2.3.2.1 HIV Transmission through Unprotected Sex

According to FGN (2003:17), 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 2004:5). 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 2006:177; Ssenozzi *et al* 2004:4-29). Similarly, 91% of adult respondents in NARHS (FMOH 2005:50) recalled that HIV can be transmitted through sexual intercourse. Among high school students Savaser (2003:74) 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 2003:352-4). In China, Huang *et al* (2005:774) reported that 12% of undergraduate students knew that anal sex is a likely route of transmitting HIV.

2.3.2.2 Mother-to-Child Transmission of HIV (MTCT)

UNAIDS (1998:2) have estimated that the probability of an HIV-positive woman's baby becoming infected will range 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 2006:32). 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 2004:6).

About two thirds of the adult population (69%) in Nigeria knew that HIV can be transmitted from mother to unborn child (FMOH 2005:50). Among teachers, 66% of the respondents knew about MTCT during pregnancy, 60% through breastfeeding and 44% during delivery (FME 2006:177). 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 2005:54). In the NDHS, about half of the adult respondents knew that HIV can be transmitted through breast feeding (NPC 2004b:177).

In India, Ananth and Koopman (2003:539) 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* (2005:774) reported that 90% of respondents knew about the likelihood of HIV transmission from infected pregnant mother to her baby, this include 79% that knew about transmission through breast feeding.

2.3.2.3 Transmission through Blood

Studies from Nigeria have reported that 81% of adult respondents (FMOH 2005:50) and 93% of teachers (FME 2006:177) were knowledgeable of HIV transmission through blood. However, Ssenigozi *et al* (2004:4-29) reported that only 60% of primary school teacher in Kano, Lagos and Nasarawa states Nigeria knew about this routes of HIV transmission. Smith (2003:352) also reported that 61% of migrant young adults in Kano city knew about HIV transmission through blood transfusion.

2.3.2.4 Transmission through Sharing of Sharp Objects

Among teachers in Nigeria, FME (2006:177) 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 2005:50) knowing that HIV can be transmitted through sharing of sharp objects. Likewise, Savaser (2003:74) 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 (Ssenigozi *et al* 2004:4-29). Among migrant young adults, Smith (2003:352) reported that 46% of the respondents in Kano and 43% in Aba cities in Nigeria knew that sharing sharp object can transmit HIV.

2.3.3 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 (2006:182) 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 2003:355) had a misconception that HIV can be contracted through mosquito bite.

Among learners in California, Hancock *et al* (1999:157) 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 (2005:51) 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/AIDS knowledge. The NDHS reported that 28% of male and 21% of female respondents (NPC 2004b:172) 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 2003:74).

2.3.4 Knowledge of the Methods of HIV Prevention

According to UNICEF (2005:76) 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 (2004:7) 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 counseling and testing, prevention of mother-to-child transmission, early treatment of sexually transmitted infections (STI), and youth focused interventions.

Several characteristics have been used to explore methods of HIV/AIDS prevention in studies. While the NDHS asked questions around condom use and limiting the number of sexual partners (NPC 2004b:170), Ssenozi *et al* (2004:4-30) used five questions on abstinence, remaining faithful, avoiding blood contact, using condom and avoid piercing instruments. This review explores the knowledge of the methods of HIV prevention

through sexual abstinence, promotion of safe sexual behaviours like being faithful to a partner and reduction in the number of sexual partners, condom use, avoidance of blood contact and avoidance of sharp instruments.

2.3.4.1 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 (2006:186) were aware of sexual abstinence as a method of preventing HIV. Similarly, Ssenigozi *et al* (2004:4-30) 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 2005:52). Smith (2003:353) 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.

2.3.4.2 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 2006:186; Ssenigozi *et al* 2004:4-30). Among teachers interviewed in FME (2006:186), 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* (2004:4-30) 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 2003:73).

While adult respondents in the NARSH knew that staying faithful to partners (87%) and reducing number of sexual partners (44%) can prevent HIV transmission, they also mentioned avoidance of sex with commercial sex workers (77%) and people with multiple sexual partners (73%) as methods of HIV prevention (FMOH 2005:52). The NDHS reported that more female (80%) than males (60%) knew that HIV can be prevented by limiting sex to one uninfected partner (NPC 2004b:171). 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 2003:353).

2.3.4.3 Use of Condom during Sex

The knowledge of condom use as a method of preventing HIV transmission varied among teachers in Nigeria. While FME (2006:185) 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

(Ssenigozi *et al* 2004:4-30). Smith (2003:353) 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 (ULAMA 2004:8).

Among adult population in Nigeria, 55% of respondents knew that HIV transmission can be prevented by using condom (FMOH 2005:52). Interestingly, more females (63%) than males (45%) respondents in the NDHS, knew that using condom during sex prevent the transmission of HIV (NPC 2004b:171).

Among high school students in Turkey, 87% of respondent knew that condom use is a method of preventing HIV infection (Savaser 2003:73).

2.3.4.4 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 2006:185). However, Ssenigozi *et al* (2004:4-30) 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.

2.3.4.5 Avoid Sharing of Sharp Objects

In Nigeria, 84% of adult respondents in FMOH (2005:76) knew that avoidance of sharing of sharp object can prevent HIV transmission. Among teachers, FME (2006:185) 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* 2004:4-30). In Turkey, 79% of interviewed high school students knew that not sharing syringes is a method of preventing HIV.

2.3.5 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/AIDS. The knowledge of common health problems of people living with HIV/AIDS is likewise important. Among student teachers in Zimbabwe, Chifunyise *et al* (2002:380) 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 (2005:55) and 53% in NPC (2004b:173) knew a healthy looking person could be HIV positive.

FME (2006:183) 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%).

2.3.6 Knowledge of Someone Infected with HIV or Died of AIDS

Contact with someone with HIV/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 2006:202). Among primary schools teachers in three states in Nigeria, Ssenozi *et al* (2004:4-33) reported that 76% of teachers in Nasarawa States 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 2005:47).

2.4 HIV/AIDS ATTITUDE

Attitudes are feelings of emotions and beliefs which influences the determination of series of behaviour towards objects, persons or the environment (Gbevwi 2004:37). Attitudes are also defined as favourable or unfavourable evaluative reaction towards something or someone exhibited in ones belief, feelings, or intended behaviour (Myers, [sa]:36 cited in lecture 02 - social psychology [sa]). According to Naidoo and Wills (2000:220), 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/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/AIDS issues.

2.4.1 Stigma and Discrimination

HIV related stigma refers to “prejudice, discounting, discrediting, and discrimination directed at people perceived to have HIV/AIDS, as well as the individuals, groups, and communities with which they are associated (Herek & Capitanio (1997) cited in Liu, Hu, Li, Stanton, Naar-King & Yang 2006:133). This review is focused on stigma towards teachers who are HIV positive in the work place as well as other PLWHA in the community.

2.4.1.1 HIV/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 (2006:206) and 57% in Ssengozi *et al* (2004:4-39) were of the opinion that HIV-infected teachers should continue teaching. However, only 27% of male and 23% of female respondents in the NDHS believed that HIV-positive female teachers should continue teaching (NPC 2004b:175-6).

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 2006:204). Though 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* 2004:4-38).

2.4.1.2 Stigma towards PLWHA in the Community

HIV/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 2006:198-9).

The 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/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 2004b:175-6). In the examination of the changes in nursing students' perception, knowledge of and attitude towards HIV/AIDS in Nigeria, Uwakwe (2003:421) 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* (2005:773) 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 (2003:76) reported that more than half of high school students believed that people with HIV/AIDS should be able to attend school and should not have to stop work.

2.4.2 Perception of Risk of HIV/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 2006:194). In Kano, Lagos and Nasarawa States Nigeria, Ssengozi *et al* (2004:4-31) 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* (2005:774) 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 (2005:48) 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/AIDS was small or none at all (Smith 2003:354).

2.4.3 HIV Test and Disclosure

Undertaking HIV test is a major step in confronting stigma and initiating appropriate attitude on HIV/AIDS issues. Overall, a tenth of adult respondents had ever been tested for HIV in Nigeria (FMOH 2005:77; NPC 2004b:178). Among teachers in Nigeria, 37% reported they had been tested for HIV (FME 2006:219). Similar findings were reported in the NDHS among adult respondents (25% of men and 32% of females) who had attained higher educational qualifications (NPC 2004b:178).

The circumstances under which HIV test were undertaken is as important as the reason for seeking the test in attitude formation. FME (2006:220) reported that 39% of teachers tested asked for the HIV test. Among adults, the desired to have an HIV test was to know HIV status (83%) and reduce fear (11%) associated with HIV/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 2005:75-6). These reasons are important issues in forming attitude on HIV/AIDS.

The role of significant others in forming and sustaining attitude is essential. With regards to HIV/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 2006:222).

2.4.4 WILLINGNESS TO DISCUSS HIV/AIDS ISSUES

Discussing HIV/AIDS issues in the public as well as disclosing result of HIV test is an important manifestation of HIV/AIDS knowledge and a major step in adopting appropriate HIV/AIDS related attitude. This review focused on the proportion of teacher who teach HIV/AIDS education and their level of willingness to discuss HIV/AIDS issues with family and friends. Similar findings among adult population were also explored.

According to Peltzer (2003:354) secondary school teachers in South Africa felt moderately comfortable to teach HIV/AIDS education. Specifically, about 29% of the teachers interviewed in the study had been teaching HIV/AIDS education for one year or less and about 48% for two years or less. Findings from Nigeria revealed 20% of teachers in FME (2006:231) and 17% in Ssengozi *et al* (2004:4-46) teach FLHE or sexuality education in their schools. Furthermore, 87% of the primary school teachers reported they were supportive of conducting HIV/AIDS education in schools, and believed they were well suited to teach HIV/AIDS education (Ssengozi *et al* 2004:4-47).

The proportion of teachers who were comfortable teaching or discussing HIV/AIDS or sexuality issues varied. In FME (2006:234), 51% of teachers interviewed were very comfortable to teach sexuality issues, 25% were comfortable and 25% were not at all comfortable. Among primary school teachers, Ssenozi *et al* (2004:4-37) reported 34% of respondents in Kano state, 31% in Lagos state and 16% in Nasarawa state Nigeria lacked the willingness to discuss HIV/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 2004b:181).

2.5 CONCEPTUAL FRAMEWORK

The term conceptual framework is used when concepts from different theories and / or research findings are used to guide a study. The framework aims at structuring the study, designing the research questions and formulating research questionnaire. (UNISA 2007:21). Concepts from several theories of knowledge and attitude were utilised to describe the components of knowledge and attitude in this section.

2.5.1 Components of Knowledge

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. (Knowledge [sa]). The concepts making knowledge and their linkage with the different forms of knowledge are discussed below.

2.5.1.1 Concepts forming the framework on HIV/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, other wise one do not possess the knowledge (Tripartite theory of knowledge [sa]).

a. Belief

According to the Webster dictionary (online [sa]), 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 (Pryor 2004). According to the tripartite theory of knowledge [sa], belief is the first condition for knowledge. Naidoo and Wills (2000:220) 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/AIDS information among the research participants as the basis for their belief on HIV/AIDS issues.

b. Truth

Truth refers to fact that have been verified (Webster dictionary online [sa]). 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). (Babbie and Mouton (2001:13). These facts on HIV/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 [sa]). This concept links knowledge with learning or experience. It is the view of the researcher that HIV/AIDS knowledge of respondents is defined by their personal contact with PLWHA or experience with HIV/AIDS issues.

2.5.1.2 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. (Definitions [sa]). 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/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 possess about HIV/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 [sa]). 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 (Definitions [sa]).

Thus, teachers with this form of knowledge will be able to teach learners about HIV/AIDS issues. Possessing this type of knowledge imply that the teachers will discuss sexuality and HIV/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 [sa]). 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.

2.5.1.3 Propositions on HIV/AIDS Knowledge for the study

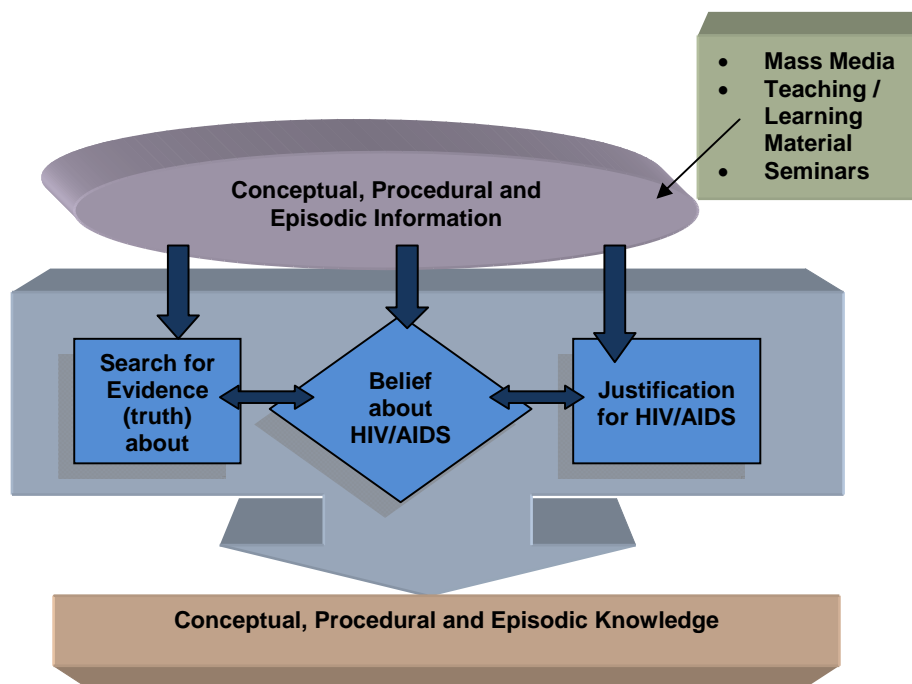
These are statements that illustrate the relationship between the different concepts used so that the phenomenon (HIV/AIDS knowledge) in this study can be understood. The following statements have been proposed to facilitate understanding of HIV/AIDS knowledge in this study.

- Information on HIV/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/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/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.

The proposition is illustrated in figure 2.1 below.

Figure 2.1: Conceptual Map for HIV/AIDS Knowledge



2.5.2 Components of Attitude

The Oxford Advanced Learners Dictionary (2000:65) defined attitude as ways of thinking or behaving. It can also be defined as physical expression of an emotion

(Darwin 1872 cited in Relationship of attitude to behaviour [sa]). Attitude also refer to enduring views on people, behaviour or event (Webster dictionary online [sa]). This section discusses the concepts and propositions for the study of HIV/AIDS attitude among teachers

2.5.2.1 Concept forming the Framework on HIV/AIDS Attitude

Based on the ABC Model of attitude, social psychologists have argued that for attitude to be formed, an individual goes through the steps of responding to an entity on affective, behavioural and cognitive levels. (lecture 02 – social psychology [sa]; Solomon [sa]; Webster dictionary online [sa]).

a. Affective Component of Attitude

The affective components of attitude are feelings or emotions that someone evokes. The Webster dictionary (online [sa]:7.4) defined the affective component of attitude as psychological responses that expresses individuals preference for an entity. Within the context of HIV/AIDS, affective component of attitude include personal perception / feeling towards people infected with HIV, and actions related to HIV/AIDS. The feeling of teachers and other adult population towards allowing infected teachers to continue to teach discussed earlier in this chapter elaborated the affective component of HIV/AIDS related attitude.

b. Behavioural Component of Attitude

The tendency or disposition to act in a certain way constitutes the behavioural component of attitude. The Webster dictionary (online [sa]) expatiated that behaviour intention are verbal indication of the intention of individuals. The behavioural intention to relate with infected teachers in the workplace discussed earlier in this chapter provides a clear understanding of the behavioural component of attitude within the context of HIV/AIDS. Other HIV/AIDS related behaviour intention earlier discussed included intention to interact with PLWHA in the community and the willingness to discuss HIV/AIDS issues in the public.

c. Cognitive Component of Attitude

Cognitive component of attitude is specifically related to cognitive evaluation of the entity / idea forming the attitude (Webster Dictionary online [sa]).The cognitive components of attitude are thoughts, beliefs, and ideas about something and when human being (e.g. PLWHA) are the subject of an attitude, the cognitive components is frequently a stereotype e.g. stigma towards people infected or affected by HIV/AIDS. In this review, thoughts and beliefs among teachers that PLWHA were disappointing, immoral and promiscuous discussed earlier in this chapter were example of cognitive component of attitude related to HIV/AIDS.

2.5.2.2 Proposition on HIV/AIDS Attitude for the Study

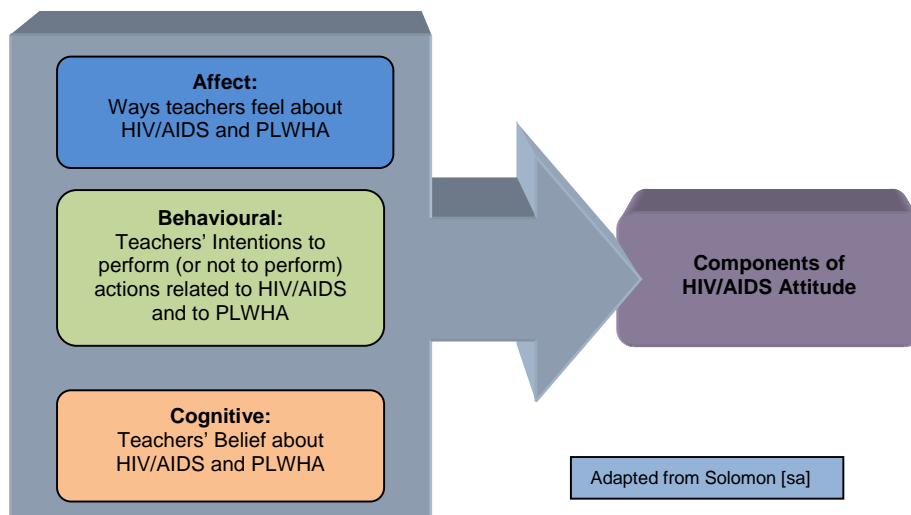
The proposition for attitude for this study is guided by the ABC Model of Attitude (Solomon [sa]:7.4) which states that for attitude to form, an individual goes through the

steps of responding to an entity on affective, behavioural and cognitive levels. Thus, HIV/AIDS attitude among teachers in this study is a complex manifestation that included:

- The ways teachers feel about HIV/AIDS issues and PLWHA including feeling towards family and people PLWHA had contact, ;
- Teachers' intention to perform (or not to perform) some actions related to HIV/AIDS, or towards people infected with or affected by HIV; and
- The thoughts and belief of teachers about HIV/AIDS and people infected with or affected by HIV

The proposition is illustrated in figure 2.2 below.

Figure 2.2: Conceptual Map for HIV/AIDS Attitude for the study



2.6 CONCLUSION

Literatures on HIV/AIDS knowledge and attitude among teachers and other relevant population were reviewed in this chapter to provide an insight into the study. The review revealed that many respondents were aware of HIV/AIDS, and they often source information about the AIDS epidemic from the mass media. While HIV/AIDS knowledge among respondents varied, misconceptions about HIV transmission still persist among teachers and among adult population in Nigeria. Likewise, in northern Nigeria, the religious bias towards public discussion of condom manifested in the low proportion of teachers with the knowledge of HIV prevention through the use of condom. HIV/AIDS related stigma and discrimination exist both at the work place and in the community and may be attributed to fear, denial and opinion about risk of HIV/AIDS infection.

Guided by the findings of the review and the conceptual framework discussed in this chapter, the research design and methodology for the study of HIV/AIDS knowledge and attitude among teachers in Abuja, Nigeria will be described in the next chapter. The study population and study sample; the process for data collection and analysis; as well as the ethical consideration in the study will also be presented.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

In this chapter, the research design and methodology that has been followed in addressing the research questions of the study of the knowledge and attitude of HIV/AIDS among teachers in Abuja, Nigeria is presented. A research design is a plan or blueprint of how the researcher intends to conduct the research. Research methodology on the other hand focuses on the process, tools and procedure utilized during the research process. (Babbie & Mouton 2001:74-5; Mouton 2001:55.).

This chapter presents the research design; the method and procedure for the development of the data collection instrument; and the study population and sampling method. The data collection exercise including ethical considerations, the measures to control reliability and validity, as well as the data analysis procedure were also discussed.

3.2 RESEARCH DESIGN

According to Mouton (2001:55), research design is a plan or blueprint of how the researcher intends to conduct the research. The research design is about drawing a plan that will be followed during the study in order to answer a research question (Babbie & Mouton 2002:72). The focus of research design therefore is on the logic of

the research, aiming at the kind of evidence that is required to address the research questions (Mouton 2001:56). The two major aspect of research design mentioned by Babbie and Mouton (2001:72) provide a guide for this section. They are (i) the researcher must specify as clearly as possible what the research intend to find out and (ii) the researcher must determine the best way to do it.

Chapter 1 of this report presented the purpose and objectives of this study and thus addressed the first major aspect of the design as stipulated by Babbie and Mouton (2001:72). This study is intended to describe HIV/AIDS knowledge and attitude among teachers in junior secondary schools (JSS) in Abuja, Nigeria. The best method selected to undertake this study and address the research question is through a quantitative descriptive survey; the second component stipulated by Babbie and Mouton (2001:72).

An insight into descriptive studies and surveys as it relates to this study are discussed below.

3.2.1 Descriptive Study

According to Babbie and Mouton (2001:80) the main purpose of descriptive research is to observe and describe situations and events. In descriptive study, the amount (frequency) and distribution (by person, place and time) of an event or situation within a population is observed and described. Descriptive studies are known for providing information for planning and programme implementation, as well as make comparison between groups (Araoye 2003:55). Therefore in this study, the researcher observed and

described the HIV/AIDS knowledge and attitude among teachers in Abuja, Nigeria based on data collected using a self administered instrument developed for the study. Furthermore, the researcher made recommendations (see chapter 4) based on the findings of the survey aimed at improving HIV/AIDS prevention education in schools in Nigeria.

Amongst the different types of descriptive studies, the researcher adopted a cross-sectional study because data collection can be done as a single observation (Araoye 2003:58) and on a smaller population (Grimes & Schulz 2002:147). These advantages of cross-sectional study reinforced the fact that descriptive studies can generate information quickly and are useful when results are needed urgently and when resources for the study are limited (Araoye 2003:56) as in the case of a dissertation of limited scope.

3.2.2 Surveys

Surveys are quantitative studies aimed at providing a broad overview of a representative sample of a larger population (Mouton 2001:152). According to Babbie and Mouton (2001:232), surveys are most appropriate for studies that have individual people as the unit of analysis. In this study, knowledge and attitude are personal elements; therefore a survey is a suitable method.

Babbie and Mouton (2001:232) also pointed out that surveys are the best method available to social scientist interested in collecting original data for describing a

population too large to observe directly. In the case of this study, the population of teachers in Abuja, Nigeria are too large to observe directly; as such a representative sample of the population is studied.

Surveys are often carried out on the **K**nowledge, **A**ttitude and **B**ehaviour / **P**ractices (KABP/KAP) of persons. Depending on the objectives, this would give a snapshot description. KABP/KAP studies have been advocated by Araoye (2003:59) to identify gap in knowledge, attitude and practices among respondents on specific issues or situation, and make recommendations for correction through interventions.

One of the strength of surveys lies in its potential to generalize findings in a sub-group to the general population if appropriate sampling design has been implemented in combination with a standardized questionnaire (Babbie and Mouton 2001:263; Mouton 2001:153). In this study, probability sampling method and a standardized questionnaire were utilised so that findings of the study can be generalized (Araoye 2003:123) to teachers in Abuja Nigeria.

3.3 DATA COLLECTION INSTRUMENT

The methods and procedures for the development of the data collection instrument for this study were described in this section. The survey questionnaire, the measures to ensure validity of the instruments and the pre-testing of the questionnaire were discussed below.

3.3.1 The Survey Questionnaire

“Questionnaires are documents containing questions and other types of items designed to solicit information appropriate to analysis. Questionnaires are used primarily in survey research’ (Babbies & Mouton 2001:646). In the use of questionnaires, Mouton (2001:100) stated that researchers may either use existing instruments or develop a new one. In the case of this study, the researcher adapted existing instruments into a new questionnaire for the study.

3.3.1.1 Questionnaire Design

A new questionnaire was formulated for this study using question items from the teachers’ questionnaire of the national HIV/AIDS knowledge, attitude and practices of HIV/AIDS and school health in Nigeria (FME 2006:337) and the assessment of educators’ view on the impact of HIV/AIDS on primary education in Nigeria (Ssengonzi *et al* 2004:A3-1). The existing questionnaires were not adopted for this study because the research objectives of these studies (FME 2006:4; Ssengonzi *et al* 2004:2-2) differ from that of this study, and in the case of Ssengonzi *et al* (2004:2-2), the respondents were teachers in primary school, not teachers in junior secondary schools as in this study.

Based on the relevance of the existing questionnaires some question items in the tools were adapted for use in this study (Mouton 2001:102).

The construction of a new questionnaire for this study was guided by the research objectives (Araoye 2003:133). The questionnaire was developed only in English language because respondents (teachers) were comfortable reading and writing English language. Simple short questions and statements were used to avoid confusion. (Babbie & Mouton 2001:237-8).

Closed ended questions were used in the questionnaires to explore HIV/AIDS knowledge among teachers. The answer categories were mutually exclusive, and special instructions were provided where necessary for ease of understanding (Araoye 2003:134; Babbie & Mouton 2001:233-4).

HIV/AIDS attitude among teachers were explored in the questionnaire with statements derived from the literature review. The statements explored the feeling, behaviour intention and belief of respondents towards PLWHA and HIV/AIDS issues. A five scale Likert response type (Babbie & Mouton 2001:153) were provided as answer options for each statement.

In view of the need to collect data on sensitive issues like sexuality and because the respondents—teachers, were literate, the instrument was developed as a self administered questionnaire (Babbie & Mouton, 2001:262).

3.3.1.2 Content of the Questionnaire

The questionnaire has 3 major sections namely background information, HIV/AIDS knowledge and HIV/AIDS attitude. Prior to these sections is the preliminary part of the questionnaire which comprised the introduction and instructions (see Annexure A).

a. Preliminary part

The introduction provided information about the purpose of the research and assured respondent of the confidentiality of the information provided (Mouton 2001:243). The instructions informed the respondent what is expected of them in completing the questionnaire (Araoye 2003:134; Babbie & Mouton 2001:243)

b. Section A: Background Information

This section comprised question items on the bio-data of the respondent as well as information about the school of the respondent. The section also sought to ascertain the number of children the respondent has, the highest educational level of the respondent and the location of the school where the respondents teach.

c. Section B: HIV/AIDS Knowledge

Section B of the questionnaire is titled HIV/AIDS Knowledge. The section has 4 sub-sections that asked question relating to conceptual, procedural and episodic knowledge, as well as the sources of information on HIV/AIDS.

Sub-section one comprised closed ended questions on the meaning of HIV and AIDS, and the relationship between the virus and AIDS. The section also explored the pathology of HIV, the routes of transmission and the methods of prevention of HIV. Questions on the risk factors for HIV infection were also asked. The second sub-section explores the knowledge of the respondents on the trends of HIV in Nigeria. The knowledge of someone infected with HIV or who have died of AIDS among respondents was also explored. The third sub-section explored the major sources of HIV/AIDS information among the teachers in schools.

Due to the sensitivity attached to sexuality issues, questions on the knowledge of use of condoms and actions to take for the treatment of STI were asked in the last sub-section on the HIV/AIDS knowledge. The sub-section also explored whether the respondents had discussed sexuality and HIV/AIDS issues with their students, colleagues and family.

d. Section C: HIV/AIDS Attitude

This section has three sub-sections with statements on the affective, behavioural and cognitive component of attitude as discussed in under the conceptual framework in chapter 2.

Sub-section one comprised attitude statements on the feeling of respondents towards PLWHA including teachers who are infected with HIV. Statements on some actions / behaviours related to HIV/AIDS like taking HIV test and disclosing HIV test result were included in the second sub-section on attitude in the questionnaire. The third sub-

section comprised statements that explored the belief of respondents about PLWHA and actions related to HIV/AIDS education / information.

3.3.2 Validity of the Instrument

As stated earlier, question items in existing tools were adapted into a new questionnaire for this study. The validity of the questionnaire was ensured by observing the guideline for questionnaire construction (Araoye 2003:134-5; Babbie & Mouton 2001:239). The measures to ensure the face validity and content validity of the questionnaire are presented below.

3.3.2.1 Face Validity

According to Araoye (2003:151) the perception of relevance of a measurement by the investigator is referred to as face validity. In the view of the researcher, the face validity of the instrument lied in the fact that some of the question items in the questionnaire for the study were derived from existing questionnaire which were administered on teacher in Nigeria in the past. In addition, the questionnaire was sent to different subject expert for the face validity confirmation.

3.3.2.2 Content Validity

The examination of whether all the component elements of a complex variable like knowledge and attitude are measured is referred to as content validity (Araoye 2003:153; Babbie & Mouton 2001:123). In this study, the researcher ensured the content validity of the instrument by basing the questionnaire on the conceptual

framework for the study. The different concepts and types of knowledge as well as the components of attitude earlier discussed in Chapter 2 were utilised to measure HIV/AIDS knowledge and attitude.

In addition, the content validity of the questionnaire also lied in the fact that (i) the original instruments where some question items were sourced were developed by experts in the Federal Ministry of Education (FME), Nigeria (FME 2006:297) and research experts from the Research Triangle International (RTI) (Ssengonzi *et al* 2004:3-1); and (ii) the questionnaire for this study was reviewed by experts from the HIV/AIDS unit of the FME, Nigeria and the research supervisor for relevance, appropriateness and adequacy of items in each section. The feedbacks from the revision were incorporated into the questionnaire for the data collection exercise. In addition, the service of a statistician was employed during the process of finalising the questionnaire.

3.3.3 Pre-testing of the Questionnaire

According to Babbie and Mouton (2001:244), pre-testing the questionnaire is the surest protection against errors in the instrument. The purpose of pre-testing the instrument is to determine whether the questions were understood by the respondents. In addition, the exercise assisted in the determination of whether there is a need to revise the format or presentation of the questionnaire with regards to sequence and wording of questions, and the need for additional instruction (Araoye 2003:69-70).

Guided by the suggestion of Babbie and Mouton (2001:244-5), ten teachers with different background from schools not included in the study undertook the pre-testing of the questionnaire. The findings of the exercise were incorporated into the final instrument for the study.

3.4 STUDY POPULATION AND SAMPLING METHOD

Study population comprised the group of individual units investigated (Araoye 2003:115). They are the population from where the study sample would be drawn (Barbie & Mouton 2001:174). This section discusses the study population, the sample size determination, the sampling method and method of selecting research participant for this study.

3.4.1 Study Population

Teachers in junior secondary schools in the six (6) area councils in Abuja, Nigeria during the 2005/2006 school year constituted the study population. They comprised teachers in junior secondary schools (JSS) listed in the database of the Education Data Bank (EdB) of the FME. Teachers in JSS not listed in the database, those in primary schools, senior secondary schools, and special education schools as well as non-formal education / literacy centres in Abuja, Nigeria were excluded from the study.

The study population comprised 1,251 teachers (529 female and 722 males) in junior secondary schools during the 2005/2006 academic session in Abuja, Nigeria. During the same period, 152 junior secondary schools were listed in the database of education

databank (EdB). (FME 2005:131). Therefore, there was an average of 8 teachers per school (1,251 teachers / 152 schools) during the school year.

3.4.2 Sample Size Determination

The formula for sample size determination when study population is less than 10,000 (Araoye 2003:119) was used to estimate the sample size for this study.

$$nf = \frac{n}{1 + (n)/(N)}$$

Where:

nf = the desired sample size when population is less than 10,000

n = the desired sample size when population is more than 10,000

N = the estimate of the population size

The desired sample size when population is more than 10,000 (n) is calculated using the formula: $n = \frac{z^2pq}{d^2}$.

$$d^2$$

Where:

$z =$ the standard normal deviate set at 1.96, which corresponds 95% confidence interval

$p =$ the proportion in the target population estimated to have a particular characteristics which is estimated to be 50% or 0.50

$q = 1 - p = (1 - 0.5) = 0.5$

$d =$ degree of accuracy desired, usually set at 0.05

Therefore, $n = \frac{z^2 pq}{d^2} = \frac{(1.96)^2 (0.5) (0.5)}{(0.05)^2} = 384$

$n_f = \frac{n}{1 + (n)/(N)} = \frac{384}{1 + (384) / (1,252)} = \frac{384}{1 + 0.31} = 293$

The calculated sample size was 293. In anticipation of a response rate of 80% (Araoye 2003:121), the sample size for the study was increased to 370.

3.4.3 Sampling Method and Subject Selection

Multi-stage cluster sampling technique was used in this study. According to Babbie and Mouton (2001:194), multistage cluster sampling method involves the initial sampling of groups of elements, followed by the selection of elements within each of the selected cluster. In this study, the first level of sampling was at the level of schools, while the second level of sampling involved the selection of the research participants – teachers. The process of selecting the sample schools and the participant of the study are discussed below.

3.4.3.1 Selection of Sample Schools

The selection of the number of schools required for the study was determined from the calculated sample size and the average number of teachers per school as follows:

$$\begin{aligned} \text{Number of school} &= \text{Calculated Sample size} / \text{Average number of teachers per school} \\ &= 370 / 8 = 46.25 \text{ schools.} \end{aligned}$$

Based on the need to meet the required sample size as well as the fact that schools exist in whole and not in fractions, **47 schools** will be selected for the study with the implication for increase in sample size from the calculated 370 teachers to **376 teachers** (47 X 8).

All junior secondary schools in Abuja were clustered by area council into six (6). In each area council, proportionate selection of schools was done. The number of schools selected for the study in each areas council was calculated using the formula:

$$\frac{\text{No. of school in the area council}}{\text{Total number of schools}} \times 47$$

Total number of schools

Guided by the number of schools in each area council listed in the databank (FME 2005:131), the number of sample schools in each areas council is calculated using the formula above and the result was presented in table 3.1 below.

3.4.3.2 Subject Selection

The selection of sample schools from each area council was undertaken through systemic random sampling. The list of schools from the education databank was used as the sampling frame. In each council area, schools were chosen at regular intervals from the sampling frame. For the selection of 47 schools out of 152 ($152 / 47$), sampling interval of 3 was used in each cluster.

The first school in each cluster was randomly selected by simple ballot of a number between 1 and 8 (because the smallest cluster consists of 8 schools). Subsequently, every third school on the EdB list of school in each cluster (area council) were included in the study until the required number of schools in each cluster was selected.

Eight (8) teachers in each selected school were included in the study as the subject of the study. The selection of teachers was done by simple ballot.

Table 3.1: Sample Size Selection

Area Council	No of schools	No of selected schools (a)	Estimated sample size i.e No of Teachers per school (8 X a)
Abaji	8	3	24
Bwari	17	5	40
Gwagwalada	19	6	48
Kuje	17	5	40
Kwali	10	3	24
AMAC	81	25	200
Total	152 Schools	47 Schools	376 Teachers

3.5 DATA COLLECTION AND FIELD ADMINISTRATION

This section discusses the processes and consideration taken during the administration of the questionnaire on the participants. The section discussed the data collection approach and the ethical issues that were addressed during the field administration of the questionnaire.

3.5.1 Data Collection Approach

The data collection exercise was undertaken in October 2007. Twelve trained field personnel drawn from the pool of enumerators engaged for the national knowledge, attitude and behaviour on HIV/AIDS and School Health by the FME was recruited for the exercise. An orientation session for the field personnel was undertaken by the researcher to acquaint the field personnel with the content of the questionnaire so that the field staff can clarify any issue as might be necessary during the field work. The field personnel were deployed to schools in pairs for the data collection exercise.

During the data collection exercise, the researcher supervised data collection exercise in 53% of sample schools (25 out of 47 sample schools) by accompanying the research personnel to the first 6 schools to ensure that the selected of teachers for the study was done in line with the approach described under subject selection above. The remaining schools for supervision were randomly selected from all the area councils in Abuja, Nigeria. The supervision exercise allowed the researcher to meet with the principals of the schools and ensure that the field personnel administered the research instrument correctly.

3.5.2 Ethical Considerations in Data Collection

According to Mouton (2001:238), the ethics of science concerns what is wrong and what is right in the conduct of research. Araoye (2003:13) stated that ethical considerations should be made from the beginning of project design and at various stages through to the end. This section discussed the ethical considerations towards the participants during the data collection exercise. These ethical considerations include the right to privacy including refusal to participate in the research, the right to anonymity and confidentiality, the right to full disclosure about the research and the right not to be harmed in any manner (Mouton 2001:243).

3.5.2.1 The Right to Privacy and Refusal to Participate

Guided by Mouton (2001:243), the research participants (teachers) were informed by the field personnel that participation in the survey was not compulsory. Rather, the teachers had the option of opting out of the study. In addition, they were allowed to complete the research instrument in their respective work station without any direct interference by the research personnel.

3.5.2.2 Right to Anonymity and Confidentiality

Anonymity refers to the principle that the identity of the research participants is kept secret; the principle of confidentiality refers to the information gathered from the participants (Mouton 2001:244). In this study, the research participants were not required to right their names on the questionnaires and were assured that their responses will not in any way be linked to them so as to assure them of confidentiality.

3.5.2.3 Right to Full Disclosure about the Research

Mouton (2001:244) stated that the aim of the research must be communicated to the research participant as much as possible. The steps taken to ensure the respect of the right to full disclosure about this study included:

a. Obtaining Permission to the Schools

Permission was requested from the HIV/AIDS unit of the Federal Ministry of Education to access schools included in the study. The letter of approval from the HIV/AIDS unit of the FME was presented to the principals of the sample schools to secure his/her consent (see Annexure B).

b. Obtaining informed consent

As part of the process of obtaining informed consent from the research participants, the field personnel introduced themselves to the teachers in the sample schools and explained the purpose of the study to them. It was also explained to the teachers that the findings of the study will assist in the improvement of the teacher education on HIV/AIDS issues in Nigeria. Following these efforts, verbal consent of the respondents for the exercise was obtained.

3.5.2.4 Right not to be harmed in any manner

Mouton (2001:245) stated that the process of conducting research must not expose the participants to substantial risk or personal harm. Babbie and Mouton (2001:522) also stated that the participants can be psychologically threatened during participation in the

research. In this study, the respondents were allowed space and time to complete the questionnaire. This was done to ensure the respondents do not feel intimidated during the process of completing the questionnaire because some of the question items relates to their sexuality and sexual practices.

3.6 CONTROL OF RELIABILITY AND VALIDITY FACTORS

According to Babbie and Mouton (2001:119), reliability refers to whether a particular technique applied repeatedly to the same object, would yield the same results each time. Validity on the other hand refers to the extent to which an empirical measure adequately reflects the real meaning of the concepts under consideration (Babbie & Mouton 2001:122). In this sub-section, the measures to control the reliability and validity of the data collection exercise are discussed.

3.6.1 Reliability

The reliability of the data collection exercise as it relates to the attitude of the interviewers, the relevance of the study to the research participant and the measuring instruments are discussed below.

3.6.1.1 Attitude of the Interviewers

According to Babbie and Mouton (2001:120), survey researchers have known that because of their attitude and demeanours, interviewers get different answers from respondents. This research addressed such concerns by ensuring that the process of data collection was through self administered questionnaire. In addition, the reliability of

the research personnel was ensured by organizing an orientation session to build consensus on terms and issues that required clarification.

3.6.1.2 Relevance of the Study to Research Participant

Babbie and Mouton (2001:121) have noted that respondents must be asked about things that are relevant to them for the research to have reliable measures. The relevance of HIV/AIDS to teachers has been argued in the last chapter under literature review, thus satisfying the postulate in Babbie and Mouton (2001:121).

3.6.1.3 The Measuring Instrument

According to Babbie and Mouton (2001:121), the questions asked must be comprehensible to ensure the reliability of the measure. As earlier discussed, the research questionnaire was pilot tested among teachers and appropriate modifications were made ensure easy comprehension by the research participants.

Another measure to assure reliability of the instrument was through the use of established measures (Babbie & Mouton 2001:122). The adaptation of some question items from existing tools into the questionnaire for this study was discussed earlier in this chapter.

3.6.2 Validity

Validity is the ability of a test or study to measure what the investigator will like to measure (Araoye 2003:150). The measures to assure internal and external validity of this study are discussed below.

3.6.2.1 Internal Validity

Internal validity is the ability of a study to measure what it sets out to measure (Araoye 2003:151). Measures to control internal validity are not addressed in this study because it is a descriptive research (UNISA 2005:16).

3.6.2.2 External Validity

According to Araoye (2003:151), external validity refers to the generalizability of the study findings from a sample to the reference population. The assurance of external validity in descriptive research design is of utmost importance as stated in UNISA (2005:16). Measures to assure external validity earlier described in this study include (i) the design of the questionnaire based on the rule for questionnaire construction and the conceptual framework for the study; (ii) the pre-testing of the questionnaire, (iii) the ethical rigor especially on the assurance of anonymity, (iv) the calculation of large sample size, and (v) the use of probability sampling technique.

3.7 DATA PROCESSING AND ANALYSIS

This section discussed the handling of data after collection. The service of a statistician who was involved in the design of the questionnaire for this study was employed for data processing and analysis.

3.7.1 Data Processing

The sifting and sorting of the questionnaires were done by the statistician to determine useable ones. 376 questionnaires were administered during the field exercise. In some instances, the respondents did not return the questionnaire. Others did not respond to majority of the question items, ultimately, 356 questionnaires were analysed, giving a response rate of 95%.

The responses in the completed questionnaires were coded, collated and entered into a data entry template under the supervision of the statistician. Data entry was done in EPI-INFO (2000) Programme.

3.7.2 Data Analysis

The data analysis was undertaken by the statistician in collaboration with the researcher. Dummy (draft) tables of the analysis to be done (Araoye 2003:164) were performed by the researcher to guide the statistician. Descriptive statistics (Babbie & Mouton 2001:459-475) was employed in the analysis. Univariate analysis (Araoye 2003:168) which included frequency distribution of key items on HIV/AIDS knowledge and attitude among teachers in Abuja were presented.

Bivariate analysis (cross tabulations) (Araoye 2003:178) were utilized to describe the research participants, and to compare HIV/AIDS knowledge and attitude among different sub-groups of respondents. Specifically, collapsed tables were utilized to explore the relationship between (i) education qualification and the knowledge of HIV/AIDS among respondent, (ii) location of school of respondents and knowledge of HIV/AIDS, (iii) receipt of information or training on HIV/AIDS and the knowledge of HIV/AIDS and (iv) the teaching of HIV/AIDS education to students and the attitude of respondents on HIV/AIDS related issues. In the cross tabulations for exploring HIV/AIDS knowledge, the variable education qualification was collapsed into two i.e. NCE and others higher qualifications (OND, HND, bachelor and masters degree) due to the high proportion of respondent who held NCE qualification and the dependent variables were collapsed into two – ‘Yes’ and ‘No’ (with variable ‘**NO**’ inclusive of the response don’t know). Likewise, the independent variable ‘marital status’ was collapsed into married and not married due to the large proportion of the respondents who were married. The dependent variable for cross tabulations for HIV/AIDS attitude were collapsed into three – ‘Agree’ (inclusive of strongly agreed), ‘Uncertain’ and Disagree (inclusive of strongly disagree).

3.8 CONCLUSION

The research design and methodology for the study of HIV/AIDS knowledge and attitude among teachers in Nigeria were discussed in this chapter. A descriptive cross-section survey design was utilized for this study, and a new questionnaire was developed. Measures to assure compliance with scientific ethic in the different stages of

the research were also discussed. A description of the process of data analysis was also presented.

Based on the finding of the data analysis, the next chapter presents the research findings and a discussion of the results. A discussion of the limitations of the study is also presented.

CHAPTER 4

PRESENTATION OF RESEARCH FINDINGS

AND DISCUSSION

4.1 INTRODUCTION

The findings of the study of HIV/AIDS Knowledge and Attitude among teachers in Abuja, Nigeria were presented and discussed in this chapter. The findings of the study are presented in the form of tables and charts depicting the background characteristics of the respondents and the different concepts of HIV/AIDS knowledge and attitude of the respondents. The discussion provided a technical analysis of the findings in relation to existing information and trends on HIV/AIDS knowledge and attitude among teachers and other adult population.

This chapter is in three sections. Section one presented and discussed the background characteristics of the respondents. The other two sections described the HIV/AIDS knowledge and attitude among teachers in Abuja, Nigeria in line with the research objectives of this study stated in chapter one.

4.2 BACKGROUND CHARACTERISITICS OF RESPONDENTS

There were 356 respondents from 47 schools in Abuja, Nigeria who participated in this study. The schools were selected from the 6 area councils in Abuja using multi-stage

cluster sampling technique described in chapter 3 and the distribution of schools in Abuja (FME 2005:131). Table 4.1 presents the distribution of respondents by area council.

Table 4.1		
Distribution of Respondents by Area Council		
Area Council	Frequency	Percent
Abuja Municipal Area Council (AMAC)	198	55.6
Bwari	30	8.4
Abaji	24	6.7
Kwali	22	6.2
Kuje	38	10.7
Gwagwalada	44	12.4
Total	356	100.0

The school where majority of the respondents (55.6%) teach were located in AMAC, 12.4% of the schools were in Gwagwalada Area Council and 10.7% were in Kuje Area Council.

Expectedly, 74% of the schools where the respondents teach were located in urban areas and 25.8% were located in rural areas (Table 4.2), because Abuja, the Federal Capital of Nigeria is largely an urban area in Nigeria.

Table 4.2		
Distribution of Respondents by Location of School		
Sector	Frequency	Percent
Urban	264	74.2
Rural	92	25.8
Total	356	100.0

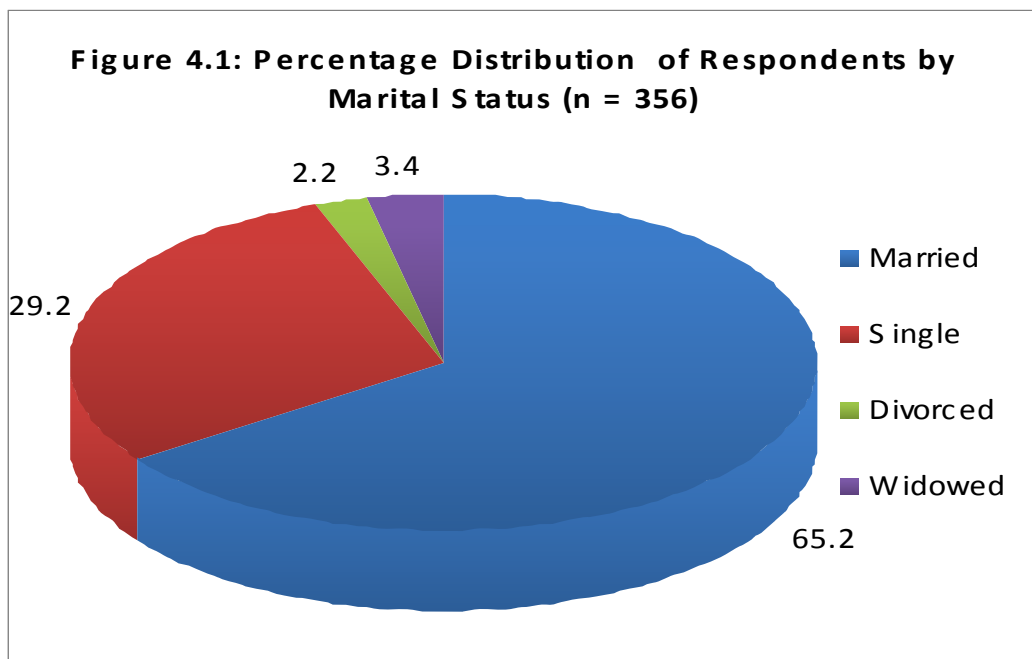
Table 4.3 below presents the gender and age distribution of the respondent. Among the 356 respondents, 53.9% were females and 46.1% were males. The age distribution of the respondents indicated that 25.8% were aged 30 – 34 years, 18% were aged 25 – 29 years, 16.9% were aged 40 – 44 years and 15.7% were aged 35 – 39 years.

Table 4.3			
Gender and Age Distribution of Respondents (n = 356)			
Age Group (Years)	Gender (Percentage)		Total (Percentage)
	Male	Female	
20 - 24	9.8	9.4	9.6
25 - 29	24.4	12.5	18.0
30 - 34	28.0	24.0	25.8
35 - 39	15.9	15.6	15.7
40 - 44	7.3	25.0	16.9
45 yrs+	14.6	13.5	14.0
Total	46.1	53.9	100.0

Majority of the respondents therefore were aged 25 – 44 years, the age groups with high HIV prevalence in Nigeria. In 2005 when the national HIV prevalence was 4.4%, the prevalence among pregnant women attending antenatal clinics in Nigeria aged 25 –

29 years was 4.9%. The HIV prevalence was 4.2% among women aged 30 – 34 years, 3.4% among 35 – 39 years and 3.9% among 40 – 49 years. (FMOH 2006:24).

Majority of the respondents (65.2%) were married, 29.2% were single, 3.4% were widowed and 2.2% were divorced (Figure 4.1).



As illustrated in figure 4.2 (below), 33% of the respondents do not have any child. Twenty-six percent (26%) had 5 or more children, 22% had either one child or two children, and 19% had 3 or 4 children.

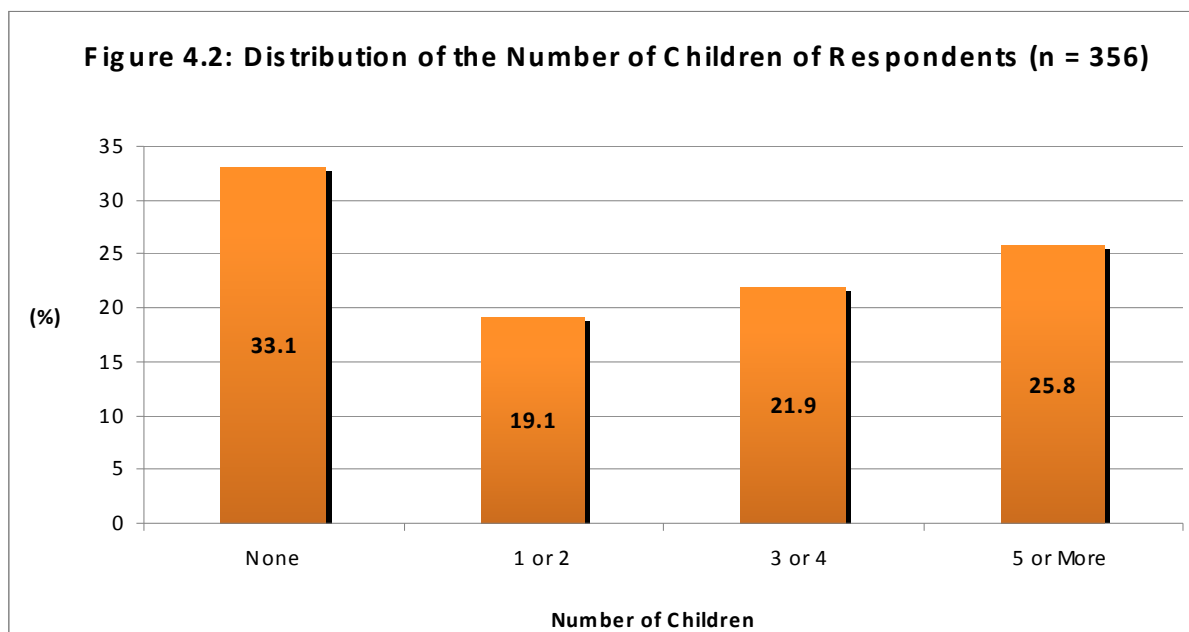


Table 4.4		
Highest Educational Level of Respondents		
Highest Education	Frequency	Percent
National Certificate of Education (NCE)	254	71.3
Bachelor's Degree	64	18.0
Masters Degree	12	3.4
Others	26	7.3
Total	356	100.0

The distribution of the education qualification of respondent is presented in table 4.4 above. The highest educational qualification of majority of the respondents (71.3%) was the National Certificate of Education (NCE), the minimum tertiary education qualification for teachers in Nigeria. Other respondents had Bachelors' degree (18%) and 3.4% had

master's degree. The remaining 7.3% of the respondents had other qualifications that included Ordinary National Diploma (OND) and the Higher National Diploma (HND).

Among the respondents, 69.9% had received HIV/AIDS information in their schools and 28.9% had been trained on Family Life and HIV/AIDS Education (FLHE) curriculum (Table 4.5).

Table 4.5		
Distribution of Respondents who have received HIV/AIDS Information or Training in FLHE in their School (n = 356)		
	Options	Percentage
Ever receive information on HIV/AIDS from any training in the school	Yes	69.9
	No	30.1
Ever received any training on Family Life and HIV/AIDS Education Curriculum	Yes	28.9
	No	71.1

The proportion of teachers who had received training on FLHE curriculum in this study is similar to the findings in the national baseline survey by FME (2006:208).

4.3 HIV/AIDS KNOWLEDGE AMONG RESPONDENTS

The presentation and discussion of the HIV/AIDS knowledge among respondents in this section is guided by the components of knowledge discussed in chapter 3. Thus, conceptual, procedural and episodic knowledge of respondents are discussed to describe the HIV/AIDS knowledge of teachers in Abuja, Nigeria.

4.3.1 Conceptual Knowledge of HIV/AIDS among Respondents

The understanding of the different concepts on HIV/AIDS including the relationship between the virus and AIDS, the risk factors, and the modes of transmission and the methods of prevention among respondents are discussed in this sub-section.

4.3.1.1 Knowledge of the Pathogenesis of HIV to AIDS

The knowledge of the pathogenesis of HIV to AIDS was explored with two questions among respondents in table 4.5 below. Overall, 92.7% of respondents knew HIV destroys the defence system of the body and 69.1% knew HIV was different from AIDS. The 69.1% of respondent who knew HIV was different from AIDS is lower than the national average of 74.2% of teachers who had the same knowledge in 2006 (FME 2006:156).

All the teachers who had master's degree knew the pathogenesis of HIV to AIDS. They knew HIV destroys the defence system of the body and knew HIV was different from AIDS. Similarly, teachers who are females and whose school are located in rural areas were more likely to know the pathogenesis of HIV to AIDS. These findings contradict reports from earlier studies (FMOH 2005:46; NPC 2004b:170) in Nigeria.

Table 4.6							
Distribution of Respondents with Knowledge of the Pathogenesis of HIV to AIDS (n = 356)							
Characteristics		Knew HIV is different from AIDS (%)			Knew HIV destroys the defense system of the body (%)		
		Yes	No	Don't Know	Yes	No	Don't Know
Gender	Male	63.4	30.5	6.1	91.5	3.7	4.9
	Female	74.0	24.0	2.1	93.8	2.1	4.2
Highest Educ.	NCE	66.1	29.9	3.9	93.7	3.1	3.1
	Bachelor	71.9	21.9	6.3	87.5	3.1	9.4
	Masters	100.0	0.0	0.0	100.0	0.0	0.0
	Others	76.9	23.1	0.0	92.3	0.0	7.7
Sector	Urban	65.9	30.3	3.8	91.7	3.0	5.3
	Rural	78.3	17.4	4.3	95.7	2.2	2.2
Overall Total		69.1	27.0	3.9	92.7	2.8	4.5
Using collapsed 2 X 2 table (described in chapter 3) of highest education qualification and knowledge that HIV destroys the defense system of the body: Pearson's Chi-square = 1.320 (df=1) ; P value =0.251							

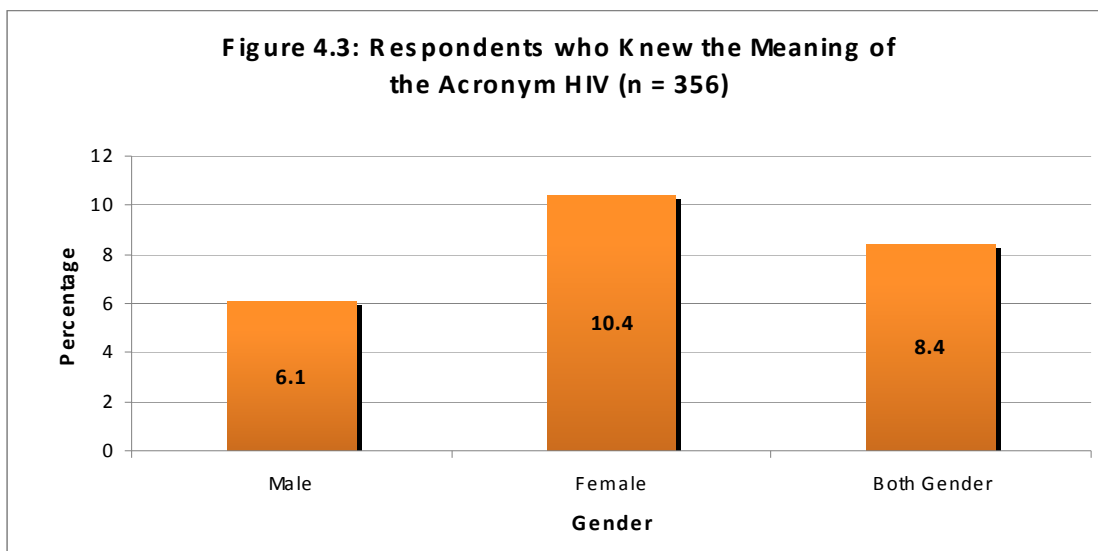
The absence of statistically significant relationship (p value = 0.251) between education level of respondent and the knowledge that HIV destroy the defense system of the body in table 4.6 though contrary to expectation is consistent with the fact that the entire teachers in JSS in Nigeria had tertiary education qualification. In addition, any disparity that might exist between teachers with NCE qualification and others could easily be obliterated through peer education among the teachers. According to FME (2006:154), about 51% of teacher sourced their HIV/AIDS information from fellow teachers.

The high proportion (more than 70%) of female teachers and teachers in rural areas that knew HIV was different from AIDS might account for the significant statistical relationship established between the location of the school of the respondents and knowledge that HIV is different from AIDS - **Pearson's Chi-square = 4.875 (df = 1); P values = 0.027**: and the relationship between gender and the knowledge that HIV is different from AIDS - **Pearson's Chi-square = 4.605 (df = 1); P values = 0.032**.

4.3.1.2 Knowledge of the Meaning of the Acronym HIV

More female respondents (10.4%) than male respondents (6.1%) knew the meaning of the acronym HIV. Overall, 8.4% of the respondents knew the meaning of the acronym HIV, a proportion that is lower than the national average of 20% of teachers reported in FME (2006:155).

The low proportion of teachers who knew the meaning of the acronym HIV is a concern for the teaching of HIV/AIDS education in schools because the meaning of the acronym HIV is one of the performance objectives of the FLHE curriculum (NERDC 2003:34).



4.3.1.3 Knowledge of the Methods of Transmission of HIV

Overall, 56.2% of the respondents knew HIV can be transmitted from infected mother to the baby during pregnancy (Table 4.7), a finding slightly lower than the 66% of teachers reported by FME (2006:158).

Table 4.7				
Distribution of Respondents with Knowledge of the Method of Transmission of HIV (n = 356)				
Characteristics		Knew HIV can be transmitted from an infected mother to the baby during pregnancy (%)		
		Yes	No	Don't Know
Gender	Male	58.5	29.3	12.2
	Female	54.2	43.8	2.1
Highest Educ	NCE	59.8	34.6	5.5
	Bachelor	50.0	37.5	12.5
	Masters	16.7	83.3	0.0
	Others	53.8	38.5	7.7
Sector	Urban	53.8	38.6	7.6
	Rural	63.0	32.6	4.3
Overall Total		56.2	37.1	6.7
Using collapsed 2 X 2 table (described in chapter 3) of highest education qualification and knowledge of MTCT of HIV during pregnancy: Pearson's chi-square = 4.831 (df=1); P value =0.028				
Using collapsed 2 X 2 table (described in chapter 3) of location of school of respondents and knowledge of MTCT of HIV during pregnancy: Pearson's chi-square = 2.374 (df=1); P value =0.123				

While 16.7% of teachers with master's degree qualification knew HIV can be transmitted from the mother to the baby during pregnancy, about 50% of teachers with other education qualifications knew about MTCT of HIV during pregnancy. Though respondent with tertiary level of education (teachers in JSS inclusive) have consistently been most knowledgeable of MTCT of HIV in Nigeria (FMOH 2005:50; NPC 2004b:177), the limited availability of HIV/AIDS intervention focusing on teachers (as argued in Chapter 1) might explain the statistical significant relationship (p value =0.028) established between the knowledge of MTCT of HIV during pregnancy and

education qualification of respondent in table 4.7. Further studies are however required to explore the factors associated with the knowledge of MTCT of HIV among teachers with NCE qualification and those with other education qualifications in Abuja, Nigeria.

Similar to the findings in table 4.6 and contrary to the findings in FMOH (2005:50), teachers in rural area (63%) were more aware of the knowledge of MTCT of HIV. However, statistically significant relationship (p value = 0.123) was not established between location of school of the respondents and the knowledge of MTCT of HIV transmission (table 4.7). Though more male (58.5%) teachers compared to female (54.2%) teachers knew of MTCT transmission of HIV, there was no significant statistical relationship between gender and the knowledge of MTCT of HIV among respondents - **Pearson's chi-square = 0.686, (df = 1); P value = 0.407**

4.3.1.4 Knowledge of Misconception about HIV transmission

The knowledge to clarify misconceptions relating to the transmission of HIV is an important issue in the context of HIV/AIDS knowledge and behaviour, and has implications for behaviour change communication strategy. Table 4.8 presents the knowledge to clarify misconception about HIV transmission among respondents.

The 18% of respondents who lacked the knowledge that mosquito bites cannot transmit HIV (Table 4.8) is similar to the national average of 15.5% of teachers who lacked the knowledge to clarify the misconception that mosquito bites transmit HIV (FME 2006:162).

Unlike other findings (FME 2006:161; FMOH 2005:51; NPC (2004b:173-4), the misconception that mosquito bites transmit HIV was more common among male respondents (15.9%) and teachers in urban areas (15.2%) in table 4.8.

Table 4.8				
Distribution of Respondents with Knowledge to Clarify Misconception about HIV Transmission (n = 356)				
Characteristics		Knew HIV cannot be transmitted through mosquito bites (%)		
			Lacked Knowledge	
		Yes	No	Don't Know
Gender	Male	78.0	15.9	6.1
	Female	85.4	9.4	5.2
Highest Educ	NCE	83.5	14.2	2.4
	Bachelor	71.9	9.4	18.8
	Masters	100.0	0.0	0.0
	Others	84.6	7.7	7.7
Sector	Urban	79.5	15.2	5.3
	Rural	89.1	4.3	6.5
Overall Total		82.0	12.4	5.6
Using collapsed 2 X 2 table of sector (location of school) and knowledge to clarify misconception about HIV transmission: Pearson's chi-square = 4.251 (df=1); P value =0.039				
Using collapsed 2 X 2 table (described in chapter 3) of highest education qualification and knowledge to clarify misconception about HIV transmission: Pearson's chi-square = 1.250 (df=1); P value =0.263				

The high proportion of teachers in rural areas who can clarify misconception about HIV transmission is consistent with other findings in this study and might explain the statistical significant relationship (p value = P=0.039) between the knowledge to clarify

misconceptions about HIV transmission and the location of the schools of the respondents.

The fact that the entire teachers had tertiary education as argued earlier in this chapter might explain the absence of statistically significant relationship ($p = 0.263$) between education qualification of respondents and the knowledge to clarify misconceptions about HIV transmission (Table 4.8).

4.3.1.5 Knowledge of Risk Factors for HIV Transmission

The knowledge of the risk factors for HIV transmission among respondents is presented in table 4.9 (below). The knowledge is core in the adoption of protective lifestyle to prevent HIV infection. Overall, 72.5% of the respondents knew a healthy-looking person can be infected with HIV and 81.5% knew STIs increases the risk of HIV infection. Similar findings were reported in FME (2006:160) where 84.2% of teachers in Abuja and 82.8% of teachers nationally knew that a healthy looking person may be infected with HIV.

Table 4.9							
Distribution of Respondents with Knowledge of the Risk Factors for HIV Transmission (n = 356)							
Characteristics		Knew a healthy-looking person can be infected with HIV (%)			Knew STIs increase the risk of HIV infection (%)		
		Yes	No	Don't Know	Yes	No	Don't Know
Gender	Male	65.9	23.2	11.0	79.3	11.0	9.8
	Female	78.1	18.8	3.1	83.3	6.3	10.4
Highest Educ	NCE	74.0	18.9	7.1	88.2	3.9	7.9
	Bachelor	65.6	25.0	9.4	62.5	12.5	25.0
	Masters	50.0	50.0	-	50.0	50.0	-
	Others	84.6	15.4	-	76.9	23.1	-
Sector	Urban	68.9	23.5	7.6	82.6	9.1	8.3
	Rural	82.6	13.0	4.3	78.3	6.5	15.2
Overall Total		72.5	20.8	6.7	81.5	8.4	10.1

The knowledge that a healthy looking person may be infected with HIV was more common among female teachers (78.1%) and teachers in rural areas (82.6%) (Table 4.9) like other findings in this study and contrary to national study by FME in 2006 (FME 2006:160). In the general population, NPC (2004b:173-4) reported that 73.2% of males and 53.4% of females knew a healthy looking person may be infected with HIV.

4.3.1.6 Knowledge of the Methods of HIV Prevention

More teachers across the different background characteristics of gender, educational qualification and location of school knew HIV can be prevented by not sharing sharp objects / piercing instruments than the proportion of teachers that knew the use of condom during sexual intercourse prevent HIV transmission (Table 4.10). This finding is

similar to what was reported in FME (2006:166) where all teachers interviewed from Abuja knew HIV can be prevented by not sharing sharp object and 81.8% knew the use of condom prevent HIV transmission. The knowledge of HIV prevention through condom use during sexual intercourse is very important for the respondents who are mostly active sexually to protect themselves from sexual transmission of HIV.

Unlike other findings in this study but similar to other studies (FME 2006:166; FMOH 2005:52) more male teachers (65.9%) and teachers in urban areas (62.9%) knew the use of condom during all sexual intercourse can prevent the spread of HIV. The statistically significant relationship (p value = 0.025) that was established between the gender of the respondents and the knowledge of the use of condom during sexual intercourse to prevent the spread of HIV (Table 4.10) is consistent with expectation. In addition, low literacy, limited exposure to the media and poor decision making power of women in Nigeria (NPC 2004b:27 and 29) may account for this finding.

Table 4.10							
Distribution of Respondents with Knowledge of the Methods of Preventing HIV (n = 356)							
Characteristics		Knew the use of condom during all sexual intercourse can prevent the spread Of HIV (%)			Knew HIV can be prevented by not sharing sharp objects and piercing instruments (%)		
		Yes	No	Don't Know	Yes	No	Don't Know
Gender	Male	65.9	26.8	7.3	75.6	13.4	11.0
	Female	54.2	38.5	7.3	88.5	9.4	2.1
Highest Educ	NCE	56.7	37.0	6.3	85.0	9.4	5.5
	Bachelor	65.6	25.0	9.4	68.8	18.8	12.5
	Masters	83.3	16.7	-	100.0	-	-
	Others	61.5	23.1	15.4	84.6	15.4	-
Sector	Urban	62.9	32.6	4.5	81.8	10.6	7.6
	Rural	50.0	34.8	15.2	84.8	13.0	2.2
Overall Total		59.6	33.1	7.3	82.6	11.2	6.2
Using collapsed 2 X 2 table of gender and knowledge that the use of condom during all sexual intercourse can prevent the spread of HIV: Pearson's chi-square = 5.015 (df=1); p value = 0.025							

The knowledge of preventing HIV by not sharing sharp object / piercing instruments was more common among female teachers (85.5%), teachers with master's level of qualification (100%) and teachers in rural areas (84.8%). Overall, 82.6% of respondent knew HIV can be prevented by not sharing sharp objects / piercing instruments. Similarly, all the teachers from Abuja and 84.2% of teachers nationally were reported to

know that people can protect themselves from HIV infection by not sharing sharp objects (FME 2006:166).

4.3.2 Procedural Knowledge of HIV/AIDS among Respondents

The knowledge exercised in the performance of some task related to HIV prevention that include condom use and the teaching HIV/AIDS education among respondents were discussed in this sub-section.

4.3.2.1 Knowledge of Condom Use

Knowing how to use condom and using condom during sexual intercourse are major actions necessary for the prevention of sexual transmission of HIV. Table 4.11 presents the distribution of respondents with the knowledge of condom use.

Among the respondents, 52.8% reported they knew how to use condom and 37.6% reported actual usage of condom during sexual intercourse. In line with expectation from the findings in table 4.10 more male respondents (63.4%) than female respondents (43.8%) reported they knew how to use the condom. Similarly, 48.8% of male and 28.1% of female respondents reported they have ever used the condom.

The finding in table 4.11 is similar to the trend among adult population in Nigeria where 46.9% of males and 23.2% of females reported using condom during the last risky sexual intercourse (NPC 2004b:183)

Table 4.11						
Distribution of Respondents with Knowledge of Condom Use (n = 356)						
	Know how to use the condom (%)			Ever used condom (%)		
	Yes	No	No Comment	Yes	No	Not Applicable
Male	63.4	35.4	1.2	48.8	43.9	7.3
Female	43.8	55.2	1.0	28.1	64.6	7.3
Total	52.8	46.1	1.1	37.6	55.1	7.3

4.3.2.2 Discussion of Sexuality and HIV/AIDS Issues with Family Members

Overall, 61.8% of respondents reported they had discussed sexuality and HIV/AIDS issues with their families (spouse / children). All the teachers who were divorced and 78.3% of teachers with 5 or more children also reported they had discussed sexuality and HIV/AIDS issues with their families. The fact that married respondents were likely to have more children might explain the statistical significant relationship (p value = 0.04) that exist between marital status of the respondents and the procedural knowledge of discussing sexuality and HIV/AIDS issues with family members.

Unlike the findings among the general population where 57.6% of males and 36.2% of females reported they had discussed HIV/AIDS issues with their spouses (NPC 2004b:182), 61% of male and 62.5% of female respondents reported they had discussed sexuality and HIV/AIDS issues with their families (Table 4.12).

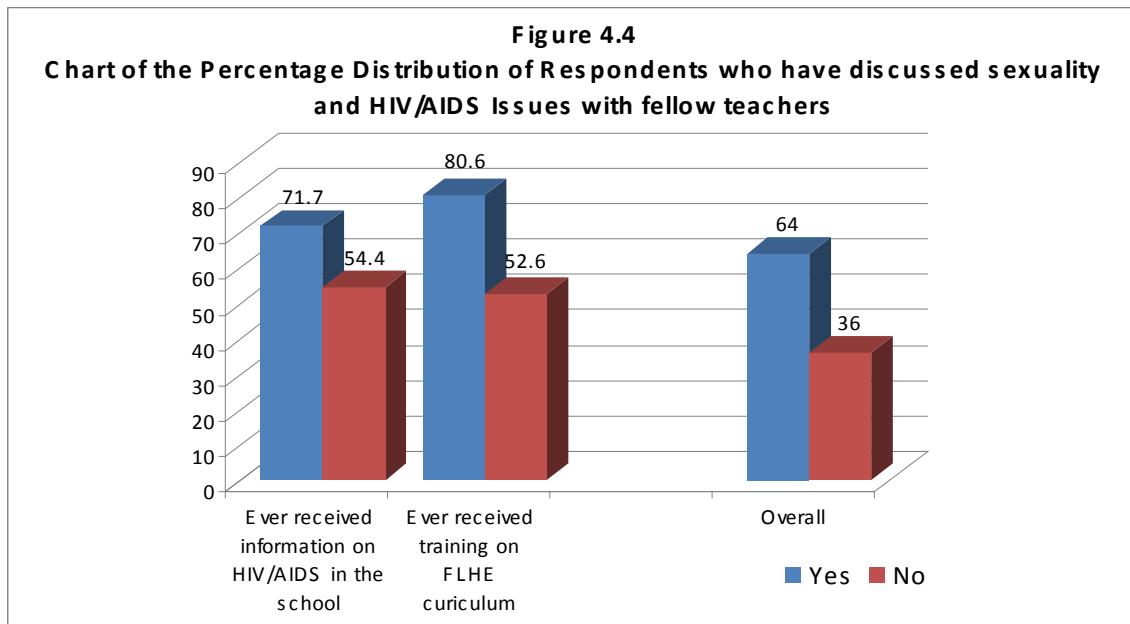
Table 4.12			
Distribution of Respondents who have discussed Sexuality and HIV/AIDS issues with Spouse/Children (n = 356)			
		Discussed sexuality and HIV/AIDS issues with spouse or child (%)	
		Yes	No
Gender	Male	61.0	39.0
	Female	62.5	37.5
Marital status	Married	67.2	32.8
	Single	44.2	55.8
	Divorced	100.0	-
	Widowed	83.3	16.7
Number of children	None	52.5	47.5
	1 – 2	58.8	41.2
	3 – 4	59.0	41.0
	5 or more	78.3	21.7
Overall Total		61.8	38.2
Using collapsed 2 X 2 table (described in chapter 3) of marital status and the procedural knowledge of discussing sexuality and HIV/AIDS issues with family members: Pearson's chi-square = 8.360 (df=1); p value = 0.004			

4.3.2.3 Discussion/Teaching of Sexuality and HIV/AIDS Issues in the School

a. Discussion of Sexuality and HIV/AIDS Issues with fellow teachers

Sixty four percent (64%) of respondents (n = 356) reported they had discussed sexuality and HIV/AIDS issues with fellow teachers in their schools (figure 4.4). Though the finding is lower than the 79.2% of teachers in Abuja who reported that 'teachers in their schools were willing to talk about HIV/AIDS in the workplace' (FME 2006:179), the

finding is consistent with the 51% of teacher who received HIV/AIDS information from fellow teachers (FME 2006:154). This action is a manifestation of the knowledge of implementing workplace programme on HIV/AIDS in the education sector.



Ever received Information on HIV/AIDS: **Chi-square = 10.518 (df=1), P = 0.001**

Ever received training on FLHE: **Chi-square = 24.074 (df=1), P < 0.001**

In line with expectations, 71.7% of teachers (n = 248) who received HIV/AIDS information and 80.6% of teachers (n = 103) trained on FLHE discussed sexuality and HIV/AIDS issues with fellow teachers in their schools (figure 4.4).

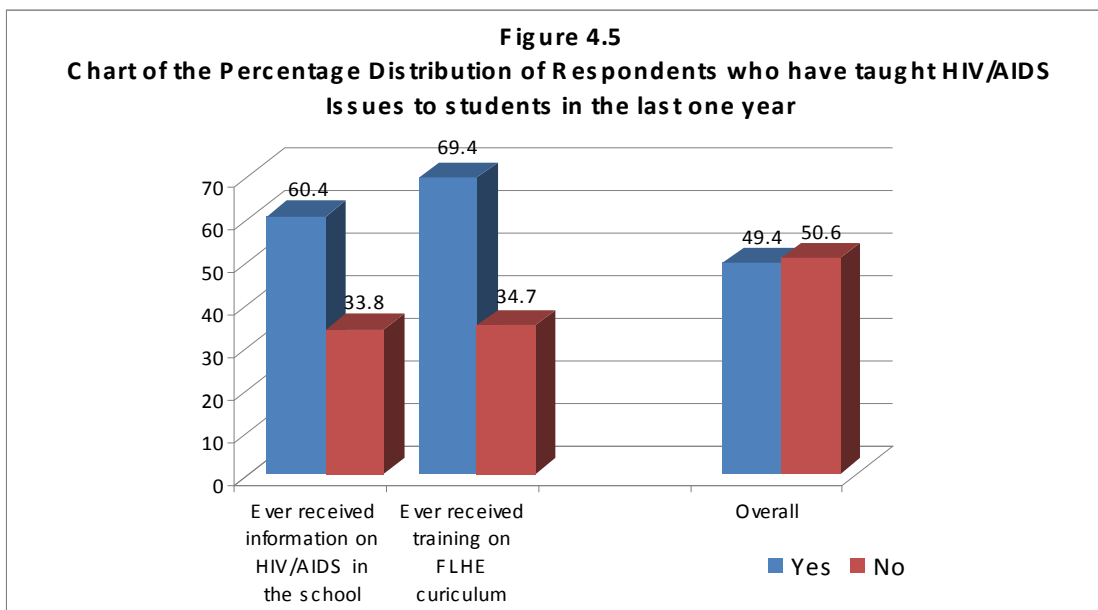
In line with the proposition for the study of HIV/AIDS knowledge in this study, statistically significant relationships were established between the receipt of information

on HIV/AIDS information ($P = 0.001$) or training on FLHE curriculum ($P < 0.001$) and the discussion of HIV/AIDS issues with fellow teachers by respondents.

b. Teaching of HIV/AIDS issues to Students

According to (FME 2006:208), 26.4% of teachers in Abuja reported the teaching of FLHE curriculum in their schools during the 2005 / 2006 academic year. In this study however, more teachers (49.4%) reported they had taught HIV/AIDS issues to students in the last one year (i.e. 2006 / 2007 academic year). In line with expectation, 60.4% of teacher ($n = 248$) who received information on HIV/AIDS and 69.4% of teachers ($n = 103$) who received training on FLHE curriculum reported they had taught HIV/AIDS issues to students in the last one year (Figure 4.5).

Similar to the finding above, statistically significant relationships exist between receipt of HIV/AIDS information ($P < 0.001$) or receipt of training on FLHE ($P < 0.001$) and the teaching of HIV/AIDS issues to students (Figure 4.5).



Ever received Information on HIV/AIDS: **Chi-square = 21.218 (df=1), P < 0.001**

Ever received training on FLHE: **Chi-square = 34.539 (df=1), P < 0.001**

4.3.3 Episodic Knowledge of HIV/AIDS among Respondents

The knowledge of events and associated emotions with HIV/AIDS like contact with someone infected with HIV among the respondents are discussed in this sub-section.

4.3.3.1 Knowledge of the year HIV was first reported in Nigeria

HIV/AIDS was first reported in Nigeria in 1986 (FMOH 2006:1). Overall, 11.2% of the respondents knew that 1981 was not the year HIV was first reported in Nigeria (Table 4.13).

Table 4.13				
Distribution of Respondents that Knew the Year HIV was first Reported in Nigeria By Highest Level of Education (n = 356)				
Characteristics		HIV/AIDS was first reported in Nigeria in 1981 (%)		
		Yes (Wrong)	No (Right)	Don't Know
Highest Educ	NCE	55.1	11.0	33.9
	Bachelor	34.4	18.8	46.9
	Masters	50.0	-	50.0
	Others	38.5	-	61.5
Overall Total		50.0	11.2	38.8

Notably, all the respondents with master's level of qualification and teachers with OND or HND (others) qualifications lacked the knowledge of the time HIV/AIDS was first reported in Nigeria (Table 4.13). This finding is a concern for HIV/AIDS Education in Nigeria. The lack of knowledge of the year HIV was first reported in Nigeria among teachers must be addressed as an important component of HIV/AIDS education in schools.

4.3.3.2 Knowledge of Someone Infected with HIV or who have died of AIDS

About fifty-four percent (53.9%) of the teachers interviewed knew someone infected with HIV and 70.2% reported they knew someone who died of AIDS (Table 4.14).

Table 4.14						
Distribution of Respondents with Knowledge of Someone with HIV or Someone who have Died of AIDS (n = 356)						
	Knew someone who is infected with HIV (%)			Knew someone who have died of AIDS (%)		
	Yes	No	Don't Know	Yes	No	Don't Know
Urban	55.3	37.1	7.6	68.2	26.5	5.3
Rural	50.0	34.8	15.2	76.1	17.4	6.5
Total	53.9	36.5	9.6	70.2	24.2	5.6

Using 2 X 2 table of location of school and episodic knowledge of someone who had died of AIDS **Pearson's chi-square = 2.039 (df=1); p value = 0.153**

Among teachers whose schools were located in urban areas, 55.3% knew of someone infected with HIV and 68.2% knew someone who died of AIDS. Half of the teachers in rural areas knew someone infected with HIV and 76.1% knew someone who died of AIDS (Table 14)

The proportion of teachers who knew someone infected with HIV in this study is similar to the 60.4% of teachers in Abuja who had the same knowledge in FME (2006:180). However, there is a major variation in the reported 70.2% of teachers in this study and 19.3% of teachers in Abuja reported in FME (2006:180) who knew someone who had died of AIDS. Though more teachers (76.1%) in rural areas knew someone who had died of AIDS, there was no statistically significant relationship (p value = 0.153) between the location of the school of the respondent and the episodic knowledge of someone who had died of AIDS.

4.4 HIV/AIDS ATTITUDE AMONG RESPONDENTS

The HIV/AIDS attitude among respondents presented and discussed in this section were guided by the components of attitude discussed under the conceptual framework of this study. Different statements that relate to the affective, behavioural and cognitive components of HIV/AIDS attitude of respondents were discussed to describe the HIV/AIDS attitude of teachers in Abuja, Nigeria.

4.4.1 Affective Component of HIV/AIDS Attitude of Respondents

The feeling and perception of respondents towards PLWHA and the teaching of HIV/AIDS and sexuality education were discussed in this sub-section.

4.4.1.1 Feeling of Respondents towards PLWHA

Two attitude statements were used to explore the feeling of respondents to PLWHA. In response to the statement "*HIV positive people should not be allowed to get married because they can spread the virus to their family*", 33.7% of the respondent strongly agreed to the statement. 19.1% agreed and 15.7% were uncertain. Likewise, 10.1% of the respondents strongly agreed to the statement that "*it is wrong to have a teacher who is HIV positive because you don't know when he / she will die*", 31.5% of the respondent agreed to the statement and 20.8% were uncertain about their feeling (Table 4.14).

Agreement with or uncertainty about the statements above by respondents suggests a feeling of discrimination towards PLWHA with the attendant implication of HIV/AIDS related stigma described under the review of literature. More that 60% of the teachers

expressed feeling of stigma and discrimination towards PLWHA (table 4.15), a finding consistent with the high level HIV/AIDS related stigma and discrimination towards PLWHA in the general population in Nigeria (NPC 2004b:174).

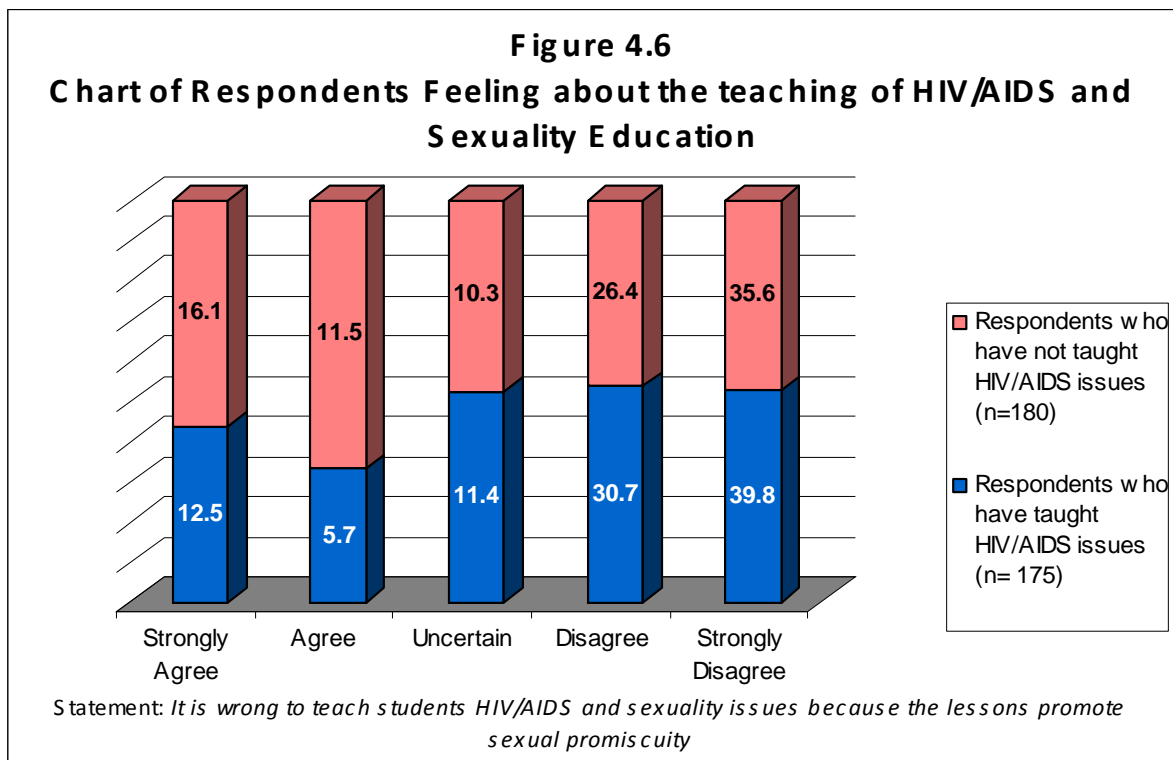
Table 4.15			
Respondents' Feeling towards PLWHA (n = 356)			
Statement: HIV positive people should not be allowed to get married		Statement: It is frustrating to have a teacher who is HIV positive because you don't know when he/she will die	
Opinion	Percentage	Opinion	Percentage
Strongly Agree	33.7	Strongly Agree	10.1
Agree	19.1	Agree	31.5
Uncertain	15.7	Uncertain	20.8
Disagree	19.1	Disagree	21.9
Strongly Disagree	12.4	Strongly Disagree	15.7

4.4.1.2 Feeling of Respondents towards the teaching of HIV/AIDS and Sexuality Education to Students

The feeling of teachers towards the teaching of HIV/AIDS and sexuality issues to students have been argued in the literature review as a major factor for the teaching of HIV/AIDS education in schools. Figure 4.6 presents the attitude of teachers in Abuja to the teaching of HIV/AIDS and sexuality education to students.

It is important to note that 12.5% of teachers who had taught HIV/AIDS issues to students strongly agreed, to the statement “*it is wrong to teach students HIV/AIDS and*

sexuality issues because the lessons promote sexual promiscuity”, 5.7% of the respondents agreed and 11.4% were uncertain. Among teachers who had not taught HIV/AIDS issues to students, 16.1% strongly agreed, 11.5% agreed and 10.3% were uncertain about the statement. (Figure 4.6).



Using collapsed 2 X 3 table of the teaching of HIV/AIDS education and respondent's feeling that HIV/AIDS education promotes sexual promiscuity: **Pearson's chi-square = 4.392 (df=2); p value = 0.111**

Agreement with or uncertainty about the statement above by respondents suggests a feeling of discrimination towards HIV/AIDS issue. Overall, the feeling of discrimination towards HIV/AIDS issues was less among teachers which have taught HIV/AIDS issues

(30%) than teachers who had not taught HIV/AIDS issues (38%). These feeling may relate to the outcome belief of teachers reported by Peltzer (2003:354) in South Africa, that HIV/AIDS education encourages early experimentation with risky behaviour (sexual intercourse) by students. However, there is no statistical significant relationship (p value = 0.111) between the teachings of HIV/AIDS issues to students and the feeling that HIV/AIDS education promotes sexual promiscuity (Figure 4.6). The fact that majority (71%) of the teachers had not received training on FLHE (Table 4.5) and about half of the teachers (figure 4.5) have not taught HIV/AIDS issues in schools might explain this finding. Further studies are however required to explore factors that influence the feeling of teachers to PLWHA and HIV/AIDS issues in Abuja, Nigeria.

4.4.2 Behavioural Component of HIV/AIDS Attitude of Respondents

The respondents' intention to perform or not to perform some actions related to HIV/AIDS and or PLWHA are discussed in this sub-section.

4.4.2.1 Respondents' Intention to take HIV Test

In response to the statement "*I will voluntarily take the HIV test*", 5.1% and 10.7% of the respondents strongly disagreed and disagreed respectively. About sixteen percent (16.3%) of the teachers were uncertain (Table 4.16). Respondents who were uncertain or were at the different levels of disagreement were more unlikely to take the test.

Findings in this report suggest that 68% of respondents were willing to take the HIV test (table 4.16) contrary to the 30.2% of teachers in Abuja who reported they had voluntarily taken the HIV test in 2006 (FME 2006:197).

Table 4.16	
Respondents' Intention to take HIV Test (n = 356)	
Statement: I will voluntarily take the HIV test	
Intention	Percentage
Strongly Agree	34.3
Agree	33.7
Uncertain	16.3
Disagree	10.7
Strongly Disagree	5.1

4.4.2.2 Respondents' Intention to Disclose HIV Status

Two attitude statements were used to explore the behaviour intention of respondents to disclose HIV status. Any level of disagreement to or uncertainty about the statement is an indication of the lack of behaviour intention to disclose HIV status by the respondents. Overall, about 33% of the respondents were willing to disclose their HIV status to fellow teachers or family members (Table 4.17).

The high level of HIV/AIDS related stigma and discrimination among teachers in Abuja, Nigeria (table 4.15) and in the general population in Nigeria (NPC 2004b:174) might account for this high proportion of respondents who lacked the behaviour intention to disclose their HIV status. This finding is also consistent with the 9.4% of the teacher

who had ever taken the HIV test and were willingness to share their HIV test result with colleagues in 2006 (FME 2006:200).

Table 4.17			
Respondents' Intention to Disclose HIV Status (n = 356)			
Statement: If my HIV status was positive, I will disclose my HIV status to fellow teachers		Statement: If my HIV status was positive, I will disclose my HIV status to my family members	
Opinion	Percentage	Opinion	Percentage
Strongly Agree	14.6	Strongly Agree	18.5
Agree	18.0	Agree	15.2
Uncertain	29.8	Uncertain	24.2
Disagree	18.0	Disagree	23.0
Strongly Disagree	19.1	Strongly Disagree	19.1

4.4.3 Cognitive Component of HIV/AIDS Attitude of Respondents

The thoughts, belief and ideas about PLWHA among the respondents were discussed below.

4.4.3.1 Respondents' belief about Teachers Infected with HIV

Twenty-four percent (23.6%) of the respondents strongly agreed and 30.3% agreed that it was a good idea to share office space with an HIV positive teacher. Eleven percent (11.2%) of the respondents strongly disagreed to the idea, 11.2% disagreed and 12.9% were uncertain about the idea (Table 4.18). The 53.9% of teachers who were in varying levels of agreement with the idea were likely to have positive HIV/AIDS attitude. This finding is consistent with the 69.9% of teachers in Abuja who reported their willingness

to share office working tools with a fellow teacher who is HIV positive in FME (2006:182).

Table 4.18			
Respondents' Belief about Teachers Infected with HIV (n = 356)			
Statement: It is a good idea to share office space with an HIV positive teacher		Statement: HIV positive teachers are promiscuous	
Opinion	Percentage	Opinion	Percentage
Strongly Agree	23.6	Strongly Agree	11.8
Agree	30.3	Agree	20.2
Uncertain	12.9	Uncertain	32.0
Disagree	11.2	Disagree	24.2
Strongly Disagree	21.9	Strongly Disagree	11.8

The 32% of teachers who are in various levels of agreement with the statement “HIV positive teachers are promiscuous” (table 4.18) is similar to the 35.4% of teachers in Nigeria who held the opinion that teachers infected with HIV were promiscuous (FME 2006:177).

4.4.3.2 Respondents’ belief about People Infected with HIV

According to FME (2006:177) teachers in Nigeria perceived PLWHA to be disappointing (51.2%) and immoral (50.8%) (FME 2006:177). In this study, two attitude statements on the belief about PLWHA were used to explore the cognitive components of HIV/AIDS attitudes of respondents, and any level of agreement or uncertainty to the statement indicate negative attitudes towards PLWHA by respondents. About 53% of the

respondents had the thought that “*People with HIV are disappointing*” and 54.5% believed “*HIV is the punishment for immorality*”. The high level of HIV/AIDS related stigma and discrimination earlier discussed in this chapter may account for this finding.

Table 4.19			
Respondents' Belief about People Infected with HIV (n = 356)			
Statement: People with HIV are disappointing		Statement: HIV is the punishment for immorality	
Opinion	Percentage	Opinion	Percentage
Strongly Agree	12.4	Strongly Agree	21.9
Agree	25.3	Agree	19.7
Uncertain	15.7	Uncertain	12.9
Disagree	29.2	Disagree	27.5
Strongly Disagree	17.4	Strongly Disagree	18.0

4.5 CONCLUSION

HIV/AIDS knowledge and attitude of teachers in Abuja who participated in this study were discussed in this chapter. The discussion revealed that the different components of HIV/AIDS knowledge and attitude among teachers in Abuja varied with the different background characteristics of the respondents. Specifically, most teachers in Abuja lacked the knowledge of the meaning of the acronym HIV; and misconception about HIV transmission among teachers persists. The low proportion of teachers who have received training in FLHE curriculum remains a major threat to the impacting of HIV/AIDS knowledge to students. In addition, HIV/AIDS related stigma and discrimination still persist among respondents.

Based on the findings of the study, conclusions were made on the HIV/AIDS knowledge and attitude among teachers in Abuja, Nigeria in the next chapter. Thereafter, the limitations of the study were outlined and recommendations made to improve HIV/AIDS knowledge and attitude among teachers in Nigeria.

CHAPTER 5

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In this chapter, the conclusions from the study of HIV/AIDS knowledge and attitude among teachers in Abuja, Nigeria, the limitation to the study and the recommendations derived from the study are discussed. Thence, the chapter is in three sections.

Section one discussed the conclusions made on the HIV/AIDS knowledge and attitude among teachers in Abuja, Nigeria in line with the research questions. The limitations to the application of the findings of the study were discussed in section two of this chapter. Recommendations based on the findings of the study were presented and discussed in the last section of this chapter.

5.2 CONCLUSIONS ON HIV/AIDS KNOWLEDGE AND ATTITUDE AMONG TEACHERS

HIV/AIDS Knowledge and attitude among teachers interviewed in this study were described in the last chapter (chapter 4). Guided by the research questions and objectives, as well as the conceptual framework for this study, conclusions on HIV/AIDS knowledge and attitude among JSS teachers in Abuja, Nigeria were made below.

5.2.1 HIV/AIDS Knowledge among teachers in Abuja, Nigeria

Teachers in JSS in Abuja, Nigeria across different background characteristics of age, marital status, educational level and location of school received HIV/AIDS information from different sources that included information session and training on FLHE in their schools (table 4.5). The information received from these sources, and other sources such as the mass media, public campaign, peers (fellow teachers) and health facilities (FME 2006:154) were the basis upon which HIV/AIDS knowledge of the teachers was formed.

This study indicated that the majority of the teachers in Abuja, Nigeria knew the pathogenesis of HIV to AIDS. They also knew the routes of HIV transmission, the risk factors for HIV infection and the methods of HIV prevention; and the teachers were able to clarify misconceptions about HIV transmission. Contrary to expectation, female teachers and teachers located in rural areas were more likely to demonstrate conceptual knowledge of HIV than their male counterparts and teachers located in urban areas. However, male teachers and teachers located in urban areas were more aware that HIV can be prevented by the use of condom during sexual intercourse. Similar to the findings in FME (2006:155), the lack of the knowledge to correctly state the meaning of the acronym HIV by majority of the teachers remains a major challenge.

In line with expectation, this study established relationships between the location of the school of the respondents and the knowledge of the pathogenesis of HIV to AIDS (p value = 0.027); as well as the between the location of the school of the respondents and

the knowledge to clarify misconception about HIV transmission (p value 0.039). However, the emergence of more teachers in rural areas with conceptual knowledge of HIV/AIDS compared to their colleagues in urban areas in this study requires further understanding. In addition to the explanations in chapter 4, the contact of more respondents (76.1%) in rural areas with someone who have died of AIDS (table 4.14) that serves as the justification for HIV/AIDS knowledge may contribute to the emerging trend. More so, the higher proportion of teacher in rural areas (46%) when compared to those in urban areas (44%) who were aware of FLHE curriculum in Nigeria (FME 2006:208) might also provide additional explanation for the findings of this study.

As discussed in chapter 4, low literacy rate, limited exposure to the media and poor decision making power among women in Nigeria (NPC 2004b:27 and 29) have been proffered as explanations for the established relationship (p value = 0.025) between gender and the conceptual knowledge that using condom during sexual intercourse prevent the spread of HIV. Findings in this study also established a relationship between gender and the knowledge of the pathogenesis of HIV to AIDS (p value = 0.032). Aside the high proportion of female teachers that demonstrated conceptual knowledge of HIV/AIDS, there is a need to explore other factors that favour female teachers in the acquisition of HIV/AIDS knowledge.

This study established different types of relationships between the education qualifications of the respondents and different attributes of conceptual knowledge of HIV. While no relationship (p value = 0.251) between education qualification of

respondents and the knowledge that HIV destroy the defense system of the body was established in this study, statistically significant relationship (p value =0.028) was however established between education qualification of teachers and knowledge of MTCT of HIV during pregnancy. Further researches have been recommended to explore the relationship between education qualification of teachers and the conceptual knowledge of HIV/AIDS.

Varied level of procedural knowledge of HIV/AIDS was reported among teachers in this study. Findings in the study revealed paucity in the knowledge of how to use condom among the teachers in Abuja, Nigeria. Consistent with the trend in the general population (NPC 2004b:183), more male teachers than their female colleagues (table 4.11) demonstrated the knowledge of using condom during sexual intercourse to prevent HIV infection.

Generally, the teachers, when compared to the general adult population in Nigeria (NPC 2004b:182), were more likely to discuss sexuality and HIV/AIDS issues with their family members. This study also established that married teachers (p value = 0.04) were more likely to discuss sexuality and HIV/AIDS issued with their family, and the proportion of teachers with procedural knowledge of discussing HIV/AIDS issues with family members increases with increasing number of children (table 4.12). The study also reported an increase in the proportion of teachers who have taught HIV/AIDS issues to students from 26.4% in the 2005/2006 academic year (FME 2006:208) to 49.4% in the 2006/2007 academic years (figure 4.5) in Abuja, Nigeria.

In line with the proposition for this study, statistical significant relationships (Figure 4.4 and Figure 4.5) was established between the receipt of HIV/AIDS information or training on FLHE curriculum and the procedural knowledge of discussing / teaching sexuality and HIV/AIDS issues in the school.

Episodic knowledge of HIV/AIDS also varied among teachers in Abuja, Nigeria. Majority of the teachers lacked the knowledge of the year HIV was first reported in Nigeria (table 4.13). This study reported that more teachers (70.2%) knew of someone who had died of AIDS than the 53.9% of teachers that knew someone infected with HIV (Table 4.14). While noting that more teachers (76.1%) in rural areas knew someone who had died of AIDS, findings in this study indicated there was no relationship (p value = 0.153) between the location of school of the respondents and the episodic knowledge of HIV/AIDS.

5.2.2 HIV/AIDS Attitude among teachers in Abuja, Nigeria

HIV/AIDS related stigma and discrimination manifested in the affective, behavioural and cognitive components of HIV/AIDS attitude among teachers in JSS in Abuja, Nigeria.

This study reported that more than 60% of the teachers expressed feeling of stigma and discrimination towards PLWHA (Table 4.15), a finding consistent with the high level HIV/AIDS related stigma and discrimination towards PLWHA in the general population in Nigeria (NPC 2004b:174). The teachers held the feeling that PLWHA (including

teachers infected with HIV) should be denied some fundamental human right both in the workplace and in the community.

Discrimination towards HIV/AIDS issues was manifested in the feeling that the teaching of HIV/AIDS and sexuality education could promote sexual promiscuity among students by the teachers. Although findings in this study suggest the feeling of discrimination towards HIV/AIDS issues was less among teachers which have taught HIV/AIDS issues (30%) than among teachers who had not taught HIV/AIDS issues (38%), statistical significant relationship (p value = 0.111) was however not established between the teachings of HIV/AIDS issues to students and the feeling that HIV/AIDS education promotes sexual promiscuity (Figure 4.6).

HIV/AIDS related stigma and discrimination among the general population in Nigeria (NPC 2004b:174) also manifested in the behaviour intentions of teachers to take HIV test and disclose their HIV status. In this study, 32% of the teachers did not have the intention to take the HIV test and 67% lacked the intention to disclose their HIV test result. These findings are consistent with the 9.4% of the teacher who had ever taken the HIV test and were willingness to share their HIV test result with colleagues in 2006 (FME 2006:200).

Another concern is the persisting HIV/AIDS related stigma and discrimination manifesting in the thought and beliefs of the respondents. About half of the teachers in this study do not agree with the idea of sharing office space with infected colleague.

Similar proportion of teachers held the thought that PLWHA were immoral and promiscuous, and believed HIV is the punishment for immorality.

5.3 LIMITATIONS OF THE STUDY OF HIV/AIDS KNOWLEDGE AND ATTITUDE AMONG TEACHERS

The study was conducted among JSS teachers in schools listed in the database of the FME, and teachers in schools not listed in the database were excluded. This limits the generalization of the findings of the study to all JSS teachers in Abuja. However, the comprehensive nature of the database of the FME as well as the large sample size strengthens the application of the findings of this study to all JSS teachers in Abuja.

The descriptive nature of the research design also limits the ability of this study to establish causal relationship between HIV/AIDS knowledge and attitude with background characteristics of respondents in this study. Findings in this study however, indicate statistically significant relationship between HIV/AIDS knowledge and educational level; and receipt of information / training on HIV/AIDS and geographic location of the schools of the respondents. Other findings indicated that the teaching of HIV/AIDS education do not influence HIV/AIDS attitude among teachers in Abuja, Nigeria. Further studies are however required to establish the causal relationships (if any) between these variables.

5.4 RECOMMENDATION ON HIV/AIDS KNOWLEDGE AND ATTITUDE AMONG TEACHERS

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

5.4.1 Recommendation to Improve Teacher Education on HIV/AIDS Prevention Education in Nigeria

- The low coverage of teachers trained on the FLHE curriculum remains a concern. Guided by the relationship between the receipt of information or teacher training on FLHE curriculum and HIV/AIDS knowledge of teachers, the development and implementation of a costed teacher development plan on HIV/AIDS education is recommended to the FME. The plan will detail time-bound milestones to expand coverage of teachers trained on FLHE curriculum both in pre-service and in-service teacher development programs in Nigeria.
- 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 issues of HIV/AIDS related stigma and discrimination are adequately addressed. The revised training content should also clarify

misconception about HIV transmission and emphasis the meaning of the acronyms HIV and AIDS.

- Due to the varied level of procedural knowledge of HIV/AIDS reported among the teacher, the methodology for teacher training on HIV/AIDS prevention education in Nigeria should be made participatory with strong component on hands-on exercise. This will allow for the assessment of the teacher not only on the areas of content (conceptual knowledge), but also on the ability to transfer HIV/AIDS knowledge (procedural knowledge) to students.
- Where possible, people living with HIV/AIDS should be engaged in the training of teachers on HIV/AIDS prevention education in Nigeria to improve episodic knowledge of HIV/AIDS among teachers as well as reduce the prejudice of teachers towards PLWHA. Thus, addressing issues of HIV/AIDS related stigma and discrimination.
- A workplace policy on condom use among teachers is recommended with special attention on condom education for female teachers. The policy will assure mechanism for information provision on condom as well as address concerns on condom use. It will also guarantee the supply of condoms to teachers in Nigeria. This strategy is important in view of the need to protect the present (teacher) and future (student) human resource capacity of Nigeria.

5.4.2 Recommended Further Studies

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

- A comparative study of the HIV/AIDS knowledge among teachers with different educational qualifications. The study will seek to establish the causal relationship between HIV/AIDS knowledge and the educational qualification of teachers in Abuja, Nigeria.
- Participatory Action Research on the factors that affect HIV/AIDS attitude among teachers in Abuja, Nigeria. The research will generate qualitative information about the key determinants of HIV/AIDS related stigma and discrimination among teachers as well as empower teachers on how to improve their HIV/AIDS attitude.
- Evaluations of the implementation of FLHE curriculum among teachers in Abuja, Nigeria is recommended to determining factors impeding coverage, as well as explores the status of implementation of the curriculum in school.

5.5 CONCLUSION

Findings of the study were used to draw key conclusions about HIV/AIDS knowledge and attitude among teachers in Abuja, Nigeria. The limitations of the study were discussed above.

Recommendations that included improvement in training content and approach, as well as policy issues to improve teacher education on HIV/AIDS prevention education and access to commodities among teachers in Abuja, Nigeria were made. In addition, further studies to improve understanding of the factors that contribute to the HIV/AIDS knowledge of teacher in Abuja, Nigeria were recommended.

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Annexure A: Instrument

STUDY OF HIV/AIDS KNOWLEDGE AND ATTITUDE AMONG TEACHERS IN ABUJA, NIGERIA

A. INTRODUCTION

HIV/AIDS remains a major development problem in Nigeria. In order to manage the problem, we need to improve the quality of information teachers possess on the epidemic. By completing this questionnaire, you will be contributing to the body of knowledge available to improve teacher education on HIV/AIDS in Nigeria.

This questionnaire is part of a survey being conducted in partial fulfilment of the award of Masters of Public Health (MPH) by the University of South Africa (UNISA), Pretoria South Africa.

- Information collected with this questionnaire will be treated as confidential and your answers will NEVER be associated with your name, as you are NOT required to provide your name in the tool.
- Giving honest information will help with the understanding of HIV/AIDS knowledge and attitude among teachers in Abuja, and assist to make appropriate recommendations to the relevant government agencies / parastatals.

B. INSTRUCTIONS

1. The questionnaire consists of 3 sections and each section has a number of questions with multiple choice answers.
2. Please answer all the questions as completely as you can, **BY TICKING** ✓ the boxes **OR** **BY CIRCLING** (2) the response codes that correspond to your chosen response.

Thanks you very much for your cooperation.

IDENTIFICATION:

QIN

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AREA COUNCIL: _____	<table border="1" style="margin: auto;"> <tr><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td></tr> <tr><td style="width: 20px; height: 20px;"></td></tr> </table>			
SUB-AREA: _____				
SECTOR: (URBAN = 1 RURAL = 2) _____				

SECTION 1: BACKGROUND INFORMATION

Q/No	Questions	Response Option	Code	Leave Blank
1.1.1	What is your Gender?	Male ----- Female -----	1 2	[]
1.1.2	Which of these age range best describe your age as at the last birthday?	20 – 24 years ----- 25 – 29 years ----- 30 – 34 years ----- 35 – 39 years ----- 40 – 44 years ----- 45 years and older -----	1 2 3 4 5 6	[]
1.1.3	What is your highest educational level?	National Certificate in Education (NCE) ----- Bachelor's Degree ----- Masters Degree ----- Others, please ----- - specify _____	1 2 3 8	[]
1.1.4	Please indicate your current marital status?	Married ----- Single ----- Divorced ----- Widow / Widower -----	1 2 3 4	[]
1.1.5	How many children do you have?	None ----- 1 – 2 Children ----- 3 – 4 Children ----- 5 children or more -----	1 2 3 4	[]

SECTION 2: HIV/AIDS KNOWLEDGE

Q/No	Questions	Response Option	Code	Leave Blank
2.1.1	Is HIV different from AIDS?	Yes ----- No ----- Don't Know -----	1 2 9	[]
2.1.2	HIV is the acronym for Human Immune Virus?	Yes ----- No ----- Don't Know -----	1 2 9	[]
2.1.3	HIV destroys the defence system of the body?	Yes ----- No ----- Don't Know -----	1 2 9	[]
2.1.4	Can HIV be transmitted from an infected mother to the baby during pregnancy?	Yes ----- No ----- Don't Know -----	1 2 9	[]
2.1.5	Can HIV be transmitted through mosquito bites?	Yes ----- No ----- Don't Know -----	1 2 9	[]
2.1.6	Do Sexually Transmitted Infections increase the risk of getting HIV?	Yes ----- No ----- Don't Know -----	1 2 9	[]
2.1.7	Can a healthy-looking person be infected with HIV?	Yes ----- No ----- Don't Know -----	1 2 9	[]
2.1.8	Can the use of condom during all sex prevent the spread of HIV?	Yes ----- No ----- Don't Know -----	1 2 9	[]
2.1.9	HIV can be prevented by not sharing sharp objects and piercing instruments?	Yes ----- No ----- Don't Know -----	1 2 9	[]

Q/No	Questions	Response Option	Code	Leave Blank
2.2.1	HIV/AIDS was first reported in Nigeria in 1981?	Yes ----- No ----- Don't Know -----	1 2 9	[]
2.2.2	What is the situation of HIV/AIDS in Abuja compared to other states in Nigeria?	Better ----- Worse off ----- About the same -----	1 2 9	[]
2.2.4	Do you know anyone who is infected with HIV?	Yes ----- No ----- Don't Know -----	1 2 9	[]
2.2.5	Do you know of someone who has died of AIDS?	Yes ----- No ----- Don't Know -----	1 2 9	[]

Q/No	Questions	Response Option	Code	Leave Blank
2.3.1	Have you receive information on HIV/AIDS from any training programme in the school?	Yes ----- No -----	1 2	[]
2.3.2	Have you receive any training on Family Life and HIV/AIDS Education Curriculum?	Yes ----- No -----	1 2	[]

Q/No	Questions	Response Option	Code	Leave Blank
2.4.1	Do you know how to use the condom?	Yes ----- No -----	1 2	[]
2.4.2	Have you ever used the condom?	Yes ----- No ----- Not Applicable	1 2 9	[]
2.4.3	Do you know where to go for help if you have sexually transmitted infection?	Yes ----- No ----- Don't Know -----	1 2 9	[]
2.4.4	Have you discussed sexuality and HIV/AIDS issues with fellow teachers in your school?	Yes ----- No -----	1 2	[]
2.4.5	Have you discussed sexuality and HIV/AIDS issues with your spouse or children?	Yes ----- No -----	1 2	[]
2.4.6	In the last one year, have you taught HIV/AIDS issues to your students	Yes ----- No -----	1 2	[]

SECTION 3: HIV/AIDS ATTITUDE

Please evaluate each statement by using the following keys:

- 1 = SA (Strongly agree)
- 2 = AG (Agree)
- 3 = UC (Uncertain)
- 4 = DA (Disagree)
- 5 = SD (Strongly disagree)

Q/No	STATEMENT	Evaluation Code					Leave Blank
3.1.1	It is a good idea to share office space with an HIV positive teacher	1	2	3	4	5	[]
3.1.2	I believe HIV positive teachers are promiscuous	1	2	3	4	5	[]
3.1.3	I am of the opinion that people living with HIV are disappointing	1	2	3	4	5	[]
3.1.4	In my opinion, HIV is the punishment for immorality	1	2	3	4	5	[]

Q/No	STATEMENT	Evaluation Code					Leave Blank
3.2.1	HIV positive people should not be allowed to get married because they can spread the virus to their family	1	2	3	4	5	[]
3.2.2	When a family member test positive to HIV, the status should be kept a secret so as not to bring shame to the family name	1	2	3	4	5	[]
3.2.3	It is frustrating to have a teacher who is HIV positive because you do not know when he / she will die	1	2	3	4	5	[]
3.2.4	It is dangerous to take an HIV test because a positive HIV test result is like a death sentence	1	2	3	4	5	[]
3.2.5	It is wrong to teach students HIV/AIDS and sexuality issues because the lessons promotes sexual promiscuity	1	2	3	4	5	[]

Q/No	STATEMENT	Evaluation Code					Leave Blank
3.3.1	I will voluntarily take the HIV test	1	2	3	4	5	[]
3.3.2	If my HIV status was positive, I will disclose my HIV status to fellow teachers in this school	1	2	3	4	5	[]
3.3.3	I will discuss HIV/AIDS and sexuality issues with my family	1	2	3	4	5	[]
3.3.4	If my HIV status was positive, I will disclose my HIV status to my family members	1	2	3	4	5	[]

Thank You for Completing the Questionnaire

Annexure B: Permission Letter from Federal Ministry of Education

FEDERAL MINISTRY OF EDUCATION

SCHOOL SUPPORT SERVICE DIVISION
BASIC AND SECONDARY EDUCATION DEPARTMENT

When replying, please quote earlier reference

146
P. M. B. No.
Telegrams... **SECEDUCATE**
Telephone.....



Ref. No.
25th October, 2007
Date.....

The Head teacher,

**RE: Administration of Questionnaire on the Study of HIV/AIDS
Knowledge and Attitudes Among Teachers in Abuja**

The bearer has secured the permission of the Federal Ministry of Education to administer a questionnaire on the Study of HIV/AIDS Knowledge and Attitudes among Teachers in Abuja. Kindly provide all necessary assistance as may be required.

Accept the assurance of our highest regard.

Mrs. Z.U. Momodu

Asst. Director,
HIV/AIDS Education