

LIST OF ABBREVIATIONS

AHI	Action Health Incorporated
AIDS	Acquired Immune Deficiency Syndrome
CDC	Centre for Disease Control and Prevention
FMOH	Federal Ministry of Health
HEAP	HIV/AIDS Emergency Action Plan
HIV	Human Immunodeficiency Virus
IEC	Information by means of Education and Communication
JAAIDS	Journalist Against AIDS
LACA	Local Government Action Committee on AIDS
NACA	National Action Committee on AIDS
NERDC	Nigerian Educational Research and Development Council
NGO	Non-Governmental Organization
NGOs	Non-Governmental Organizations
NPC	National Planning Committee Organization
PCP	Pneumocystis Carinni Pneumonia
SACA	State Government Action Committee on AIDS
SSS	Senior Secondary School
STDs	Sexually Transmitted Diseases
STIs	Sexually Transmitted Diseases
UNAIDS	Joint United Nations Programme on AIDS
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural
UNICEF	United Nations Children Education Funds
WHO	World health Organization
YARN	Youth Action Rangers of Nigeria

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CHAPTER ONE

INTRODUCTORY ORIENTATION

1.1 INTRODUCTION

The HIV/AIDS (Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome) epidemic has become a major challenge for modern society. A report published in 2007 estimated that 33.2 million people worldwide are living with HIV/AIDS (UNAIDS/WHO 2007:3). This report claimed that HIV/AIDS has been the cause of the death of more than 2.9 million persons. In the report HIV/AIDS is described as the biggest social, health, developmental and security issue facing the world. It would seem as if this problem does not respect either country, border, culture, race, language, colour, sex or age (Bozkaya 1994; Cetin 1993b, in: Savaser 2003:71).

The HIV/AIDS epidemic appears to be of particular concern in many developing countries, as these countries account for 95% of the worldwide burden (UNAIDS 2005:10). A UNAIDS (2008:1) report stated that an estimated 1.9 million people were newly infected with HIV in sub-Saharan Africa in 2007 alone, bringing the number of persons living with HIV to 22 million. This report indicates that approximately sixty seven percent (67%) of the global total of persons with HIV live in sub-Saharan Africa, and seventy five percent (75%) of all AIDS-related deaths in 2007 occurred in this region.

In 2002 the National Intelligence Council predicted that the five countries expected to experience the heaviest burden of HIV infections would be India, China, Nigeria, Ethiopia and Russia. According to the Council's predictions, Nigeria and Ethiopia would be hardest hit by HIV/AIDS, with the number of

persons living with HIV/AIDS in Nigeria projected to be between ten to fifteen million by 2010. Without effective prevention on a large scale, Nigeria was seen as experiencing not only the tragedy of countless lives forever altered by the virus, but also untold adverse social and economic effects (Adeyi, Kanki, Odutolu, & Idoko 2006:7).

1.2 PROBLEM ANALYSIS

1.2.1 Realisation of the problem

Several routes of the transmission of HIV have been identified, namely, by means of sexual intercourse, the use of contaminated hypodermic needles, by means of blood and blood products, and by the transmission of the virus from infected mothers to their unborn babies (Kalichman 1995:100). However, in Africa the prevalent AIDS scourge seems to be transmitted primarily through sexual relations (Howlett, Watoky, Mmuni, & Missalek 1989:12). Of the cases reported in Nigeria, sexual contact accounted for approximately 84% of all infections, mother-to-child transmissions for about 14%, while the remaining 2% were reported to be as a result of blood transfusions (Report by the Federal Ministry of Health 2002:9).

An estimated 60% of the new infections reported in Nigeria were from young people aged between 13 to 25 (UNAIDS Report, 2005b:1-2). The statistics of a survey on adolescent behaviour indicated that it was their sexual practices that contributed to their being a high risk group in terms of being infected by HIV/AIDS and other sexually transmitted infections (Hoppe, Wells, Wilsdon, Gillmore & Morrison 1994:117-126). Adolescents seem to be engaging in high risk sexual behaviour, often without protecting themselves against the consequences of such behaviour. If they had the knowledge of sexually

transmitted diseases, of the prevention of unwanted pregnancies, and of sexually transmitted diseases, it did not seem that this knowledge led to risk-reducing behaviour (Barnfather 1999:1).

The fact that adolescents are a high risk group is also indicated in the Avert Report (2007:1). According to this report, HIV/AIDS seriously affects adolescents throughout the world, with one third of all currently infected individuals being young people between the ages of 15 to 24, with half of the new infections occurring in persons of the same age group. It is estimated that more than five young people are infected by the HI-virus every minute, over 7,000 each day, and more than 2.6 million each year (UNAIDS/WHO 2006:1).

The available statistics indicate that the number of adolescents and young adults infected with HIV/AIDS is rapidly increasing worldwide (Walter, Vaughan, Gladis, Ragin, Kasen & Cohall 1992:528; NACA 2003:12; FMOH, 2005:1; Umeh & Ejike 2004:339). The State of the World Population Report (2003:1) states that HIV/AIDS has become a disease of young people aged between 15 to 24 years, thus accounting for half of some 5 million new cases of HIV infections. In most of the developing countries the highest percentage of the new infections was young women (Hoppe *et al.* 1994:117-126; Asuquo, Ekuri, Asuquo, & Bassey 2004:64). Likewise, in Nigeria it was noted that the majority of sexually transmitted infections, including HIV, was reported as being with females (Slap, Lot, Huang, Daniyam, Zink & Succop 2003:1).

A combined research project by UNICEF/UNAIDS/WHO (2003:1) that looked at the number of young people between the ages of 15 and 24 who were living with HIV/AIDS by the end of December 2001, showed that sub-Saharan Africa has the highest number of recorded HIV/AIDS cases. A summary of their findings is given in Table 1.

Table 1.1: Young people living with HIV/AIDS in December 2001

Region	Young women %	Young men %	Total
Sub-Saharan Africa	67	33	8,600,000
North Africa and the Middle East	41	59	160,000
East Asia and the Pacific	49	51	740,000
South Asia	62	38	1,100,000
Central Asia and Eastern Europe	35	65	430,000
Latin America and the Caribbean	31	69	560,000
Industrialized Countries	33	67	240,000
The World	62	38	11,800,000

Source: UNICEF/UNAIDS/WHO 2003:1

According to Table 1, an estimated 11,800,000 young persons between the ages of 15 and 24 (at the end of 2001) were living with HIV/AIDS. An estimated 8,600,000 cases were reported from sub-Saharan Africa. Seventy two percent of the reported cases in the world, at the end of 2001, were to be found in sub-Saharan Africa. According to Table 1, there were more young women than young men living with HIV in sub-Saharan Africa, namely 67%, compared to 33% men. The overall percentages for young women and young men worldwide are 62 and 38, respectively (UNICEF, UNAIDS & WHO 2003:1).

It does seem that the spreading of HIV has come under control in the Western and developed nations. The developing countries, especially Africa, are still battling with the acceptance of the gross reality of the pandemic. This may be the reason why the then UN Secretary-general, Kofi Annan, made the following statement to the Africa Summit on HIV/AIDS in Nigeria “The incidence of HIV/AIDS, tuberculosis and other infectious diseases is higher on this continent than any other” (Umeh & Ejike 2004:339). The AIDS threat is gradually becoming a matter of concern for the developing nations, as is illustrated in Table 1.

Young people are at the centre of the HIV/AIDS pandemic (UNICEF 2002:7). The extent and rate of the reported infections among adolescents and young people are factors that will endanger the future of any nation. The disease is causing untold physical, psychological and emotional suffering. It is eliminating the 25 to 35 year olds, the most productive members of any society (Coetzee 2005:2). With an estimated 60% of new infections in Nigeria occurring in youths between the ages of 13 to 25 (UNAIDS Report, 2005b:1-2), it is imperative to address adolescent sexual behaviour. A change in their sexual practices is needed to decrease their susceptibility to HIV/AIDS infections. It is possible that they may have the wrong perceptions and attitudes concerning the devastating effects and prevention methods of the illness. These perceptions and attitudes will have to be changed in order to change their sexual practices, ultimately leading to HIV/AIDS risk reduction (Hein & Futterman 1995:96).

1.2.2 Exploration of the problem

The first case of HIV in Nigeria was in 1985, and was reported in 1986 (FMOH 1989:10). The Federal Government had since responded to the HIV/AIDS scourge by instituting various Bodies and Committees at the different levels of governance. Examples of such Bodies are the National Action Committee on

AIDS (NACA), the State Action Committee on AIDS (SACA) and the Local Action Committee on AIDS (LACA). These Bodies, through funding from the Federal Government of Nigeria and international donors, have been involved in conducting periodic sentinel surveys, carrying out research, and conducting workshops, seminars and conferences, and creating HIV/AIDS awareness by means of the mass media. Non-governmental organisations and faith-based organizations have also complemented the efforts of the Federal Government by developing appropriate measures through enlightenment exercises to reduce the debilitating effect of the epidemic. The success of these initiatives in creating an awareness of the HIV/AIDS threat, which will ultimately lead to a change in the sexual practices of Nigerian adolescents and the entire populace, remains unknown.

The growing concern about HIV/AIDS in Nigeria has led to numerous research projects that seek to establish the extent of the problem in the country. According to a survey on adolescence conducted by a Nigerian-based Non-governmental Organization, Action Health Incorporated (AHI), it is reported that young people between the ages of 15 and 24 account for the majority of unwanted pregnancies, complications from unsafe abortions, and sexually transmitted diseases in Nigeria (AHI 2008:1). This Report further stated that the situation is worse in the northern parts of the country where young people are forced to marry at younger ages, and have minimal access to HIV/AIDS information and modern family planning methods (AHI 2008:3).

Avert (2004:1) made a comparison of the HIV/AIDS rates in the different sub-Saharan countries, and ranked Nigeria, with an estimate of 3.5 million known cases, as the country with the second highest rate, and the fourth highest globally, in terms of the absolute number of cases. This report further stated that approximately 95% of all AIDS orphans in the world live in sub-Saharan Africa.

Ever since the first cases of HIV/AIDS were reported in Nigeria it appears that the incidence rate has continued to increase. This state of affairs was confirmed when the Nigerian Government requested that the Federal Ministry of Health carry out a sentinel HIV/Syphilis sero-prevalence survey bi-annually. The increase in the incidence rate of HIV/AIDS was confirmed during the series of sentinel surveys conducted. For example, the HIV prevalence has risen from 1.8% in 1988 to 5.8% in 2005 (FMOH, 2006:1; NRR 2001-2004:1; JAAIDS, 2006:8). The prevalence rates of HIV/AIDS among adolescents have continued to rise, as can be seen in figure 1.

Figure 1.1: HIV prevalence rates according to age in 2005

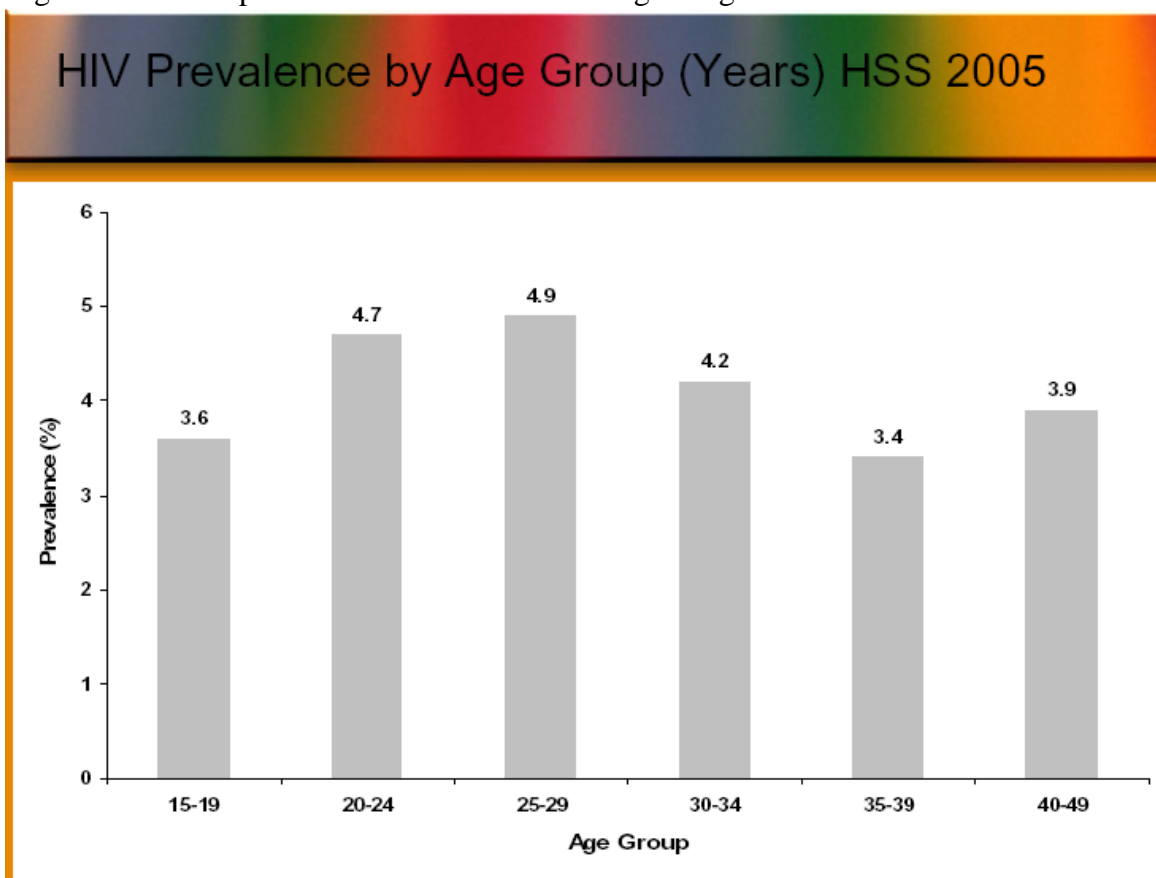


Figure 1: (Adapted from JAAIDS 2006:11)

According to a report by one of the NGO's in Nigeria, young people between the ages of 15 and 19 have a HIV/AIDS incidence rate of 3.6, those between the ages of 20 and 24 a rate of 4.7%, while young people between the ages of 25 to 30 has the highest incidence rate of 4.9% (JAAIDS 2005:10). The UNAIDS Report supports this rise in the incidence rate of HIV/AIDS among young people in Nigeria, where it stated that young people between the ages of 20 and 24 have the highest incidence rate of 5.6%, when compared with other age groups (UNAIDS 2005:25). This was further buttressed in another study conducted by UNAIDS and WHO in 2005, which stated that an estimated 220,000 deaths had occurred as a result of AIDS, and 930,000 orphans who had lost their parents because of HIV/AIDS, were living in Nigeria (UNAIDS/WHO 2006:25). The Report further indicated that there has been an alarming increase in the number of HIV positive children in recent years, and it noted that approximately 90% of the children who are infected with HIV may have contracted the virus from their mothers, who probably are adolescents (UNAIDS/WHO 2006 Report:38).

Nigerians probably do not fully realise the extent of the problem. Many of them believe that HIV is a disease of the prostitutes, and that it must have been 'imported' into the country by an 'elite group' who had sexual contact with prostitutes during their sojourn abroad. Since HIV/AIDS presents with features such as an excessive loss of weight, many other people have wrongly attributed HIV/AIDS to malnutrition. This notion is supported by the findings of Mafeni and Fajemisin (2003:6) who stated that many Nigerians do not take the early warning signs of the disease seriously. This may be the reason why the problem has continued to escalate.

From the various available statistics it does seem that HIV/AIDS has become a general epidemic in Nigeria, and current evidence suggests that the epidemic is

yet increasing. For example, the findings from a sentinel survey carried out in 2004 suggests that in Nigeria all the geo-political zones are now affected, and the prevalence gap between the urban and rural areas of the community has narrowed significantly, as is illustrated in figure 2 (FMOH 2004a:11-12; NACA 2004:1; JAAIDS 2006:15-20).

Figure 1.2: HIV prevalence by geo-political zone

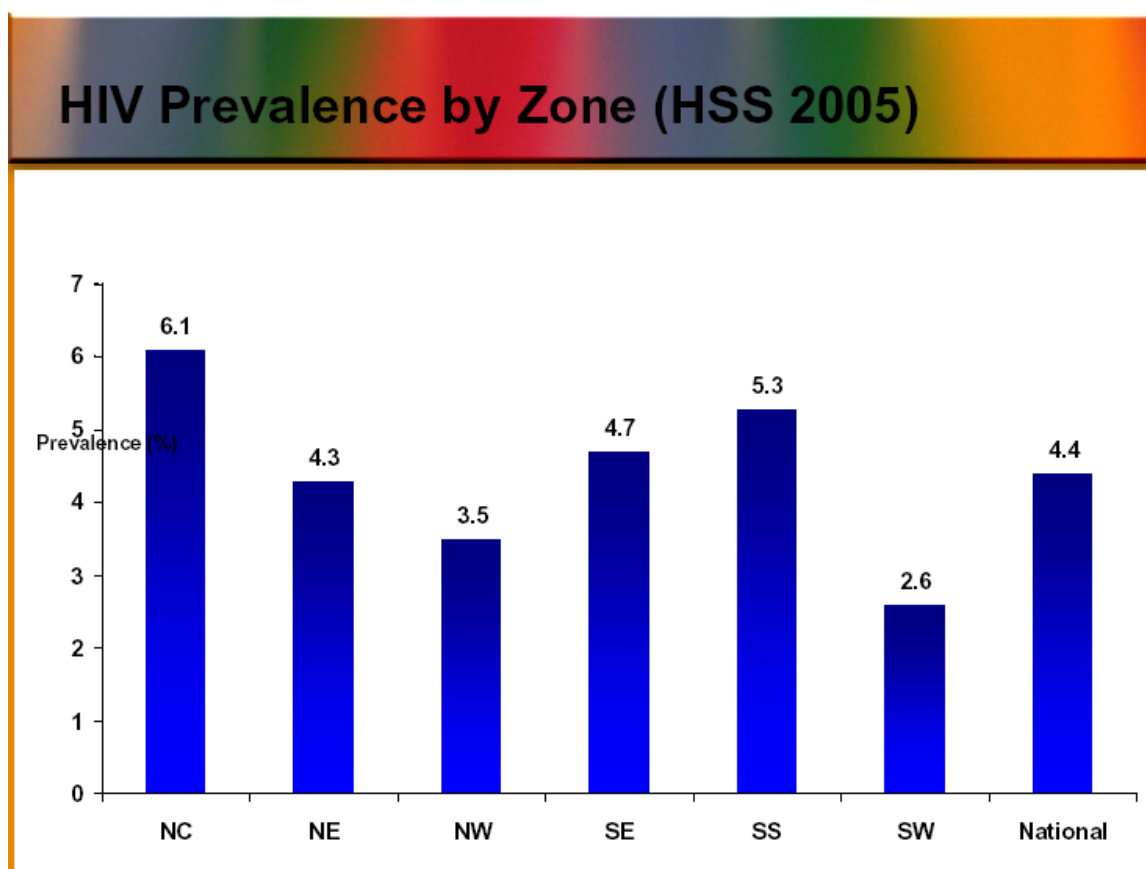


Figure 2 (Adapted from JAAIDS 2006:10)

The Federal Government of Nigeria is trying to reduce the incidence rate of this infection. However, it does seem that, given the current scale of the prevalence of HIV/AIDS, the Government only has a limited capacity to respond to this problem. This has placed the Government in a devastating situation, as it may

not likely want to use all its available resources to combat the HIV/AIDS scourge. In a bid to counteract the problem the Federal Government has instituted several policies, as well as a Committee, to monitor the trend of the disease especially among adolescents. The Nigerian Education Research and Development Council (NERDC) was instituted by the Federal Government to monitor the trend of the disease in the education sector. This has led to the development and the incorporation of HIV/AIDS education and sexuality education into the national school curriculum. This move is intended to help young people with the acquisition of adequate knowledge and skills, and the responsible attitudes, to prevent and reduce sexually transmitted infections (STIs), including HIV/AIDS. (Nigeria National HIV/AIDS Response Review 2001-2004:3; Ohiri-Anichie & Odukoya 2004:10).

Furthermore, NACA, a national committee on HIV/AIDS, stated in their Report that the Federal Government of Nigeria was giving priority to the health of adolescents. The same Report indicated that the Government was, in particular, considering the health situation of the Nigerian adolescent students, and especially, the age of their first sexual intercourse (NACA 2005:3). These decisions may have led to various projections by researchers, noting that the future is very bleak for the adolescents if the problem of HIV/AIDS is not addressed urgently. One of these predictions came from Kanki (2006:7), who stated that HIV may have infected as many as 10 to 15 million Nigerians by 2010. If this projection were to become a reality, the infection is going to have very adverse effects on the economy of the country.

All over the world health workers and researchers have agreed that prevention is a major avenue towards curbing the pandemic. In fact, until a reliable cure is found, prevention remains the most effective weapon against AIDS (Batchelor 1984:1277). Prevention is achieved mainly through education and the

enlightenment of the nation on the adverse consequences of AIDS. In Nigeria the task of the enlightenment of the people has been embraced by the government agencies and non-governmental organizations.

From the preceding discussion it does seem that the adolescents are yet to change their sexual behaviour, in spite of all that has been done by the Government and non-governmental organizations (Jagha 2002:1). For example, the researcher has been involved in conducting enlightenment programmes on HIV/AIDS in schools in and around Nigeria. It would appear that many of the adolescents, who were addressed through these programmes, although having heard about HIV/AIDS, were not aware of the seriousness of the threat. During a session at one such group, the Tip Top secondary school, Ajah, in March 2007, it became evident that the students had heard about HIV/AIDS, but were ignorant of the threat the disease may have, and they were not aware of the various options of preventive methods open to them.

1.3 PROBLEM STATEMENT

The high incidence of HIV/AIDS recorded among Nigerian adolescents suggests that they are not heeding the Government's endeavours to encourage the practice of safe sex. It would seem that in spite of the Government's efforts to combat HIV/AIDS, these efforts have had little impact on the sexual behaviour and practices of the adolescents. Therefore, in spite of all the ongoing efforts to combat HIV/AIDS, Nigerian adolescents still remain a high risk group likely to be infected with HIV/AIDS.

This leads one to ask "Why is it that Nigerian adolescents remain a high-risk group in spite of all the governmental and non-governmental initiatives to combat

HIV/AIDS? Are there underlying factors that contribute toward Nigerian adolescents being a high risk group for contracting HIV/AIDS? If so, what are these factors?

This above-stated problem can be analysed as follows:

- What factors are at play in contributing toward the vulnerability of the Nigerian adolescents being a high risk group?
- Is there something about the adolescents that contributes to their being a high risk group?
- Could it be that the adolescent developmental process predisposes them to risky sexual behaviour?
- What is the sexual behaviour of Nigerian adolescent students?
- If sexually active, do Nigerian adolescent students practise safe sex?
- What are the attitudes of Nigerian adolescent students to the prevention methods that have been suggested to combat HIV/AIDS?
- How do Nigerian adolescent students perceive HIV/AIDS?
- Is it possible to change their perceptions, should it be found that they have the wrong perceptions of HIV/AIDS?
- If so, what is needed to change the perceptions of Nigerian adolescent students concerning HIV/AIDS?

1.4 RESEARCH AIMS

The aims of the study are:

- To ascertain what makes adolescents vulnerable to being a high risk group.

- To find out if the normal developmental process of adolescents predisposes them to unsafe sexual behaviour.
- To determine the sexual behaviour of Nigerian adolescent students.
- To discover if sexually active Nigerian adolescent students practise safe sex.
- To ascertain the Nigerian adolescent students' attitudes toward the prevention methods which have been suggested for practicing safe sex.
- To investigate if the efforts of the Government to inform the population about HIV/AIDS have yielded positive results toward responsible sexual practices among adolescent students.
- To ascertain Nigerian adolescent students' perceptions of HIV/AIDS.
- To determine how the perceptions of Nigerian adolescent students can be influenced.
- To find out what is needed to change the perceptions of the Nigerian adolescent students to HIV/AIDS.
- To discover the attitudes of Nigerian adolescent students to prevention methods.
- What is needed to change their attitudes toward prevention methods, should they have negative attitudes toward practising safe sex?

This study is aimed at discovering the prevalent factors that contribute to Nigerian adolescents being a high risk group. Factors that will be investigated are, vulnerability, adolescence as a predisposition to risky sexual behaviour, and adolescents' perceptions of HIV/AIDS, and their attitudes to prevention methods. This research option was borne out of the conviction that assessing people's knowledge, attitudes, beliefs and practices (KAPB) relating to sexuality and AIDS, is a good starting point for a prevention programme.

1.5 RESEARCH QUESTIONS

- What are the effects of the adolescent developmental process on the sexual behaviour of adolescent students in Nigeria?
- What is the effect of the Government's efforts on adolescent students' sexual behaviour?
- What are the effects of peer group pressure and the mass media on Nigerian adolescent students' sexual behaviour?
- What is the effect of the students' overall perception of HIV/AIDS on their sexual behaviour?
- What are the attitudes of Nigerian adolescent students to prevention methods?
- What is the relationship between the adolescent students' attitude to prevention methods and their sexual behaviour?
- What are the gender differences of adolescent students to prevention methods?

1.6 RESEARCH METHODS

The research will consist of a literature study and an empirical investigation.

1.6.1 Literature study

The factors that could cause a group to be vulnerable as a high risk group will be looked at. This will include examining adolescent development with a view to understanding which factors predispose them to be a high risk group.

A literature study regarding perceptions will be conducted to understand what influence them. The factors will be considered with a view to understanding their likely influence on adolescents' perceptions of HIV/AIDS. This could be a basis for understanding what factors need to be addressed should it be found that

Nigerian adolescents need to change their perceptions concerning HIV/AIDS. Their attitudes and how they are likely to influence the use of prevention methods, will also be looked at. If the Nigerian adolescents indicate negative attitudes towards methods suggested preventing HIV/AIDS, this should also be considered.

1.6.2 Empirical study

A quantitative study was done to investigate the Nigerian adolescent students' perceptions of HIV/AIDS and their attitudes toward prevention methods. This involved the development of a questionnaire that was completed by the students. The variable of sexual activity was also incorporated into the questionnaire.

1.7 SIGNIFICANCE OF THE STUDY

The results from the study may lead to significant and practical implications for intervention strategies. The results are expected to give an insight into the potential risks of HIV/AIDS infections faced by the students, and will provide data on their current sexual behaviour and on the aspects that influence them to indulge in risky behaviours. Such information could be incorporated into the school curricula and teacher education programmes.

In addition, the intent of the study is to try and understand adolescent students' perceptions and attitudes concerning HIV/AIDS, and their behaviour within the context of peer group and mass media-related influences in Nigeria. The research could therefore provide useful information in developing relevant media campaigns and HIV/AIDS education campaigns in schools, thereby strengthening the present HIV/AIDS prevention initiatives.

1.8 EXPLANATION OF THE CONCEPTS

A brief definition of some of the concepts that are used is given to indicate their meaning within the context they are used in this study.

1.8.1 Adolescence

'Adolescence' is a developmental stage during which three transformations occur: the disengagement from parental ties that have been internalised since infancy; the sexual impulse - discovering the object of love under the primary genital and orgasmic organizations; and the identification for readjustment and the affirmation of identity and subjectivity. These transformations begin with the onset of puberty, and are concluded when infantile sexual activity has reached its final form. Adolescence is, therefore, a completion of the process of ego maturation. It is characterised by the conflicts that these transformations bring about, and also, the ensuing crisis resulting from the wish for adult sexual activity and the fear of giving up infantile pleasures (Hauser & Smith 1991:139).

1.8.2 HIV

'HIV' is an acronym for the Human Immuno Deficiency Virus. This is a chronic viral infection that can occur independently of other sexually transmitted diseases through sexual contact. The virus of this infection may enter through an ulcer or a lesion, in the presence of other forms of sexually transmitted infections, or through unscreened blood, semen, or blood products like plasma, by means of vaginal secretions, and breast milk. Sexual intercourse is responsible for more than 80% of all HIV transmissions in Nigeria (FMOH 2002:9). The HI-virus can also be transferred through the sharing of needles, mother to child transmissions, or blood transfusions (NACA 2004:1).

The virus can be detected by means of a blood test. The presence of the virus in an individual may not cause immediate illness because evidence of infection with the virus may also be found in healthy people. These persons are referred to as HIV-positive individuals. Although the introduction of anti-retroviral drugs is supposed to control the infection, it seems that most people who are HIV-positive will eventually develop full-blown AIDS (American Lung Association 2004:5). This statement is supported by the findings of an international organization working on HIV/AIDS where it stated that the virus acts by gradually weakening the immune system in such a way that the body may not be able to resist infections. The diseased person continues to suffer from other microbes as a result of the reduction in the body's defenses (UNAIDS & WHO 2004:2).

1.8.3 AIDS

'AIDS' is an acronym for 'acquired immune deficiency syndrome'. AIDS is caused by the HI-virus. It is a disease that destroys the body's natural immune system, leaving victims with no defense against diseases (Kane, Blake, Miller, Frye & Whittington 1987:403). The diagnosis of AIDS depends on blood test results of infected individuals and evidence of a pattern of symptoms indicating the presence of some disease. HIV/AIDS may develop over a number of years.

The hallmarks of AIDS are a T-cell count less than 400 cell/mm³, where a normal T-cell count is approximately 1,600 cell/mm³. Usually patients who die from full-blown AIDS have succumbed to an opportunistic disease. This is the case because their immune system has been suppressed by the presence of the virus in their blood stream. People who are immune-suppressed do not have the normal resistance to diseases and are therefore more susceptible to infections. Examples of opportunistic infections include PCP (Pneumocystis Carinni Pneumonia) and Kaposi's sarcoma, HIV encephalopathy and HIV wasting syndrome (American Lung Association 2002:1-4). The death of these individuals

occurs not from AIDS itself but rather from the opportunistic diseases (Kalichman 1995:10; Laudau-Stanton & Clements 1993:21).

1.8.4 Attitude

The Wikipedia (2008:1) describes 'attitude' as a hypothetical construct that represents an individual's degree of like or dislike for an item. Attitudes are generally positive or negative views of a person, place, thing or events. People can also be in conflict or ambivalent towards an object, meaning that they simultaneously possess both positive and negative attitudes towards the item in question (Wikipedia 2008:1). For the purpose of this study, 'attitude' can be described as the positive or negative predisposition to HIV/AIDS prevention methods.

1.8.5 Perception

A 'perception' can be defined as "...a process of gathering information through our senses, organizing and making use of it" (Oladele 1989:101). A perception is the representation of what is perceived and the basic component in the formation of a concept. It can be seen as a way of conceiving things. 'Perception' is the ability to see, hear or understand things (Oxford Advanced learners Dictionary 2000:859). For the purpose of this research the researcher focused on how adolescent students perceived or feel about HIV/AIDS.

1.8.6 Prevention methods

'Prevention methods' are the various methods that can be used to prevent one, in this case, from contracting HIV. The various prevention methods include the use of condoms, being faithful to one's sexual partner and abstaining from casual sex. These methods are being presented to the adolescents by means of HIV/AIDS information and education via the mass media, and in schools. For the

purpose of this research the researcher focused on abstinence and the use of condoms as preventive methods.

1.9 DEMARCATION OF THE STUDY

The research will be open to the adolescent student population group in Nigeria, from whom three hundred students will be selected from the Lagos state area. It will be expected from the participants to respond to a questionnaire in order to ascertain their perceptions and attitudes.

1.10 THE PROGRAMME

The researcher intends to investigate the perceptions of the students to HIV/AIDS and their attitudes to prevention methods.

An outline of the research programme is given below.

Chapter one: Introductory orientation

In the introductory orientation the following is presented: the background to the research, an analysis of the problem, the research questions, the aims of the study, the research methods to be used, the significance of the study and an explanation of the concepts used in the investigation.

Chapter two: The factors that contribute toward the Nigerian adolescent students' vulnerability, and initiatives to address this vulnerability

This chapter will explore the factors contributing to the adolescents' vulnerability of being a high-risk group. This will include looking at the extent to which the development of the adolescents contributes toward their vulnerability. The adolescents' risk-taking behaviour will also be considered. The approaches by the Government, non-governmental organizations and educational authorities in addressing the crisis will be looked at. In this chapter the actual HIV/AIDS situation in Nigeria will be scrutinised with the view of discovering the progress that has been made in stemming the tide of HIV/AIDS infections.

Chapter three: Underlying perceptions and attitudes that influence sexual behaviour

A literature study on 'perception' and 'attitude' will be done. This will include looking at the variables that influence them. Peer group pressure and the mass media will be included in the study, in an effort to try to understand what could influence perceptions and attitudes. The reports and results of the surveys will be reported on to see if this could give some idea of the adolescents' perceptions and attitudes toward HIV/AIDS, and of the use of condoms as a prevention method. Literature will also be consulted on how to influence behaviour by changing perceptions and attitudes. In this respect, behavioural theories will be considered.

Chapter four: The research design

The research design implemented in this study will be described according to the research problem, the aim of the investigation, the research paradigm, the

research methods and tools (the questionnaire), the selection of the samples, and the processing of the results.

Chapter five: Findings from the empirical investigation

The results and a discussion of the empirical investigation are provided in relation to the background, the findings from the different sections of the questionnaire (questions relating to the overall perception of HIV/AIDS, to sexual behaviour, to prevention against the spreading of HIV/AIDS, and questions relating to condom use), followed by an integration of the results.

Chapter six: Conclusions of the research

This chapter includes the findings emanating from the literature review, and the empirical investigation, as well as recommendations, a conclusion of the investigation, the contribution of the study, the limitations, and matters requiring further research.

CHAPTER TWO

THE FACTORS THAT CONTRIBUTE TOWARD THE NIGERIAN ADOLESCENT STUDENTS' VULNERABILITY, AND INITIATIVES TO ADDRESS THIS VULNERABILITY

2.1 INTRODUCTION

The need for an adequate response to and the proper management of HIV/AIDS are very important to any country's wellbeing. This notion is reflected in a document by the World Bank (2000:1) stating that HIV/AIDS may wipe out the development gains of a generation if it is not attended to urgently. The Report further states that countries with a high prevalence of HIV/AIDS cannot expect to gain any development momentum until the epidemic is brought under control. Similarly, the UNDP(United Nations Development Programme) agrees and reports that the epidemiology of HIV/AIDS will affect businesses, food supplies, and livelihoods, as well as the availability of various cadres of professionals, thereby bringing about a precipitous decline in productivity and savings (UNDP 2000:12). HIV/AIDS has therefore been linked to having a direct effect on the economic growth of countries that have a high prevalence of HIV/AIDS.

In this chapter the researcher will report on factors that contribute towards Nigerian adolescents' vulnerability that could result in their being a high risk group. The factors that will be discussed are those that are of particular relevance for the Nigerian adolescent. They are the following:

- cultural factors;
- socio-economic factors; and
- adolescent development and risk-taking behaviors.

The initiatives to address the vulnerability of the adolescents 'at risk' will be examined. Lastly, the HIV/AIDS situation that exists in Nigeria will be reported on. This will be done to gain an understanding of the success of the initiatives in having changed some of the perceptions concerning HIV/AIDS, and to see if these initiatives have led to positive attitudes toward using condoms as a method of preventing infection. Preventive methods to bring the crisis under control are vital because, as have been pointed out in the UNDP Report, this is crucial if the country is to gain any development momentum (UNDP 2004:12).

2.2 CONTRIBUTORY FACTORS TO VULNERABILITY

2.2.1 Definition of 'vulnerability'

Because of its dynamic nature, 'vulnerability' can be considered to be those features of a society, social or economic institution, or the processes that affect the likelihood that, in the case of HIV/AIDS, the excess morbidity and mortality that are associated with the disease, will have a negative impact (Barnett & Whiteside 2002:1). When viewed as a concept, 'vulnerability' points to a set of factors of which the interaction increases or reduces the chances for a person to get infected by HIV. In this perspective, individual behaviour of higher or higher risk exposure, is considered in relation to a greater set of determining factors, which must be taken into account for the planning of prevention intervention (Sanchez & Selig 2004:1).

2.2.2 Cultural factors

In the context of HIV/AIDS, it is argued by UNAIDS (2002a:1) that 'vulnerability' means having little or no control over one's risk of acquiring HIV infection or, for

those already infected with or affected by HIV, having little or no access to appropriate care and support. In this regard, from a Nigerian perspective, with the emphasis on the dominant adult male, namely, that women, children, adolescents and young children are considered more vulnerable to HIV/AIDS than older men (Onwuliri & Jolayemi 2007:310).

With regard to socio-cultural norms, women in Nigeria are relegated to a lower social status, thus limiting their access to education, information, employment, training, resources, and to the freedom of making choices about their own sexuality. Studies done by Onwuliri & Jolayemi (2007:311) reported that young women are particularly constrained by the prevalent norms that allow them only a minimal opportunity to negotiate for consensual sex. This lack of control over their own sexuality heightens their risk of HIV infection.

It would seem as if gender roles and relations have a significant influence on the course of the impact of the HIV/AIDS epidemic throughout the world, but this is especially significant in the Nigerian culture. UNAIDS & WHO (2004:11) reports that women are particularly vulnerable because of the inter-relationships between the complex biological, cultural and socio-economic factors. With regard to this report, the gender imbalance of infections appears to be the greatest with African young women, as those between the ages of 15 to 24 are at least three times more likely to be infected than young men.

The cultural paradigm in Nigeria encourages promiscuity such as polygamy, and in many areas does not denounce violence toward women. In addition, premarital relationships are often presented as morally correct, and the cultural convictions prevent young girls from negotiating sex. In certain parts of the country it is also considered a sign of hospitality to let a visiting male friend sleep with your

spouse. These practices that often result in having multiple sex partners, increase their vulnerability of being at risk of contracting HIV/AIDS infections.

The cultural paradigm indicates that another contributing cause of Nigerians' vulnerability is the fear of discrimination. The HIV-related stigma and discrimination remains an enormous barrier to effectively fighting the HIV/AIDS epidemic (JAAIDS 2002:21). Fear of discrimination may prevent persons from seeking treatment for HIV/AIDS, or from admitting their HIV status publicly. Those with or suspected of having HIV may be turned away from healthcare services and employment, may be refused admission to schools, and entry into foreign countries. In some cases they may even be evicted from their homes by their family, or be rejected by friends and colleagues. The stigma attached to HIV/AIDS can extend into the next generation, placing an emotional burden on those left behind. This fear of discrimination often leads to the denial of one's HIV/AIDS status.

Denial thus goes hand in hand with discrimination, with many people continuing to deny that HIV/AIDS exists in their community. Today, with HIV/AIDS threatening the welfare and well-being of people in Nigeria, combating the stigma and discrimination against people who are infected by HIV/AIDS, is as important as developing medical cures for preventing and controlling the global epidemic (UNAIDS 2003:12).

This culture of discrimination and denial of HIV/AIDS has become a serious problem in respect of under-reporting in Nigeria. According to Nasidi and Harry (in Adeyi et al 2006:32), the following reasons may contribute to the under-reporting of the incidence of HIV/AIDS in Nigeria:

- the stigma of AIDS may discourage people living with HIV/AIDS from seeking medical care;
- health-care workers may not want to record the diagnosis of AIDS because of the stigma attached to the disease;
- some persons who have been infected may die of other diseases before they are diagnosed with AIDS;
- rural hospitals and district health-care clinics may not have the facilities to test for HIV, or may not be able to recognise the disease;
- most private clinics and laboratories do not report their AIDS statistics; and
- because of misdiagnosis, and thus attributing HIV diseases to other ailments.

According to Oyelese (2004:125), the AIDS epidemic continues to rise in Nigeria because HIV/AIDS-infected individuals continue to suffer stigmatization and discrimination. He further (2004:126) stated that discrimination and stigmatization against HIV-infected people is a major constraint in the management and control of HIV/AIDS in Nigeria. During the celebration of the World AIDS day in 2002 in Nigeria Pat Matemola, an HIV carrier and a co-ordinator of the Network of People living with HIV/AIDS in Nigeria, remarked (FMOH 2002:12) that the rapid spreading of HIV/AIDS in Nigeria is a result of the stigmatization and discrimination against people who tested positive to HIV. He further stated in Lagos that this has discouraged Nigerians to go for voluntary testing to know their HIV status.

2.2.3 Socio-economic factors

According to Madise, Zulu & Ciera (2007:85), poverty is an important driving factor for unsafe sexual practices, leading to a rise in sexually transmitted

diseases and HIV/AIDS. Madise *et al.* (2007:85) further stated that because the flow of the exchange of gifts in Africa is predominantly from males to females, poorer females and wealthier males exhibit a higher risk in sexual behaviour. According to Onwuliri & Jolayemi (2007:313), the poor economic backgrounds of some women increase their vulnerability, as poor people are prone to transactional sex, and more likely to become involved in or to be coerced into unprotected intercourse.

The socio-economic situation of the parents is likely to affect their children's sexual behaviour, because children will observe the sexual behaviours that the parents adopt under economic constraints (Rwenge 1995:216). Abega, Tamba, Balla, Metomo, Angah and Nama (1995:4) indicate that due to difficult living conditions, some parents encourage their children to engage in lucrative sexual activities. In some African towns, and this is also the case in Nigeria, living conditions have become so hard that parents are unable to take proper care of their children, especially of adolescents. Therefore young people engage in practices that can be a source of income, but these are often sexual endeavours, since they are seen as an easy way of making money. Girls are being harassed, and boys become delinquents or members of organized gangs (Meekers 1995:164).

Lau and Muula (2004:410), Smith (2004:235), and Owolabi, Onayade, Ogunlola, Ogunniyi and Kuti (2005:176) have all, through their respective researches, indicated that the factors that have contributed to the spreading of HIV/AIDS in Nigeria, and indeed, also in other parts of Africa, include poverty, a poor health status, a low literacy level, a high number of young people, and an inadequate knowledge about the disease. Madise *et al.* (2007:84) also continued to illustrate that poor African nations often lack the resources to provide preventive and curative services, thus increasing their nations' susceptibility to HIV infection.

Furthermore, Madise *et al.* (2007:84) related poverty at an individual level to illiteracy, gender inequality, and a failure to negotiate sex. According to a survey on high risk adolescent groups, Ntozi, Mulindwa, Ahimbisibwe, Ayiga and Odwee (2001:213) named peer pressure, an increased sexual urge and poverty as the factors increasing adolescents' susceptibility to the disease. This situation led to UNICEF (2006:2) reporting that HIV/AIDS is a long way from being brought under control, and the efforts will have to be doubled to rescue the situation, with young people, especially young women, still representing the group most affected.

2.2.4 Adolescent development and risk-taking behaviour

2.2.4.1 'Adolescence' defined

In the past certain cultural groups did not make allowance for this period today known as adolescence. Marriage, irrespective of age was seen as the crossing from childhood to adulthood. According to Koteskey's investigation, for 3 000 years the minimum legal age for marriage was 12 for girls and 14 for boys in the Jewish, Roman, Anglo-Saxon and American cultures (Koteskey 2003:63). Many cultures treated married persons as adults, regardless of their age (Koteskey 2003:62). Thus there was no concept of adolescence in cultures that encouraged early marriage (Cha 2005:21). For example, in the northern part of Nigeria, predominantly among the Hausa Fulani, a child could be given out in marriage at the appearance of her first menstruation. This may vary from between 10 and 15 years old (Makinwa-Adebusoye 2006:8-9). This marriage is usually arranged by the parents of the child, irrespective of the child's feelings (NPC & UNICEF 2001:201).

Adolescence as a developmental period was recognized in the Western cultures at about the time of the Industrial Revolution of the 20th century (Cha 2005:21). Puberty was no longer the age that indicated readiness for marriage. A marriage

would often take place five to ten years after puberty. Puberty was considered to be the stage when an individual was ready for marriage, but with marriage taking place later, this period eventually became recognised as 'adolescence' in the westernized countries (Petersen & Leffert 1995:299; Osarenren 2002:7; Oladele 1989:39). The onset of adulthood was thus seen as being reached later in life and was not determined by getting married. These years from puberty to adulthood that became known as the period of adolescence, was considered to be the transition from childhood to adulthood (Makinwa-Adebusoye 2006:3). Adolescence was thus described as a period of growth and change, including the development of mature forms of thought, emotion, and behaviour (Montemayor 1983:1-2).

According to Wigfield, Byrnes and Eccles (2002:158-159) the adolescent developmental period is one in which the individual experiences many changes associated with puberty, important changes in the relations with family and peers, and social and educational changes related to the transition from elementary to middle school. Although physical development such as puberty is still regarded as the sign of adolescence, researchers have started to consider other changes, namely, cognitive, moral and psycho-social development (Petersen & Leffert 1995:299). The World Health Organization (WHO), for example, defines 'adolescence' as the period between 10 to 19 years, from the perspective of not only biological but also psychological development and socio-economic status (WHO 2003:1).

Adolescence as a period from 10 to 20 years is further divided into three phases, namely, pre-pubescence, pubescence, and post-pubescence (Cha 2005:21). However, the age distinctions seem to be a major challenge to researchers. There exist many definitions of adolescence, but no definitive answer has been derived as to the end of adolescence. It does, however, seem that researchers

are fairly in agreement that the period of adolescence starts with the onset of puberty. The Oxford Advanced Learners Dictionary (2000:16), for example, defines 'adolescence' as the time in a person's life when he or she develops from a child into an adult; the process or condition of growing up; the growing age of human beings; the period which extends from childhood to manhood or womanhood, or youth, usually considered to extend from 14 to 25 years in males and 12 to 21 in females. The age distinction is continuously changing and only provides a general guideline not a standard rule.

In psycho-analytic theory the period between childhood and adulthood is named 'adolescence' (Carlberg 1994:36). 'Adolescence' means the psychological development from being a child to being an adult, and is different from puberty, which refers to the anatomical and physiological changes occurring during the development of a child to an adult (Oladele 1989:37). This definition of 'adolescence' implies that there are no exact age limits to the beginning and ending of this period of development.

2.2.4.2 Developmental changes during adolescence

Despite the uncertainty about the age when adolescence ends, Staples and Smart (1991:1) highlighted the following six items as being characteristic of the completion of adolescence:

- the attainment of separation and independence from parents;
- the establishment of a sexual identity;
- the commitment to work;
- the development of a personal system of moral values;
- the achievement of a capacity for lasting relationships and genital sexual love in sexual relationships; and
- a return to parents in a new relationship based upon relative equality.

The developmental changes of adolescence will be discussed with the emphasis on the characteristics that relate to sexual development. Sexual activity that results because of the adolescent's sexual development could be a major contributory cause for the vulnerability of contracting HIV/AIDS.

Researchers agree that adolescent development involves many facets. Beginning with puberty, there is great increase in physical, cognitive and social development. This is depicted by Newton's (1995:25) three sequential stages of adolescent development, namely:

- The withdrawal stage – This stage corresponds with the beginning of the growth spurt. During this stage the adolescents become more secretive and self-conscious about the changes in their bodies. At the same time they begin to develop peer relationships, with a reduced dependency on relationships with family members. This occurs roughly from the onset of puberty until around the age of thirteen.
- The isolation stage – This stage lasts for about two years. This is a period of introspection and interaction with peers rather than with the adult world. The period of isolation allows time to integrate "...the enlarged body, the reproductively mature body, and the new sense of self into a unified person" (Newton 1995:27).
- The re-entry stage – This stage allows the adolescents to begin with the process of re-entry into the family and the society as an adult. During this stage adolescents integrate their experiences into some new personal interpretation. This stage lasts until the year of legal adulthood.

The development of the adolescent is therefore a process that is considered to begin with puberty with a great increase in physical development, sexual interest, and cognitive and social development (Chauban 1992:75-76).

Petersen and Leffert (1995:230), in a study on adolescent development, explain that children experience external (secondary sexual) and internal (cognitive and emotional) changes. They meet different developmental tasks during the three phases of adolescence (early, middle, and late adolescence) (Cha 2005:22). During the early stage of adolescence, the adolescents invent new definitions of the self and discover a sexual identity (Lerner 2002:1). The main issue of middle adolescence is changing social relationships (Petersen & Leffert 1995:230). During this second stage of adolescence the opinion of the peer group increases and the influence of the parents on their child's behaviour decrease (Barber & Erickson 2001:326). This stage is most commonly regarded as stereotypical adolescence (Cha 2005:23). Late adolescence is a younger concept, associated with the characteristics of modern society, for example, longer education and delayed marriage. During this phase adolescents assume adult roles (Petersen & Leffert 1995:231). Additionally, late adolescents develop formal operational thought, defined as one of the characteristics of adults in modern society (Lerner 2002:1). According to Piaget, formal operational thoughts make it possible for someone to consider all the hypothetical situations and anticipate the consequences (Lerner, 2002:1; Peterson & Leffert 1995:231). However, these characteristics are age related, but not age dependent (Thato 2002:457).

In brief, the period of adolescence is usually marked by significant physical changes that occur at about the same time as rapid social and emotional changes. Some researchers in the field of adolescent development explain that the social and emotional changes are a result of the physical changes. Newton (1999:100), for example, stated that the period of adolescence is characterised

as a time of tension, crisis, and turmoil through which adolescents have to pass on their journey to adulthood. The developing sexual awareness that could lead to sexual activity is one of the environmental factors that place major stress on the process of adolescence (Santrock 1998:171).

2.2.4.3 Adolescence and sexuality

From the discussion of adolescent development in section 2.2.4.2, it seems that the development of sexual awareness accompanied by having to decide on sexual activity or abstinence is an aspect that places a fair amount of stress on the adolescent. It is also noticeable that at the time when these decisions need to be made the adolescent will more likely accept advice from his/her peers. Of all the stages of the adolescent's growth discussed in section 2.2.4.2, the most intense seems to be the increase in sexual urges, and the new manifestation of emotions and thoughts accompanying them (Drench 1994:31). One important issue for both boys and girls at this stage is to reconcile sexuality with the other sides of self-perception, which is developing without conflict and stress (Drench 1994:31).

There exist two very different opinions concerning the major influences on adolescent sexuality (Brook-Gunn & Furstenberg 1989:249-250; Millar, Christopherson & King, 1993:58): the one group stresses the biological component of adolescent sexuality, namely, hormones and their effects on the sex drive; the second group focuses on the contextual factors and their combined effects on adolescent development. The link between development and the initiation of sexual behaviour may be extremely complex and may be strongly influenced by the social factors with which sex is viewed. Smith, Urdy and Morris (1985:183) contend that the social determinants of sexual behaviour are remarkably stronger in girls, whereas the biological elements are more prominent in boys. The study points to the need of understanding simultaneously the

influence both biological maturation and social norms have on the initiation of sexual intercourse and the engagement in other sexual behaviour.

As has been stated earlier (*cf.* 2.2.4.2) adolescence marks the beginning of the events of puberty where the childlike body is transformed to the adult shape. The onset of puberty brings a rapid increase in height and weight and the development of secondary sexual characteristics which eventually lead to the capacity to reproduce. Reproductive functioning and hormonal changes affect the sex drives in complex ways (Moore & Rosenthal 1993:23). Sexual maturation for girls and the onset of the menarche usually occur between the ages of 10 and 16 years, with the mean age for the Nigerian population at around 13 years (Odewole 1995:11). Not all adolescents develop at the same rate; there are male and female differences, with girls maturing on average two years earlier than boys. Although there are differences in the development rate during adolescence, the young people also have to develop a self-identity, autonomy, meaningful relationships, and a personal value system (Millar *et al.* 1993:58). The period is characterised by rapid psychological changes and the need to be able to achieve significant developmental tasks.

Adolescent females have been studied much more extensively than males. It has been found that a greater percentage of females become sexually active at a younger age. This increased sexual activity leads to possibly more sexual partners with the increased risk of negative outcomes. Brook-Gunn and Furstenberg (1989:249) wrote that early maturing girls are more likely to have older friends, and this fact is associated with sexual intercourse, smoking and drinking. More physically mature girls seem to elicit more freedom from parents, perhaps starting to date and ultimately, being sexually active at an earlier age. Thus, girls who approach womanhood at a younger age tend to begin sexual experimentation sooner (Barnfather 1999:9). There are definite drawbacks to the

early initiation into sexual activities. A younger age of the onset of sexual activity has been shown to increase the number of partners, and decrease partner discrimination and the likelihood of condom use (Herold 1994:345). Adolescents become more aware of their sexual attractions and love interests, and adult-like erotic feelings emerge. Gender identification occurs whereby one's existence as male or female is determined as significant to the roles, values, duties, and responsibilities of being a man or a woman (Moore & Rosenthal 1993:420).

2.2.4.4 Adolescents and risk-taking behaviour

Exploration and experimentation, characteristics of adolescence, can be seen as necessary factors for development throughout this stage. These processes, however, involve risk-taking which can have both positive and negative consequences. Using heroin, for example, may compromise the individual's health, create conflict with parents, or disinterest in school, but at the same time, taking this substance may lead to social acceptance by peers, and may promote feelings of autonomy and maturity, thereby also serving a normal developmental need. How many adolescents are engaged in risk-taking behaviour, what kinds of risks, at what level of involvement, and why are they involved? Research has struggled to answer these questions.

Adolescents often engage in the following high-risk behaviour: sex, smoking, taking drugs (such as marijuana and cocaine), and drinking alcohol (Rwenger 2003:95).

As mentioned earlier in chapter one, Hoppe *et al.* (1994:117) indicated that adolescents are at an increased risk of contracting the HIV/AIDS virus. However, it seems that the high incidence of HIV/AIDS among adolescents may be as a result of their perceived invulnerability to the disease, or their involvement in other risky behaviours. According to a survey by Hochhauser (1988:302), it was

reported that adolescents characteristically believe that they are impervious to diseases, accidents, and deaths. This finding was supported by Strunin and Hingston (1987:825) who reported that 91% of the participants who took part in their survey did not think they would get HIV/AIDS. Price, Desmond and Kukulka (1985:107), in a similar study, reported that 73% of their respondents were not worried about becoming HIV-infected. DiClemente, Zorn and Temoshok (1986:1443) reported that although the majority of the participants (79%) were afraid of getting HIV/AIDS, more than half of them believed it would not happen to them.

Risk-taking behaviours can be distinguished from developmentally exploratory behaviour by their potentially serious, long-term, and negative consequences. Whereas adolescent exploratory behaviour in a safe or positive context enhances competence and confidence, risk-taking behaviours jeopardize the health and well-being (Irwin & Millstein 1997:817).

According to Baumrind (1991:112), "...risk-taking is excessive when it is uncontrolled, impulsive, fatalistic, has little compensatory gain, and its consequences are left to chance". When such behaviour becomes self-perpetuating or interferes with schoolwork or with the development of a more productive coping style, it should be considered as problem behaviour (Baumrind 1991:112).

Few developmental stages are distinguished by so many changes at so many varied levels as adolescence, which explains the increased attention paid to adolescence at a time when problem-behaviour commences (Eccles, Midgley, Wigfield, Buchman, Reuman, Flanagan & Maciver (1993:90). It is a time of vulnerability for adolescents and, as a result, a time of change for parents and gatekeepers (school teachers and counsellors). Hamburg and Takanishi

(1989:342) state that adolescence is naturally accompanied by potential risk, immediate, delayed or long-term. In fact, the fact that adolescence spans a long period presents its own problems.

Adolescent risk-taking behaviour has emerged as a leading health concern. It is well-established, statistically, that adolescents experience the negative consequences of some risk behaviours to a disproportionately high degree (Moore & Rosenthal 1992:415; Quadrel, Fischhoff & Davis 1993:103). Risky behaviours such as the use of tobacco, alcohol, illicit drugs or anabolic steroids constitute a potential threat to adolescents' health and even to their lives (Irwin & Millstein 1986:82). Sexually-transmitted diseases, including HIV/AIDS and unwanted pregnancies, are few of many consequences of risk-filled lifestyles (Irwin & Millstein 1986:83).

According to Jessor (1991:597), 'risk behaviour' is any behaviour that can compromise the adolescent's psychological development. Some adolescent risk behaviours are functional and purposeful, and often help them to gain peer approval, to establish autonomy from parents, to rebel against convention, to cope with anxiety and frustration, or to declare maturity - common issues that adolescents encounter during the transition to adulthood.

On the other hand, adolescent risk behaviour is often attributed to exaggerated feelings of invulnerability. It is not clear whether experimentation is prompted by feelings of invulnerability and a willingness to take risks, or instead, simply reflects the failure of adolescents to perceive their own actions as unsafe (Cohn, Macfarlane, Yanez & Imai 1995:218). Quadrel *et al.* (1993:105) wrote that the easiest explanation, in many ways, is that adolescents get into trouble because they do not understand the risks they are taking. A more troubling interpretation of risk behaviour is that adolescents actually understand the risks, but they

choose to ignore them. A ready explanation for why adolescents take risks is that they ignore, or at least greatly underestimate, the likelihood of bad outcomes.

2.2.4.5 An explanation model for risk-taking behaviour

Irwin and Millstein (1986:82) proposed an explanation model for risk-taking behaviour, with adolescents' biological development as a base. Biological development, characterised by the rapid hormonal, physiological and somatic changes of puberty, is dramatic and is interwoven with other aspects of maturation. In the Irwin and Millstein-model of risk-taking behaviour it has been suggested that biological maturation directly influences four psycho-social factors: cognitive scope, self-perceptions, perceptions of the social environment and personal values. Irwin and Millstein hypothesize that these four factors predict adolescent risk-taking behaviour.

Furthermore, they claim that different types of risk behaviour do not occur in isolation but are mutually correlated. There are gender-specific differences, and peers and the family play an important role in the onset of risk-taking behaviour.

Adolescence is a period when young people face a set of development tasks that, if mastered, equip them with skills to enter into adulthood successfully. These tasks include autonomy/independence, mastery, intimacy and individuation/identity formation.

In early adolescence (at about 11 to 14 years of age) an increased identification with the peer group serves to fulfil the need for separation from parents. At the same time this identification may provide an increased pressure to take risks.

Risk-taking in middle and late adolescence (at about 13 to 20 years of age) serves to meet the developmental needs related to autonomy, as well as the

needs for mastery and individualisation. Mastery needs are frequently met by experimentation, which often involves testing limits and taking risks.

In addition, adolescence involves a major shift in cognitive functioning. Concrete, egocentric thinking undergoes a gradual transition to more abstract and hypothetical reasoning.

Adolescents who are labelled sexual risk-takers tend to have had multiple partners and do not use contraception when engaging in intercourse (MacDonald, Fisher, Wells, Doherty & Bowie 1994:690). Research findings show that of the sexually active young people, 40% have had four or more sexual partners (Braveman & Strasburger 1993:658). The reports from the Nigerian Youth and AIDS Study reported similar perceptions regarding Nigerian adolescents (Odewole 2000:125; Omotesho 2003:89).

Luster and Small (1994:628) wrote that adolescent risk-takers differ from committed monogamists in the fact that the risk-takers had low grades, were less religious, had less-positive relationships with their parents, and engaged in other high-risk behaviours, such as smoking marijuana and using alcohol. The presence of these other high risk behaviours is a key marker for high-risk sexual behaviour, because the distinguishing effects of various substances may alter their decision-making abilities, whereby increasing the likelihood of their engaging in high-risk sexual behaviour (Krowchuk 1998:129).

2.2.4.6 Adolescence and risk-taking sexual behaviour

Regarding the risky sexual behaviour of Zimbabwean adolescents, Wilson, Greenspan and Wilson (1992:957) found that 46.4% of male students and 3% of female students reported having had sexual intercourse. Of these students, 38%

of the males and 2% of the females reported having had sexual intercourse with two or more partners. One hundred and fifteen (15.8%) male students reported having had sexual intercourse with a prostitute. Students who came from homes in urban areas reported having significantly more sexual partners than did students from homes in rural areas.

Developmental research suggests that adolescents undergo a transition from concrete to formal operational thinking at approximately 14 years of age. A lag time in this adjustment may render adolescents unable to think about situations hypothetically, thus they believe that natural laws do not affect them personally (Biro & Rosenthal 1995:256). Cognitively, early adolescents (11 to 13 years old) are usually concrete, present-oriented thinkers, unable to consider the future consequences of their behaviour. As they mature they develop the ability to think abstractly and anticipate long-range consequences. The limited cognitive and emotional abilities of early and middle adolescents (14 to 17 years old) give rise to egocentrism characterised by concern for one's own activities and needs. Adolescents may mistakenly interpret the risk of harm as cumulative across situations when it is actually independent across situations (Cohn *et al.*1995:219). This may explain why adolescents who have admitted to the previous use of contraceptives find themselves currently engaging in sexual activity without protection.

2.2.4.7 Concluding comments

From the preceding discussion on factors of vulnerability, the adolescents' development and sexual awareness, marked by sexual activity, can be seen as the biggest contributory factor to risky sexual behaviour. The Nigerian adolescent is at risk by virtue of being an adolescent. This tendency, purely on grounds of being an adolescent, and their interest in sexual activity, coupled with

their sense of invulnerability and hence risk-taking behaviour, could lead to unprotected sex, and thus add to the growing epidemic in Nigeria. Changing their sexual practices that could lead to abstinence may be a long-term answer but immediate steps need to be taken to ensure the practise of safe sex. The correct perceptions about HIV/AIDS, along with informed attitudes toward the use of condoms in practising safe sex, become relevant topics for the Nigerian adolescents of the 21st century.

To combat vulnerability among Nigerian adolescents their perceptions about their invulnerability, their fear of discrimination, and their denial of being infected, will have to be addressed. Their perceptions that they are immune to infection will have to be changed. They need to be educated, and their risky behaviours need to be changed to taking more responsibility for the prevention of HIV/AIDS. It is also necessary that they be taught that if they are sexually active they should be responsible and make use of some form of preventative method.

2.3 INITIATIVES TO ADDRESS THE HIV/AIDS CRISIS

A brief examination will be done to ascertain what initiatives are being taken in Nigeria to address the HIV/AIDS crisis. This includes the initiatives by the Government, the education authorities, and an NGO. An attempt will also be made to evaluate to what extent these initiatives are proving to be successful.

2.3.1 Governmental initiatives

Nigeria like many other countries around the world, initially responded to the HIV/AIDS epidemic with denial and little action (Kanki in Adeyi et al 2006:7). The Nigerian Government paid little or no attention to the prevention of HIV-infection (Umeh & Ejike 2004:339). From the time that the first case of AIDS was reported

in 1986, it has taken Nigeria 12 years before a control policy was formulated. The slowness to respond to the looming crises occurred in spite of the reality of the epidemic as demonstrated by patients in hospitals, and by the communities, and in spite of the Government's proposed 'commitment' to the war against AIDS.

This lukewarm attitude of the Government in the face of the mounting evidence of the raging epidemic led Olikoye Ransome-Kuti to make the following prediction, "The world is waiting for a catastrophe that will surely befall Nigeria when we will begin to pick up our dead from the disease" (Ransome-Kuti 1998:25).

For a number of years many political leaders denied the impact of HIV/AIDS on the people and the community (UNAIDS 2004a:14). Barnett and Whiteside (2003:5) stated as follows, "Politicians, policymakers, community leaders and academics have all denied what was patently obvious – that the epidemic of HIV/AIDS would affect not only the health of individuals but also the welfare and well-being of households, communities and, in the end, entire societies".

Research also shows that the past military regimes in Nigeria, between 1984 to 1999, showed a nonchalant attitude to the HIV/AIDS epidemic. When the first case of HIV/AIDS was reported, the country welcomed it with much denial. Alubo (2002:551), in a survey on AIDS policy and politics in Nigeria, reported that Nigeria's National AIDS Control Program falls victim to years of military arbitrariness and uncertainty. Furthermore, Alubo (2002:551) stated that a lack of adequate response by the Government to the HIV/AIDS situation has remained a heavy and growing burden for a number of years.

It is reported, for instance, that despite the claim of some health professionals of having diagnosed symptoms similar to the AIDS disease, the Federal Health Authorities consistently denied the claim. It is reported that Professor Olikoye

Ransome-Kuti, then the Minister of Health, stated that the HIV/AIDS claims in the country was a bid to destroy his efforts in providing primary health care (PHC) for the country (Okafor 1999:106).

Despite the numerous outcries from different sources the country remained in a state of complacency. Rather than preparing the ground and informing people of the disease, there was official denial among intellectuals, government officials and the general populace about the presence of HIV/AIDS in the country (FMOH 2002:1-2). Leaders chose not to admit to its existence, because they may have felt that the presence of the epidemic would reflect negatively on the immoral behaviour of the citizens, hence the denial, apportioning of blame, and the invention of a myriad of weird and wonderful causes of the epidemic (Buchel 2005:37). Alubo (2002:551) stated that the fragmented statistics and the Government's seeming conspiracy of silence in Nigeria may have helped in the exclusion of African countries with a high prevalence of the HIV/AIDS epidemic.

The Government eventually formulated a policy to guide AIDS control in 1997. The National Policy on HIV/AIDS/STIs (STDs) control was formulated, based on "...principles of social justice and equity" and on health as the right of all citizens (FMOH 2005:1). However, the Nigerian Government's bid to educate its populace on this new infection did not seem to convince its populace or itself (Alubo 2002:552). Therefore, all the efforts of the Government seemingly did not have much effect, although this could be as a result of the poor health-seeking behaviour of most Nigerians, or of insufficient awareness.

The advent of a democratic Government brought about a significant change in the attitude of the Government to the epidemic, as well as the Government's response to it. For example, President Olusegun Obasanjo restructured the National Control Program and renamed it the National Action Committee on AIDS

(Alubo 2002:559). The NACA program includes addressing the stigma, creating micro-credit to enable people to better cope with the economic impact of the disease, and a scholarship program for the so-called 'AIDS orphans'. The scholarship programme which is yet to take off, has intricate criteria for eligibility, including proof that one or both parents died of AIDS, and that the child is poor, enrolled at school, and at "...risk of leaving school because of the orphan status" (NACA 2000:11).

The chairperson of the National Action Committee on HIV/AIDS, Professor Akinsete, blamed the past Governments for paying little attention to HIV/AIDS, hence making Nigeria the first among the countries of the world to cross the 5.4% prevalence threshold. The change in the mentality by the new government towards HIV/AIDS in Nigeria has been encouraging but, according to a survey by Umeh & Ejike (2004:40), it was reported that the National Action Committee on HIV/AIDS, formulated by the democratic Government, is plagued with uncoordinated efforts and a poorly defined strategy. This Report further noted that the committee received widespread political and financial support but their strategy remained ill-defined. This brings to doubt how effective the Government's endeavours are to reduce the level of vulnerability of adolescents to being infected by HIV/AIDS. According to an evaluation of the response to HIV/AIDS in Nigeria, the Government's efforts at the national, state and local levels have not been tangible in terms of financial commitment to fight HIV/AIDS. Policies and laws were hardly backed with adequate financial commitments, and when funds were available they were seldom released.

Recently the Government has been trying to educate the country that having been tested positive to HIV is not a death sentence. The Government recognised that there still is no cure for this infection, thus they advise that individuals go for voluntary testing to be diagnosed early. Voluntary testing is

subsidized by the Government and is free to the inhabitants of Nigeria. The Government also provides anti-retroviral drugs for free for HIV-positive individuals (Punch 2007:34).

2.3.2 Educational initiatives

2.3.2.1 The reason why educational initiatives have become vital

UNAIDS (2002:8), in a report on AIDS and education, stated that the Millennium Development Goals for Education cannot be achieved without urgent attention to HIV/AIDS. This report is corroborated by Kelly (2000b:24) who states that HIV/AIDS appears to be in the ascendancy and have virtually overcome education, swamping it with a range of problems. Kelly (2000b:24) continued by stating that "...the school in an AIDS-infected world cannot be the same as the school in the AIDS-free world". Similarly, UNICEF (2000:10) stated that "...although HIV/AIDS affects all sectors, its most profound effects are concentrated in the education sector". The mass media also regularly reports on the impact of HIV/AIDS on education and schooling, for example, a leading commentator stated that "...the educational systems in Africa will collapse unless we change our understandings of the pandemic and how we in education respond to it "(Coombe 2002:2).

The negative impact of HIV/AIDS on education, as confirmed by reports from UNICEF (2002:2), has been the driving force in the recent initiatives to address the situation. AIDS is currently causing problems in education due to

- the illness of infected students, which may have the effect that they are frequently absent from school, causing a drop in the number passing the West African Examination Council Examinations (WAEC) and the Joint Admissions Matriculation Board Examinations (JAMB) (FMOH 2005:10);

- the orphan crisis, which implies that some children will have to drop out of school due to a lack of finances, and to look after younger siblings (UNAIDS 2004a:61-62);
- the illness and death of teachers, which could cause a high turnover, disrupting the continuity of quality instruction (UNICEF 2002:2);
- a decrease in the availability of teachers (FMOH 2000:10);
- an increase in the training cost for teachers;
- less public funding for schools;
- a drop in the school enrolment, especially for girls; and
- a loss of financial, material and emotional support for orphans towards successful schooling (Ohiri-Anichie & Odukoya 2004:10-11).

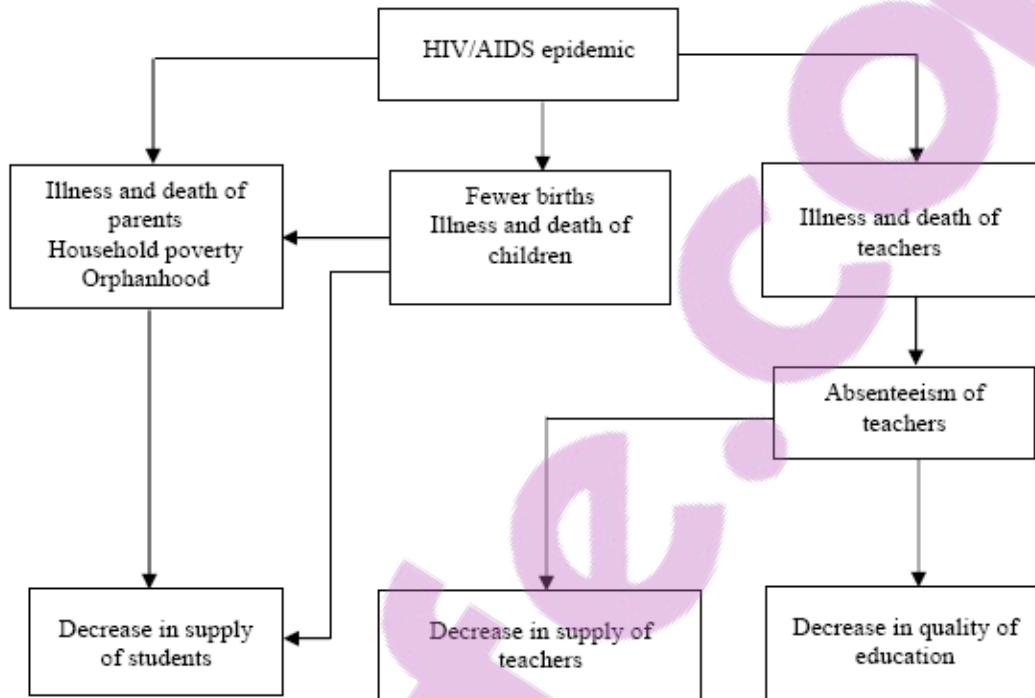
According to a survey Akande (2002:30) it was reported that 60% of age-eligible children are enrolled in primary schools and nearly half of them drop out before completing primary school. Of those who remain in school to the sixth grade, only 40% are functionally literate. A similar study on the prevalent rate of HIV/AIDS among children in Nigeria (FMOH 2003:45) stated that the percentage of children affected by HIV/AIDS in schools ranges from 2.2 to 6.7.

According to a report by the United Nations Department of Economic and Social Affairs (2005:69), the HIV/AIDS epidemic may affect the education section in at least three ways the supply of education through the availability of teachers; the demand for education (total number of children enrolled and staying in school); and the quality of education (supply of experienced teachers). The findings of this report is further enhanced by the observations of Katahoire (1993:56) who found that the absenteeism of teachers from school, and ultimately their deaths, affect the teaching resources available. He further stated (1993:57) that teachers who are infected with the virus try to relocate to another area or, once visibly ill, simply disappear.

A survey conducted by UNICEF (1998:34) found that 860 000 children lost a teacher to AIDS in sub-Saharan Africa in 1999. Similarly, in Malawi 10% of the teaching personnel in urban areas were estimated to have died of AIDS in 1997, and in 2005 it was projected that this figure would increase to 40% (World Bank 1998:1). Badcock-Walters (2001:165), in a survey in Kwazulu-Natal South Africa, found that the mortality of teachers rose significantly, from 406 in 1997 to 601 in 2001.

It can be said that the impact of HIV/AIDS on education has far-reaching implications for development. Globally, AIDS has become a significant obstacle to the goal of universal access to primary education by 2015 (UNAIDS 2004a:51). Furthermore, an estimated 1 billion US dollars per year is the net additional cost calculated to offset the impact of HIV/AIDS on global education, for example, to cover the costs of losing teachers, teacher absenteeism and the cost of keeping the growing numbers of disrupted children and orphans in school (UNAIDS 2004a:51).

Figure 2.1: Conceptual framework for the impact of the HIV/AIDS epidemic on education



Source: (Adapted from the United Nations Department of Economics and Social Affairs 2005:70).

Another impact of HIV/AIDS on education is the effect that the absenteeism and death of teachers have on the students, especially in rural areas, where teachers serve as role-models. School children may view the disappearance of their teachers as their own destiny if they persist in going to school. Even teachers who are not infected with the virus may be deeply affected by the prevalence of HIV/AIDS among their colleagues and relatives.

Stigmatization and discrimination may also have a negative impact on the adolescent students affected or infected by the HIV/AIDS virus. Other students

and teachers may not want to associate with them. This may interfere with the learning process of such students who then may decide to quit school.

There is a general consensus that basic education forms the foundation of a literate and progressive society. Unfortunately, the HIV/AIDS epidemic threatens to exacerbate the challenges already facing basic education in Nigeria by means of factors that influence both the supply and demand for education. Unlike in many other professions, the disruptive effects of HIV/AIDS on the supply and demand for education have immediate and long-term negative effects on the quality of education. The absence of a teacher from a classroom for even one day, either due to sickness or having a sick relative, for example, directly translates into a loss of education for students, unless arrangements are made to replace the school day by organizing makeup classes in the same year, which will be very hard to do as the impact of the epidemic increases. Similarly, the increased drop-out of children affected by HIV/AIDS negatively affects the overall learner enrolment, especially as far as girls are concerned (FMOH 2001:1-2; UNAIDS 2004:1).

UNICEF (2000: 69) describes education as a major engine of economic and social development. The incidence of HIV/AIDS causes a disruption in the schooling system and places a huge burden on the students, mostly adolescents. The cost of the epidemic is felt in the education sector in various ways, including the loss of personnel, an increase in school drop-out rates, and the dwindling of Government and household resources to support educational services (Nigerian National HIV/AIDS Response Review 2001-2004:27). The impact of HIV/AIDS will most certainly be felt in the education sector and more resources will have to be channeled to cope with the health impact of AIDS (FMOH 2003:12).

2.3.2.2 Educational initiatives to address the situation

The Federal Ministry of Education, in its policy statement (National Policy on HIV/AIDS 2002:12), proposed a national sexuality curriculum for upper primary, junior secondary and senior secondary schools, as well as for tertiary institutions in Nigeria, as a way of militating the epidemic. The policy also stipulated that the Government would, from time to time, disseminate appropriate HIV-related information by means of education and communication (IEC) materials targeted at both in-school and out-of-school adolescents. The Government also intends to promote safer sex that advocates abstinence, mutual fidelity and the use of condoms in its tertiary institutions.

Furthermore, it has also been proposed that HIV-education be made a compulsory general studies course in tertiary institutions, although it may not carry any grade point. For example, in the states of Nasarawa and Lagos, the Federal Ministry of Education, in partnership with UNFPA, strongly promotes family life education and adolescent reproductive health throughout the school system. The programme is being implemented at two levels, namely, firstly, family life and HIV/AIDS education is being incorporated into the relevant subject matter in the school curriculum and, secondly, teachers are being trained. The programme aims to have anti-AIDS and health clubs to sustain prevention efforts. Peer education training is also being planned (Adamu 2002:12).

The Federal Government of Nigeria instituted the Nigerian Educational Research and Development Council (NERDC) and mandated it to collaborate with other government agents, NGOs and UN agencies to develop a curriculum on sexuality education, which is considered critical in helping the young people with the acquisition of adequate knowledge and skills, and the responsible attitudes

needed to prevent and reduce sexually transmitted infections, including HIV/AIDS (Ohiri-Anichie & Odukoya 2004:9).

The response of the Ministry of Education in Nigeria as a sector in society to the HIV/AIDS epidemic has prompted the HIV/AIDS specific policies to be put in place in this sector to address HIV/AIDS related issues. These Policies specifically addresses the issue of what is acceptable and what not in respect of HIV/AIDS. It also instructs individual schools and educational institutions to adopt their own policy on HIV/AIDS. Critical issues like discrimination, the admission of students, the appointment of educators, disclosure and confidentiality, preventative measures, and the provision of safe school environments are addressed. The national policy also details issues relating to HIV/AIDS education and the responsibilities of students and educators with regard to HIV/AIDS. Schools are furthermore directed to establish a Health Advisory Committee at each school. The policy from the National Education Ministry is thus quite comprehensive and appears to cover all the relevant aspects in respect of schools.

UNESCO (2003:14) highlighted eight themes that describe the response of education to HIV/AIDS in Nigeria:

- the development of a National Strategic Action Plan in line with the country's HIV/AIDS Emergency Action Plan (HEAP);
- the establishment of a critical body with the Federal Ministry of Education;
- the introduction of family life education and HIV/AIDS issues into the curricula of schools and teacher training institutions;
- the use of non-formal strategies (peer education, anti-AIDS clubs, drama, art, music, comic books and posters);

- periodic sensitization, mobilisation and awareness campaigns;
- the establishment of HIV/AIDS units under the Federal Ministry of Education;
- collaborations with NGOs, Civil Society Organizations, and donor agencies; and
- the establishment of HIV/AIDS preventive education units at the National Teacher's Institute, Kaduna.

To combat this present as well as the future threat of HIV/AIDS, many education ministries are incorporating HIV-prevention programmes into their curricula, for example, family life, and sexuality and HIV/AIDS-education, which form valuable sectors of education's response to the HIV/AIDS crisis.

Rena (2006b:22) illustrated that the consequences that need to be addressed by the education authorities include the declining and delayed school enrolments, erratic school attendance, poor attention and performance, high drop-out rates, and the reversal of education for all development gains in the sector. In his report Rena (2006b:23) stated that with the high prevalence of HIV/AIDS, achieving the millennium educational and development goals (a just and egalitarian society and a great and dynamic economy) by 2015 will be very difficult.

The implementation of HIV/AIDS preventive programmes in Nigerian schools seems to be very slow. This may be because teachers and educators first need to be trained. It is also not clear if the teachers and educators are comfortable with handling sexuality education as a course of study in schools. It seems, though, despite the efforts of the Government and the NGOs, that teachers are too embarrassed to discuss the issue of HIV/AIDS and sexuality education with their students. The society has also kicked against the school teaching sexuality

and family life education, for fear that it may make learners promiscuous, and expose them to explicit sex.

Ohiri-Anichie & Odukoya (2004:2) reported in a survey on HIV/AIDS and education in Nigeria that the challenges of HIV/AIDS intervention programmes are:

- insufficient of data and information - available data are based on the sentinel sero-prevalence survey conducted within the country.
- the incapacity of educators and education personnel to deal with the issue of HIV/AIDS;
- the poor monitoring and evaluation of programmes and interventions; and
- the poor coordination of programmes and intervention responses to HIV/AIDS education.

2.3.3 Non-governmental initiatives

There has been a tremendous effort on the part of the non-governmental organizations (NGOs) in Nigeria to implement HIV-preventive programmes, especially among adolescent students. One such NGO initiative is Action Health Incorporated (AHI) which was established in 1989. Their main focus is primarily on adolescents, both in-school and out-of-school. The AHI has the backing of internal bodies and international organizations for its funding. Their aim is to eradicate the HI-virus amongst adolescents, and to positively influence teenage behaviour with the aim of reducing teenage pregnancies, HIV/AIDS and other sexually transmitted infections. They wish to attain this aim by educating the adolescents. Since 1991 the AHI has been involved in organising education programmes in secondary schools, especially across Lagos state, through the establishment of health and life planning clubs (Action Health, 2000b:1).

These clubs are being co-ordinated by trained adolescent peer educators to share factual information on issues of youth health and development. In addition, the AHI has been known to provide age appropriate information to adolescents to help them to make responsible decisions. One of the most significant programmes organised by the AHI is a yearly programme entitled the Teenage Festival of Life (TFL). This programme is organised in collaboration with the Lagos state government by asking secondary schools to send in entries in the form of designs, and drama, poetry and songs, using the theme as a guide.

The other critical areas that the AHI is tackling are the training of teachers in HIV/AIDS and sexuality education, as well as the provision of manuals and support materials for these programmes. These materials are in the form of newsletters which are made appealing to the adolescents and the young people, and are published on a quarterly basis with a different theme each time. The AHI has formed a partnership with the Department of Education, their main focus being the students. Since 1989 they have, together with other NGOs, trained more than 10 000 teachers to teach life skills, with the aim of training at least two teachers per school.

Another NGO that deals directly with the adolescents is the Youth Action Rangers of Nigeria (YARN). The YARN uses the media, public outreach activities and behavioural change communication programmes to reach the adolescents. The other critical areas are research and community mobilization. The YARN uses sport, for example, inter-school soccer, to instil the concept of a healthy lifestyle in the youth.

Besides these organizations mentioned above, there are several other initiatives by the media, community organizations and NGOs that are involved in HIV/AIDS intervention programmes. HIV/AIDS-awareness is very prominent throughout

Nigeria. It is the sermon from the pulpit in churches, and sermons in mosques. They are all ways of creating HIV/AIDS-awareness throughout Nigeria. The NGOs may have achieved much, but it is not quite clear why their efforts are not yielding the desired results in terms of the adolescents practising safe behaviours.

Could it be that the adolescents are keeping them busy with risky behaviours?

2.4 THE CURRENT SITUATION

2.4.1 Introductory remarks

In the previous sections (2.2 through 2.3) the underlying factors that contribute to the vulnerability of the Nigerian adolescents, namely of being at a high risk to be infected with HIV/AIDS, were discussed. Section 2.4 will focus on the situation that now exists in Nigeria regarding HIV/AIDS infections. This will be to try to understand the extent to which some of these vulnerability factors could have impacted on life in Nigeria. The situation that has existed over the years will also be reported on and will serve as an indication of how successful some of the initiatives to address the issue of HIV/AIDS have been. It will lend credibility to whether the situation warrants a change in perception to HIV/AIDS and a different attitude towards prevention methods. The reports and statistics that have been given concerning the HIV/AIDS situation in Nigeria will be indicated. A brief look will also be given to what the situation is in education, because this is the focus of the study, and it will be a further indication of the relevance of this study.

2.4.2 Available statistics and reports

According to an HIV/AIDS policy fact sheet, Nigeria has the third highest number of people estimated to be living with HIV/AIDS in the world (3.6 million at the end of 2003), after South Africa and India (Kaiser Family Foundation 2005:1). Since the first case of AIDS in Nigeria was reported in 1986, the epidemic has spread rapidly. The prevalence rate among adults has increased from 1.8% in 1991 to 4.5% in 1996, and to 5.0% in 2003 (FMOH 2005:1). The Nigerian National HIV/AIDS Response Review (2001-2004:1) stated that young people between the ages of 20 and 29 years are affected the most. UNFPA (United Nations Fund for Political Activities 2003:1) agrees with this statement, but adds that in some parts of the country there is a higher prevalence among the 15 to 19 age group.

It appears as if the toll of the epidemic continues to rise, especially in countries already experiencing a high prevalence of infection rates. According to JAAIDS (2008:1), an estimated 4 million people are currently living with HIV in the country, and with 1.5 million AIDS orphans, and more than 300,000 deaths annually, HIV/AIDS has become an epidemic in Nigeria. The Report further states that the burden of infection continues to be borne by the young people. This shocking state underscores the dilemma that is facing education management in Nigeria. It is evident that adolescent students, at an increasing rate, could succumb to the disease, whereby making planning, implementing, teaching and learning strategies very difficult.

The impact of HIV/AIDS is also felt on babies' life expectancy at birth. According to a report by the National Population Commission (1998:35), infants who are born HIV positive, or develop HIV through transmission from their mothers, have a highly shortened lifespan due to the short incubation period. The Report furthermore stated that most infections occur among young people in their early

20s in Nigeria, which means, with a 10-year incubation period, they will probably die in their early to mid 30s.

The rising numbers of AIDS orphans and children affected by AIDS also present further social, psychological, and developmental problems. The rising increase in the number of deaths of adults as a result of AIDS has increased the number of orphans. Dr Anne Petersen, Assistant Administrator for global health of UNAIDS, had the following to say about the growing number of AIDS-affected children (in: Lakay 2001:9; Porter 2002a:1-2), “Countless children are living with and caring for parents who are sick and dying”. Porter (2002a:1-2) comes to the conclusion that the societal impact of AIDS goes beyond the impact of orphans on society. Peter Piot, Director of UNAIDS (Porter 2002a:1-2), underscores the statement made by Dr Petersen, stating that children who raise themselves cannot develop normally, because they lack food, shelter, education, nurturing and health care, which are the basic necessities for self-actualization.

According to the 2004 Global AIDS Epidemic Report, about 3.3 million adults aged between 15 to 49 were estimated to have been infected with HIV at the end of 2003. The same Report stated that a sizeable proportion of these people are at a stage where they have developed AIDS-related diseases that affect their day-to-day activities, as well those of their caregivers (FMOH 2001:1-2; UNAIDS 2004:21). HIV-experts have posited that the prevalence rate of HIV/AIDS may be higher than reported among the secondary school students in Nigeria but there is very little representative of these at the national level in the country.

The UNDP (2004:45) stated in a report that the impact of HIV/AIDS is discernible at every level – individual, family, and societal, and is observable from the demographical, social, economic, and political perspectives. Ajakaiye (2002:45) similarly indicated the socio-economic and health costs of the epidemic, and

stated that not only does HIV deplete the human body of its natural defenses, but it also depletes families and communities of the assets and social structures needed for the successful provision of care and treatment for persons living with HIV/AIDS. It is evident that HIV/AIDS impacts negatively on the education and the health sectors and on the socio-economic situation of the country (Oni & Opatola 2002:27). The infection is extinguishing the food producers and farmers of the country, thus weakening the agriculture labour force for generations to come.

The UNDP statistics for Nigeria reveal a devastating picture of human suffering. The impact of the large number of people living with HIV/AIDS reflects the numerous problems facing the schooling system in the country. The worst affected age group (15 to 49) includes a large percentage of students, teachers, parents, family members, and secondary care givers to AIDS orphans. Moreover, 50% of all new infections fall in the 14 to 24 year age group (UNAIDS 2004a:15).

2.4.3 Concluding statements

According to the available reports and statistics referred to in sections 2.4.1. and 2.4.2, the incidence of HIV/AIDS in Nigeria is still high. The UNAIDS fact sheet (2002:1) states that, "HIV/AIDS marks a severe development crisis in sub-Saharan Africa, the worst affected region in the world. Even if exceptionally effective preventive treatment and care programs take hold immediately, the scale of the epidemic means that the human and socio-economic toll will remain massive for many generations."

Continuous endeavours to address the situation are needed, and if it is to be brought under control it will take the efforts of all sectors of society. Looking at the changing perceptions about HIV, endeavouring to promote an attitude where Nigerian adolescent students are willing to practise safe sex, is one of the

endeavours that may bring about behavioural changes that will impact positively on the HIV/AIDS situation in Nigeria.

2.5 CONCLUSION

The HIV/AIDS situation in Nigeria is a grave cause for concern, especially as regards the youth population. From the available facts it is evident that large numbers of learners and teachers in Nigeria could be affected by HIV/AIDS. Various studies have also reported the devastating impact of the disease. Unless much is done to encourage adolescent students to practise safe sexual activities, it will continue to have a negative impact on their learning processes (UNDP 2005:14). According to the UNDP (2005:73), infected teachers may be absent from school, or too ill to provide good education for their students, and low enrolments may occur because of orphaned children trying to fend for themselves, and not being able to attend school. The disease, and the subsequent death of teachers and students, will continue to have a negative impact on the education, and on the learning process of students (UNDP 2005:14).

An evaluation of the initiatives of the Government and the education authorities indicate that a number of policies have been drawn up. However, it seems that no policy or laws alone can combat HIV/AIDS. The fear and prejudice that lie at the core of HIV/AIDS discrimination need to be tackled at community and national levels. A more enabling environment needs to be created to increase the visibility of people with HIV/AIDS as a 'normal' section of society. In future the task may be to take heed of the fear-based messages and biased social attitudes in order to reduce the discrimination against people who have HIV/AIDS.

It is therefore clear that a wide range of strategies will have to be employed to address the epidemic. It is for this reason that this study will focus on changing the perceptions and attitudes that adolescents may have with regard to these initiatives and prevention campaigns.

This leads the researcher to ask: Could it be that adolescent students have wrong perceptions of HIV/AIDS, thereby leading to unsafe and risky sexual practices, or could it be that they have a negative attitude to HIV/AIDS-prevention methods?

In the next chapter the literature on the perceptions of adolescents to HIV/AIDS, as well as their attitudes to the use of condoms as a method of prevention will be reviewed

CHAPTER THREE
UNDERLYING PERCEPTIONS AND ATTITUDES THAT
INFLUENCE SEXUAL BEHAVIOUR

3.1 INTRODUCTION

Chapter two dealt with specific factors that contribute toward the vulnerability of the Nigerian adolescents, placing them at risk of contracting HIV/AIDS infections. The discussion of the initiatives to address the situation indicated that in the recent years there has been a concerted effort to curb the increasing HIV/AIDS dilemma, but much is still needed to reduce the rising crisis. When the literature on the actual situation in Nigeria was examined, it showed that despite all the efforts to bring about a drop in the number of new cases, the situation still remains crucial. In fact, the crisis may even be greater than is suggested by the available statistics and reports, because of under-reporting, a reluctance to be tested, and denial. The available statistics indicating that a crisis does exist may, therefore, be only the tip of the iceberg, with negative consequences for the Nigerian society at large.

When examining the available research and reports that deal with the HIV/AIDS dilemma in Nigeria, it seems as if the young people are not heeding the initiatives by the Government, the education authorities and NGOs advocating responsible sexual behaviour. Once again the question arises, “Do the young people continue to be reckless about their sexual activities because of wrong perceptions about the threat of HIV/AIDS?”

It has been stated that because of their faulty perceptions the Nigerian adolescents have not changed their risky sexual behaviours. Hopefully initiatives can be introduced that will change these perceptions, that will then lead to attitudes of changing their risky sexual behaviour by making use of condoms as a method of prevention. Comprehensive prevention could avert 29 million of the 45 million new infections expected to occur in this decade (UNAIDS 2004:1). In order to curb the spreading of infections the use of condoms is encouraged. Could the adolescent students' attitudes of not wanting to use condoms be founded on faulty perceptions of HIV/AIDS?

Studies have revealed that measures instituted to avert the epidemic situation have in the past not brought about changes in behaviour in terms of the risks of contracting HIV (Carabasi, Green & Brent 1993:240; DiClementi *et al.* 1986:1443; Holtzman, Lowry & Kann 1994:389). However, additional methods and more sustained efforts in respect of the present initiatives have to come into effect to drastically curb the spreading of infections. The policies and initiatives discussed in chapter two gave attention to these aspects that sought to provide the adolescent students with factual information regarding the use of condoms. It does, nonetheless, seem that more effort may be needed to change the faulty perceptions held by many of the Nigerian adolescents, and to promote attitudes that will see the use of condoms as a possible method of preventing the spreading of infections.

By means of an empirical investigation this researcher will seek to identify the students' perceptions and attitudes about HIV/AIDS infections, and the use of condoms. This research is an endeavour to make a contribution to change students' perceptions about HIV/AIDS, and to promote attitudes of being willing to use condoms as a method of prevention.

In this chapter perceptions and attitudes will be discussed, how they are formed and their influence on sexual practices. The discussion will be confined to understanding the variables at play in the formation of perceptions, as well as to students' attitudes toward using condoms. Attention will also be given to prevention methods. Some theories of behaviour change will be discussed. The methods that could be used to bring about the changes in perception as a means of changing students' attitudes will also be looked at briefly.

3.2 PERCEPTIONS

Hamachek (1995:199) defines 'perception' as the manner that individuals experience stimuli by the sensory receptors. What is experienced consciously is not always the same as what is experienced auditorily, visually or tactically. People's perceptions are affected by the way in which they view the world around them. Therefore, individuals' interpretations of sensory stimuli will be affected by their own views (Hamachek 1995:199).

'Perceptions' are mental frames of references that can be based on either founded or unfounded statements, a real or imagined state of affairs. Being left on their own, perceptions could wittingly or unwittingly create the basis for a reality. Kanser and Tindall (1984:294) refer to 'perception' as the understanding, knowledge and insight of an impression presented to the senses.

To Oladele (1989:101) 'perception' is the process of becoming aware of objects and qualities by way of the sense organs, but what is perceived depends on what he brings with him from his past experience and what his present needs are. Thus, sensory experiences are gathered and processed in the brain into

meanings which elicit behaviour. Perception mechanisms include analysis, synthesis and the integration of a series of information (Oladele 1989:102).

Oladele (1989:101) lists five important characteristics of 'perception' in the learning process:

- We have to perceive if we are to learn. What we learn and how we learn is a function of our perception.
- Perception furnishes us with experiences that promote thinking and understanding.
- Perceptions help us in problem-solving.
- Perceptions build our emotions.
- Perceptions are indispensable in the development of imagination.

'Perceptions' are an individual's interpretation of reality, and will influence behaviour. However, perceptions do not only determine behaviour but also influence the processing of new information. According to Muchinsky, Kriek and Schreuder (2006:217), people's preconceived views also influence the way in which information is processed. These views assist in processing large amounts of data. If information does not fit in with people's preconceived views, the data are usually eliminated or ignored during information processing. Information is processed instinctively as much as possible, and value judgements generally remain consistent. It is only when something extraordinary happens that people may reflect on their preconceived views.

3.2.1 The formation of perceptions

The formation of perceptions about HIV/AIDS is rooted in a number of variables that interact. It is a difficult task to ascertain all the variables that could be at play in the formation of perceptions concerning HIV/AIDS. Researchers who have

carried out surveys have listed a number of sources that influence adolescents' perceptions of HIV/AIDS. Of the many sources the mass media and peer pressure seem to be dynamic variables that are at play in the formation of Nigerian adolescents' perceptions about HIV/AIDS. The role of the mass media and peer pressure will therefore be discussed.

As stated in 3.2, people will interpret incoming information from their own frame of reference. This frame of reference will influence how any information, in this case concerning HIV/AIDS, will be interpreted. With the high risk of Nigerian adolescent students of being infected by HIV/AIDS, understanding these perceptions is crucial when planning initiatives to address the dilemma. If these perceptions are faulty, irrational and unrealistic, then it could indicate why these adolescents are not responding to the initiatives put into place in recent years.

For the purpose of this study the researcher reviewed related literature on the following factors, namely the mass media and peer group pressure.

3.2.1.1 The mass media

The influence and power of the media, for example television, seem to be the biggest form of influence in Nigeria (Hebert 1980:120). He also found that many people rely on the television and the radio to get the latest information. The television produces motion pictures with vision, sound and colour, which are capable of stimulating and holding the attention of the viewer. It creates interest through real life situations, thereby facilitating retention, recall and recognition (Pardun, L'Engle & Brown 2005:75).

Television viewing dominates the Nigerian adolescents' leisure time. For example, the average adolescent spends as much time watching television as

being in school (Anselem, in Ugwuegbu & Eke 2005:67). It seems that most homes own at least a television set, a radio and a video machine, and often there are television sets in all the children's and adolescents' rooms. Aside from spending time with their friends, adolescents spend a lot of time watching television. The implication of this is that the availability of media such as the television, video, and the radio, as well as printed materials in most Nigerian homes predisposes a child to behaviour according to which opinions are formed.

It has been indicated that the mass media has an influence on a broad range of behaviours and attitudes, which includes violence, eating disorders, smoking, and drinking alcohol, yet very few studies have examined the effect of the media on adolescents' sexual attitudes and behaviour. There exists a dearth of research into the potential of the media's contribution to the formation of perceptions and sexual activity, however, the issue of the influence of the media on adolescents' sexuality cannot be overemphasized. The young people become attracted to what they see on television and tend to model their behaviour after what they see, whether it is acceptable or not. These observed behaviour patterns may, accordingly, contribute to their perceptions about sex.

Adolescents seem to be changing their orientation and concentration from productive activities to less productive ones (Friedman 1992:345). It is therefore reasoned that the media is an important influence in inducing sexual activities and behaviour.

The Kaiser Family Foundation (1999:1), in a survey on the role of the mass media, reported that more than 50% of all television shows contain a sexual content averaging more than three scenes with sex per hour. The Foundation reported (2004:1) that as regards shows with a sexual content, only 9% mentioned the possible risks of sexual activity, or made reference to

contraception, protection, or safe sex. In a study looking at a very popular show among adolescents and broadcast in 2002-2003, it was found that one in four interactions among the characters per episode conveyed a sexual message. In three weeks of programming, only 2 out of 10 shows included messages about sexual responsibility (Kaiser Family Foundations 2004:1-2).

The television has definitely been a major source of information on HIV/AIDS for most of Nigeria's adolescents. In an observational study (Omotesho 2003:1) on adolescents in Nigeria, it was revealed that the main source of information on HIV/AIDS is the mass media. Among the adolescents surveyed, 33% believed that HIV/AIDS cannot be prevented, 39% felt that AIDS is common among the uneducated, 22% thought that HIV/AIDS is not common in Nigeria, while 25% believed that it is not prevalent amongst adolescents, opinions based on what they have seen on the TV. The television is very popular as a source of sexual health information for teenagers. In a study it was found that 21% female teens and 31% male teens preferred TV as their number one source of information (McKay & Holonaty 1997:29).

Although the media's images of sex and sexuality may have a negative influence on teenage sexual decision-making, there is considerable potential for the use of the media in conveying messages about responsible sexual behaviour. This notion has been supported by means of a number of psycho-social theories, hypotheses and models. Although there exist considerable variations in the theoretical mechanisms by which the media affects the adolescents' sexual attitudes and behaviour, most of them posit that sexually related message content and behaviour act as stimuli to change the psychological and behavioural functions (Escobar-Chaves, Tortolero, Markham, Low, Eitel and Thickstun 2005:303).

Media public awareness programs and educational campaigns that seek to educate adolescents about the risks of unsafe sexual activities need to be aware that effective education continues to be compromised by the lack of a clear understanding of specific kinds of messages that affect adolescents' sexual decisions and practices (Shoop & Davidson 2004:140). The messages projected by the media and the promotion of the roles of adolescents on television and in the movies can influence the perceptions of the adolescents, especially on the issue of sexual behaviour and decisions (Dolan, Corber & Zacour 1990:135).

3.2.1.2 Peer group pressure

The peer group is an important factor in adolescent development and has some bearing on teenagers, especially on their decision about sex. This period of adolescence is characterized by a growing dependence on friends and a lesser dependence on parents. During this period adolescents spend a great deal of their time away from home with friends. They find it easier to relate to their friends and shy away from adults to discuss sexuality issues, thinking they will be shouted at or mocked. In this respect the adolescent is willing to sacrifice his or her happiness to be part of a peer group. The fear of rejection by their friends may even compel them to engage in risky activities, including sexual activities. They are concerned with the fact that they want to "belong" (Osarenren 2002:46).

The period of adolescence has been described as a period of 'storm and stress'. They are going through rapid physical changes, and take comfort in being with others going through the same changes (Papalia & Olds 1998:388). Researchers indicate that the initiation of sexual behaviour is associated with what is perceived as normative in one's peer group. Beliefs about the importance of peers are stronger than the actual research indicates (Brook-Gunn & Furstenberg 1989:250). In their (Brook-Gunn & Furstenberg 1989:250) research

it was not determined whether more sexually inclined adolescents seek to associate with less sexually experienced adolescents, or if grouping begins in advance of the initiation of sexual activity. Moore and Rosenthal (1992:415) found that teenagers invariably obtain their information on sex from friends, who may serve as an influence in their decision-making about sex. Having peers as the primary source of sexual information presents two major problems: (a) peers are notorious for being sources of misinformation; and (b) it is often difficult to dispel sexual myths that are pervasive among adolescents (Benshoff & Alexander 2003:288).

Adolescents may model their behaviour after their friends or be 'pushed' into activities because of being teased, dared or shamed. Benshoff and Alexander (2003:288) found that when teens talk about sex and relationships, they prefer talking to friends rather than to parents and significant others at the ratio of approximately 2:1. In a KAB(Knowledge, Attitude and Behaviour) study on adolescents in Ghana, peer pressure was cited as the dominant reason for young people having sex - 32% of the respondents stated that they had sex as a result of peer pressure, 27% out of curiosity, 19% because of irresponsible parents, and 12% cited broken homes. Two percent (2%) attributed early sex to rape and 8% stated that adolescents have sex primarily due to bad morals (Amoakah-Coleman 2006:24).

Fraser (1997:45) asserts that the pressure to engage in sex increases during middle adolescence, mentioning that peer group attitudes about sex influence the attitudes and behaviours of teenagers. This statement is supported by a report from a survey on adolescents by the Kaiser Family Foundation (2000a:1-2). It was indicated that adolescents between the ages of 13 to 18 years are more likely to get information on sexual health issues from their peers.

Youths who resist engaging in sexual activities tend to have friends who are abstinent as well. They also have strong personal beliefs in abstinence, often based on the negative reactions of their parents. Young people who are sexually active often believe that most of their friends are sexually active as well, and they believe that sexual rewards outweigh the costs of sexual involvement, that sex in general is rewarding, and that it is acceptable for unmarried adolescents over the age of 16 to engage in sexual intercourse (Advocates for Youth 1997:1).

3.3 ATTITUDES

'Attitudes' are feelings or emotions and beliefs in respect of objects, persons or the environment (Gbevwi 2004:37). 'Attitudes' are defined by Huffman, Vernoy and Vernoy (1994:627) as favourable and unfavourable evaluation reactions towards something or someone, exhibited in one's beliefs, feelings, or intended behaviour. Weiten (2007:649) refers to 'attitudes' as positive or negative evaluations of an object of thought.

Le Roux (1994:6) defines an 'attitude' as "...a positive or negative emotional relationship with or predisposition towards an object, institution or person". Brecker and Wiggins (1991:137) contend that 'attitudes' are "...enduring non-verbal features of the social and physical world, and (they) are acquired through experience and exert a directive influence on behaviour".

According to Oskamp (1991:8), the central feature of all definitions of 'attitude' is the idea of readiness for response, which means that 'attitude' is not behaviour or something a person does, but rather a preparation for behaviour, a predisposition to respond in a particular way to the object. The concept 'attitude object' is used to include things, people, places, ideas, actions or situations, either singular or plural.

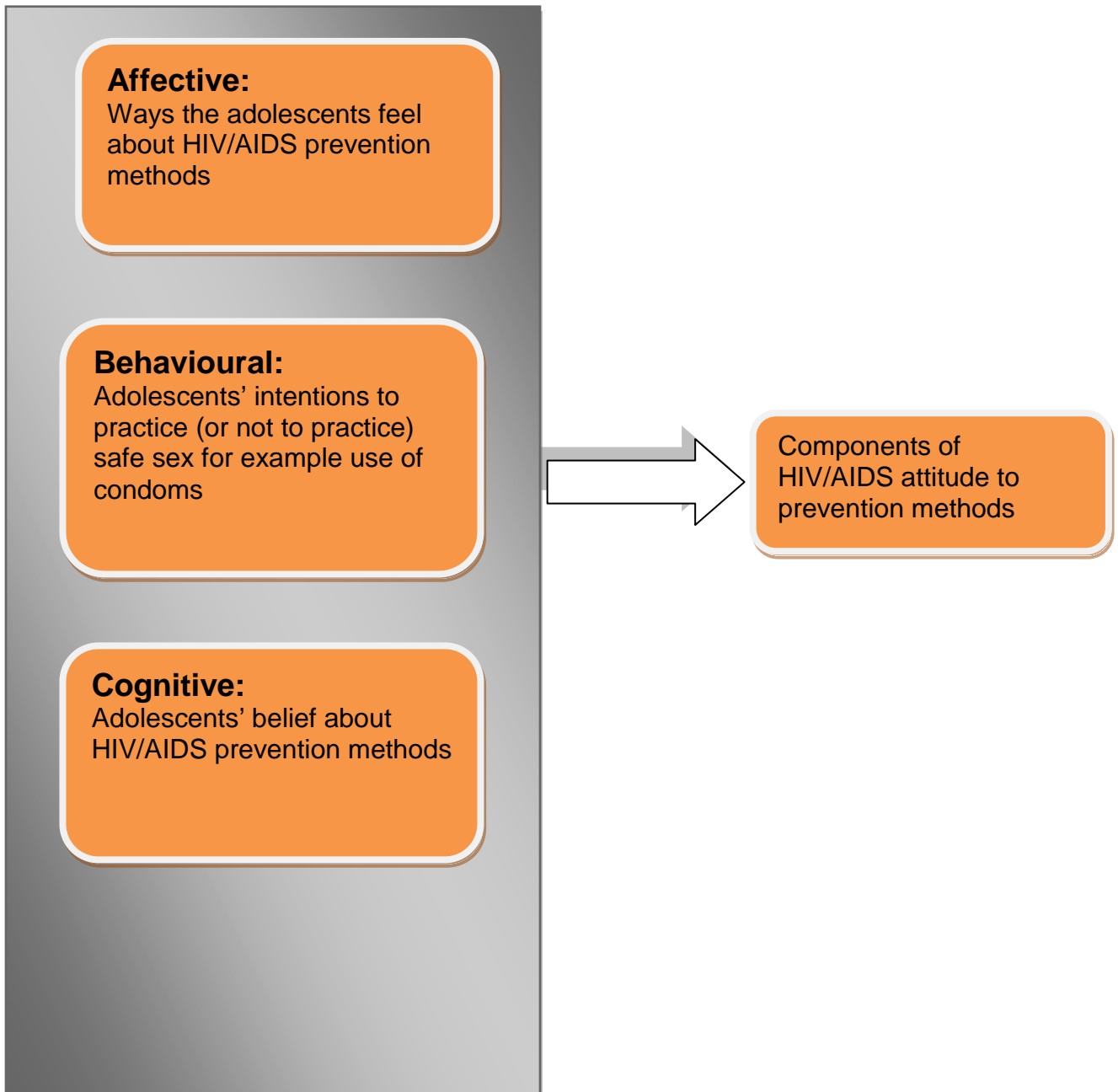
Frankfort-Nachmias & Nachmias (1992:241) defines an 'attitude' as "...a mental or neural state of readiness represented by cognition, feelings and behaviour, organised through experience, deliberate learning and heredity". Attitude therefore exerts a directive or a dynamic influence upon an individual's response to all objects and situations with which it is related. Naido and Willis (2002:220) explain that people's attitudes are made up of the knowledge and the information they process, as well as their feelings, and emotions, and an evaluation of what is important.

3.3.1 Attitude formation

Social psychologists have argued that for an attitude to be formed, an individual goes through the steps of responding to an entity. According to Weiten (2007:649), and Fazio and Olson (2003:259) attitudes may include up to three fundamental components: the feelings, the affective component; the actions, the behavioural component; and the thoughts, the cognitive component.

Rajeeki (1990:347) calls the three components the A-B-C of an attitude. According to this model, the A represents the Affective (feeling) domain or component; the B represents the Behavioural component, and the C represents the Cognitive component. When one holds an attitude, these three components are present in different proportions.

Figure 3.1 :The components of attitudes to HIV/AIDS prevention methods



3.3.1.1 The affective component of an attitude

The affective component of an attitude consists of emotional feelings stimulated by an object of thought (Weiten 2007:649). Within the context of this study, it refers to the feelings and emotions (likes and dislikes) that adolescents have concerning HIV/AIDS prevention methods. This can manifest itself in the form of enthusiasm by the adolescents to practise safe sex.

3.3.1.2 The behavioural component of an attitude

The tendency or disposition to act in a certain way towards an attitude or object constitutes the behavioural component of an attitude (Weiten 2007:649). The intention to practise abstinence and to use a condom provides a clear understanding of the behavioural component of an attitude within the context of HIV/AIDS prevention methods.

3.3.1.3 The cognitive component of an attitude

The cognitive component of an attitude is specifically related to the cognitive evaluation of the idea forming the attitude. According to Lord (1997:223; Weiten 2007:640), a thought or the cognitive component consists basically of ideas, experiences and beliefs that the attitude-holder holds about the object of an attitude. In the case of this study, the adolescents' thoughts are influenced by the ideas, experiences and beliefs they hold about HIV/AIDS prevention methods.

3.3.2 Factors influencing the strength/depth of attitudes

Oslo and Mario (2003:234) report that attitudes vary along crucial dimensions, including strength, accessibility and ambivalence.

- The strong attitudes are held firmly and durable over time and have a powerful impact on behaviour (Petty, Wheeler, & Tormala 2003:634).
- The accessibility of an attitude refers to how often one thinks about something, and how quickly it comes to mind. Highly accessible attitudes are quickly and readily available (Fabrigar, MacDonald, & Wegener (2005:453).
- Ambivalent attitudes are conflicting evaluations that include both positive and negative feelings about an object of thought (Fabrigar, MacDonald, & Wegener 2005:453).

According to Ehlers (1984:8), the strength of attitudes can be influenced by:

- Extremeness (depth): The more extreme the attitude, the more resistant it is to change.
- Multiplexity: Change is more likely to occur in a multiplex attitude than in a simple one. But when changes do occur, the changes in the multiplex attitudes tend to be slighter in comparison to the change in the simplex attitudes.
- Interconnectedness: Attitudes linked to other attitudes that are strongly emotional, will not change easily.

- Attitudes and needs: Attitudes that serve strong wants or needs are relatively more stable. When behaviour contradicts attitudes, people will frequently modify their attitudes, mainly because the behaviour can be seen and the attitude not, but when people are forced to behave in a certain way, attitudes do not change.

3.4 PREVENTION METHODS

HIV/AIDS transmission occurs by three means: sexual intercourse; blood, and blood products; and perinatal transmission, including breast-feeding (National Policy on HIV/AIDS 2003:10). HIV/AIDS prevention in Nigeria is expended on behavioural change programmes with key messages centered on the promotion of abstinence, mutual fidelity and condom use (National Strategic Framework for Action 2005:8-9).

The prevention of HIV/AIDS is an important strategy in the fight against the virus, and relies heavily on education. Nigeria employs a multi-sectoral approach to HIV/AIDS, meaning the involvement of all sectors and communities, by focusing on the prevention of transmission among young people. The principles of the National HIV/AIDS Policy (National Policy on HIV/AIDS 2003:15) are as follows:

- promoting abstinence and mutual fidelity as the best protection against HIV/AIDS;
- integrating HIV/AIDS-education into the curricula of formal schools, beginning at primary school level;
- making condoms available, accessible and affordable to all sexually active individuals;
- developing education programmes for in-school and out-of-school youth;

- producing and disseminating appropriate information, education and communication (IEC) materials targeted towards the youth; and
- promoting delay in the onset of sexual activity.

The sexual transmission of infections has often been tied to unprotected sex (Izugbara 2008:1). According to Jemmott, Jemmott and Fong (1992:372), there are two approaches to reduce the risk of having unprotected sex among young people: the one is abstinence that focuses on reducing the frequency of sexual intercourse; and the other is the safer-sex strategy, that focuses on increasing condom use.

3.4.1 Abstinence

Santelli, Ott, Lyon, Rogers, Summers and Schleifer (2006:73) define ‘abstinence’ as “...postponing sex, or refraining from further sexual intercourse if sexually experienced”. ‘Abstinence’ is one of the actions recommended for the prevention of unwanted pregnancies and sexually transmitted diseases among young people (Davids & Weller 1999:275; Brown, Karim, Hutchinson, Agha, Maclyntyre, Magnani & Church 2001: 1-3). In Nigeria, an abstinence-only until marriage programme was initiated as a priority for promoting sexual and reproductive health among young people (NACA, 2004:24).

Blinn-Pike (1999:296) and Wiley (2002:164) enumerated eight principles underlying abstinence education:

- abstinence yields social, psychological, and health benefits;
- abstinence is the expected standard for children in school;

- abstinence is the only 100% effective way to prevent pregnancies outside marriage, STDs, and other risks arising from sexual intercourse;
- sexual activities should take place in a mutually monogamous relationship;
- negative psychological and physical effects are likely to occur as a result of sexual intercourse outside wedlock;
- having children outside marriage is likely to have negative effects on the child, the parents, and society; and
- there is a need for the youth to be taught sex refusal skills, and to learn how drug abuse, including drinking alcohol, impairs judgment about sexual activity.

Given the listed principles of abstinence, young people are expected to be self-reliant before being sexually active. These principles are assumed to be universally applicable based on the guided development of similar programmes in the developing countries, including sub-Saharan Africa (President's Emergency Plan for AIDS Relief 2007:1).

Nigeria is currently one of the largest beneficiaries of the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). Largely due to this, both Nigeria's official HIV/AIDS policy and the reviewed National Strategic Framework 2005 endorse abstinence as the best protection against HIV/AIDS among unmarried young people (NACA 2005:1; National Strategic Framework 2005:8). According to Izugbara (2008:1), the important role of abstinence as a behavioural strategy for preventing the negative outcomes of adolescent sexual activity cannot be contested.

3.4.2 Condoms

Effective condom use may reduce the risk of transmitting HIV infections up to 70 – 100% (Schuster 1998:238). According to Cates and Stone (1992:78), effective

condom use may also aid in the prevention of gonorrhoea, syphilis, chlamydia, genital ulcers, and herpes simplex virus infections at arguably the same rates. The consistent and correct use of condoms have been found to have an efficacy rate of 98% (Trussel, Hatcher, Cates, Stewart & Kost 1990:53; Cline & Freeman 1992:40; Jemmott & Jemmott 1992:276; Zimmerman & Olson 1994: 202; Brien, Thombs, Mahoney & Wallnau 1994:170).

According to Orly & Rotimi (2003:84), encouraging adolescents to use condoms is due to the rapid spreading of AIDS in this age group. Various studies evaluating condom use among Nigerian adolescents indicated that adolescents have not yet conceded to a culture of condom use. For example, according to the results of a study on teenage sex workers in Ilorin, an urban community in Nigeria, 50% did not use condoms (Adedoyin & Adegoke 1995:27). In another survey into condom use by Dada, Olaseha & Ajuwon (1998:265) it was reported that only 20% of their respondents used condoms, 60% of the sexually active respondents reported that they did not take precautions during their last sexual intercourse, and that it could have resulted in sexually transmitted diseases or pregnancy. Out of the 58% who took precautions, 37.9% used condoms while the remainder used some other forms of contraception.

In a national survey on the use of condoms, 15% of women and 32% of men reported using condoms to prevent sexually transmitted diseases (National Population Commission 1999:10). In the same survey another 20% of women and 38% of men reported ever using condoms for family planning purposes or disease prevention reasons. In addition, 7% of the women and 15% of the men used a condom during their last sexual encounter. From the same survey it was documented that condom use peaked at 20 to 24 years of age and decreased thereafter, suggesting that condom use is higher among those who are not yet married (National Population Commission 1999:33).

Potsonen and Kontula (1999:211), in their survey on condom use and adolescents in Finland, reported that despite the advantages of using condoms, there seems to be a number of factors that work against them. For example, Herbert, Bernard, De-Man and Farrar (1989:708); Hingson, Strunin, Berlin and Heeren (1990: 298); MacDonald, Fisher, Wells, Doherty and Bowie (1994:690); and Wiessman, Plichta, Nathanson, Ensminger and Robinson (1991:72-73) reported negative attitudes toward condom use. Likewise, Godwin and Roscoe (1998:219) and DeBuono, Zinner, Daamen and McCormack (1989:824) reported sexual anxiety and reliance on other contraceptives as having been the most common reasons for not using condoms.

If condom use is to be encouraged among the Nigerian adolescents then it will first be necessary to understand and know what the reasons are that have led to a negative attitude to using condoms. It is imperative to know what the attitudes and perceptions of the Nigerian adolescents are before attention can be given to correcting the situation.

3.5 NIGERIAN ADOLESCENTS' PERCEPTIONS AND ATTITUDES CONCERNING HIV/AIDS AND THE USE OF CONDOMS

3.5.1 Perceptions and attitudes concerning HIV/AIDS

Twelve years ago the results of a questionnaire administered to 400 university students in Nigeria to ascertain their perceptions of HIV/AIDS indicated that 30% of the respondents of both sexes saw HIV/AIDS as not really in existence (Anugwom 1996:593). This is quite worrisome when one takes into consideration that these were university students who were supposed to be well informed. All of the 400 respondents had heard of the existence of the disease in Africa by

means of the television. In addition to this, most of the respondents stated that they had only seen White people being afflicted with HIV/AIDS. None of them claimed to have seen a Black person afflicted and 80 (20%) of them could not remember exactly the race of the HIV/AIDS victims they had seen on the television. It was also noted that a large number of the respondents (280, or 70%) saw HIV/AIDS as an invention of the Western nations to 'put Africa in her place'. Therefore, the respondents mostly thought of HIV/AIDS as a part of the politics of development and propaganda from the Western nations. This revelation vindicates the earlier findings by Raufu (1993:7) who stated that Nigerians scoff at the idea of the reality of HIV/AIDS and see it as Western inspired propaganda.

Maswanya, Moji, Nagata, Horguchi, Apyaji, Honda and Takemoto (1999:199), in their study on the perception of HIV/Aids four years later, found that 70% of their respondents mentioned that they had heard something about HIV/AIDS, and more boys had heard than girls. Eighty-six percent knew at least one person who had died of AIDS and 58% knew someone with AIDS at the time of the survey. Sixty-eight percent knew that a HIV-positive individual can appear healthy, and 88% were aware of the increased risk of AIDS by having multiple partners. Most of the students who took part in this survey thought that AIDS is a very dangerous killer disease, and 85% had the misperception that AIDS could be cured if detected early.

A more recent study (Omoteso 2003:1) that looked at university female students' perceptions of HIV/AIDS in Nigeria indicated a positive finding. The results of the study revealed that the perception of the university students was adequate, as the majority of the respondents (81%) believed that HIV exists and have heard about the virus. Also, 75% of the respondents were quite conversant regarding

the transmission routes of HIV, and were of the opinion that AIDS is caused by the human immune deficiency syndrome.

Another study done at the same time (Smith 2003:23) indicated that most of the adolescents thought that AIDS was a foreign disease that affected White people and homosexuals, but not Nigerians. In addition, they thought that it was a Western conspiracy to spread stories about HIV/AIDS in order to limit the African population growth and also African world power, and that people who are rumored to have died from AIDS are frequently thought by their family members to be victims of witchcraft, and diagnosis and treatment are sought from a range of non-biomedical practitioners.

Smith's study (2003:75) of Nigerian adolescent perceptions of personal risk revealed that there was a high level of knowledge among the respondents. More than 99% of the respondents, both males and females, had heard of HIV/AIDS. Many of the respondents, approximately 85%, knew HIV can be transmitted through sexual intercourse. The level of knowledge was identical between the male and female respondents. More than 70% of the respondents felt that they were not at risk for contracting HIV/AIDS.

The results of recent studies of adolescent students' knowledge about HIV/AIDS revealed that students in general demonstrated a level of AIDS-related knowledge that ranged from low to moderately high, depending on age, grade level at school, geographical placement, the availability of information, and the source of information (Araoye & Adegoke 1996:179; Bandawe, 1992:1; Chirwa & Phiri 1990:36; MacLaclan, Chimombo & Mpemba 1997:41; Ouedraogo, Lorenz, Zina, Rehle & Soudre, 1996:10; Tauna & Hilderbrand, 1993:83; Wilson *et al.* 1992:957; Oyo-Ita, Ikpeme & Efokidem 2005:89). In one study of 738 secondary school students in Calabar, Nigeria, about 30% of the students did not know that

AIDS existed in Nigeria and only 315 were aware that the use of condoms can protect them from HIV (Asindi, Ibia & Young 1992:397). Tauna and Hilderbrand (1993:85) surveyed 416 Nigerian students aged between 10 and 16 years to examine their reproductive health knowledge. Results indicated differences relating to age and grade level, with older and senior students being better informed. However, their knowledge about AIDS was found to be very limited.

The Kaiser Family Foundation (2007:1), in a study on the adolescents knowledge about HIV/AIDS, reported that in 2006 more than one third thought that HIV might be transmitted by means of kissing, 22% thought that it might be transmitted through sharing drinking glasses, while one in six (16%) thought it might be transmitted through a toilet seat. In addition, more than half of the people did not know that having another sexually transmitted disease can increase one's risk of getting HIV (56%), and that a pregnant woman with HIV can take drugs to reduce the risk of her baby being infected (55%). Smaller numbers did not know that there was presently no cure for HIV (14%) and that there are drugs that can lengthen the lives of people living with HIV (13%).

Adeniyi, Adejuwon, Kabiru, William, Musbau, Taiwo and Phillip (2006:23) carried out a research study to ascertain the knowledge and perception of HIV/AIDS among pregnant women in Nigeria. Their results revealed that approximately 90% of the women had heard of HIV but only 27% knew that HIV could be transmitted from mother to child. Of those, 70% thought of HIV/AIDS as a fatal disease, and a slightly greater proportion (94%) did not understand the benefits of HIV counselling and testing (VCT). Nonetheless, almost 90% of the respondents were willing to know their status, following information on VCT.

The researcher has been involved in various community and school projects that seeks to address the issue of HIV/AIDS. Chatting informally to some of the young people indicated that there existed a number of misperceptions, for example:

- having sex with a virgin will cure me of aids;
- washing myself with lime after sex will prohibit infection;
- it is a disease of the poor;
- it is more prevalent in big cities;
- if I am circumcised I will not be infected by HIV;
- it is a punishment from God;
- a spiritualist can heal you if you are infected; and
- it is an excuse used to discourage young people from having sex.

It is not known if these are mere perceptions held by individuals or whether some of these perceptions are held by the adolescent group as a whole. The researcher therefore hopes, by means of a questionnaire, to look at some of the above-mentioned perceptions, as well as to establish young people's knowledge about the true situation regarding HIV/AIDS.

3.5.2 Perceptions and attitudes concerning the use of condoms

One of the main aims of any country throughout the world, Nigeria included, is to educate her people whereby, amongst others, preventing the transmission of HIV. Since there is no cure for AIDS at present, prevention is still the only way. It has become imperative for the Federal Government of Nigeria to put in place the necessary policies and legislation, to stop discrimination, and also to respect the rights of those affected by or infected with HIV/AIDS.

Ransun, Marion and Mathias (1993:277) reported that while the knowledge of HIV/AIDS has increased in the Canadian society, only a small percentage of

persons make use of condoms. This notion is supported by Singh, Porterfield, Thilakavathi, Shepar, Mawar, Divekar and Bollinger (1997:1520); and Bagalley, Drobiniewski, Pozinak, Chipanta, Tembo and Godfrey-Faussette (1997:90) who found in a survey that respondents who were sexually active did not use condoms, or used condoms inconsistently with casual partners.

Oswatt and Masten (1993:51) reported that, according to their survey, about 8% of their respondents with multiple sex partners made use of a condom; about 90% did not use it at all; while 4% of those with multiple partners did not use condoms or, at least not often, despite the universal report that AIDS is transmitted sexually. Also, the findings of Madhox, McCallum, Ewan, and Bhopat (1993:124) stated that although respondents were generally positive about condom use, only 19% always used condoms and 81% never.

According to Edem (1993:10), in a survey on Nigerian university students to the question on the decision to adopt safe sex practices, the data indicated that 65% of the respondents had experienced intercourse, 43% had had multiple sex partners, and an alarming 40% have never used condoms.

An examination of the results of surveys into the use of condoms indicated that there were those who were in favour of making use of condoms, but many still demonstrated a reluctance to using a condom. Once again it is obvious that this attitude is linked to faulty perceptions about HIV/AIDS infection.

The following negative perceptions are indicative of the attitude of not wanting to make use of a condom:

In a study on university adolescents in Nigeria, Akande (1994:300) reported that the majority of them who are sexually active did not use a condom during

intercourse - a condom was not perceived as necessary in having sex with a regular partner.

According to Maliki, Omahan and Uwe (2006:153), the perception of condom use in Nigeria is that only sex workers carry condoms. The cultural expectation of what constitutes good or appropriate behaviour across societies in Nigeria does not include the use of condoms. In this regard adolescents, particularly females, do not want to be seen with condoms, or they will be considered promiscuous.

Sacco, Rickman, Thompson, Levine and Reed (1993:330), in a study on gender differences on condom use, found that females generally demonstrated a more favourable attitude than men to condom use, but were more inhibited to buying and possessing them. Buying condoms and the decision to use a condom is the expected role of men.

Other studies also indicated gender differences in attitudes towards condom use. However, the findings are inconsistent with regard to which gender indicates more positive or negative attitudes. For example, in a survey conducted by Moreau-Gruet, Ferron, Jeannin and Dubois-Arber (1996:650), it was reported that males held more favourable attitudes towards condom use, whereas other studies (Bruce & Walker 2001:433; Muzuno, Kennedy, seals & Myllyloma 2000:1391) indicated that females have more positive attitudes towards condoms than males.

The decision to use a condom may be influenced by gender therefore a critical understanding gender differences may be an important component of promoting safer sexual behaviours (Sheeran & Orbell 1998:245; Mays & Cochran 1988:950). According to Lollis, Johnson, Antoni, and Hinkle (1996:65), it was suggested that men may indicate more negative attitudes about condom use

because it conflicts with their male gender role, and threatens their sense of masculinity. Other studies have reported that women find themselves in risky partnerships always and suggested that women often lack the power to influence their partners' sexual behaviour or to demand safe sex practices (Dunkle, Jewkes, Brown, Gray, McIntyre, & Harlow 2004:1419; Jewkes, Dunkle, Nduna, Levin, Jama, Khuzwayo, Koss, Puren & Duvvury 2006:1416; Pettifor, Rees, Kleinchmidt, Steffenson & MacPhail 2005:1530).

The role of dominance in heterosexual relationships may also be a factor that influences condom use differently for men and women. Martinez-Donate, Hovell, Blumberg, Zellner, Sipan, Shilington and Carricoza (2004:172) explored the notion that women at the highest risk of infection are those who suffer from gender dominance. The results indicated that the negotiation process itself influences the extent to which condoms will be used. These results have also been cited in other studies which found that men exert greater control over the decision to use a condom (Noar & Morokoff 2001:43; Dunkle, Jewkes, Nduna, Levin, Jama, Khuzwayo, Koss & Duvvury 2006:2107; Martin, Kilgallen, Tsui, Maitra, Singh, & Kupper 1999:282; El-Bassel, Fontdevila, Gilbert, Voisin, Richman & Pitchell 2001:29; Sacco *et al.* 1993:330).

According to Maliki *et al.* (2006:152), gender roles often characterize the negotiation process, with men being expected to provide condoms and women influencing the decision, primarily through communication (Sacco *et al.* 1993:330). Clearly, gender is an important variable to consider in the study of HIV/AIDS as it is likely to influence condom use, and thus the effectiveness of prevention programmes.

In addition to the attitudes towards the use of condoms as indicated above, the researcher, in her work with young adolescent students, was given the following reasons for their reluctance to use a condom:

- it gets in the way;
- it takes away the enjoyment of sex;
- it lessens sensation;
- it is inconvenient; and
- it is embarrassing.

The prevention of HIV/AIDS among adolescents has now become the collective responsibility of the parents, the school and the Government. A number of research studies have been conducted on the attitude of adolescents to prevention methods. According to a study by Asuquo *et al.* (2004:66), adolescents agree to the relevance of HIV/AIDS prevention methods, and the findings also indicate that adolescents' attitudes towards prevention programs may be becoming more positive. In a similar survey, Bogart, Kral, Scott, Anderson, Flynn, Gilbert and Bluthenthal (2005:425) reported that respondents indicated positive attitudes towards the use of condoms.

Iliyasu, Abubakar, Kabir and Muktar (2006:1920), on attitudes to voluntary counselling and testing, reported that the majority of the respondents (72.3%) said they were willing to be tested and would recommend it to friends and relatives. The remainder said they would only consent if a cure were available. On looking at the attitude towards condom use among university students, Alarape, Olapegba, and Chovwen (2008:241) reported that students with positive affective attitudes toward condom use reported making use of them more than students with negative affective attitudes.

In order to try to understand why adolescents engage in risky behaviour, one may apply models of behaviour change to the study of condom use. Many psychological models have contributed theoretically to the study of behaviour change, often paying particular attention to high-risk behaviour. The theory of reasoned action (Ajzen & Fishbein 1985:113; Ajzen & Fishbein 1975:45), the theory of planned behaviour (Ajzen, 1985:234, 1988:211, 1991:121), the health belief model (Becker & Joseph 1988:394; Janz & Becker 1984:1-3; Rosenstock, Strecher, & Becker 1994:1203), and the information–motivation-behavioural skills model (Fisher & Fisher 1992:455) can be useful in understanding factors that predict condom use.

According to the theory of reasoned action (Ajzen & Fishbein 1980:221; Fishbein & Ajzen 1975:120), behaviour is a function of intentions to perform behaviour, as well as the attitudes towards and the social norms about that behaviour. In other words, an individual performs a specific behaviour when he/she evaluates it positively and when their perception of the norms and opinions held by others is also positive. In a later work, Ajzen (1991:341) proposed the theory of planned behaviour, which suggests that perceived behavioural control may impact intentions and behaviour, enhancing predictive power in situations that are under the control of the person.

In the case of condom use, attitudes and perceived behavioural control (for example, the intention to use condoms, to purchase condoms, or to communicate about safe sex) will influence condom use. The theory of reasoned action has frequently been applied in the study of sexual risk behaviour and has demonstrated the importance of intentions, of positive attitudes about condom use, and the perception of positive social norms regarding condom use (Albarracín 2003:102; Jemmott & Jemmott 1992:273; Sanderson & Maibach 1996:54; Sheeran & Orbell 1988:167; Wong & Tang 2001:43). The theory of

planned behaviour is also supported, with many researchers finding that condom use is influenced by perceived behavioural control and efficacy in communicating about condoms, and the efficacy in using a condom (Albarracin 2003:23; Ford & Morris 1995:342; Sanderson & Jemmot 1996:123; Sanderson 1999:42).

Another theory which has been used in the study of condom use, is the health belief model (Rosenstock *et al.*1994:34), which proposes that behaviour change is influenced by individual perceptions of risk and the belief that a specific behaviour will have preventative benefits. In the case of HIV-prevention and condom use, the health belief model posits that condom use would be influenced by an individual's perceptions of risk of becoming infected, the belief that HIV-infection represents a serious health problem, and that using a condom would have a positive impact on the risk. The health belief model has been examined quite extensively in the field of AIDS-prevention, and demonstrates its applicability to the understanding of condom use (Norris & Ford 1995:341). Despite this, the health belief model is generally considered to be less acceptable than the theory of planned behaviour (Vanlandingham, Suprasert, Grandjean & Sittitrai 1995:34).

The information-motivation-behavioural skills model (Fisher & Fisher 1992:456) was designed to model AIDS-risk behaviour change. In many ways, the information-motivation-behavioural skills model reflects a combination of the strengths of the health belief model and the theory of planned behaviour. According to the information-motivation-behavioural skills model, information relevant to HIV-transmission and prevention is a prerequisite for risk behaviour change (Fisher & Fisher 1992:455). The motivation to make use of condoms is a function of attitude towards such behaviour, social norms and the perception of vulnerability to HIV.

Finally, behavioural skills for using condoms are related to the perceived efficacy in the use of condoms (Fisher & Fisher 1992:234). The information-motivation-behavioural skill model has demonstrated under utility in the study of condom use and AIDS prevention (Albarracin 2003:24; Fisher & Fisher 1996:120; Misovich, Fisher & Fisher 1997:23).

The discussion of the perceptions and attitudes toward the use of condoms as a preventative method shows that the negative attitudes that exist lie imbedded in negative perceptions.

3.6 CHANGES IN BEHAVIOUR

To be able to effectively carry out a HIV/AIDS-prevention program it must be grounded in a theory. Kalichman (1998:191) stated that effective HIV-prevention programmes have been designed based on behavioural and social theories in relation to some core elements. He continued to say that these theories have been created by using cognitive-attitudinal and affective-motivational constructs. It is important to mention these theories as they try to explain human behaviour as also exhibited by adolescents, and they suggest ways to achieve behavioural changes in relation to the students' risky behaviour.

According to Jackson (1997:143), effective theory can be an aid in all stages of the program development process. He mentions that the use of theory serves to facilitate the development of a comprehensive and effective school health education program, and by so doing increases the likelihood that the program will have the desired impact on behaviour change (Freudenberg, Eng, Flay, Parcel, Rogers & Wallerstein 1995:290). Each theory is based upon different assumptions. They all profess that behavioural changes occur by changing the

potential risk producing situations and social relationships, the perceptions of risk, attitudes, self efficiency, beliefs, intentions and outcome-expectations (Kalichman 1995:193). The behavioural theories may help to cast some light on the reasons why the mere knowledge-acquisition of HIV/AIDS is insufficient to change risky behaviour.

Since HIV-transmission is propelled by behavioural factors, theories on how individuals change their behaviour have provided a foundation for the prevention of HIV worldwide (Kalichman 1998:191).

For the purpose of this study eight behavioural models will be discussed.

3.6.1 The AIDS Risk-reduction Model

The AIDS Risk-reduction Model was developed by Catania, Kegeles and Coates (1990:121). This model indicates that behavioural change is a process individuals must go through, with different factors affecting movement. It proposes that the more an intervention helps an individual to progress in the stage of continuum, the more likely he/she is to exhibit change. The AIDS Risk-reduction Model uses the construct from several other models/theories (health belief model, self-efficiency model and psychological theory) and is applicable to sexually active individuals. This model mentions the following three stages:

3.6.1.1 Labelling

This involves that a person has to label his/her actions as risky for contracting HIV. Three elements are necessary:

- knowledge about how HIV is transmitted and can be prevented;
- perceiving a person to be susceptible to HIV; and
- believing that HIV is undesirable.

All these three elements influence how people perceive HIV/AIDS.

3.6.1.2 Commitment

This decision-making phase is shaped by four factors:

- making a firm commitment to deal with HIV as a problem;
- remaining undecided or not making a decision;
- waiting for the problem to solve itself; and
- resigning oneself to the problem, namely, weighing up the costs and benefits of the one's behaviour.

The last stage of this model is called:

3.6.1.3 Enactment

This also includes three stages, namely

- seeking information;
- obtaining remedies; and
- enacting solutions.

Although this model is presented as a series of sequential stages, individuals may move through them in any order. Studies have found that moderate levels of fear may motivate health-protective behaviour; excessive fear may immobilize and impair performance; and too low an affective state may produce apathy with respect to health actions (Strecher, DeVellis, Becker & Rosenstock 1986:80). Several studies have supported the usefulness of this model. One such study was carried out by Boyer, Barrett, Peterman and Bolan (1997:359) who reported that there was an increase in condom use with men, and a decrease in the number of sexual partners without condom use. Also, following psycho-educational interventions based on the AIDS risk-

reduction model, Mallow, West, Corrigan, Pena and Cunningham (1994:131) found that intervention group subjects displayed enhanced efficacy, skills in the use of condoms, and sexual communication, and indicated a reduction in sexual HIV risk behaviour.

3.6.2 The Health Belief Model (HBM)

The Health Belief Model (Kirscht & Joseph 1989:111) is a behavioural model that focuses on two important elements in health-related behaviour, namely, the threat of illness and the behavioural response to the perceived threat. In perceiving the threat, the individual considers his personal susceptibility to harm or illness, the perceived severity of the threat of the illness and the value of behaviour or line of action to overcome the perceived threat, and the barriers to the action.

The Health Belief Model proposes that health behaviour is a function of the individual's socio-demographic characteristics, knowledge and attitudes. According to this model, a person must hold the following beliefs in order to change his/her behaviour:

- the perceived susceptibility to a particular health problem, for example, "Am I at risk of contracting HIV?";
- the perceived seriousness of the health condition, namely, "How serious is AIDS?";
- the perceived benefits of specific behaviour, for example, regarding condom use, "Is it effective?";
- clues to action, namely witnessing the illness or death of a close friend due to AIDS;

- the perceived benefits of preventive actions, for example, “If I start using condoms or abstain from casual sex, can I avoid becoming infected? ”; and
- barriers to taking action, “I don’t like using a condom”.

The proponents of this model argue that the belief elements produced in an individual (Becker 1974:324) some psychological readiness to act in the face of perceived threat to one’s health. Specific factors are known that seem to influence psychological readiness, for example, peer pressure, which may be relevant in the case of adolescents. HIV/AIDS-education, therefore, must build a sense of personal susceptibility to harm when educating adolescents regarding unsafe behaviour. This model believes that the educational efforts must produce in recipients the belief that it is indeed in their best interest to change their ways of behaving.

3.6.3 The Social Cognitive Theory

The Social Cognitive Theory maintains that behaviour changes are dynamic and are influenced by personal and environmental factors. One theory which explains risk-taking behaviour is Bandura’s Social Cognitive Theory (1986:125). This theory is based on the premise that it is easier to alter people’s beliefs about the causes of their behaviour than to change the way they behave (Bandura, 1986:40). He continued to state that people tend towards ‘unhealthy habits’ because they do not know how to change their own behaviour. He then defined the term ‘self-efficacy’ as “...not being concerned with the skills one has, but with the judgements of what one can do with whatever skills one possesses”. He stated that a person’s judgement of his/her self-efficacy will determine how he/she will behave when faced with obstacles. He listed several sources for the development of self-efficacy, namely, the family, peers, and most importantly, the school, as agents of impacting knowledge, behavioural skills, and skills and

beliefs about capabilities. At school one needs to target the adolescent students' sense of self-efficacy, focusing mainly on impacting relevant knowledge. Other Social Cognitive Theorists state that human beings learn new behaviours by means of direct experience, or by observing the behaviour of others.

3.6.4 The Adolescent Decision-making Model

Decision-making is an important component of AIDS-education for adolescents. Every decision that an individual makes depends on others made previously, and each decision directs or diminishes the range of choices one has left. Therefore, understanding exactly how adolescents make decisions should be carefully considered. Some aspects of decision-making can be learned.

Meeks and Heit (1988:37) apply what they refer to as a responsible decision-making approach in their curriculum 'AIDS: What you should know.' Their decision-making process calls for students to do the following: identify the situation, identify different decisions you might make to resolve the situation, ask questions about each possible decision, make a responsible decision, and act on it, and evaluate actions. Students may ask themselves five questions to assess whether a proposed decision will lead to responsible actions, namely, "Would the results of my decisions be healthful?" "Would the results of my decisions be safe?", "Would the results of my decision show respect for myself and others", "Would the results of my decision follow my parents' or guardians' guidelines?" (Meeks & Heit 1988:38).

One problem with this model is that it does not capture the complex nature of decisions related to sexuality and HIV/AIDS. The steps have to take into consideration information processing from peers, parents, other adults, and the media, through critical or reflective self-analysis. In an attempt to address this shortcoming, Langer and Wareit (1992:919) advanced a new model of

adolescent decision-making called the Pre-adult Health Decision-making Model (PAHDM). The central premise of the PAHDM is that adolescents are in a process of self-development, and in order to understand their decision-making, the concept of the emerging self as it interacts with their 'life world' must be taken into consideration prior and subsequent to a cue to action (Langer and Warheit 1992:919). A major assumption by authors of this model is that directness and orientation are important components of decision-making. More specifically, the focus is on how reference groups associated with decision-making, direct and reinforce the perceptions, attitudes, beliefs, and behaviours related to risks.

In the PAHDM, Langer and Warheit (1992:920) primarily focus on two major aspects in respect of adolescent decision-making: inputs, with consideration to knowledge and beliefs, and outputs, defined as the adolescent's attitudes and behaviours. "... both inputs and outputs....mediated at different points by psychosocial/environmental factors which exist along a time sequence" (Langer & Warheit 1992:920). Thus, past, present, and a self-perceived future factors are considered by the PADHM to intervene or mediate adolescent decision-making at the input stage (prior to any cue to action), and the decision-making stage.

Responsible decision-making includes two major components, namely, adequate knowledge based on information and a system for organizing and studying that information in order to arrive at a decision. As regards the former, it is extremely important that students obtain accurate facts. Without accurate facts and relevant information that is closely related to the decisions at hand, there is very little chance that a 'good' healthy choice can be made, except by accident. Regarding enough information on which to base decisions, the individual should remember that the more related information he/she has, the greater the chances will be of reducing errors. Once the individual is satisfied that he/she has adequate information, it has to be organized into a usable system.

To develop a good system, students must learn that an action is most likely to bring about the desired results most of the time. In some situations, a given action will lead to a particular outcome. It becomes important, therefore, to learn to estimate realistically the chances of specific actions producing specific outcomes. It is doubly important that the individual estimates and that predictions are made based on sufficient related, factual, and correct information to ensure realistic choices.

3.6.5 The Theory of Reasoned Action (TRA)

The Theory of Reasoned Action, postulated by Fishbein (1967:1470), is based on the premise that human beings are reasonable creatures who systematically use the information available to them to decide what action to take. In other words, to be able to change risky behaviour it is necessary to change the underlying cognitive structure of the behaviour in question. This theory deals with the relationships between belief, attitudes, intentions, and behaviour (Fishbein, Middlestadt & Hitchcock 1994:61).

Furthermore, the TRA assumes a casual chain that links beliefs to behaviour. According to this model, behaviour is perceived to result from the function of the intention to perform the behaviour. The intentions to behave in a particular manner are composed of two elements: the first component is the attitude toward the behaviour, which is a person's overall positive or negative feeling toward the performance of the behaviour. A person's attitude is influenced by his/her behavioural beliefs – which the performance of the behaviour will, in fact, lead to certain outcomes, and whether this outcome is perceived as positive or negative.

The second component of behavioural intention is that of subjective form. This is being determined, according to Fishbein *et al.* (1994:67), by the person's normative beliefs, that is, whether or not people who are important to the person approve or disapprove of the performance of the behaviour, weighed by the motivation to comply with those referent behaviours.

In order for AIDS interventions to be effective, they first have to influence the beliefs that underlie the decisions to perform or not to perform certain actions. The mere provision of education and information is not sufficient, according to the TRA. It may even be that some of the prevention programs are based on false assumptions on how HIV can be transmitted and prevented. If this is the case, the information may not translate into desirable behaviour.

According to Fishbein *et al.* (1994:235), one of the main reasons why such aforementioned interventions fail is because they often do not address appropriate beliefs. A good example of this is the message about condom use. The majority of people know that using a condom can help to prevent HIV and other STDs. However, despite this knowledge, they still continue to engage in sexual activities without using a condom. This is like telling people what they already know. This is the case in Nigeria, where the popular jingle will always say, if you cannot practise abstinence, use a condom. According to the TRA, telling people what they already know may not produce much of a change in behaviour. Instead, the intervention must be aimed at changing behavioural or normative beliefs that underlie the use of condoms. For example, "Do you feel that a condom will decrease your sexual pleasure?" or "Are you embarrassed to buy condoms, or to ask your partner to use a condom?" In order for prevention methods to work with adolescent students in Nigeria, decisions about the specific behavioural or normative beliefs must not be based on intuition, but must instead

be determined empirically by closely examining the attitudes and beliefs specific to the population in question.

3.6.6 The Diffusion of Innovation Theory

The Diffusion of Innovation Theory was first propounded by Roger (1983:126). He defined 'innovation' as "...an idea, practice or object that is perceived as new by an individual or other unit of adoption". He also defined 'diffusion' as "...the process by which an innovation is communicated through certain channels over time among the members of a social system".

The Diffusion of Innovation Theory is composed of four key elements. They are:

- the innovation, which is the new health promotion concept or strategy;
- the communication channels, which are the means by which the messages are presented and feedback obtained;
- the time or process required for the innovation to reach the target audience; and
- a social system, or the structure and functions of relations among a group of individuals (Dearing, Meyer, & Rogers, 1994:79).

The Diffusion of Innovation Theory therefore examines how an innovation is being communicated over time among the members of a social system (Dearing *et al.* 1994:79). According to Orlandi, Landers, Weston, and Haley (1990:234), many health or social interventions fail because of "...the gap that is frequently left unfilled between the point where innovation-development ends and diffusion planning begins".

3.6.7 A Piagetian Cognitive Developmental Perspective combined with the Intuitive Theories

Sigelman, Deronowski, Woods, Mukai, Alfred-Liro, Durazo, and Maddock (1996:254) argue to marrying the Intuitive Theory with a theory that has dominated the research of HIV/AIDS and education responses in the past, which is the Piagetian Cognitive Developmental Perspective. Piaget, as mentioned in Mussen, Cogner, Kagan, and Huston (1984:236) has indeed had a tremendous influence on the manner in which HIV/AIDS-education has unfolded the world over. He postulated that the Cognitive Development Perspective consists of four stages: the sensorimotor, pre-operational, concrete operational and formal operational stages. Adolescents, being the main subjects of this study, fall in the formal operational stage.

The Piagetian cognitive developmental perspectives with the intuitive theories above-mentioned indicate that an individual actively constructs his or her own world. Cognitive development depends on both maturation and active contact with the outside world (Mussen *et al.*1984:236). In the light of this the adolescent students are the target group of this study, because the basic point of departure with their thinking is that the complexity of children's thinking increases with age. The Piagetian developmental perspectives and the intuitive theories are based on the premise that children need to be cognitively ready before they can grasp the meaning of, in the case of this study, disease concepts. This is why it may be necessary to target the adolescents. It may seem like a waste of energy and resources if interventions and/or educational programs are targeted towards much younger children, as they may not be mature enough and ready to assimilate the information..

Researchers such as Sigelman *et al.* (1996:225) have challenged the view that children cannot benefit, until they are cognitively ready to assimilate new information, and also that their levels of conceptual understanding cannot be altered. They furthermore stated that although it may be true that children lack an understanding due to their young age, this does not mean that they cannot be exposed to age-appropriate instruction, for example, regarding HIV/AIDS. Van Coeverden de Groot (1991:1455) believes that the earlier HIV/AIDS education begins the greater the benefits. They contend that the early education of elementary school children may prevent them from risk-taking behaviour, they may make better sense of HIV/AIDS-related information, it may increase their compassion for persons with AIDS, correct misconceptions about transmission through casual contact, and also reassure them in respect of the illness.

3.6.8 The Transtheoretical Model (Stages of Change)

The Transtheoretical model, (also known as the Stages of Change), was developed by Prochaska and DiClemente (1983:120). They proposed that all people go through the same stages, regardless of the theory being applied. The two basic dimensions of the transtheoretical theory are, stages of change, and processes of change. The five stages of change describe an orderly sequence of change that people go through. These changes are:

- Pre-contemplation, the stage where people have no intention of changing their behaviour.
- Contemplation, the stage where people are thinking about making a change.
- Preparation, the stage where people intend to take action in the immediate future, and have already taken some behavioural steps in that action.
- Action, the stage where people are actually involved in changing their behaviour.

- Maintenance, the stage where people have been successful in making and maintaining the change.

These processes provide important guides for intervention programs, because they are independent variables that people need to apply to move from stage to stage (Prochaska, Redding & Evers 1997:112).

As regards HIV/AIDS, there are a number of processes of change that can be used to prevent high-risk behaviours. The above-mentioned model also indicates that it is important to identify where people are in terms of their stage of change, and then to utilize the interventions that are most suited to that particular stage. For example, pre-contemplators would include adolescent students who do not know about the risk of AIDS, who probably minimize the dangers to themselves, or for whatever reason, have no intention of changing their risky behaviour. These people fall under the category of people who are defensive about their behaviour and resistant to outside pressure to get them to change. At this point the most effective intervention would be the process of consciousness in raising or increasing their levels of knowledge and their awareness of the risk of AIDS.

On the other hand, the contemplators are already aware of their risky behaviours, and are seriously considering changing their behaviour. In this stage, individuals require a great deal of encouragement and support. Due to the fact that relapse is a common occurrence, effective interventions for people in the action and maintenance stages would focus on the positive reinforcement of their behaviour, and other relapse-prevention methods (Valdiserri 1992:42).

AIDS risk-reduction interventions have shown that, in general, educating adolescents about AIDS has not always translated into appropriate behavioural change (Bury 1991:123; Kalichman 1995:234; Piot & Merson 1995:78). Hence

there exists a need to re-examine the current health behaviour models used to plan interventions that are applied to adolescents. Sexual decision-making amongst adolescents is multifaceted. Furthermore, if successful interventions for this age group are to be made, the adolescent students' must carefully attend to contextual meanings.

Understanding the theories that underlie change need to be applied in the endeavour to change the perceptions and attitudes concerning HIV/AIDS and prevention methods where a condom is used.

In section 3.7 attention will be given to the different methods that can serve as tools to promote this change.

3.7 MEDIUMS TO PROMOTE A CHANGE IN PERCEPTIONS AND ATTITUDES

Flanagan (1995:85-86) insisted that perceptions and attitudes can be changed through learning. As far as HIV/AIDS is concerned, this may involve explicit instructions from teachers to students about HIV/AIDS, prevention methods, and the need for adolescents to practice safe sex. Eysenck (2004:638) emphasised the need for persuasion and the need to adopt healthy lifestyles for prevention programmes to work. He (2004:638) stressed the techniques of persuasion to bring about an attitude change. Persuasion communication aims to induce a person to adopt a particular set of values.

Weiten (2007:651) enumerated three effective factors in persuading someone to change his/her attitude:

- Source factors: The source presenting HIV/AIDS prevention methods must possess the following traits: expertise, trustworthiness, high credibility and likeability (Weiten 2007:651).
- Message factors: Messages must be presented in a clear and concise manner in such a way that the adolescents are made to understand the consequences of practising unsafe sex.
- Receiver factors: A receiver's resistance to persuasion will depend in part on the nature of the attitude and the belief that the source is trying to change.

Adolescents need to obtain adequate information on HIV-transmission before initiating sexual activities, and they need access to a variety of sources of information. Bakker (1999:152) maintains that the dissemination of information on HIV/AIDS should aim to increase knowledge of HIV-transmission and to promote safe sexual practices. Various sources of HIV/AIDS-information have been identified by researchers. In section 3.2.1 the mass media and peer pressure were discussed as factors influencing perceptions about HIV/AIDS and sexual behaviour, and a means for providing a vehicle that will bring about a change in perceptions and attitudes, and these will also form part of the discussion in section 3.7. This section will therefore look at the different mediums to bring about change in the adolescents' perceptions and attitudes to HIV/AIDS-prevention, and the use of condoms.

3.7.1 The mass media

Kelly (1999:5) reported that the mass media, like the television, should promote and emphasize aspects like sexual abstinence for adolescents, although it was mentioned that before such programmes are designed, the knowledge, concerns, attitudes and behavioural needs of the adolescents should be stressed and taken

into consideration. The inputs of the parents and community leaders regarding the sex programmes are also important..

Various forms of mass media messages can influence the sexual behaviour of adolescents.

3.7.2 The television (TV)

The TV is a valuable source of information. A study among Chinese college students to determine the sources accessed for information on the transmission of HIV revealed that the TV was a valuable source of information on HIV/AIDS, although not easily accessible at college because of limited TV sets. However, many students watched TV when they were at home on holiday (Walsh-Childers, Treise, Swain & Dai 1997:564). In South Africa, Strydom (2003:64) found that the majority (85.2%) of the respondents felt that there should be more TV programmes on the transmission of HIV.

According to a survey on HIV/AIDS among adolescent students in Nigeria, Oyo-Ita, Ikpeme, Etokidem, Offor, Okonkon and Etuk (2005:4) reported that the majority of the respondents (54%) ranked the TV the highest among the sources of HIV/AIDS-information. Furthermore, Bhattacharya, Cleland and Holland (2000:206) reported the TV to be the major source of information on HIV/AIDS among Asian-Indian adolescents. Harding, Anadu, Gray and Champeau (1999:29), in a survey on Nigerian university students, reported that the students obtained information about HIV/AIDS from the TV rather than from the universities and homes.

Similarly, Nwezeh (2008:394) agreed and illustrated that the mass media is the leading source of HIV/AIDS-information among adolescents in Nigeria.

3.7.3 The radio

The radio is a prime source of information for adolescents. In a baseline survey, Phiri and Erulka (2000:18-22) found that between 73% and 83% of adolescents listen to the radio. Walsh-Childers *et al.* (1997:564) reported that all the students in their study owned radios and spent not less than thirty minutes a day listening to the radio. Buseh, Glass, McElmurry & Mkhabelab (2002:534) indicated that the radio was among the primary sources of information on HIV-transmission and was widely available in most of the respondents' homes.

In Nigeria the radio is among the preferred sources on HIV/AIDS-transmission Wodi (2005:89).

Generally speaking, the radio is therefore a very popular source of information on HIV-transmission.

3.7.4 Magazines

General interest magazines can be used to disseminate information on HIV-transmission among the adolescents. Walsh-Childers *et al.* (1997:564) found that in China, students reported magazines as a valuable source of information on HIV-transmission, although they could not be easily accessed because of the cost. Magazines were therefore read only occasionally, and shared with friends and classmates, when available. Buseh *et al.* (2002:534) indicated that magazines are important sources of information on HIV-transmission, although not always affordable for the youth.

3.7.5 Friends

Adolescents share most of their health-related information with their friends and peers, hence they should be equipped with information that is accurate. According to Best (2000:6), young people prefer to receive reproductive health-information from peers. In Ghana and Nigeria, for example, adolescents adopt behavioural changes and a reduction in the number of sexual partners as a result of peer education (Oboro & Taboweni 2003:17). These authors also found that 85% of the respondents discussed sexual matters with friends, and the majority had a good knowledge of HIV-transmission. Amoran, Onadeko and Adeniyi (2005:79) indicated that the respondents rated friends as their primary source of sex- and HIV/AIDS-information. Ewuniyi and Ogunyemi (2006:52) agreed and reported that friends are the primary source of HIV/AIDS-information for adolescents. Peer educators are among adolescents' preferred sources of information because they are more approachable and non-judgemental (Amuyunzu, Nyamongo, Biddlecom & Queradraogo 2005:35).

3.7.6 School teachers

It seems that school teachers are not keen on providing HIV/AIDS-information to students in Nigeria. This may be attributed to inadequate training, and cultural inhibitions cause the topic of sex and sexuality education a taboo in the country. According to the National Policy on HIV/AIDS, sexuality and family life education, which include providing HIV/AIDS-information and education for the students, have been incorporated into the school curriculum (FMOH 2002:1). Researchers are of the opinion that the introduction of sexuality and HIV/AIDS-education are coming too late. According to Van Coeverden de Groot (1991:1455), sex education at schools is started at a too late stage. The situation is that adolescents are often already sexually active when sex education is introduced.

According to Kelly (1999:16), it would appear that the school is doing very little to inform adolescents about sex education and HIV/AIDS. The respondents rated the school very low as a source of HIV/AIDS-education.

Yazdi, Aschbacher, Arvantaj, Naser, Abdoolahi, Asadi, Mousavi, Narmani, Kianpish, Nicfallah and Moghadam (2006:1007) found that Iranian adolescents (66% of them) obtained their HIV/AIDS-information from school teachers. This source of HIV/AIDS-information was rated first among the participants. Obiechina, Diwe and Ikpeze (2005:89) reported that in Nigeria school teachers are the most preferred source of HIV/AIDS-information among adolescents.

Bankole and Mabekoje (2008:249) reported that the majority (64%) of the teachers in Nigeria reported that they do not have adequate HIV/AIDS knowledge, and attempting to answer questions from adolescents may cause embarrassment when they could not answer the questions satisfactorily. Approximately 28% felt that giving HIV/AIDS information to students might have the negative consequence of promoting sexual activities, when they are informed of the various precautionary measures. The remaining eight percent (8%) mentioned that cultural/societal norms prohibit them from openly discussing sex in Nigeria, and there was always the possibility of parents raising objections should teachers attempt to teach students sex-related matters.

3.7.7 Parents

The role of parents in the lives and the decision-making of youths are often underestimated. Although the transition to greater independence is the hallmark of this developmental phase, parents clearly have a role to play and exert significant influence in the choices that young people make about sex. Parents are also very influential in the sexual attitudes and behaviour of adolescents.

The adolescent period is, however, characterized by them drifting towards their peers, and thereby creating a gap in their homes. This is the period when there are frequently clashes between parents and their children. Researches on the parental influence on adolescents' perception of HIV/AIDS are surprisingly sparse. Issues of familial communication in respect of first intercourse or sexuality information and other related aspects in general seem to be missing in published studies. One study found that the greater the numbers of sexual topics discussed by parents, the less likely the children are to have had coital experience or to have been promiscuous (Benshoff & Alexander, 1993:288). Parents also have a strong influence on adolescents' opinions, beliefs and attitudes towards sex.

Fundamentally, it does seem that parents believe that they do not know enough about sexual topics to discuss them with their children. Researchers found in a study, that parents may misjudge opportunities to discuss sexuality information; others may choose not to recognize their child's emerging sexuality and interest in sexual matters (Andre, Frevert & Schuchmann, 1989:260). Haffner (1998:454) revealed one aspect of the parental relationship with adolescents that discourages the discussion of sexuality which is parents believe that children may experiment when given all the sexual information. Many adolescents are willing to risk pregnancy and sexually transmitted diseases including HIV, rather than damage their reputation with their parents, or experience the disapproval of adults with whom they have to interact to obtain contraceptives and condoms. In a parent-adolescent communication study it was revealed that prior discussions of sexual matters with parents and significant others can facilitate responsible communication and sexual practices with sex partners (Shoop & Davidson 1993:146).

A Kaiser's Family Foundation survey revealed that teenagers are the least likely to seek information from their parents (32%). Most of the teenagers said that they would rather ask their friends for information (61%). A significant number of the teenagers (43%) expressed a strong desire for information on how to talk to their parents about their sex relationships. Also, in another survey, nearly 80% of the teenagers indicated that their parents had told them what they knew, and had discussed with them what their parents thought might influence their decisions about sex relationships (Kaiser Family Foundation, 2000b:1).

While HIV/AIDS education can be integrated into the school curriculum from the primary grades throughout formal education, parents should still be involved in educating their children (Bakker 1999:151). It may seem that parents are shifting their responsibility as primary sexuality educators of their children onto the school. This notion is underscored in a survey on Nigerian adolescents by Oyo-lta *et al.* who reported that parents ranked the lowest (2.2%) as adolescents' source of HIV/AIDS-information. According to Kelly (1999:15), it became apparent that the parents are preferred by younger adolescents as their source of sex and HIV/AIDS-information. Wodarski (1995:7) reported that two-thirds of the parents did not discuss sex matters with their children. Steinberg and Levine (1992:83) supported the view that the majority of parents are reluctant to supply sex and HIV/AIDS-information to their adolescents.

Buseh *et al.* (2002:534) found that in Swaziland parents were the least reported sources of information on HIV/AIDS, and the researchers urged them to play a role in educating their children on sexual issues and HIV-transmission. According to Oboro and Taboweni (2003:17), 15% of the respondents discussed sexual issues with their mothers, while only 2% discussed these matters with their fathers. Young people view their mothers as more approachable than their

fathers regarding sexuality and HIV/AIDS issues (Amuyunzu-Nyamongo, Biddlecom, Queredraogo & Woog 2005:34).

3.7.8 Sexuality and HIV/AIDS education

Asuquo *et al.* (2004:71) are of the opinion that the introduction of formal sex and HIV/AIDS education in schools is necessary for the improvement and sustenance of optimistic perceptions of HIV/AIDS. Anugwom (1996:595) agrees that in order to tackle the problem of wrong and unjustified perceptions of HIV/AIDS it is necessary to incorporate HIV/AIDS into the school curriculum in Nigeria. Similarly, Sy, Richter and Coppello (1989:100), in a study on adolescents, suggested that in order to change adolescents' perceptions of HIV/AIDS there should be a realignment of AIDS-prevention programmes in schools. Sy *et al.* further urged that HIV/AIDS-education should be incorporated into the curriculum of schools in Nigeria.

HIV/AIDS is known to affect all aspects of human life. Chelala (2004:1) reports that although HIV/AIDS is a problem that can be constrained by well-structured education programmes, the deadly virus still continues to spread so widely that it has a profound adverse impact on communities and institutions. The education sector is one of the institutions hardest hit by the virus (see 2.3.2.2).

3.7.9 Schools and family counseling programmes

Asuquo *et al.* (2004:71) are of the opinion that effective school and family counselling programmes should be devised where students may be counseled, individually or in groups. Omoteso (2006:132), in a survey on adolescents and sexual behaviour, reported that more psychologists and counsellors should be

made available at schools to guide students to control and modify their sexual behaviour.

3.8 CONCLUDING REMARKS

This chapter dealt with the perceptions and attitudes of Nigerian adolescent students to HIV/AIDS and prevention methods. The literature review looked at the formation of perceptions and attitudes and identified certain sources, for example, the mass media and peer groups.

The perceptions and attitudes held by Nigerian adolescents will form the basis for whatever initiatives may be planned to address the HIV/AIDS-crisis in Nigeria. A number of possible vehicles that could be used to bring about change were discussed in section 3.7. However, for these initiatives to be successful they should be based on a realistic idea of what the perceptions and attitudes are that need to be changed. These perceptions and attitudes will form the basis for what needs to be addressed. This chapter, therefore, leads to the research methodology that was used to identify the perceptions and attitudes of adolescent students in Nigeria.

CHAPTER FOUR

THE RESEARCH DESIGN

4.1 INTRODUCTION

In the previous chapters it was indicated that, based on various factors, adolescents are vulnerable to HIV/AIDS. The period of adolescence can lead to sexual behaviour that places them at risk of HIV/AIDS-infection. Incorrect perceptions, for example, their invulnerability, can lead to risky sexual behaviour, behaviour that may also be influenced by their perceptions about HIV/AIDS. By means of literature research it was established that their perceptions of HIV/AIDS can be influenced by a number of variables, for example, peer group pressure, the mass media, their parents and gender.

The changing of adolescents' behaviour is founded on changing the faulty perceptions, and by promoting methods of preventing HIV/AIDS-infection. Education initiatives have therefore been introduced to promote safe sex, and the use of condoms has been an important aspect in the initiatives that promote prevention. Different methods of providing this type of education have been suggested that have to be planned after the perceptions and attitudes toward the use of condoms have been identified. It has been suggested that this is the starting point to address the crisis in Nigeria.

In this chapter a description will be given of the methods used to collect the data. A quantitative method of inquiry, which involves data collection by means of a structured questionnaire, was chosen for the purpose of this research.

This chapter will focus on the instrument that will be used, on the research problem, and the aim of the empirical investigation. The research design, the study area, population for the study, the sample and sampling techniques, the reliability and validity of instruments and the procedure for the administration of the instrument will also be discussed in this chapter.

4.2 THE RESEARCH PROBLEM

The research problem of this study is: Will adolescent students practise safer sex if they have positive perceptions about HIV/AIDS and positive attitudes to prevention methods?

4.3 THE AIMS OF THE EMPIRICAL INVESTIGATION

The aims of the empirical investigation are to

- ascertain the perceptions of adolescent Nigerian students about HIV/AIDS;
- investigate the sexual behaviour of the adolescent students;
- find out if adolescent students practice safe sex;
- find out where the students found their information on HIV/AIDS;
- discover what influence the students' perceptions of HIV/AIDS; and
- ascertain the attitudes of the students to HIV/AIDS-prevention methods.

4.4 THE RESEARCH DESIGN

Polit and Beck (2004:49) describe 'research design' as "...a blueprint, or outline, for conducting a study in such a way that the maximum control will be exercised over factors that could interfere with the validity of the research results." The research design is thus the researcher's overall plan and implies the structure and strategies for obtaining answers to the research questions on the level of collecting information and knowledge (Strydom 2000:76) It is the procedure for conducting the study, including when, from whom and under which conditions data will be obtained (McMillan and Schumacher 2001:31). Burns and Grove (2001:211) define 'research design' as the "...end result of a series of decisions made by the researcher concerning how the study will be implemented."

This research design flows directly out of the literature study, which points to the fact that the media, parents, and peers influence the adolescent students' perception of HIV/AIDS and their attitudes to using condoms as a prevention method. The purpose of this research is to introduce initiatives that will bring about changes after identifying the perceptions and attitudes.

The researcher chose a quantitative design to describe the students' perceptions of HIV/AIDS and their attitudes to prevention methods.

4.5 QUANTITATIVE RESEARCH

Quantitative research is the systematic scientific investigation of quantitative properties and phenomena and their relationships (Hayes 2000:60). The objectives of quantitative research are to develop and employ mathematical models, and to develop theories and/or hypotheses pertaining to the phenomena. The process of measurement is central to quantitative research because it

provides the fundamental connection between empirical observation and mathematical expression (Wikipedia 2008).

Burns and Grove (2001:26) refer to 'quantitative research' as "...a formal, objective, and systematic process in which numerical data (are) used to obtain information about the phenomenon under study". They point out that quantitative studies seek to describe variables, examine relationships among variables, and determine cause-effect interactions between variables.

4.5.1 Descriptive research

The purpose of descriptive research describes "...what is" by recording, analyzing and interpreting conditions that exist (Ogunleye 2000:14). Furthermore, descriptive research provides an accurate portrayal or account of the characteristics of a particular individual, event or group in real-life situations for the purpose of discovering new meaning, for describing what exists, determining the frequency with which something occurs, and categorizing information (Hayes 2000:56). Descriptive studies provide valuable baseline information.

Descriptive research describes the specific details of a situation, social setting, or relationship, and focuses on 'how' and 'why' questions (Neuman 2000:22). The researcher begins with a well-defined subject and conducts research to describe it accurately (De Vos 2001:109).

In descriptive design, a survey is frequently selected as a data-collection technique (Babbie & Mouton 2001:80).

4.5.2 Survey

Surveys can be used to collect much data from a large number of people in a short space of time, thereby involving less cost (Burns & Grove 2001:568). As data-collection technique, a survey makes use of questionnaires or personal interviews (Burns & Grove 2001:239). According to Babbie and Mouton (2001:244), a 'questionnaire' is "...a document containing questions designed to solicit information appropriate for analysis". Usually it is information from the respondents about their attitudes, knowledge, beliefs and feelings.

4.5.3 Generalization

Polit, Beck and Hungler (2001:462) define 'generalization' as "...the degree to which the results of the study can be applied from a sample to a larger population".

4.6 ETHICAL CONSIDERATIONS

Burns and Grove (2001:83) emphasize that to be ethical in research implies that the rights of the researcher and the participants are protected. De Vos (2001:24) points out that ethical guideline serve as a basis upon which researchers can evaluate their conduct.

Accordingly, the researcher observed the following ethical principles in this study:

4.6.1 Permission to carry out the study

With an identification card from UNISA the researcher visited the Ministry of Education so as to obtain permission to administer questionnaires to adolescents

in the schools chosen for the study. All the schools chosen for the study was visited with an identification card from UNISA to obtain permission to administer questionnaires to the students.

- **Letters of consent**

Letters asking their consent to allow their children to participate in the research study were sent to the parents of the students who were selected. The principals and vice-principals of the chosen schools helped in this respect.

- **Beneficence**

The study was conducted in classroom settings to ensure minimal disturbance of the respondents' daily routine. The questionnaires were worded clearly and simply for easy understanding. It took a reasonably short time (45-55 minutes) to complete the questionnaire, which enabled the students to return to their work.

4.6.2 Respect for human dignity

The researcher informed the respondents of the nature, purpose and significance of the study, and ensured them that no harm would come to them (Polit & Hungler 1999:134). Respect for human dignity includes the right to self-determination and full disclosure. The respondents' rights to self-determination were honoured, meaning that they could decide independently without any coercion, whether or not to participate in the study. They were afforded the right not to answer any questions that caused discomfort or not to disclose personal information. Furthermore, the respondents were treated with dignity throughout the study (Polit & Beck 2004:147).

- **Confidentiality**

No names or identifying details were asked on the questionnaire, so that no information could be linked to any respondent. Only the researcher and the statistician had access to the data.

4.7 RESEARCH METHODOLOGY

Polit and Beck (2004:731) describe 'research methodology' as "...the techniques used to structure a study and to gather and analyze information in a systematic fashion." The discussion of the research methodology will include reporting on the population, sampling and sample techniques, data collection, data-collection instruments, validity, and reliability.

4.7.1 Scope of the study

The study area is the Lagos metropolis, which is the area from where the population of the study was drawn. It is Nigeria's largest seaport and the principal economic centre. As the western terminus for the Nigerian railway system, it is linked by rail and road to other major cities in Nigeria. Lagos experiences heavy and ongoing migration to the city from all parts of Nigeria as well as the neighboring countries. The Lagos metropolitan area spreads over much of Lagos state. Major sections of the city include Lagos Island, Ikoyi, Victoria Island, and industrialized Iddo. Important mainland areas include Ebute-Metta, Yaba, Surulere, Ajegunle, Oshodi, Mushin and Ikeja.

Lagos state is comprised of 20 local government areas. Ten of these areas were incorporated in the study. The study is, however, limited to senior secondary

school students in selected public and private schools. Lagos state was chosen for the study because it is a metropolitan city and a great many ethnic groups live in the city.

4.7.2 The study population

The population from which the sample was obtained was comprised of all students enrolled in public and private secondary schools in Lagos state, Nigeria. Secondary school students are considered the ideal group, for the following reasons:

As adolescents they are considered to be at a greater risk of HIV-infection than any other age group; this is the age group with the highest rate of sexually transmitted diseases (Ministry of Health 2005:12).

Furthermore, secondary school students are in a position of being influential role models of behaviour, and are able to shape the attitudes of pre-adolescents in primary schools and their peers in secondary schools.

Secondary education in Nigeria falls under two categories: public and private schools. Both the public and private schools follow the same prescribed curriculum.

The students participating in the study were drawn from public and private secondary schools. Mixed schools (boys and girls) were used for the purpose of this research. The researcher made use of 10 of the 20 local government areas in Lagos state for the study. One school each was chosen purposively from each of the local government areas. One local government area, which was not included in the main study, was chosen for the pilot study. By means of a random

sampling technique the researcher selected 30 students from each of the participating schools. The respondents were between the ages of 13 and 20.

The participating secondary schools included the following:

- Ivory Grammar School
- Ajebo High School
- Akodo Comprehensive High School
- Oke Ira Grammar School
- Isale-Eko Grammar School
- School Masters Academy
- Home Science Association Secondary School
- Caleb International College
- Unilag International Secondary School
- Nigeria Model High School

Table 4.1: A summary of the schools, their local government area and type of school

Name of school	Lga	Type of school
1. Ivory grammar school	Amuwo Odotin	Public
2. Ajebo high school	Epe	Public
3. Akodo comprehensive high school	Ibeju-lekki	Public
4. Oke-ira grammar school	Ikeja	Public
5. Isale eko grammar school	Lagos Iskand	Public
6. Schools masters academy	Eti-osa	Private
7. Home science association secondary school	Ifako Ijaiye	Private
8. Caleb international college	Ikorodu	Private
9. Unilag international secondary school	Lagos mainland	Private

Name of school	Lga	Type of school
10. Nigeria model high school	Mushin	Private

4.7.3 The sample and sampling technique

A total of 300 participants made up the sample. The participants were selected through purposive sampling. In purposive sampling, the researcher samples with a purpose in mind, and usually has one or more specific pre-defined groups he or she is seeking. In this study, the researcher was interested in the senior secondary school students. Purposive sampling was very useful in the situation where the researcher needed to reach a targeted group.

To ensure adequate coverage of the state, ten out of the twenty local government areas were selected, using the hat-and-draw procedure. The samples comprised 150 males and 150 females. A total of 30 students (15 males and 15 females) were additionally selected by means of the random sampling technique from senior secondary classes 1 to 3 from each school. The final sample consisted of 300 students, 150 boys and 150 girls. The number of boys and girls in each grade are outlined in table 4.2.

Table 4.2: The number of boys and girls in SSS 1 to SSS- 3 (Senior secondary school 1 to 3)

Class	Number of boys	Number of girls	Total
SSS 1	50	50	100
SSS 2	50	50	100
SSS 3	50	50	100
TOTAL	150	150	300

4.7.4 The measuring instrument used in the investigation

A summary of the variables measured in the study in each section is shown in table 4.3

Table 4.3: Variables measured in each section of the questionnaire

Section A	Biographical variables
Section B	Perception
Section C	Prevention methods
Section D	Sexual behaviour
Section E	The use of condoms

4.7.5 The development of a measuring instrument to measure the adolescents' perceptions of HIV/AIDS and their attitudes to its prevention

Only a few studies have investigated the link between adolescents' sexual behaviour and variables such as, their relationships with their parents, the mass media, their attitudes to condom use, their developmental stages, and the influence of peer pressure. A questionnaire was developed to identify the adolescent students' perceptions of HIV/AIDS and their attitudes to prevention methods (ASPHAATPMQ). It measured the variables mentioned above against the sexual behaviour of the adolescents.

4.7.6 The structure of the research instrument

4.7.6.1 Initial considerations

When constructing the measuring instrument to explore the perceptions of the Nigerian adolescent students to HIV/AIDS and their attitudes to prevention methods, certain considerations had to be taken into account.

Firstly, the instrument was not to be too time-consuming to administer, and with only one subject period available, the questionnaire could not be too lengthy.

Secondly, the instrument had to be flexible. It had to be possible to use it in an individual or group test situation.

A questionnaire that makes use of a scale was an appropriate instrument. This would facilitate the administration and interpretation, and meant it could be used in a group situation.

4.7.6.2 The format of the questionnaire

The questionnaire had the following characteristics:

It consisted of five sections: Sections A, B, C, D and E.

- **Section A:** The biographical information was contained in section A. Factors such as gender, home situation, parents' occupation, number of siblings, source of HIV/AIDS information, and involvement in gang activities at school were measured. This section consisted of 14 items.
- **Section B:** The perceptions of adolescents to HIV/AIDS were measured by means of 30 items. These were based on a five point scale, which enabled the adolescents to choose a middle-of-the-road option. The following numbers and codes were used:

1 = STRONGLY AGREE

2 = AGREE

3 = UNDECIDED
4 = DISAGREE
5 = STRONGLY DISAGREE

- **Section C:** This section measured the attitudes of the students to the existing prevention methods. Thirteen items were developed to measure this variable, and a five-point scale was used. Each item had a positive and a negative scale, ranging from 1 to 5. The following numbers and codes were used:

1 = STRONGLY AGREE
2 = AGREE
3 = UNDECIDED
4 = DISAGREE
5 = STRONGLY DISAGREE

- **Section D:** This section measured the sexual behaviour of the students. Twelve items were formulated and two dimensions were used for this purpose. A three-point scale was used to measure questions 1 to 5, while items 6 to 12 were straightforward questions, with answers provided in each box with a number allocated to it. The following numbers and codes were used for items 1 to 5 of this section:

1 = YES
2 = NO
3 = UNSURE

- **Section E:** The attitudes to the use of condoms were measured by the means of 9 items. The following number and codes were used:

- 1 = STRONGLY AGREE
- 2 = AGREE
- 3 = UNDECIDED
- 4 = DISAGREE
- 5 = STRONGLY DISAGREE

4.7.6.3 The development of items for the measuring instrument

Other instruments used in the past to measure adolescents' perceptions of HIV/AIDS and prevention methods were consulted. Asuquo *et al.*'s Overall Adolescents' Perception of HIV/AIDS Scale (2004:79) measured their overall perception of HIV/AIDS, but was done on a four- point scale, namely, Strongly Agree, Agree, Disagree, and Strongly Disagree. It was made up of 11 items. Certain questions in the questionnaire were adapted for the purpose of this study.

A few items from the above scale were also adapted to ascertain the attitudes of the students to prevention methods. The questionnaire which is a self-assessment test used to measure the perceptions and attitudes of the adolescent students. As mentioned before, the questionnaire consisted of five sections. For the purpose of measuring the attitudes of the students to the use of condoms, a number of items were adapted from Cha (2005:224) Condom Self-Efficacy Scale.

- **SECTION A: Biographical Information**

The items in this section provided biographical information regarding

- class

- gender
- home situation
- religion
- parents' occupation
- parents' formal education
- siblings
- culture
- peer group
- source of HIV/AIDS-information
- work status of parents

- **SECTION B: Questions relating to perceptions of HIV/AIDS**

Examples of the items in this section include:

Item number 1	I think HIV/AIDS is not real.
Item number 2	HIV/AIDS is a disease of the Whites.
Item number 4	I think HIV/AIDS is used to discourage adolescents from having sex.
Item number 11	My friends are more at risk of contracting HIV/AIDS than me.
Item number 19	If I shower immediately after sex, it will stop me from contracting HIV/AIDS.

- **SECTION C: Questions relating to the prevention methods against the spreading of HIV/AIDS**

The items in this chapter attempted to answer questions on:

Item number 12	Refusing unsafe sex with multiple partners.
Item number 13	Seeking immediate treatment when infected with sexually transmitted diseases.

- **SECTION D: Questions relating to sexual behaviour**

Examples of the questions include:

Item number 2	Have you ever engaged in pre-marital sex?
Item number 5	Have you ever been sexually abused?

- **SECTION E Questions relating to the use of condoms**

Examples of questions include:

Item number 8	My partner and I don't like using condoms
Item number 9	Using condoms make you feel sexually promiscuous.

4.8 THE PILOT STUDY

A pilot study was carried out by the researcher to test the items, whereby removing ambiguity from the questionnaire. The subjects for the pilot study were drawn from one public secondary school in Lagos state. The choice of the school was based on convenience and accessibility. A total of 20 participants were randomly selected, using the hat-and-draw sampling procedure. The participants consisted of 10 males and 10 females who were not included in the main study.

The research instrument, Adolescent Students' Perceptions of HIV/AIDS and their Attitudes to Prevention Methods Questionnaire (ASPHAATPMQ), was administered to the 20 students. The selected students were given the questionnaire to complete under the supervision of the researcher and their teachers. The subjects were specifically informed that the exercise was not a test, and instructions were clearly read out and explained. On average, the respondents completed the questionnaire within 45 minutes. A split-half method of reliability was used, and the scores of the respondents were obtained and subjected to Pearson's Product Moment Correlation Analysis for the various subscales in the instrument. The results of the analysis are presented in Table 4.4 below.

Table 4.4: Split-half reliability estimate of research variables

	Assessment measures	Mean (X)	Standard deviation (SD)	Split-half reliability ®
1	Perception	X1 – 74.2	SD1 – 3.71	0.77
		X2 - 74.7	SD2 - 3.83	
		N1 - 10		
		N2 - 10		
2	Prevention methods	X1 - 50.5	SD1 - 8.11	0.90
		X2 - 50.1	SD2 - 8.34	
		N1 - 10		
		N2 - 10		
3	Sexual behaviour	X1 - 29.8	SD1 - 9.35	0.95
		X2 - 29.99	SD2 - 8.35	
		N1 - 10		
		N2 - 10		
4	The use of condoms	X1 - 30.7	SD1 - 5.42	0.97
		X2 - 30.3	SD2 - 5.25	
		N1 - 10		
		N2 - 10		

The instructions for the administration of the measuring instrument included the fact that the questionnaires were administered with the assistance of four trained research assistants. The questionnaire was administered in April 2008.

The respondents received a questionnaire containing sections A, B, C, D, and E. They were told to follow the instructions on the questionnaire. It was explained to the students that there were no right or wrong answers. The students were encouraged to respond to the items as honestly as possible.

4.9 CONCLUSION

In this chapter a description of the methods used in this study were given. The population, the sample, the initial development questionnaire and the pilot study were also indicated. Furthermore, the actual procedures followed to collect the data were presented.

In chapter 5 the analysis and results of the collected data will be explicated in detail.

CHAPTER 5

FINDINGS FROM THE EMPIRICAL INVESTIGATION

5.1 INTRODUCTION

This study was conducted to determine the perceptions of Nigerian adolescent students to HIV/AIDS, and their attitudes to prevention methods. The data were collected using the Adolescent Students' Perceptions of HIV/AIDS and their Attitudes to Prevention Methods Questionnaire (ASPHAATPMQ). The data were coded and analyzed, making use of the Statistical Analysis System (SAS), software package version 9.3.

The methodology used for the analysis comprised the following:

- the one-way frequency table;
- the composite two-way frequency table;
- a scale reliability/item analysis;
- the calculation of overall perception mean values;
- an analysis of variance based on the general linear model approach, and the Tukey pair-wise comparison-of-means test, and a summary of the results;
- a composite cross-reference frequency table; and
- a two-way table.

5.2 A DESCRIPTION OF THE SAMPLES

As indicated in the previous chapter, the sample for the study consisted of 300 students drawn from 10 secondary schools in Lagos state. The students were divided equally according to their gender, thus 50% female (N = 150) and 50% male (N = 150) students. They were expected to respond to the Adolescent Students' Perceptions of HIV/AIDS and their Attitudes to Prevention Methods Questionnaire. It should be noted that the sample used for the purpose of the study is not a reflection of the gender ratios of students' enrolment in public and private secondary schools in Nigeria.

5.3 RESULTS FROM THE ASPHAATPM QUESTIONNAIRE

5.3.1 The demographic distribution of students

The items on the biographical data (see Appendix A) were computed, using the one-way frequency table, as shown in tables 5.1 to 5.15 below.

5.3.1.1 Age distribution

Responses to question 1 of the questionnaire were computed on a one-way frequency table. The results are presented in Table 5.1. the percentages are based on all respondents (N = 300 students). The age range for the sample was from 13 to 20 years.

Sixty-one per cent of the sampled adolescents were between 13 and 16 years of age, twenty seven percent of the samples were between 16 and 17 years, while 10% were between 18 and 19 years. One percent of the adolescents were

between 19 and 20 years old. This group was the least among the respondents. This may reflect the age at which adolescents start secondary education in Nigeria. The majority of the adolescents leave primary school at about the age of 11 or 12 years, after spending six years in primary education. The average age for starting primary education in Nigeria is between 5 and 6 years.

Table 5.1 Biographical characteristics , frequency tables

Age				
Age	Frequency	Percent	Cumulative frequency	Cumulative percent
13-14	53	17.67	53	17.67
15-16	131	43.67	184	61.33
16-17	81	27.00	265	88.33
18-19	31	10.33	296	98.67
19-20	4	1.33	300	100.00

5.3.1.2 Gender

The sample was equally distributed with regard to gender. A total of 150 males and 150 females took part in the research.

Table 5.2 Gender

Gender				
Gender	Frequency	Percent	Cumulative frequency	Cumulative percent
Male	150	50.00	150	50.00
Female	150	50.00	300	100.00

5.3.1.3 Class

Of the 300 respondents who participated in the study, an equal number was selected from SSS-1 through SSS-3. Table 5.3 presents the cumulative frequency of the students who participated in the study. It should be noted that SSS-3 is a national examination class, when students sit for the West African Examination Council (WAEC) examination. Those who pass can proceed to write the Joint Admission Matriculation Board (JAMB) examination, leading to a tertiary institution examination.

Table 5.3 Class

Class				
Class	Frequency	Percent	Cumulative frequency	Cumulative percent
SSS-1	100	33.33	100	33.33
SSS-2	100	33.33	200	66.67
SSS-3	100	33.33	300	100.00

5.3.1.4 Home situation

Table 5.4 below indicates that seventy seven percent (77%) of the respondents lived with both parents. Nearly 20% of the respondents lived with only the mother, the father or grandparents, as a result of separation or divorce. It was encouraging to observe that 97% of the sampled adolescents lived with at least one parent. Parental influence thus existed in almost all the cases investigated. Nearly 3% of the respondents lived with friends. This is the least percentage of the responses of the adolescents. This may be because it is very uncommon for adolescents to live with friends, and may be due to economic reasons.

Table 5.4 Home situation

Home situation				
Home situation	Frequency	Percent	Cumulative frequency	Cumulative percent
Live with both parents	229	76.59	229	76.59
Live with mother, parents separated	33	11.04	262	87.63
Live with father, parents separated	19	6.35	281	93.98
Live with grandparents, parents divorced	10	3.34	291	97.32
Live with friends	8	2.68	299	100.00

Frequency Missing = 1

5.3.1.5 Religion

All participating students reported to be religious and had some religious affiliations. The one-way frequency table was used to compute the religion of the students, as is presented in table 5.5. The majority (68%) of the students indicated that they are Christians, 30% indicated that they adhere to the Islamic religion, while 2% indicated that they practice an African traditional religion. This may be an indication that there are more Christians in Lagos state than all the other religions. However, it would be premature to speculate on how important

religion is in the lives of the respondents. There is a need to further investigate how often students attend church or mosque, and the role of religion, and its impact on their lives.

Table 5.5: Religion of the respondents

Religion of the respondents				
Religion	Frequency	Percent	Cumulative frequency	Cumulative percent
Christian	204	68.00	204	68.00
Islam	90	30.00	294	98.00
Traditional religion	6	2.00	300	100.00

5.3.1.6 Parents' occupation

A one-way frequency table of distribution of the occupations of the students' parents is shown in table 5.6 (father) and table 5.7 (mother). The occupations were divided into six categories. The categories included: (1) professional (accountants, doctors, nurses, lawyers, teachers, lecturers, engineers, pilots, air-hostesses); (2) business; (3) farm-related occupations; (4) skilled worker (for example, carpenters, plumbers, electricians, bricklayers, mechanics, etc); (5) clerical workers (6) factory workers. It is interesting to note that 55% of the adolescents indicated both parents' occupations as 'business'. Thirty percent and twenty-three percent respectively of the respondents indicated that their fathers and mothers held professional jobs. The corresponding farming-orientated jobs represented a low 3% and 1% of the sample. The majority of the parents thus

appeared to have steady jobs. This finding is substantiated by the fact that 94% of the adolescents indicated that at least one of their parents had a job.

Table 5.6 Father's occupation

Father's occupation				
Occupation	Frequency	Percent	Cumulative frequency	Cumulative percent
Professional	91	30.33	91	30.33
Business	166	55.33	257	85.67
Farmer/ agriculture	8	2.67	265	88.33
Skilled worker	12	4.00	277	92.33
Clerical	12	4.00	289	96.33
Factory worker	11	3.67	300	100.00

Table 5.7 Mother's occupation

Mother's occupation				
Occupation	Frequency	Percent	Cumulative frequency	Cumulative percent
Professional	69	23.00	69	23.00
Business	166	55.33	235	78.33
Farmer/ agriculture	4	1.33	239	79.67
Skilled worker	10	3.33	249	83.00
Clerical	16	5.33	265	88.33
Factory worker	9	3.00	274	91.33
Housewife	26	8.67	300	100.00

5.3.1.7 The educational level of the parents

The educational levels of the parents were also indicated as good – 50% of the fathers and 42% of the mothers had a tertiary qualification, and an additional 31% and 38% of fathers and mothers had completed secondary school. Only between six and seven percent of fathers and mothers had never attended school or only primary school.

A relatively stable picture with regards to parental influence and occupational and intellectual background seems to emerge.

Table 5.8 Father's educational level

Father's educational level				
Educational level	Frequency	Percent	Cumulative frequency	Cumulative percent
Never been to school	7	2.33	7	2.33
Primary education	12	4.00	19	6.33
Finished primary school	15	5.00	34	11.33
Secondary education	23	7.67	57	19.00
Completed secondary school	92	30.67	149	49.67
University diploma/degree	151	50.33	300	100.00

Table 5.9 Mother's educational level

Mother's educational level				
Educational level	Frequency	Percent	Cumulative frequency	Cumulative percent
Never been to school	9	3.00	9	3.00
Primary education	14	4.67	23	7.67
Finished primary school	22	7.33	45	15.00
Secondary education	20	6.67	65	21.67
Completed secondary school	108	36.00	173	57.67
University diploma/degree	127	42.33	300	100.00

5.3.1.8 Number of siblings in the household

Table 5.10 indicates that nearly 72% of the respondents indicated that they have between one and four siblings, while nearly 28% of the respondents indicated that they have between five and nine siblings. The Nigerian family system permits polygamy, thus it may be possible that the siblings are not from a monogamous relationship.

Table 5.10 Number of siblings in the household

Number of siblings in the household				
Siblings	Frequency	Percent	Cumulative frequency	Cumulative percent
One	31	10.33	31	10.33
Two	75	25.00	106	35.33
Three	59	19.67	165	55.00
Four	53	17.67	218	72.67
Five	33	11.00	251	83.67
Six	26	8.67	277	92.33
Seven	9	3.00	286	95.33
Eight	8	2.67	294	98.00
Nine	6	2.00	300	100.00

5.3.1.9 Sex culture

Nearly 16% of respondents indicated that their cultural beliefs permitted them to engage in pre-marital sex, while the others indicated that their cultural beliefs do not agree to this. The reason for this large percentage may be related to the faith the respondents belong to. The Christian and the Islam faiths do not advocate pre-marital sex.

Table 5.11 Sex culture

Allows sex before marriage				
Sex culture	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	47	15.82	47	15.82
No	250	84.18	297	100.00

Frequency Missing = 3

5.3.1.10 Gang membership and time spent with gang members

The majority of the sample population did not belong to a school gang (69%), but a somewhat contradictory picture presents itself when compared to the time spent with gangs. Here 71% of the respondents indicated that they spend more time with a gang than at home. Could it be that adolescents belong to other gangs than school gangs or could it be that they interpret the word 'gang' as meaning a 'club' or an extra-mural activity?

Table 5.12 Gang membership

Member of school gang				
Gang	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	93	31.00	93	31.00
No	207	69.00	300	100.00

Table 5.13 Time spent with gang members

Spend more time with gang than home				
Gang-time	Frequency	Percent	Cumulative frequency	Cumulative percent
Yes	214	71.33	214	71.33
No	86	28.67	300	100.00

5.3.1.11 Sources of HIV/AIDS information

The adolescent students' source of information on HIV/AIDS is presented in table 5.14 below. Of direct relevance to the study is the fact that most adolescents indicated that they received their information on HIV/AIDS from the television (56%). Friends were indicated as the second highest source of information, as nearly seventeen percent (17%) indicated that they received their HIV/AIDS-information from their friends. The parents were the third highest source of information (15%). It is quite shocking to note that only 2% of the respondents got their HIV/AIDS information from their teachers. Does this mean that

HIV/AIDS education does not take place at school? Physicians, magazines, and the radio accounted for nearly 9% of the adolescents' information.

Table 5.14 Sources of HIV/AIDS information

Sources of HIV/AIDS information				
HIV/AIDS information	Frequency	Percent	Cumulative frequency	Cumulative percent
Television	176	58.67	176	58.67
Parents/guardian	44	14.67	220	73.33
Friends	49	16.33	269	89.67
Teachers	6	2.00	275	91.67
Physicians	6	2.00	281	93.67
Magazines	11	3.67	292	97.33
Radio	8	2.67	300	100.00

5.3.1.12 Parents' working status

The working status of the adolescents' parents was computed, using a one-way frequency table, and is presented in table 5.15 below. The majority of the adolescents (82%) indicated that both their parents work. About ten percent (10%) indicated that their fathers work, and their mothers stay home. Just two (2%) stated that their mothers work and their fathers stay home. Nearly six percent (6%) of the adolescents stated that their parents are unemployed.

Table 5.15 Parents' working status

Parent's working status				
Working status	Frequency	Percent	Cumulative frequency	Cumulative percent
Both parents work	246	82.00	246	82.00
Father works, mother at home	31	10.33	277	92.33
Mother works, father at home	6	2.00	283	94.33
Both unemployed	5	1.67	288	96.00
Informal	12	4.00	300	100.00

5.4 ANALYSIS OF THE ITEMS ON THE ADOLESCENT STUDENTS' PERCEPTIONS OF HIV/AIDS

5.4.1 Introduction

A number of questions in the survey explored the extent of adolescent students' perceptions of HIV/AIDS. A total of thirty (30) items were used to explore their general perceptions in section B of the ASPHAATPM questionnaire. Cell-chi-square and row percentage were computed, as shown in table 5.16 to find out if the adolescents have an optimistic perception of HIV/AIDS. The first item sought to find out if they thought HIV/AIDS was not real, where fifteen percent (15%) of the respondents agreed that it was, nearly eighty one percent (81%) disagreed while nearly four percent (4%) did not know. On HIV/AIDS as a disease of the White people, nearly fifteen percent (15%) agreed, nearly seventy seven percent (77%) disagreed, and nearly eight percent (8%) were undecided. When asked if HIV/AIDS is a propaganda stunt to reduce the Black population, nearly twenty six percent (26%) of the respondents agreed, nearly seventeen percent (17%) were undecided, and fifty seven percent (57%) disagreed. On the item, HIV/AIDS is used to discourage adolescents from having sex, nearly thirty nine percent (39%) of the respondents agreed, fifty three percent (53%) disagreed, while eight percent (8%) were undecided. The question on HIV/AIDS being a dangerous disease had nearly seventeen percent (17%) in agreement, seventy nine percent (79%) disagreed, and three (3%) were undecided. The next item asked if the adolescents thought they were at risk of contracting HIV/AIDS, nearly forty percent (40%) of the respondents agreed, nine percent (9%) were undecided, and fifty one percent (51%) disagreed. On the item which asked if a healthy looking person could not be HIV positive, nearly twenty percent (20%) agreed, seventy five percent (75%) disagreed, while five (5%) were undecided. When

asked if witchcraft can cause HIV, nearly twenty percent (20%) of the respondents agreed, seventy five percent (75%) disagreed, while five percent (5%) remained undecided. On whether I can tell by the way a person looks if he/she is HIV positive or not, twenty percent (20%) agreed, seventy percent (70%) disagreed, while ten percent (10%) were undecided. On whether HIV is being misrepresented by the Government as a threat, nearly thirty one (31%) agreed, fifty two percent (52%) disagreed, and seventeen percent (17%) were undecided. When asked if their friends were more at risk of contracting HIV than they were, nearly fifteen percent (15%) agreed, sixty nine percent (69%) disagreed, and sixteen percent (16%) were undecided. The item on if only homosexuals contract HIV/AIDS, had thirteen percent (13%) in agreement, seventy seven percent (77%) in disagreement, and nearly ten percent (10%) were undecided. On whether they thought HIV/AIDS concerned the adult population and not adolescents, nearly thirteen percent (13%) agreed, nearly seventy nine percent (79%) disagreed and eight percent (8%) were undecided. When asked if they thought HIV/AIDS could infect adolescents under the age of 16 years, nine percent (9%) agreed, eighty seven percent (87%) disagreed, while four percent (4%) were undecided. On the statement that sexual intercourse with a virgin could cure a person of HIV, nearly eleven percent (11%) agreed, eighty five percent (85%) disagreed, while nearly four percent (4%) were undecided.

They were further asked if limiting the number of sexual partners could stop them from contracting HIV/AIDS, and thirty three percent (33%) of the respondents agreed, nearly fifty percent (50%) disagreed, while seventeen percent (17%) remained undecided. Adolescent students' perceptions of HIV/AIDS were further probed by asking if they thought that HIV was a punishment from God, and nearly twenty two percent (22%) of the respondents agreed, nearly forty four percent (44%) disagreed, while nineteen percent (19%) of the respondents were undecided. On whether taking a shower after sex can protect one from AIDS,

eleven percent (11%) of the respondents agreed, seventy two percent (72%) disagreed, while seventeen percent (17%) were undecided. The researcher wanted to know if the adolescents felt that only people who live in the cities can get HIV/AIDS, and nearly six percent (6%) agreed, nearly seventy nine percent (79%) of the respondents disagreed, while fifteen percent (15%) were undecided. Furthermore, the students were asked if they thought that HIV/AIDS can be cured with the help of a spiritualist, and nearly fifteen percent (15%) agreed, sixty seven percent (67%) disagreed, and sixteen percent (16%) were undecided. On whether HIV/AIDS can be transmitted by the sharing of cups, spoons, and plates with an infected person, nearly twenty two percent (22%) agreed, sixty six percent (66%) disagreed, while twelve percent (12%) were undecided. In trying to find out if they thought the media was placing too much emphasis on HIV/AIDS, nearly thirty two percent (32%) agreed, nearly fifty one percent (51%) disagreed, while seventeen (17%) were undecided. When asked if their faith in God could protect them from HIV/AIDS, nearly sixteen percent (16%) agreed, sixty percent (60%) disagreed, while fourteen percent (14%) were undecided. On the question whether HIV/AIDS is hereditary, nearly twenty percent (20%) of the respondents agreed, sixty three percent (63%) disagreed, while fourteen percent (14%) were undecided. When asked if they felt that only uncircumcised people can contract HIV/AIDS, nearly twelve percent (12%) agreed, seventy four percent (74%) disagreed, while fourteen percent (14%) were undecided.

The question on the use of lime to wash the genitals prevent HIV/AIDS had eleven (11%) in agreement, approximately forty nine (49%) of the respondents were undecided while thirty nine (39%) disagreed. On more females contract HIV/AIDS than males thirty six (36%) agree, approximately twenty one remain undecided and forty three (43%) of the respondents disagree with the item. When asked if HIV/AIDS spreads through mosquito bites seventeen (17%) of the respondents agree, sixteen (16%) are undecided while sixty seven (67%)

disagreed with the item. When asked if malnutrition causes HIV/AIDS in their community eleven (11%) of the respondents agree, twenty (20%) are undecided while approximately sixty nine (69%) of the respondents disagreed with the item. They were further asked if HIV is a punishment from God twenty two (22%) of the respondents agree, nineteen (19%) are undecided while fifty nine (59%) disagreed. On only people who practice homosexuality contract HIV/AIDS thirteen (13%) agreed, nine (9%) are undecided while seventy seven (77%) disagreed with this item.

The data on the adolescent students' perceptions of HIV/AIDS were computed using the composite table, as shown in table 5.16 below.

5.4.1.1 Section B: Adolescent students' perceptions of HIV/AIDS

Table 5-16 Adolescent students' perceptions of HIV/AIDS

Table 5.16 Adolescent students' perceptions of HIV/AIDS

Section B: Adolescent students' perceptions of HIV/AIDS						
Sub-item	Agreement rating scale					Total
Frequency Cell Chi-Square Row Pct	agree++	agree	undecided	disagree	disagree++	
HIV/AIDS is not real	28 0.0164 9.33	17 5.3544 5.67	11 19.085 3.67	70 2.6224 23.33	174 25.52 58.00	300
HIV/AIDS is a disease of the Whites	11 10.904 3.67	33 0.3939 11.00	23 5.8527 7.67	84 0.01 28.00	149 7.6127 49.67	
HIV/AIDS is propaganda to reduce the Black population	29 0.0034 9.67	50 14.085 16.67	50 3.869 16.67	63 5.6596 21.00	108 1.0014 36.00	
HIV/AIDS is used to discourage adolescent sex	54 22.339 18.00	64 40.028 21.33	24 5.0931 8.00	71 2.2827 23.67	87 8.5644 29.00	

HIV/AIDS is a dangerous disease	19 3.2704 6.33	34 0.6584 11.33	9 22.03 3.00	82 0.1006 27.33	156 11.567 52.00	
I am not at risk of contracting HIV/AIDS	67 51.174 22.33	52 16.98 17.33	27 3.1309 9.00	46 17.84 15.33	108 1.0014 36.00	
I can tell by the way a person looks if he/she is HIV positive or not	28 0.0164 9.33	31 0.0675 10.33	17 11.519 5.67	82 0.1006 27.33	142 4.4825 47.33	
Witchcraft can cause HIV	11 10.904 3.67	29 0.011 69.67	16 12.648 5.33	62 6.1877 20.67	182 33.47 60.67	
I can tell if a person is HIV positive	26 0.2515 8.67	35 0.9906 11.67	28 2.5824 9.33	84 0.01 28.00	127 0.55 42.33	
The HIV-threat is misrepresented by the Government	36 1.865 12.00	58 27.287 19.33	50 3.869 16.67	84 0.01 28.00	72 18.508 24.00	
My friends' HIV/AIDS risk is greater than mine	15 6.5294 5.00	29 0.0116 9.67	49 3.2563 16.33	97 1.7174 32.33	110 0.668 36.67	

Only homosexuals contract HIV/AIDS	13 8.5772 4.33	27 0.2261 9.00	28 2.5824 9.33	87 0.0508 29.00	145 5.7231 48.33	
HIV/AIDS is a threat to adults, not to adolescents	16 5.6101 5.33	22 1.9453 7.33	26 3.7321 8.67	85 0.0001 28.33	151 8.6585 50.33	
Adolescents younger than 16 years cannot contract HIV/AIDS	11 10.904 3.67	16 6.239 5.33	13 16.352 4.33	94 0.9701 31.33	166 18.646 55.33	
Sexual intercourse with a virgin cures one from HIV/AIDS	11 10.904 3.67	23 1.4662 7.67	11 19.085 3.67	79 0.4131 26.33	176 27.406 58.67	
Limiting sexual partners will prevent HIV/AIDS	69 56.656 23.00	31 0.0675 10.33	51 4.5345 17.00	102 3.4339 34.00	47 43.489 15.67	
HIV/AIDS is a punishment from God	37 2.4738 12.37	29 0.0081 9.70	57 9.7962 19.06	98 2.1087 32.78	78 13.851 26.09	

More females contract HIV/AIDS than males	63 41.414 21.07	44 7.1421 14.72	62 15.551 20.74	74 1.3376 24.75	56 32.977 18.73	
Taking a shower after sex will protect you against AIDS	15 6.5294 5.00	18 4.5374 6.00	52 5.2528 17.33	115 10.652 38.33	100 3.008 33.33	
Only persons living in cities contract HIV/AIDS	7 16.394 2.33	11 11.676 3.67	46 1.735 15.33	105 4.7463 35.00	131 1.2287 43.67	
HIV/AIDS spreads via mosquito bites	35 1.3899 11.67	16 6.239 5.33	48 2.6964 16.00	92 0.5897 30.67	109 0.8263 36.33	
A spiritualist can cure HIV/AIDS	24 0.737 8.03	20 3.0527 6.69	49 3.342 16.39	83 0.0318 27.76	123 0.1696 41.14	
The use of lime to wash genitals prevents HIV/AIDS	16 5.5443 5.35	18 4.4754 6.02	62 15.551 20.74	85 0.0015 28.43	118 0.0022 39.46	
Malnutrition causes HIV/AIDS in my community	15 6.5294 5.00	20 3.1061 6.67	59 11.758 19.67	98 2.0136 32.67	108 1.0014 36.00	

HIV/AIDS can be transmitted by the cutlery or crockery of the infected person	31 0.1867 10.33	34 0.6584 11.33	36 0.0945 12.00	93 0.7681 31.00	106 1.4022 35.33	
The media places too much emphasis on HIV/AIDS	50 16.231 16.78	45 8.2921 15.10	52 5.4791 17.45	67 3.5714 22.48	84 9.8558 28.19	
HIV/AIDS infects only poor people	17 4.7605 5.67	17 5.3544 5.67	41 0.2549 13.67	110 7.4048 36.67	115 0.1287 38.33	
My faith in God protects me from HIV/AIDS	53 20.609 17.67	24 1.0548 8.00	43 0.6886 14.33	80 0.2854 26.67	100 3.008 33.33	
HIV/AIDS is hereditary	33 0.6488 11.00	26 0.4347 8.67	52 5.2528 17.33	87 0.0508 29.00	102 2.4054 34.00	
Only uncircumcised people contract HIV/AIDS	20 2.63 6.67	14 8.2111 4.67	44 0.9846 14.67	87 0.0508 29.00	135 2.1764 45.00	
Total	860	887	1136	2546	3565	

Statistic	DF	Value	Prob.
Chi-Square	116	1087.6469	<.0001

Effective Sample Size =

8994

Frequency Missing = 6

5.4.1.2 Findings on adolescent students' perceptions of HIV/AIDS

On closer inspection of Table 5.16 above, the students in general appear to have a negative perception of HIV, as evaluated against the listed items. The column totals for the overall disagreement and strong disagreement rating levels sum to 6111, as compared to the 1747 overall agree and strongly agree rating responses on the 30 items, which reveals a healthy attitude towards HIV in general. A positive perception is thus reflected, since misconceptions were probed and the respondents disagreed, to a varying extent, to these. For example, an inspection of the individual agreement distributions, reveals a number of misconceptions which adolescents disagreed upon to varying extents. (Large cell-chi square entries within cells of the frequency table indicate items of which the disagreement 'pattern' or extent of disagreement differed greatly from other items), such as

- HIV/AIDS is not real (cellchi2 = 25.5, for example, – disagreed very strongly));
- witchcraft can cause HIV/AIDS (cellchi2 = 33.4, disagreed very strongly);

- I can tell whether a person is HIV positive (cellchi2 = 4.48, strong disagreement);
- adolescents under the age of 16 years cannot contract HIV/AIDS (cellchi2 = 18.6, very strong disagreement);
- intercourse with a virgin will cure AIDS (cellchi2 = 27.4, very strong disagreement);
- limiting sexual partners will prevent AIDS (cellchi2 = 56.6 stronger agreement component); and
- more females than males contract AIDS (cellchi2 = 21.0 stronger agreement), etc.

The perceptions seem to indicate that adolescents are well-informed about HIV.

The chi-square test associated with the table and mentioned above is significant. (The probability associated with the chi-square statistic of 1087.65 is less than 0.0001., which is less than 0.05 – the general 5% level of significance.) Significance in this instance implies that not all agreement-distributions for the items listed in the table reveal the same agreement distribution pattern. In other words, this implies that respondents did not perceive all issues in the same way – some issues were perceived more negatively, and others somewhat more positively – this is illustrated in the listing of the items above, and an indication has been given of how the cell chi-square value can assist in identifying those items that differ from the others with regards to the extent of disagreement or agreement. (Cell chi-square is the contribution which each cell within the frequency table made towards the chi-square statistic. All cell chi-square values added together equals the chi-square statistic).

5.5 ANALYSIS OF THE ITEMS ON THE ADOLESCENT STUDENTS' ATTITUDES TO HIV/AIDS PREVENTION METHODS

5.5.1 Introduction

Section C of the ASPHAATPM questionnaire, an example of which can be found in the Appendix, dealt with the attitudes of the adolescent students to prevention methods. A number of items were used to explore the attitudes of the students. A total of thirteen (13) questions were asked in this section. The first question in this section sought to ascertain the attitude of the students towards practicing abstinence from sexual relations. More than half of the respondents (72%) agreed, nearly 20% disagreed, while the remaining 8% remained undecided on the issue. The next question asked the respondents about their attitude to remain faithful to one's partner. Nearly seventy eight percent (78%) of the respondents agreed to this, while nearly seventeen percent (17%) disagreed, and the remaining five percent (5%) remained undecided. Regarding their attitudes to the use of condoms, nearly sixty nine percent (69%) of the respondents agreed, nearly eighteen percent (18%) disagreed, while nearly thirteen percent (13%) were undecided. On the avoidance of sharing piercing instruments, nearly seventy seven percent (77%) agreed, nearly thirteen percent (13%) disagreed, and nearly seven percent (7%) remained undecided. In respect of the avoidance of illicit drug use and abuse, sixty one percent (61%) agreed, nearly thirteen percent (13%) disagreed, while fifteen percent (15%) remained undecided. Nearly seventy six percent (76%) of the respondents agreed to the sterilization of equipment and materials, nearly ten percent (10%) remained undecided, and the remaining fourteen percent (14%) disagreed. It is worthy to note that nearly eighty percent (80%) of the respondents agreed to the introduction of

sex/sexuality education in schools, nearly fifteen percent (15%) disagreed, and nearly five percent (5%) remained undecided. Nearly eighty six percent (86%) of the respondents agreed to medical tests before marriage, nearly nine percent (9%) disagreed, and the remaining five percent (5%) remained undecided. On their attitude to the banning of prostitution, nearly seventy five percent (75%) agreed, nearly nineteen percent (19%) disagreed, and six percent (6%) were undecided. Regarding seeking immediate treatment when infected with sexually transmitted diseases, forty four percent (44%) of the respondents agreed, nearly thirty six percent (36%) disagreed, while twenty percent (20%) were undecided. As regards legalizing homosexuality, nearly seventy two percent (72%) agreed, fifteen percent (15%) disagreed, and thirteen percent (15%) were undecided. On refusing casual sex, seventy four percent (74%) of the respondents agreed, nine percent (9%) disagreed, and nearly eighteen percent (18%) were undecided. The last question in this section sought to ascertain the attitude of the students regarding refusing unsafe sex with multiple partners, where seventy nine percent (79%) of the respondents agreed, nearly fourteen percent (14%) disagreed, while nearly seven percent (7%) remained undecided on this issue.

5.5.1.1 Section C: Adolescent students' attitudes to HIV/AIDS prevention methods

Table 5.17 Adolescent students' attitudes to HIV/AIDS prevention methods

Section C: Students' attitudes to HIV/AIDS prevention methods						
Sub – items	Agreement ratings					Total
Frequency Cell Chi-Square Row Pct	agree++	agree	undecided	disagree	disagree++	
Abstinence from sexual relations	130 0.3761 43.33	88 0.6216 29.33	25 0.462 8.33	26 0.0012 8.67	31 0.5619 10.33	300
Faithful to one's sexual partner	148 0.853 49.33	83 0.0541 27.67	14 7.4816 4.67	30 0.5593 10.00	25 0.1624 8.33	300
The use of condoms	101 9.5433 33.67	105 7.1736 35.00	38 3.061 12.67	25 0.0527 8.33	31 0.5619 10.33	300
Avoidance of sharing piercing instruments	154 2.0617 51.33	76 0.2978 25.33	31 0.1949 10.33	20 1.4563 6.67	19 2.4199 6.33	300
Avoidance of illicit drug use and abuse	117 2.9693 39.00	66 2.7471 22.00	45 9.3491 15.00	44 12.141 14.67	28 0.03 9.33	300
Sterilization of equipment and materials	151 1.4904 50.50	77 0.1642 25.75	28 0.0103 9.36	23 0.3652 7.69	20 1.8182 6.69	299

Sexuality/sex education	149 1.018 49.67	92 1.5205 30.67	13 8.5388 4.33	16 3.9547 5.33	30 0.3108 10.00	300
Medical test before marriage	174 9.8812 58.00	86 0.3204 28.67	15 6.4943 5.00	11 8.7969 3.67	14 6.3308 4.67	300
Ban/Abolition of prostitution	152 1.7065 50.84	72 0.9254 24.08	19 3.19 6.35	31 0.9254 10.37	25 0.1492 8.36	299
Seeking immediate treatment when infected with STDs	69 33.888 23.00	64 3.5335 21.33	61 36.572 20.33	48 18.2 16.00	58 35.241 19.33	300
Legalizing homosexuality	129 0.4881 43.00	88 0.6216 29.33	37 2.442 12.33	17 3.2155 5.67	29 0.1335 9.67	300
Refusing casual sex	147 0.7721 49.16	76 0.2668 25.42	26 0.2264 8.70	29 0.3253 9.70	21 1.3363 7.02	299
Refusing unsafe sex with multiple partners	161 4.1352 53.67	78 0.1045 26.00	20 2.6052 6.67	20 1.4563 6.67	21 1.3722 7.00	300
Total	1782	1051	372	340	352	3897
Frequency Missing = 3						

Statistic	DF	Value	Prob
Chi-Square	48	270.0397	<.0001

5.5.1.2 Findings on adolescent students' attitudes to HIV/AIDS prevention methods

The adolescent students' general attitudes to HIV prevention methods were positive. The column totals for the 'agree' and 'strongly agree' responses added up to 2831, as opposed to the 'disagree' and 'strongly disagree' responses, which added up to 692. Respondents thus felt positive about prevention methods in general.

The significance of the chi-square statistic with a value of 270.04, (a probability of < 0.0001 is associated with the test which is less than 0.05, the general 5% significance level) implies that the respondents differed in the extent of their agreement on some of the issues. The cell-chi-square value for each cell can assist in identifying the items that differ greatly in their extent of agreement. A few examples are

- medical tests before marriage (very adamant about the matter, cellchi² = 9.88);
- seeking immediate treatment when infected with sexually transmitted diseases (very divided on the matter);
- refusing unsafe sex with multiple partners (felt very strongly about the issue); and

- condom-use – although in agreement, the extent of agreement seemed to be less than most of the other options (quite a substantial number agreed in comparison to the strongly agree option).

5.6 ANALYSIS OF THE ITEMS ON ADOLESCENT STUDENTS' ATTITUDES TO CONDOM USE

5.6.1 Introduction

Section E probed the attitude of the students towards the use of condoms. A total of nine questions were used to gather information from the students. The answers to the items were based on a five-point attitudinal scale of strongly agree (SA), agree (A), undecided (C), disagree (D), and strongly disagree (SD). The respondents were asked to tick the answers based on their preference. The first question in this section wanted to find out if using a condom gets in the way of natural sex, to which nearly forty three percent (43%) of the respondents agreed, forty six percent (46%) disagreed, while eleven percent (11%) remained undecided. On the question whether using a condom reduces sexual pleasure, nearly forty four percent (44%) of the students agreed, forty nine percent (49%) disagreed while seven percent (7%) were undecided. Nearly thirty six percent (36%) of the students agreed that using a condom makes the process of sex abrupt, forty five percent disagreed (45%), while nineteen percent (19%) were undecided. On whether using a condom reduces emotional intimacy, nearly thirty nine percent (39%) agreed, forty seven percent (47%) disagreed, while fourteen percent (14%) were undecided. The item on whether using a condom can be embarrassing, had nearly thirty nine percent (39%) in agreement, forty two percent (42%) disagreed, while the remaining nine percent (9%) were undecided. As regards the question whether using a condom can be physically uncomfortable, nearly forty nine percent (49%) of the respondents agreed, nearly forty one percent (41%) disagreed, while ten percent (10%) were undecided. On

the question if using a condom can be inconvenient, nearly forty four percent (44%) agreed, nearly forty four percent (44%) disagreed, and twelve percent (12%) were undecided. The item referring to, "My partner and I don't like using a condom", had nearly twenty eight percent (28%) in agreement, fifty five percent (55%) disagreed, and seventeen percent (17%) were undecided. Nearly twenty one percent (21%) of the respondents agreed, sixty eight percent (68%) disagreed, while eleven percent (11%) were undecided on the question, "Using a condom makes you feel sexually promiscuous",

5.6.1.1 Section E: Adolescent students' attitudes to condom use

TABLE 5-18 Adolescent students' attitudes to condom use

Table 5.18 Adolescent students' attitudes to condom use

SECTION E: ADOLESCENT STUDENTS' ATTITUDES TO CONDOM USE						
Sub items probed	Agreement rating					Total
Frequency Cell Chi-Square Row Pct	agree++	agree	undecided	disagree	disagree++	
Using a condom gets in the way of having natural sex	73 8.1932 24.33	57 0.3343 19.00	33 0.4437 11.00	76 29E-9 25.33	61 2.0054 20.33	300
Using a condom reduces sexual pleasure	61 1.511 20.40	70 1.2255 23.41	21 6.8724 7.02	81 0.3641 27.09	66 0.6467 22.07	299
Using a condom makes the process of sex abrupt	46 0.7588 15.33	61 0.0047 20.33	57 10.736 19.00	85 1.0654 28.33	51 6.6857 17.00	300
Using a condom reduces emotional intimacy	50 0.1011 16.67	68 0.6791 22.67	42 0.6599 14.00	67 1.0661 22.33	73 0.0002 24.33	300
Using a condom can be embarrassing	57 0.4224 19.00	59 0.1045 19.67	28 2.2127 9.33	84 0.8418 28.00	72 0.0168 24.00	300

SECTION E: ADOLESCENT STUDENTS' ATTITUDES TO CONDOM USE						
Sub items probed	Agreement rating					Total
Frequency Cell Chi-Square Row Pct	agree++	agree	undecided	disagree	disagree++	
Using a condom can be physically uncomfortable	62 1.7992 20.67	84 8.2009 28.00	30 1.3432 10.00	53 6.9613 17.67	71 0.0608 23.67	300
Using a condom is inconvenient	55 0.1585 18.39	76 3.5088 25.42	37 0.0001 12.37	59 3.7031 19.73	72 0.0103 24.08	299
My partner and don't like using condoms	36 4.9885 12.04	47 3.3485 15.72	51 5.3593 17.06	79 0.1396 26.42	86 2.3679 28.76	299
Using a condom makes you feel sexually promiscuous	30 9.3914 10.03	31 15 10.37	34 0.2327 11.37	99 7.1375 33.11	105 14.173 35.12	299
Total	470	553	333	683	657	2696
Frequency Missing = 4						

<u>Statistic</u>	<u>DF</u>	<u>Value</u>	<u>Prob.</u>
<u>Chi-Square</u>	<u>32</u>	<u>134.8350</u>	<u><.0001</u>

5.6.1.2 Findings on adolescent students' attitudes to condom use

In general, the students seemed to be divided on the issue of condom use. The sum of the agreement column-responses added up 1023 and the disagreement column responses to 1340. General disagreement thus transpired but not to a very large extent.

The chi-square test is again significant which implies that respondents did not disagree on all sub-issues to the same extent. The cell-chi-square could again be used to identify the issues on which attitudes varied the greatest. These included, for example,

- using a condom makes you feel promiscuous (strongest disagreement- 68%);
- we do not like using a condom (disagreement, but not to the same extent as above- approximately 55%);
- it makes the process of sex abrupt (a great element of indecision, namely 19% undecided);
- it gets in the way of natural sex (undecided, 43% agreed to some extent, 11% were undecided, and 45% disagreed, to some extent); and
- it gets in the way of having natural sex (undecided, 43% agreed to some extent, 11% were undecided and 45% disagreed to some extent).

5.7 SCALE RELIABILITY TESTING OF SECTIONS B, C, AND E. A SUMMARY OF THE RESULTS

The respondents' general perceptions on HIV/AIDS, their attitudes to prevention methods, and on condom use, were covered in sections 5.2, 5.3 and 5.4. The question now is whether a more accurate and precise measure of the respondents' general perceptions on each of the three aspects could be

calculated. Such a measure would provide a single summative measure of the respondents' perceptions of the concepts in general, and could then be used in further analyses - thus a more compact perception measure than 30, or 13 or 9 separate response-distributions.

The mean rating score (average), calculated on each respondent's responses to each sub-question within a section, appears to be a natural choice of a general perception-measure for each respondent. The next question which springs to mind is whether the summative mean score would be a reliable and representative measure of the general perception on each issue? Scale reliability testing and item analysis were undertaken on each subset of questionnaire items within sections 5.2, 5.3, and 5.4 to establish whether all the items within the specific section contributed towards explaining the aspect (or construct) probed within the section. Scale reliability testing thus tests the reliability of the measurement. This type of reliability is referred to as 'internal consistency reliability'. A coefficient referred to as 'coefficient Cronbach alpha' is calculated during scale reliability testing and gives an indication as to how well the subset of questionnaire items describes the specific construct or concept. A good indication of internal consistency reliability can be derived from an alpha value greater than 0.7.

Item analyses were duly performed on each of the subsets of questionnaire items of sections B, C and E on adolescents' perceptions on HIV/AIDS in general, HIV/AIDS prevention methods and condom use, in the ASPHAATPMQ.

A summary of the analyses are presented in the table 5.19 below:

Table 5.19 Scale reliability test, a summary

Scale reliability test, a summary. Results table on scale reliability testing for the perception constructs evaluated. Cronbach alpha coefficients calculated for each of the perception constructs listed, questionnaire describing each perception construct as well as construct mean scores are reported in the body of the table.				
Perception construct	Questionnaire items	Cronbach alpha coefficient	Mean and standard deviation construct score	
General perception of HIV/AIDS	b1-b30	0.794	3.79	0.48
HIV/AIDS prevention	c1-c13	0.833	2.08	0.73
Condom use	e1-e9	0.838	3.19	0.95

5.7.1 Conclusions on the scale reliability test

The calculated Cronbach alpha coefficient are all greater than 0.7. Scale reliability is thus indicated in all three cases. This implies that the mean perception scores calculated for each of the HIV aspects can act as reliable indicators/ agents of the students' perceptions on HIV, prevention methods and condom use.

The mean scores indicated in the second to last column (5.20 below) indicated the students' general perceptions of HIV, HIV prevention methods and condom

use. The values are evaluated against the agreement rating scale where '1' represents strong agreement to '5' representing strong disagreement. In general, the students' perceptions of HIV was that of disagreement (evaluated against the 'misconceptions' described by the relevant questionnaire items), but healthy.

Their general attitude on HIV prevention methods were positive (that of 'agreement' with prevention methods) and their perceptions on condom use were divided. (a value of '3' signifies a neutral or undecided opinion). This was in agreement with the findings of the composite tables, albeit in a more compact format. (The values of the composite tables are not negated by the mean scores. The composite tables were able to explain individual differences in their perceptions within a perception-construct).

At this stage one could ponder on the value of the calculated mean construct scores, if the composite tables also provided the 'answers' to general perceptions regarding the concepts investigated. Construct/perception scores come into play as soon as the question of whether biographical indicators (such as gender, age, *etc.*) can be linked to the respondents' perceptions, and how the perceptions are influenced by biographical characteristics.

A first investigation into the matter would be the calculation of the construct, namely perception mean scores for the three aspects (general perceptions of HIV, attitudes to HIV prevention, and toward condom use) according to the category levels of the biographical variables.

In the next section these perception mean scores will be presented in a summary table of means.

5.7.2 Perception means scores according to the biographical categories, sections B, C, and E. A summary of results

Once scale reliability had been established each respondent's perception mean score on the three concepts probed in sections B, C and E were calculated as the mean response (average response) over sub-question responses within each section. The three sets of perception mean scores for the respondents were used to calculate three overall perception mean scores. These overall perception mean scores gave an indication of how respondents in general perceived the three issues probed. (The three perception mean scores are reported in the summary results table on item analysis). The three overall mean score values could be interpreted according to the agreement rating scale used in the questionnaire:

- 1 = agree++
- 2 = agree
- 3 = neutral/ undecided
- 4 = disagree
- 5 = disagree++

The perception mean scores per category level for each of the biographical characteristics were also calculated. These mean scores gave an indication as to whether groups of respondents, classified according to the categories of biographical variables (such as gender) perceived each of the perception concepts the same or differently. For example, from table 5.20 below, it can be seen that the general perception mean score on HIV/AIDS for gender categories - that would be, male and female - seem to be very much the same (perception mean ratings of 3.77 and 3.80 – which is both approximately 4, and represents a disagreement rating). On the other hand, the general perception mean score on HIV/AIDS for adolescents whose culture permits pre-marital sex and those who

do not permit pre-marital sex, appear to differ (3.53 as compared to 3.83). An initial indication as to whether certain biographical variables affect the students' behaviour can thus be gleaned by examining perception mean scores. Please note that the tables of perception mean scores can only give an indication of biographical variables that could possibly be influential.

Perception means were also calculated according to the category levels of d6-d9. It was argued that sexual experiences which adolescents might have had could also affect their perceptions regarding HIV/AIDS.

These perception mean scores are presented separately in table 21 in this section. The acronyms mean-b, mean-c and mean-e refer to perceptions on HIV/AIDS in general, HIV/AIDS prevention methods, and condom use.

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
13-14	53	mean-b	3.81	0.49
		mean-c	2.19	0.85
		mean-e	3.19	1.01
15-16	131	mean-b	3.79	0.51
		mean-c	2.00	0.65
		mean-e	3.21	0.91
16-17	81	mean-b	3.81	0.41
		mean-c	2.13	0.74
		mean-e	3.23	0.98
18-19	31	mean-b	3.64	0.45
		mean-c	2.13	0.84
		mean-e	2.90	0.92
19-20	4	mean-b	3.79	0.28
		mean-c	1.98	0.50
		mean-e	3.69	0.56

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
gender	Number of observation	Variable	Mean	Standard Deviation
Male	150	mean-b	3.77	0.45
		mean-c	2.00	0.68
		mean-e	3.09	0.97
Female	150	mean-b	3.80	0.50
		mean-c	2.17	0.78
		mean-e	3.29	0.91
class	Number of observation	Variable	Mean	Standard Deviation
SSS1	100	mean-b	3.77	0.44
		mean-c	2.08	0.69
		mean-e	3.16	0.91
SSS2	100	mean-b	3.74	0.49
		mean-c	2.14	0.78
		mean-e	3.15	0.91
SSS3	100	mean-b	3.84	0.49
		mean-c	2.03	0.73
		mean-e	3.25	1.01

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
Home situation	Number of observation	Variable	Mean	Standard Deviation
Live with both parents	229	mean-b	3.80	0.48
		mean-c	2.10	0.74
		mean-e	3.18	0.95
Live with mother, parents separated	33	mean-b	3.76	0.54
		mean-c	2.13	0.75
		mean-e	3.35	1.01
Live father, parents separated	19	mean-b	3.75	0.34
		mean-c	1.74	0.66
		mean-e	2.90	0.69
Live with grandparents, parents divorced	10	mean-b	3.70	0.24
		mean-c	2.20	0.77
		mean-e	4.00	0.72
Live with friends	8	mean-b	3.60	0.48
		mean-c	1.92	0.47
		mean-e	2.58	0.76

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
Religion of the respondent	Number of observation	Variable	Mean	Std Dev
Christian	204	mean-b	3.82	0.47
		mean-c	2.09	0.75
		mean-e	3.21	0.96
Islam	90	mean-b	3.70	0.48
		mean-c	2.10	0.71
		mean-e	3.10	0.91
Traditional religion	6	mean-b	3.91	0.35
		mean-c	1.65	0.29
		mean-e	3.65	0.78
Father's occupation	Number of observation	Variable	Mean	Standard Deviation
Professional	91	mean-b	3.97	0.42
		mean-c	2.01	0.71
		mean-e	3.28	0.86

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
Business	166	mean-b	3.72	0.47
		mean-c	2.11	0.76
		mean-e	3.15	0.99
Farmer/ agriculture	8	mean-b	3.73	0.43
		mean-c	2.23	0.49
		mean-e	3.24	1.16
Skilled worker	12	mean-b	3.76	0.52
		meanc	1.96	0.46
		meane	3.10	0.98
Clerical	12	meanb	3.81	0.45
		mean-c	2.01	0.79
		mean-e	3.33	1.14
Factory worker	11	mean-b	3.40	0.50
		mean-c	2.42	0.85
		mean-e	2.88	0.58
Mother's occupation	Number of observation	Variable	Mean	Standard Deviation

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
Professional	6	mean-b	4.00	0.42
		mean-c	1.99	0.72
		mean-e	3.37	0.91
Business	166	mean-b	3.73	0.47
		mean-c	2.14	0.75
		mean-e	3.09	0.91
Farmer/ agriculture	4	mean-b	3.98	0.36
		mean-c	2.44	0.31
		mean-e	3.58	0.94
Skilled worker	10	mean-b	3.50	0.52
		mean-c	1.81	0.50
		mean-e	2.74	0.97
Clerical	16	mean-b	3.81	0.39
		mean-c	2.06	0.63
		mean-e	3.51	0.90
Factory worker	9	mean-b	3.78	0.57
		mean-c	2.38	1.05
		mean-e	3.42	1.39

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
Housewife	26	mean-b	3.67	0.51
		mean-c	1.93	0.67
		mean-e	3.11	1.00
Father's educational level	Number of observation	Variable	Mean	Standard Deviation
Never been to school	7	mean-b	3.63	0.54
		mean-c	2.15	0.68
		mean-e	3.16	1.15
Primary education	12	mean-b	3.94	0.33
		mean-c	2.26	0.93
		mean-e	3.52	0.95
Finished primary school	15	mean-b	3.63	0.40
		mean-c	2.45	0.68
		mean-e	3.32	0.89
Secondary education	23	mean-b	3.48	0.52
		mean-c	1.88	0.50
		mean-e	3.02	0.95

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
Completed secondary school	92	mean-b	3.71	0.44
		mean-c	2.12	0.72
		mean-e	3.14	0.95
University diploma/degree	151	mean-b	3.89	0.47
		mean-c	2.04	0.75
		mean-e	3.20	0.94
Mother's educational level	Number of observation	Variable	Mean	Standard Deviation
Never been to school	9	mean-b	3.46	0.44
		mean-c	2.32	0.61
		mean-e	3.53	0.96
Primary education	14	mean-b	3.82	0.43
		mean-c	2.02	0.70
		mean-e	3.31	1.01
Finished primary school	22	mean-b	3.65	0.44
		mean-c	1.99	0.55
		mean-e	3.36	0.87

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
Secondary education	20	mean-b	3.72	0.46
		mean-c	2.31	0.94
		mean-e	3.27	1.08
Completed secondary school	108	mean-b	3.75	0.48
		mean-c	2.10	0.74
		mean-e	3.08	0.88
University diploma/degree	127	mean-b	3.87	0.47
		mean-c	2.04	0.73
		mean-e	3.19	0.99
Number of siblings in the household	Number of observation	Variable	Mean	Standard Deviation
One	31	mean-b	3.75	0.41
		mean-c	2.26	0.73
		mean-e	3.52	0.88
Two	75	mean-b	3.90	0.50
		mean-c	2.04	0.75
		mean-e	3.20	1.02

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
Three	59	mean-b	3.75	0.50
		mean-c	1.98	0.71
		mean-e	3.12	0.99
Four	53	mean-b	3.83	0.50
		mean-c	1.95	0.53
		mean-e	2.95	0.87
Five	33	mean-b	3.72	0.39
		mean-c	2.26	0.86
		mean-e	3.23	0.77
Six	26	mean-b	3.76	0.49
		mean-c	2.39	0.82
		mean-e	3.29	0.94
Seven	9	mean-b	3.60	0.32
		mean-c	1.91	0.79
		mean-e	3.57	0.79
Eight	8	mean-b	3.55	0.47
		mean-c	1.94	0.69
		mean-e	2.79	0.97

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
Nine	6	mean-b	3.61	0.50
		mean-c	2.10	0.87
		mean-e	3.28	1.33
Culture allows sex before marriage	Number of observation	Variable	Mean	Standard Deviation
Yes	47	mean-b	3.53	0.47
		mean-c	1.92	0.58
		mean-e	3.05	0.97
No	250	mean-b	3.83	0.46
		mean-c	2.11	0.76
		mean-e	3.22	0.94
Father's occupation	No of Observation	Variable	Mean	Standard Deviation

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
Professional	69	mean-b	4.00	0.42
		mean-c	1.99	0.72
		mean-e	3.37	0.91
Business	166	mean-b	3.73	0.47
		mean-c	2.14	0.75
		mean-e	3.09	0.91
Farmer/ Agriculture	4	mean-b	3.98	0.36
		mean-c	2.44	0.31
		mean-e	3.58	0.94
Skilled worker	10	mean-b	3.50	0.52
		mean-c	1.81	0.50
		mean-e	2.74	0.97
Clerical	16	mean-b	3.81	0.39
		mean-c	2.06	0.63
		mean-e	3.51	0.90
Factory worker	9	mean-b	3.78	0.57
		mean-c	2.38	1.05
		mean-e	3.42	1.39

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
Housewife	26	mean-b	3.67	0.51
		mean-c	1.93	0.67
		mean-e	3.11	1.00
Member of school gang	Number of observation	Variable	Mean	Standard Deviation
Yes	93	mean-b	3.71	0.53
		mean-c	2.03	0.66
		mean-e	3.17	0.92
No	207	mean-b	3.82	0.45
		mean-c	2.11	0.76
		mean-e	3.20	0.96
Spends more time with gang than at home	Number of observation	Variable	Mean	Standard Deviation
Yes	214	mean-b	3.78	0.49
		mean-c	2.12	0.76
		mean-e	3.23	0.95

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
No	86	mean-b	3.81	0.45
		mean-c	1.99	0.65
		mean-e	3.07	0.93
Source of HIV/AIDS information	Number of observation	Variable	Mean	Std Dev
Television	176	mean-b	3.78	0.47
		mean-c	2.08	0.70
		mean-e	3.16	0.88
Parents/guardian	44	mean-b	3.83	0.45
		mean-c	2.26	0.76
		mean-e	3.33	0.83
Friends	49	mean-b	3.77	0.51
		mean-c	2.01	0.78
		mean-e	3.04	1.13
Teachers	6	mean-b	3.59	0.45
		mean-c	2.40	0.85
		mean-e	3.83	1.09

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
Physicians	6	mean-b	3.67	0.51
		mean-c	1.60	0.64
		mean-e	3.17	1.29
Magazines	11	mean-b	3.78	0.56
		mean-c	1.80	0.70
		mean-e	3.47	1.22
Radio	8	mean-b	3.97	0.46
		mean-c	2.16	0.93
		mean-e	3.06	0.94
Parents' working status	Number of observation	Variable	Mean	Std Dev
Both work	246	mean-b	3.81	0.46
		mean-c	2.11	0.75
		mean-e	3.16	0.92
Father works, mother at home	31	mean-b	3.56	0.58
		mean-c	2.07	0.71
		mean-e	2.99	1.03

Table 5.20 Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV prevention methods, and to condom use

Perception mean scores for perceptions on HIV/AIDS in general, on attitudes to HIV/AIDS prevention methods, and to condom use, according to category levels of biographical variables.

Age in all the tables	Number of observation	Variable	Mean	Standard Deviation
Mother works, father at home	6	mean-b	3.38	0.27
		mean-c	1.92	0.33
		mean-e	2.94	0.76
Both unemployed	5	mean-b	3.83	0.49
		mean-c	2.09	0.54
		mean-e	3.84	0.19
Informal	12	mean-b	4.11	0.28
		mean-c	1.62	0.44
		mean-e	4.12	0.89

5.7.3 Perception means scores according to category levels d6-d9

Table 5.21 Perception means scores for levels d6 – d9

Have you ever engaged in pre-marital sex?	No of Obs	Variable	Mean	Std Dev
Yes	75	mean-b	3.68	0.47
		mean-c	2.12	0.76
		mean-e	2.75	0.86
No	214	mean-b	3.83	0.47
		mean-c	2.04	0.72
		mean-e	3.34	0.94
Undecided	9	mean-b	3.60	0.59
		mean-c	2.62	0.64
		mean-e	3.25	0.87
Have you ever had a sexually transmitted disease?	Number of Observ.	Variable	Mean	Std Dev
Yes	30	mean-b	3.72	0.52
		mean-c	2.15	0.82
		mean-e	3.09	0.94
No	256	mean-b	3.80	0.47
		mean-c	2.05	0.71
		mean-e	3.20	0.95

Have you ever engaged in pre-marital sex?	No of Obs	Variable	Mean	Std Dev
Undecided	12	mean-b	3.72	0.38
		mean-c	2.75	0.73
		mean-e	3.19	0.90
Have you ever been pregnant/made someone pregnant?	N Obs	Variable	Mean	Std Dev
Yes	33	mean-b	3.77	0.50
		mean-c	2.08	0.73
		mean-e	3.24	1.12
No	257	mean-b	3.79	0.48
		mean-c	2.07	0.73
		mean-e	3.18	0.92
Undecided	8	mean-b	3.66	0.40
		mean-c	2.58	0.85
		mean-e	3.47	0.93
Have you ever forced sex?	N Obs	Variable	Mean	Std Dev
Yes	61	mean-b	3.86	0.50
		mean-c	2.04	0.73
		mean-e	3.19	1.06

Have you ever engaged in pre-marital sex?	No	of	Variable	Mean	Std Dev
No	220		mean-b	3.77	0.47
			mean-c	2.06	0.72
			mean-e	3.19	0.92
Undecided	14		mean-b	3.75	0.43
			mean-c	2.65	0.84
			mean-e	3.24	0.92

5.8 Analysis of variance based on the general linear model approach and Tukey pair-wise comparison-of-means test, sections B, C and E. A summary of the results

The perception mean scores calculated according to the biographical categories described above and indicated in Table 5.20, gave an initial indication of the differences within a biographical characteristic (in other words, whether for example, perceptions of males and females differed on HIV/AIDS prevention methods). An analysis of variance is a technique to establish whether perception means truly differ – referred to as means differing significantly from one another.

In exploratory analyses of variance conducted separately on each set of the summative mean-perception variable, all biographical variables were initially included in the Anova model. Based on a step-wise selection approach, biographical variables which significantly affected the perception variables were identified. A summary of the results of the final analyses of variance with only significant effects were included, as is presented in Table 5.22.

The analysis of the variance and the accompanying pair-wise comparison of means-test thus gave the final picture of how and where perceptions differed. (The analysis of variance test only indicates which variables affect a specific perception variable, but pair-wise comparison of means indicates how perceptions are swayed by the biographical variables effect.

Table 5.22 A summary analysis-of-variable table on perception mean scores of the three constructs listed

A summary analysis-of-variable table on perception mean scores of the three constructs listed						
Source		DF	Sum squares	of Mean Square	F Value	Pr > F
1. Students' general perceptions of HIV/AIDS						
Model		3	5.03791789	1.67930596	7.89	<.0001
Sex accepted in culture	1	3.34129352	3.34129352	15.69	<.0001	
d6	2	1.31747544	0.65873772	3.09	0.0468	
Error		291	61.96388234	0.21293430		
Corrected total		294	67.00180022			

2. Students' attitudes to HIV/AIDS-prevention methods					
Model	3	7.0436015	2.3478672	4.49	0.0042
D9	2	4.90383915	2.45191957	4.69	0.0099
Gender	1	2.39310877	2.39310877	4.58	0.0332
Error	291	152.0661250	0.5225640		
Corrected total	294	159.1097265			
3. Students' attitudes to condom use.					
Model	2	19.3697193	9.6848596	11.55	<.0001
D6	2	19.36971927	9.68485964	11.55	<.0001
Error	295	247.2744328	0.8382184		
Corrected total	297	266.6441520			

5.9 FINDINGS ON THE PERCEPTION MEAN SCORES ACCORDING TO THE BIOGRAPHICAL VARIABLES

Since the probability associated with the F-statistic for each of the biographical variables included in the Anova-models in the table proved to be less than 0.05, it can be deduced that these effects were significant. This implies that the effect of these biographical variables swayed the perception on the three constructs investigated. How perceptions are influenced can be determined by comparing perception mean scores over the categories of a significant biographical effect. The table below presents the perception mean scores per category level of the significant effects. Tukey's pair-wise comparison of means-test were used to establish which mean perception differed from the others. Perception mean

scores within the categories of a biographical variable differ significantly from one another if different letters appear next to their mean score values.

Perception mean scores of three constructs: general perceptions regarding HIV/AIDS, attitudes to HIV/AIDS-prevention methods, and to condom use, classified according to biographical variables which had been indicated as significant effects in the analysis of variance (see annexure c). Tukey's least significant difference (lsd) test was used to indicate how perceptions differ. (Means with the same letter are not significantly different.)

Table 5.23 Perception mean scores of three perception constructs

Perception construct 1: Perceptions of HIV/AIDS in general.			
Q10: Sex and culture categories. Tukey lsd = 0.144			
Tukey grouping	Mean	N	Sex-culture
A	3.83735	248	No
B	3.53050	47	Yes
Perception construct 1: Perceptions of HIV/AIDS in general.			
D6: Pre-marital sex categories. Tukey lsd = 0.219			
A	3.8356	211	No
A	3.6784	75	Yes
B	3.6000	9	Undecided

Perception construct 2: Attitudes to HIV/AIDS-prevention methods			
Q3: Gender categories		Tukey Isd = 0.176	
A	2.16938	149	female
B	1.99903	146	male
Perception construct 2: Attitudes to HIV/AIDS-prevention methods			
D6: Pre-marital sex categories.		Tukey Isd = 0.422	
A	2.6461	14	Undecided
B	2.0621	220	No
B	2.0392	61	Yes
Perception construct 3: Attitudes to condom use			
D6: Pre-marital sex		Tukey Isd = 0.632	
A	3.3361	214	No
A	3.2469	9	Undecided
B	2.7460	75	Yes

5.10 CONCLUSIONS

From the tabulated perception mean scores presented above, it can be derived that the general perceptions of HIV/AIDS were swayed by the cultural beliefs on pre-marital sex, and whether respondents engaged in pre-marital sex, variable d6.

The general perceptions of HIV/AIDS of the respondents from cultures that do not agree to pre-marital were significantly more on the disagreement side of the agreement scale (3.84) than the perceptions of respondents whose cultures

allow pre-marital sex. Furthermore, an interesting result showed up with regard to respondents' involvement in pre-marital sex, d6: respondents who indicated that they were undecided on whether they were engaged in pre-marital sex, held general perceptions of HIV/AIDS that were also significantly less to the disagreement side (3.6) than respondents who both denied and admitted to engagement in pre-marital sex.

Perceptions on HIV/AIDS-prevention methods were influenced by gender. The females' perceptions on the issue were somewhat but significantly more to the agreement side (2.2) than the males' perceptions. Perceptions on prevention methods were also influenced by pre-marital sex stances. The respondents who indicated that they were undecided on whether they engaged in pre-marital sex held an almost undecided (2.65, approximately 3) perception regarding prevention, as opposed to adolescents admitting or denying pre-marital sex who were more in agreement with HIV/AIDS prevention (2.1 and 2.0).

Attitudes to condom use were also swayed by engagement in pre-marital sex. Respondents abstaining from pre-marital sex and those who were undecided about their stance, were more in agreement than students who engaged in pre-marital sex, whose opinion were somewhat more to the undecided side of the agreement rating scale.

5.11 ANALYSIS OF ADOLESCENT STUDENTS' SEXUAL BEHAVIOUR

5.11.1 Introduction

Section D presents the items on sexual behaviour in the ASPHAATMQ. This section is divided into three sub-sections. The first sub-section is comprised of five items (d1A – d1E), while the second sub-section is comprised of four items

(d2 – d5), and the third of seven items (d6 – d12). The composite table is used for the analysis of section D, as is presented in table 5.24. This table gives a general idea of the respondents' sexual behaviour pattern.

The first question sought to find out if the students have been engaged in any of the following activities with the opposite sex: holding hands, - nearly seventy two percent (72%) of the respondents ticked 'yes' while twenty eight percent (28%) ticked 'no'; kissing, - nearly fifty percent (50%) agreed, while the remaining fifty percent (50%) disagreed; necking, - forty percent (40%) agreed to have been involved in necking, while nearly sixty percent (60%) disagreed; hugging - sixty five percent (65%) agreed, and thirty five percent (35%) disagreed; breast fondling, - thirty five percent (35%) agreed, while nearly sixty five percent (65%) disagreed; pre-marital sex - nearly twenty six percent (26%) admitted to have been engaged in pre-marital sex, and seventy four percent (74%) ticked 'no'. They were further asked if they have had sexually transmitted diseases, and ten percent (10%) admitted, and nearly ninety percent (90%) disagreed. When asked if they had been pregnant or made someone pregnant, eleven percent (11%) said 'yes', while nearly eighty nine percent (89%) disagreed. On if they have ever been sexually abused, nearly twenty two percent (22%) agreed, while seventy eight percent (78%) disagreed.

They were further asked how old they were when they had their first sexual experience. Nine percent (9%) indicated that they have never had sex. Twenty percent (20%) indicated they had sex before the age of thirteen, Nine percent (9%) indicated that having had sex by the age of thirteen. Twenty percent (20%) indicated they have had sex by age 14, eight percent (8%) of the respondents indicated they have had sex by the age of fifteen while twelve percent (12%) indicated that they were older than 16 years when they had their first sexual

intercourse, twelve percent of the responded indicated that they cannot recall when they had their first sexual intercourse.

On who influence their decision to have sexual intercourse eight percent (8%) of the respondents reported mass media, sixty percent (60%) indicated friends, twenty four percent (24%) indicated sexual partners while eight percent (8%) indicated that they have never been influenced.

Table 5.24 Perceptions of sexual behavior			
Section D: Perceptions of sexual behaviour			
Sub-items	Sexual behaviour		Total
	yes	no	
Frequency Cell Chi-Square Row Pct			
Holding hands	212 95.871 71.62	84 56.311 28.38	296
Kissing	143 12.754 49.83	144 7.4911 50.17	287
Necking	115 0.935 40.49	169 0.5492 59.51	284
Hugging	188 59.916 64.60	103 35.193 35.40	291
Breast fondling	101 0.1884 35.44	184 0.1107 64.56	285
Have you ever engaged in pre-marital sex?	75 9.5385 25.95	214 5.6026 74.05	289

Table 5.24 Perceptions of sexual behavior			
Section D: Perceptions of sexual behaviour			
Sub-items	Sexual behaviour		Total
Frequency Cell Chi-Square Row Pct	yes	no	
Have you ever had a sexually transmitted disease?	30 54.332 10.49	256 31.913 89.51	286
Have you ever been pregnant/made someone pregnant?	33 51.456 11.38	257 30.224 88.62	290
Have you ever forced sex?	61 17.764 21.71	220 10.434 78.29	281
Total	958	1631	2589
Frequency missing = 15			

Statistic	DF	Value	Prob
Chi-Square	8	480.5836	<.0001

5.11.2 Findings on adolescent sexual behaviour

The composite table differs from the previous composite tables in the sense that perceptions or attitudes were not evaluated, but sexual behaviour was described. From the findings it is apparent that the adolescent students were involved in

pre-marital sex. Interestingly, a trend that exists is for a progressively larger proportion of respondents to indicate that they were not involved in such activities, as the level of sexual activity became more involved. For example, 72% of the adolescents indicated that they had been engaged in kissing, and 50% in necking, down to 11% admitting to have had transmittable diseases and 11% to have been pregnant. Forced sex: 22% indicated that they have been involved in forced sex.

Sixty five percent of the students were engaged in hugging – could this figure possibly lead to misperceptions in this regard? Do adolescents not possibly regard hugging as a way of greeting each other, and not necessarily as a sexual activity?

As a final step in the analysis, cross tabulation was done in section D. It was reasoned that, apart from the composite table of section D, which gave a general idea of the respondents' attitude towards sexual behaviour, a comparison of questions d6-d9 (which could be regarded as possible outcome/result-of indicators of sexual behaviour) as opposed to d1-d5 (indicators of practical sexual behaviour), would indicate whether a greater involvement in sexual activities correlates with more serious consequences of sexual involvement.

Table 5.25 gives a summary of cross-reference frequency tables of all the consequence-variables (d6-d9) by sexual habit variables (d1-d5) to investigate whether more involved sexual habits leads to more serious consequences of sexual involvement.

Table 5.25 Summary of the cross-reference frequency tables, questions d1-d5 and d6-d9 in section D

Summary of the cross-reference frequency tables, questions d1-d5 and d6-d9 in section D													
		D6			D7			D8			D9		
Frequency		Yes	no	total	Yes	no	total	Yes	no	total	Yes	no	total
Row %													
Col %													
D1	Yes	62 30.39 83.78	142 69.61 66.98	204	18 8.87 60.00	185 91.13 73.12	203	23 11.17 69.70	183 88.83 72.33	206	45 22.84 75.00	152 77.16 70.05	
	No	12 14.63 16.22	70 85.37 33.02	82	12 15.00 40.00	68 85.00 26.88	80	10 12.50 30.30	70 87.50 27.67	80	15 18.75 25.00	65 81.25 29.95	80
	Total	74	212	286	30	253	283	33	253	286	60	217	277
	Df, chi-sq Prob(chi)	1	7.5726	0.0059	1	2.2776	0.1313	1	0.1006	0.7511	1	0.5616	0.4536
D2	Yes	61 44.53 82.43	76 55.47 37.25	137	21 15.44 72.41	115 84.56 46.75	136	20 14.49 64.52	118 85.51 47.77	138	36 27.07 63.16	97 72.93 45.75	133
	No	13 9.22 17.57	128 90.78 62.75	141	8 5.76 27.59	131 94.24 53.25	139	11 7.86 35.48	129 92.14 52.23	140	21 15.44 36.84	115 84.56 54.25	136
	Total	74	204	278	29	246	275	31	247	278	57	212	269
	Df, chi-sq Prob(chi)	1	44.3417	<.0001	1	6.8363	0.0089	1	3.0886	0.0788	1	5.4429	0.0196
D3	Yes	51 45.95 71.83	60 54.05 29.41	111	16 14.55 53.33	94 85.45 38.84	110	18 16.22 54.55	93 83.78 38.43	111	29 27.10 49.15	78 72.90 37.32	107
	No	20 12.20 28.17	144 87.80 70.59	164	14 8.64 46.67	148 91.36 61.16	162	15 9.15 45.45	149 90.85 61.57	164	30 18.63 50.85	131 81.37 62.68	161
	Total	71	204	275	30	242	272	33	242	275	59	209	268

Summary of the cross-reference frequency tables, questions d1-d5 and d6-d9 in section D													
		D6			D7			D8			D9		
	Df, chi-sq Prob(chi)	1	39.3713	<.0001	1	2.3268	0.1272	1	3.1332	0.0767	1	2.6856	0.1013
D4	Yes	62 34.25 83.78	119 65.75 57.49	181	15 8.33 53.57	165 91.67 65.74	180	16 8.74 50.00	167 91.26 66.53	183	39 22.67 66.10	133 77.33 62.15	172
	No	12 12.00 16.22	88 88.00 42.51	100	13 13.13 46.43	86 86.87 34.26	99	16 16.00 50.00	84 84.00 33.47	100	20 19.80 33.90	81 80.20 37.85	101
	Total	74	207	281	28	251	279	32	251	283	59	214	273
	Df, chi-sq Prob(chi)	1	16.4439	<.0001	1	1.6285	0.2019	1	3.3955	0.0654	1	0.3099	0.5777
D5	Yes	55 55.00 74.32	45 45.00 22.06	100	20 20.41 68.97	78 79.59 31.97	98	18 18.18 58.06	81 81.82 33.20	99	26 27.37 43.33	69 72.63 33.17	95
	No	19 10.67 25.68	159 89.33 77.94	178	9 5.14 31.03	166 94.86 68.03	175	13 7.39 41.94	163 92.61 66.80	176	34 19.65 56.67	139 80.35 66.83	173
	Total	74	204	278	29	244	273	31	244	275	60	208	268
	Df, chi-sq Prob(chi)	1	64.4046	<.0001	1	15.4188	<.0001	1	7.3826	0.0066	1	2.1008	0.1472

5.11.3 Conclusions

Significant dependencies in cross tabulations are indicated in the shaded portion.

Significant dependencies were established for all cross-tabulations of d6 (involvement in pre-marital sex) with sexual behaviour of holding hands, kissing,

necking, hugging, and breast fondling. If hugging is omitted (due to the possibility that adolescents may not have regarded hugging as sexual behaviour, but as a form of greeting), the question stated above on whether greater involvement in sexual activities correlates with more consequences of sexual involvement, then this is clearly the case with regards to engagement in pre-marital sex. The ratio of respondents involved in pre-marital sex to holding hands (30%), is less than the ratio of pre-marital sex.

Perceptions on HIV/AIDS-prevention methods were influenced by gender. The females' perceptions on the issue were somewhat but significantly more to the agreement side (2.2) than the males' perceptions. Perceptions on prevention methods were also influenced by their opinions on pre-marital sex. The respondents that indicated that they were undecided on whether they engaged in pre-marital sex held an almost undecided (2.65, approximately 3) perception regarding prevention, as opposed to adolescents admitting or denying pre-marital sex who felt more in agreement with HIV/AIDS prevention (2.1 and 2.0).

Attitudes to condom use were also swayed by their engagement in pre-marital sex. Respondents abstaining from pre-marital sex and those undecided on their stance, felt significantly more in agreement than adolescents who engaged in pre-marital sex, whose opinions were somewhat more to the undecided side of the agreement rating scale.

5.11.4 Two-way tables on sexual behaviour

Two-way tables were used to analyze the age distribution of adolescents who were involved in pre-marital sex and their age at first having sex. This analysis was also done on the question that had influenced adolescent students to have

sex and their involvement in pre-marital sex. These analyses are presented in tables 5.26 and 5.27 below.

Table 5.26 Age of first sexual experience			
Age of first sexual experience	D 6 Have you ever engaged in pre-marital sex?		Total
	yes	no	
Frequency Row Pct Col Pct			
I have never had sex	7 3.70 9.33	182 96.30 85.45	189
Younger than 13 years	15 68.18 20.00	7 31.82 3.29	22
13 years	7 63.64 9.33	4 36.36 1.88	11
14 years	15 78.95 20.00	4 21.05 1.88	19
15 years	6 85.71 8.00	1 14.29 0.47	7
16 years	7 58.33 9.33	5 41.67 2.35	12
Older than 16 years	9 75.00 12.00	3 25.00 1.41	12

Cannot recall	9 56.25 12.00	7 43.75 3.29	16
Total	75	213	288
Frequency missing = 3			

Pearson Chi-Square Test	
Chi-Square	146.8881
DF	7
Asymptotic Pr > ChiSq	<.0001

Monte Carlo Estimate for the Exact Test	
Pr >= ChiSq	0.0000
99% Lower Conf Limit	0.0000
99% Upper Conf Limit	4.604E-04
Number of Samples	10000
Initial Seed	540370657

Table 5.27: Influence by d6			
Who influenced your decision to have sex?	D 6 Have you ever engaged in pre-marital sex?		Total
	yes	no	
Frequency Row Pct Col Pct			
The mass media	6 12.50 8.00	42 87.50 19.63	48
Friends	45 42.45 60.00	61 57.55 28.50	106
My sex partner	18 45.00 24.00	22 55.00 10.28	40
I have never been influenced	6 6.32 8.00	89 93.68 41.59	95
Total	75	214	289
Frequency Missing = 2			

Statistic	DF	Value	Prob
Chi-Square	3	46.1528	<.0001

5.11.5 Conclusions on the two-way table

As indicated in the analysis above (see table 5.26), Fisher's exact test (a test where all assumptions upon which the derivation of the test statistics are met as opposed to an approximate test) is significant.

(Exact probability, Probability (Chi-square = 146.9) <0.0001) which indicates that age and sexual engagement in pre-marital sex is significantly related (or dependent on each other). Although the majority of the students indicated that they were not involved in pre-marital sex (182), the proportion of those involved and those not involved in pre-marital sex proved to be substantially greater for the 14 years age category ($15/4 = 3.8$).

Could this indicate the fourteen year old-group as the students who start experimenting with sex?

As indicated in the analysis above in table 5.27, the chi-square test is significant. (Probability (Chi-square =46.15) <0.0001), which indicates that the influential elements and sexual engagement in pre-marital sex are significantly related (or dependent on each other). The number of adolescent students influenced by either friends or sexual partners to have sex was substantially bigger than the proportion of the mass media, or the number of those who have never been influenced.

CHAPTER SIX

CONCLUSIONS OF THE RESEARCH

6.1 INTRODUCTION

The findings emanating from the literature review and the empirical study were analyzed and interpreted in chapter five.

In this chapter these findings will be discussed, and also the conclusions, the contribution to knowledge, and recommendations. The limitations of the study and matters for further research will be pointed out.

6.2 FINDINGS EMANATING FROM THE LITERATURE REVIEW

6.2.1 Vulnerability to HIV/AIDS

The literature study revealed that

- adolescents are involved in risky behaviours (2.2.4.4)
- cultural factors, socio-economic factors, adolescent development and risk taking behaviours are factors that could result in adolescents' vulnerability to HIV/AIDS (see 2.1, 2.2.2, 2.2.3, 2.2.4.1, 2.2.4.2);
- the Government is underreporting HIV/AIDS in Nigeria (see 2.2.20)
- HIV/AIDS has a negative impact on education (see 2.3.2.1);
- HIV/AIDS also has a negative impact on students and teachers (see 2.3.2.1) and

- initiatives have been put in place by government(see education initiatives) and non governmental organization to reduce the prevalence of HIV/AIDS among Nigerian adolescents (see 2.3.2.2 and 2.3.3)

6.2.1.1 Perceptions of HIV/AIDS

The literature study also revealed that:

- The formation of perception about HIV/AIDS is rooted in a number of variables(see 3.2.1);
- perceptions can be influenced (see 3.2.1);
- variables like the mass media and peer group pressure could influence adolescents' perceptions of HIV/AIDS (3.2.1.1 and 3.2.1.2);
- introduction of sexuality and HIV/AIDS education to adolescents' could be used to promote a change in adolescents perceptions and attitudes to HIV/AIDS(see 3.6.5);
- the media, the school teachers, parents, and family counseling programmes could also form basis for changing adolescents' perceptions (see 3.6.1, 3.6.3, 3.6.4, 3.6.5 and 3.6.6)

6.2.1.2 Attitudes to prevention methods

Regarding the students' attitudes to prevention methods, the following can be noted:

- abstinence and condom use are prevention strategies for reducing the HIV/AIDS scourge (see 3.3, 3.3.1, .3.3.2);

- abstinence is focused on reducing the frequency of sexual intercourse (see 3.3.1);
- the young people have negative attitudes to condom use (see 3.3.2, 3.4.2)
- gender differences affects condom use as females tend to have favourable attitude towards condom use (see 3.4.2).

6.3 FINDINGS FROM THE EMPIRICAL INVESTIGATION

The adolescent students' perceptions of HIV/AIDS and their attitudes to prevention methods in Lagos, Nigeria were evaluated by the means of the ASPHAATPM questionnaire. The selected instrument manifests good reliability indices. The findings are presented below according to the demographic data, the perceptions of HIV/AIDS and attitudes to prevention methods.

6.3.1 Demographic data

- The majority of the respondents (61%) are between the ages of 13 and 16 years. Age may affect their perceptions of HIV/AIDS and their attitudes to prevention methods.
- The majority of the respondents lived with their parents (77%), and nearly ninety seven percent (97%) lived with at least one parent. Parents play an influential role in the socialization of adolescents, and need to be having up to date information to be able to communicate openly with the adolescents on HIV/AIDS-issues. The majority of the respondents (94%) indicated that at least one of their parents had a job.
- The study revealed that the majority of the respondents received their HIV/AIDS information from the television (56%), and parents were rated

second (15%). The parents of the respondents had steady jobs and as such, could afford a television set. The parents' educational levels were also indicated as good - 50% of the fathers and 42% of the mothers had a tertiary qualification, and an additional 31% of the fathers and 38% of the mothers had completed secondary school. The educational background of the parents may influence the perceptions of the respondents to HIV/AIDS and their attitudes to prevention methods.

- The majority of the respondents are Christians (68%), the remaining thirty two percent (32%) belong either to the Islam or the traditional religions. Religious organizations preach against pre-marital sex, hence abstinence until marriage. This is consistent with Marindo *et al.*'s (2003:24) findings that the church promotes abstinence until marriage.
- The adolescents' activities indicated that the majority of them did not belong to a gang at school, but seventy one percent (71%) indicated that they spend more time with their gang members than at home. Although the adolescents discuss HIV/AIDS with their peers and their friends, they indicated that they spend more time at home with their parents.
- Many of the respondents (16%) indicated that their cultural beliefs did not permit them to engage in pre-marital sex. The cultural beliefs held by the respondents may have influenced their attitude to HIV/AIDS prevention methods. This notion was consistent with the findings of Marindo *et al.* (2003:24) that virginity is valued highly and celebrated traditionally.

6.3.2 The respondents' perceptions of HIV/AIDS

- Generally speaking, the respondents indicated a healthy knowledge of HIV/AIDS. They knew, for example, that HIV/AIDS could not be spread by

- means of mosquito bites, and could not be transmitted through sharing cutlery with an infected person.
- The general perceptions to HIV are optimistic rather than negative. A great number of the respondents (81%) believed that HIV/AIDS is real, and they also knew that it is not a disease of the Whites. They were aware that limiting sexual partners will prevent HIV/AIDS, and also disagreed that only uncircumcised people contracted the infection.
 - The general perceptions of adolescents were swayed by religious beliefs. Many of the respondents (59%) indicated that HIV is not a punishment from God and disagreed that their faith in God can protect them from HIV/AIDS.
 - Seventy five percent (75%) of the respondents disagreed that HIV/AIDS infects only the poor people. Most (68%) of the respondents disagreed that using lime to wash the genitals will prevent AIDS.
 - Seventy percent (70%) of the respondents disagreed that one can tell if a person is HIV positive. Fifty two percent (52%) of the respondents felt that HIV/AIDS is used to discourage adolescents from having sex.
 - Approximately thirteen percent of the respondents (13%) felt that witchcraft can cause HIV. This belief may be reflected in cultural beliefs in the country that witchcraft is the cause of several diseases. These inaccurate perceptions could lead to feelings of hopelessness, leading to a lack of action to take preventative measures against HIV-transmission. These perceptions could also be shared with friends and peers.
 - Approximately forty percent (40%) of the respondents thought that they were not at risk of contracting HIV/AIDS, and thirty five percent (35%) believed that females are more at risk of contracting HIV/AIDS than males. Adolescents with this perception may not practise safe sex, especially the males, who believe that they are not at risk of contracting HIV/AIDS.

6.3.3 Respondents' attitudes to prevention methods

- Nigerian adolescent students tend to have a positive attitude to HIV/AIDS prevention methods.
- Seventy two percent (72%) of the respondents agreed to abstinence from sexual intercourse while seventy nine (79%) of the respondents were aware of the risk involved in having unsafe sex with multiple partners, whereby refusing casual sex, and avoiding the sharing of piercing instruments. Seventy six percent (76%) of the respondents abstained from premarital-sex, and agreed that they would be faithful to one sexual partner.
- Seventy five percent (75%) of the respondents believed that prostitution should be banned while approximately eighty six (86%) that medical tests should be done before marriage.
- Sixty eight percent (68%) of the respondents indicated the use of condoms as an HIV/AIDS preventive method.
- Seventy one percent (71%) of the respondents wanted homosexuality to be legalized. This could be because the respondents believed that HIV can be transmitted by heterosexual intercourse only. They may not have knowledge of the implications of homosexuality.
- Eighty percent (80%) of the respondents agreed to the introduction of sexuality /sex education in the school curriculum. This could be because the respondents have several questions to clarify and to ask their teachers at school.

6.3.4 The respondents' sexual behaviour

- Seventy four percent (74%) of the respondents mentioned that they have never had sex, even though they had been involved in hugging, kissing and necking.
- About forty three percent (43%) of the adolescents who had engaged in pre-marital sex admitted that their friends had influenced them. This meant that the peer group exerted a lot of influence on adolescents' sexual behaviour.
- Thirty five percent (35%) of the respondents indicated they have engaged in breast fondling.
- Twenty two percent of the respondents stated that they had been involved in forced sex.
- Ten percent (10%) of the respondents indicated that they have had sexually transmitted diseases.

The sexual behaviour of the respondents could imply that they are involved in pre-marital sex. This risky behaviour could result in the contraction of HIV/AIDS.

6.3.5 The respondents and condom use

- Forty three percent (43%) of the respondents felt that condoms get in the way of having natural sex.
- Forty nine percent (49%) of the respondents disagreed that the use of condoms reduces sexual pleasure.
- Nineteen percent (19%) of the respondents remained undecided whether condoms made the process of sex abrupt.
- Forty eight percent (48%) of the respondents agreed that condoms can be physically uncomfortable.

- Forty eight percent (48%) of the respondents disagreed that condoms can be embarrassing.
- Sixty eight percent (68%) of the respondents disagreed that condoms made them feel sexually promiscuous.
- Twenty seven percent (27%) agreed that they do not like using condoms.
- The respondents are divided on the issue that condoms are inconvenient.

It could therefore be assumed that the respondents mostly do not use condoms but they do not seem to like it. Since they are comfortable with using condom there is a probability that they may not use condoms consistently. Amuyunzu *et al.* (2005:24) found that the young people did not use condoms consistently in the belief that their partners are not infected.

The respondents also indicated a positive attitude to prevention methods. The results correlate with the research findings of Asuquo *et al.* (2005:70) who reported that the adolescent students indicated a positive attitude to HIV/AIDS, and are quite knowledgeable about HIV/AIDS. Their findings also indicated that the respondents knew that limiting sexual partners and using condoms during sexual intercourse consistently, could prevent the transmission of HIV. They were aware of the fact that adolescents under the age of sixteen years can contract HIV.

The findings from the study further indicated that the group of adolescents used in this study is favorably disposed to HIV/AIDS preventive methods. This is encouraging, because the more positive they are about the prevention of the disease, the more responsive they are about the prevention and control. However, their attitudes need to improve.

6.4 ETHICAL CONSIDERATIONS

- The consent forms were completed and signed by the parents or guardians of the participants.
- Appropriate research methods were identified.
- The findings were accurately recorded.

6.5 RECOMMENDATIONS AND GUIDELINES FOR ADOLESCENTS, PARENTS AND TEACHERS TO REDUCE RISKY SEXUAL BEHAVIOUR

In accordance with the findings of the research the following recommendations can be made:

6.5.1 Recommendations for preventing the spreading of HIV/AIDS

- Efforts should be made to maintain the adolescents' positive perceptions of HIV/AIDS by means of counseling and the implementation of sexuality and HIV/AIDS education.
- Efforts to prevent the spreading of HIV/AIDS need to focus on the individuals' risky behaviour as well as on gender-based, socio-cultural, biological, and economic factors.
- Voluntary counseling and testing for all adolescents and their parents, teachers, guardians and community members are recommended.
- The stigmatization and discrimination against HIV-positive individuals must be discouraged.
- Efforts have to be made to encourage students to abstain from sex until marriage, and to stress the importance of responsible sexual behaviour.

- The use of condoms must be promoted, with safe sex negotiations being an alternative to abstinence. The use of condoms requires a clear message that dispels misconceptions, such as the notion that only promiscuous people use condoms. It must be made clear that using condoms is indicative of mature and responsible sexual behaviour.

6.5.2 Recommendations and guidelines for teachers and students

It is recommended that students are given the relevant information on HIV/AIDS and services in order to make informed choices about matters that can profoundly affect their lives and the lives of their partners. With the rapid spreading of HIV-infection among young people, the need for sexuality and HIV/AIDS education has become more compelling, and the consequences of unsafe risk-taking behaviour more dangerous. If there were any doubt about the need for HIV/AIDS education in schools, or any suspicion that ignorance is protective, it should now be dismissed. It is now, more than ever, important to provide comprehensive HIV/AIDS education at all secondary schools.

Accordingly, the general aim of HIV/AIDS education should be to reduce the risk of HIV-transmission. It is important that the education given should form part of an integrated national AIDS prevention program and control strategy. These should be designed in such a way that students in secondary schools are able to

- understand the nature of HIV/AIDS and its transmission;
- obtain information on the seriousness of HIV/AIDS in Nigeria;
- make informed decisions about the behaviour that will protect them against HIV/AIDS;

- personally and socially behave in ways that will eliminate the risk of spreading HIV-infection;
- make informed choices in accordance with decision-making models;
- reject biased information and myths relating to HIV/AIDS;
- value their own health and relationships, free from HIV/AIDS;
- develop optimistic perceptions toward HIV/AIDS; and
- develop positive attitudes toward HIV/AIDS prevention methods.

In order to achieve these and also other goals of HIV/AIDS education in schools, the various schools and educational institutions need to be committed, and appropriate actions need to be taken to accomplish the following, namely to increase

- the level of awareness and knowledge about the transmission of HIV/AIDS among secondary school students in the community;
- the level of understanding throughout the community, and among the secondary school population in particular, of the personal and social problems associated with sexual behaviour and HIV/AIDS.

It is important, then, that all HIV/AIDS-information be presented in an accurate, clear, simple and direct manner. Such an approach would not assume that all adolescents are capable of formal operational thought, and would therefore need to involve concrete language and examples. The quality, style of presentation and, ultimately, the impact of an HIV/AIDS-education programme are influenced by the persons who teach it.

Accordingly, the training of teachers is vital for the successful implementation of HIV/AIDS education programmes. The needs of teachers regarding teaching sexuality and HIV/AIDS education would have to be assessed and then

appropriate training programmes be developed. Well-equipped and trained teachers will have a significant impact on the knowledge, skills and attitudes of the students.

HIV/AIDS education in secondary schools should not be limited to merely presenting facts about HIV and AIDS, but could also include topics such as prejudice and discrimination and other social issues, as well as communication and more sensitive discussions of sexuality, feelings and emotions.

Educators will have to realize that teaching involves not only impacting knowledge, but also leading students to possible changes in beliefs, perceptions and attitudes, which may be more effective if acquired through relevant teaching methods, for example, participatory teaching techniques. Participatory activities, in which students can identify with situations without being drawn into personal revelations, such as role play sessions, can explore different moral views and choices. These can be related to young people's experiences in a changing world, while skills of negotiations and communication are practiced.

It is particularly important that relevant cultural values be integrated in the HIV/AIDS education programme in order to promote positive attitudes to people living with HIV/AIDS. For example, if someone is infected, it is the collective responsibility of everyone to take care of that person. There should be no stigma attached to the individual, or discrimination against him or her.

School teachers have to teach students which behaviours are considered risky and which can increase their chances of being infected by the HI virus. It is important that students should understand that there is no cure for AIDS, and that engaging in responsible sexual behaviours is the only method of reducing

the risk of HIV transmission. This behaviour includes either delaying the initiation of sexual intercourse, or making use of condoms.

Students should also be made aware that they have several prevention strategies to choose from, but the effectiveness of each depends on making use of them in a responsible way. Those persons who choose to practise abstinence will consistently have to abstain from having sex. Similarly, those who choose any other recommended prevention strategies, including the use of condoms, will find them effective only if used correctly.

Adolescents must realize that they will have to make behaviour changes that will reduce their risk of infection. Educators need to keep in mind that behaviours responsible for HIV transmission are often marked by the adolescents' own convictions. Students should learn about the emotional and social factors which influence behaviour associated with HIV transmission.

There are a variety of activities available to educate students about HIV, which could also be used in schools. Their success depends on their implementation. The unique social context of the school population could be used in the following manners

- the use of peer facilitators to discuss HIV/AIDS issues in the classrooms and with students individually;
- role-playing a scene in which a person discusses the prevention of HIV/AIDS;
- drama presentations, that portray the risks of HIV/AIDS, written and presented by the students;
- group discussions on one's attitude to the social, cultural, ethical or religious issues involved in HIV/AIDS prevention;

- school presentations about HIV/AIDS by people living with HIV/AIDS, or by students;
- discussion sessions on youth sex issues;
- practising the solving of problems faced by young people; and
- replying to so-called letters from teenagers with questions and concerns about HIV/AIDS, in the form of a newspaper advice column.

6.5.3 Government agencies

- The Government needs to reassess the various policies on HIV/AIDS.
- The scope and content of HIV/AIDS education would need to be determined by the Ministry of Education in liaison with the Ministry of Health, curriculum experts and National AIDS Control Agencies.
- Specific approaches to sensitive topics could be locally determined and be consistent with parental and community values.
- The Government should collaborate and consult with parents and other members of the community and with, for example, religious groups, health officials, non-governmental organizations, and student representatives.
- The Government should make HIV/AIDS education compulsory at teacher training colleges and universities.
- The Government should provide resources for teachers to update their knowledge and understanding of HIV/AIDS issues.
- In order for classroom teachers to adopt relevant teaching methods and learning activities, it is important that the Ministries of Education, and of Sports and Culture realize the need to adequately train the teachers.
- The appropriate training in respect of HIV/AIDS education could be done through in-service training workshops.
- Since these workshops at national level can be expensive, they can be carried out in a number of ways (WHO/UNESCO 2000:12), namely:

- As an in-school training programme, involving all the staff members.
- In regional or district training programmes for all the teachers who are involved with HIV/AIDS education.
- In a 'train the trainers' programme where one or more teachers per school are trained. These teachers then train their colleagues on return to their respective schools.

6.5.4 Parents

Parents are the primary educators of their children. Parents have to provide their children with the correct and accurate information regarding HIV/AIDS. The following are recommended:

- Parents who are knowledgeable about HIV/AIDS could liaise with school and give HIV/AIDS talks during parent-teachers association meetings.
- Parents should constantly communicate with their children, especially with adolescents, so as to pass on the correct information on HIV/AIDS to them.
- Where parents have failed to provide sexuality and HIV/AIDS education to adolescents, the school educational psychologist or counselor could be approached for help.
- Parents need to work hand in hand with the school so as not to relegate their primary role as sexuality educators to the school alone.

6.6 CONCLUSIONS OF THE INVESTIGATION

From the findings of this study it is apparent that Nigerian adolescent students have positive perceptions of HIV/AIDS and prevention methods. But, this has not been reflected in their sexual behaviour. They are already engaging in pre-marital sex. The students seem to be divided on condom use. This may be due to the fact that those involved in pre-marital sex are not practising prevention methods.

It is apparent that parents, teachers, the Government and the society, all have a role to play in the development of healthy sexual behaviour. An educational psychologist should be available to proffer solutions to the problems of adolescents.

6.7 CONTRIBUTIONS TO KNOWLEDGE

The research investigation contributed to the knowledge of the interaction between the adolescents' perceptions of HIV/AIDS and their sexual behaviour. Findings from the study could contribute to positive attitudes to prevention methods and to developing healthy sexual behaviour.

The results from the study provided evidence that despite the fact that adolescents have positive perceptions of HIV/AIDS and positive attitudes to prevention methods, they may still be practising risky sexual behaviour. It is necessary to help adolescents sustain their optimistic and positive attitudes.

These research findings have significant benefits for:

- adolescents who practise risky sexual behaviour;
- educational psychologists, counselors and other educators, who have to realize that they have a major role to play;
- parents, to realize their importance as the primary sexuality and HIV/AIDS educators of their children;
- Governmental and non-governmental organizations, in respect of their role in the dispensation of HIV/AIDS knowledge and information; and
- other professionals like nurses, doctors, counselors, administrators, curricula experts and all concerned with education in Nigeria.

6.8 LIMITATIONS OF THE STUDY

- Although it is possible to generalize the findings of this study to a certain extent, it is important to point out that the research was limited to only one state in Nigeria. Generalizations for the whole country can only follow when similar research has been conducted in all the states.
- There seems to be an inherent discrepancy between HIV policies and its implementation in schools.
- Attitudes and perceptions can be influenced by time and realities.
- Attitudes cannot be measured, they are inferred, and subjectivity is embedded in this inference.

6.9 MATTERS REQUIRING FURTHER RESEARCH

The findings of this study have the following implications for further research:

- A comparative research on both the out-of-school adolescents and those attending secondary school is recommended in order to explore and

- examine the relationship between adolescents' perceptions of HIV/AIDS and their sexual behaviour.
- Research with different samples of the adolescent populations throughout Nigeria is recommended, and variables like gender, cultural background, religion, the socio-economic status of the parents, and urban versus rural settings need to be examined.
 - It is further recommended that certain crucial elements of adolescent sexuality, such as sexual abuse, need to be examined. It would be useful to understand adolescents' perceptions on the frequency, the nature and the magnitude of sexual abuse cases in Nigeria.
 - Furthermore, more research needs to be done on adolescents' sexual behaviour.
 - From this study it is evident that not all senior secondary school students are sexually active. It might be useful to investigate adolescent students' perceptions of abstinence, more specifically, to examine the reasons why some choose abstinence, the pressures they go through, and how they manage to persist in their decision. One will learn how effectively such findings can be incorporated in the AIDS education curriculum.
 - It would also be useful to gain further understanding of how individuals interpret HIV/AIDS related messages from the variety of sources that adolescents encounter in their lives. The impact of these messages on the attitudes and sexual behaviours of adolescents is not evident.

6.10 CONCLUSION

In this study the researcher highlighted certain key areas for intervention, with special emphasis on introducing HIV/AIDS education in secondary schools in Nigeria. In this respect it is hoped to help the students to gain more accurate information about HIV/AIDS, to recognize HIV/AIDS as an immediate threat, and

to make informed decisions that do not put them at risk of HIV-infection. Since a great number of students are sexually active, it places them at risk, and it makes HIV/AIDS prevention programmes for secondary schools a matter of immediate urgency.

The AIDS education programmes should be developed by the Ministries of Education and Health in conjunction with teachers, curricula developers, parents and student representatives. Furthermore, the programme would enable students to seriously think through the issues, and encourage them to adopt and maintain responsible sexual behaviour that will minimize the risk of becoming HIV infected. From this study it is evident that all students require appropriate HIV/AIDS education.

The research findings are important and have tremendous implications for Nigeria, particularly for life skills teachers. This research was undertaken by an educational psychologist, and it is hoped that other professionals, the Government, parents and adolescents would welcome the sexuality/HIV/AIDS education programmes in Nigeria.

The outcomes of this research are positive and worth the time and effort invested in it.

The findings confirm that the aims of the research have been achieved.

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ANNEXURE A

MOBILE HEALTH CONSULT,
70A MOLADE OKOYA,
VICTORIA ISLAND,
LAGOS.
12 MARCH 2008

THE PERMANENT SECRETARY,
MINISTRY OF EDUCATION,
ALAUUSA,
IKEJA,
LAGOS.

DEAR Sir/Madam

Request for permission to conduct research in your schools

I hereby request permission from your office to carry out a survey among students in Lagos state. This is part of the requirements for me to complete my studies at the University of South Africa.

My topic is “Exploring Nigerian adolescent students’ perceptions of HIV/AIDS and their attitudes to prevention methods: A psycho of educational perspective”.

With your permission the study will be conducted at the following schools:

Ivory grammar school;
Ajebo high school;
Akodo comprehensive high school;
Oke ira grammar school;
Isale-eko grammar school;
School masters academy;
Home science association secondary school;
Caleb international college;
Unilag international secondary school; and
Nigerian model high school.

Your assistance in the matter would be greatly appreciated.

Yours sincerely,

.....
Jimoh, Morayo

ANNEXURE B

Parent/Guardian consent form

TITLE OF THE THESIS: Exploring Nigerian adolescent students' perceptions of HIV/AIDS and their attitudes to prevention methods: A psycho of educational perspective

**JIMOH, MORAYO (DOCTORAL CANDIDATE)
DEPARTMENT OF PRIMARY EDUCATION,
UNIVERSITY OF SOUTH AFRICA,
PRETORIA**

Dear Parent/Guardian

My name is Morayo Jimoh. I am a Doctoral student at the University of South Africa. I am currently conducting a research on "Exploring Nigerian adolescent students' perceptions of HIV/AIDS and their attitudes to prevention methods: A psycho of educational perspective". The information that I collect could be used to improve sexuality/HIV/AIDS education in the schools.

I am requesting you to allow your child participate in the above-mentioned study. The information collected could be used to design HIV/AIDS prevention programmes for adolescents in the country. The information gathered from this study will be kept highly confidential, and participation is voluntary.

Please indicate that you agree that your child may participate in this study by signing below.

Parent/Guardian:

Date:

Mrs Morayo Jimoh
Contact telephone number: 4705589

Mobile phone number: 08033451351

ANNEXURE B

Consent to be a participant in the research project

Dear Respondent

My name is Morayo Jimoh. I am an Educational Psychologist pursuing my studies for a Doctoral degree in Psychology of Education at the University of South Africa. I am doing research for a study entitled “Exploring Nigerian adolescent students’ perceptions of HIV/AIDS and their attitudes to prevention methods: A psycho of educational perspective’.

The study may generate information that would be useful in designing HIV/AIDS prevention programmes for adolescents.

I am requesting you to answer the following questions as honestly as possible. All information gathered in this study will be kept confidential. Your participation is on a voluntary basis and you are free to withdraw at any stage should you wish to do so.

Please be informed that there will be no payment for being a respondent in this study.

PLEASE DO NOT WRITE YOUR NAME ON THE QUESTIONNAIRE

Thanking you.

.....
MORAYO JIMOH
CONTACT NUMBER: 08033451351

30 Variables:	b1	b2	b3	b4	b5	b6	b7	b8	b9	b10
	b11	b12	b13	b14	b15	b16	b17	b18	b19	
	b20	b21	b22	b23	b24	b25	b26	b27	b28	
	b29	b30								

2 SIMPLE STATISTICS

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
b1	300	4.15000	1.29089	1245	1.00000	5.00000	HIV/AIDS is not real
b2	300	4.09000	1.15745	1227	1.00000	5.00000	HIV/AIDS is a disease of the Whites
b3	300	3.57000	1.37285	1071	1.00000	5.00000	HIV/AIDS is propaganda to reduce the Black population
b4	300	3.24333	1.50943	973.00000	1.00000	5.00000	HIV/AIDS is used to discourage adolescent sex
b5	300	4.07333	1.25427	1222	1.00000	5.00000	HIV/AIDS is a dangerous disease
b6	300	3.25333	1.61385	976.00000	1.00000	5.00000	I am not at risk of contracting HIV/AIDS
b7	300	3.93000	1.33581	1179	1.00000	5.00000	A healthy looking person cannot be HIV positive
b8	300	4.25000	1.14829	1275	1.00000	5.00000	Witchcraft can cause HIV
b9	300	3.83667	1.32002	1151	1.00000	5.00000	I can tell if a person is HIV positive

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
b10	300	3.32667	1.34635	998.00000	1.00000	5.00000	The HIV threat is misrepresented by the Government
b11	300	3.86000	1.16257	1158	1.00000	5.00000	My friends are more at risk of contracting HIV than me
b12	300	4.08000	1.15095	1224	1.00000	5.00000	Only people practising homosexuality can contract HIV/AIDS
b13	300	4.11000	1.16437	1233	1.00000	5.00000	HIV/AIDS concerns the adult population, not adolescents
b14	300	4.29333	1.02834	1288	1.00000	5.00000	Adolescents less than 16 years cannot be infected with HIV/AIDS
b15	300	4.28667	1.08709	1286	1.00000	5.00000	Sexual intercourse with a virgin can cure HIV
b16	300	3.09000	1.41015	927.00000	1.00000	5.00000	Limiting sexual partners will stop me from contracting HIV/AIDS
b17	299	3.50502	1.30916	1048	1.00000	5.00000	HIV is a punishment from God

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
b18	299	3.05351	1.41082	913.00000	1.00000	5.00000	More females than males are infected with HIV/AIDS
b19	300	3.89000	1.09020	1167	1.00000	5.00000	A shower after sex will stop me from contracting HIV/AIDS
b20	300	4.14000	0.96445	1242	1.00000	5.00000	Only persons living in cities can contract HIV/AIDS
b21	300	3.74667	1.31463	1124	1.00000	5.00000	HIV spreads via mosquito bites
b22	299	3.87291	1.24670	1158	1.00000	5.00000	A spiritualist can cure HIV/AIDS
b23	299	3.90635	1.14894	1168	1.00000	5.00000	The use of lime to wash the genitals will prevent HIV/AIDS
b24	300	3.88000	1.12390	1164	1.00000	5.00000	Malnutrition causes HIV/AIDS in my community
b25	300	3.69667	1.33062	1109	1.00000	5.00000	HIV is transmitted via the cutlery or crockery of the infected person
b26	298	3.30201	1.44579	984.00000	1.00000	5.00000	The media places too much emphasis on HIV

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
b27	300	3.96333	1.12228	1189	1.00000	5.00000	HIV/AIDS infects only poor people
b28	300	3.50000	1.46418	1050	1.00000	5.00000	My faith in God protects me from HIV/AIDS
b29	300	3.66333	1.32002	1099	1.00000	5.00000	HIV/AIDS is hereditary
b30	300	4.01000	1.17807	1203	1.00000	5.00000	Only uncircumcised people contract HIV/AIDS
Cronbach Coefficient Alpha							
Variables		Alpha					
Raw		0.788221					
Standardized		0.794326					

3 CRONBACH COEFFICIENT ALPHA

Cronbach Coefficient Alpha with Deleted Variable					
Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
b1	0.324835	0.781080	0.315006	0.788074	HIV/AIDS is not real
b2	0.429668	0.776900	0.423299	0.783295	HIV/AIDS is a disease of the Whites
b3	0.388012	0.777902	0.384815	0.785003	HIV/AIDS is propaganda to reduce the Black population
b4	0.360482	0.779153	0.347700	0.786641	HIV/AIDS is used to discourage adolescent sex
b5	0.257949	0.784110	0.247420	0.791012	HIV/AIDS is a dangerous disease

Cronbach Coefficient Alpha with Deleted Variable					
Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
b6	0.170646	0.790039	0.163607	0.794607	I am not at risk of contracting HIV/AIDS
b7	0.425951	0.776155	0.430050	0.782994	A healthy looking person cannot be HIV positive
b8	0.370021	0.779437	0.372921	0.785529	Witchcraft can cause HIV
b9	0.352210	0.779757	0.354771	0.786330	I can tell if a person is HIV positive
b10	0.236742	0.785263	0.221360	0.792135	The HIV threat is misrepresented by the Government
b11	0.211006	0.785968	0.209208	0.792657	My friends are more at risk of contracting HIV than me
b12	0.334375	0.780902	0.335478	0.787178	Only people practicing homosexuality can contract HIV/AIDS
b13	0.383666	0.778803	0.393556	0.784616	HIV/AIDS concerns the adult population, not adolescents
b14	0.424276	0.777944	0.434457	0.782797	Adolescents < 16 years cannot be infected with HIV/AIDS
b15	0.275765	0.783353	0.290261	0.789154	Sexual intercourse with a virgin can cure HIV
b16	0.335053	0.780515	0.335488	0.787177	Limiting sexual partners will stop me contracting HIV/AIDS
b17	0.166603	0.788389	0.165742	0.794516	HIV is a punishment from God

Cronbach Coefficient Alpha with Deleted Variable					
Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
b18	0.298158	0.782380	0.296072	0.788901	More females than males are infected with HIV/AIDS
b19	0.317843	0.781715	0.325909	0.787597	A shower after sex will stop me contracting HIV/AIDS
b20	0.257596	0.784152	0.267170	0.790157	Only persons living in cities can contract HIV/AIDS
b21	0.307253	0.781888	0.311616	0.788222	HIV spreads via mosquito bites
b22	0.249511	0.784474	0.261761	0.790391	A spiritualist can cure HIV/AIDS
b23	0.434218	0.776761	0.447939	0.782195	The use of lime to wash the genitals will prevent HIV/AIDS
b24	0.375608	0.779307	0.378695	0.785274	Malnutrition causes HIV/AIDS in my community
b25	0.348028	0.779940	0.357144	0.786225	HIV is transmitted via the cutlery or crockery of the infected person
b26	0.156195	0.789651	0.149012	0.795228	The media places too much emphasis on HIV
b27	0.224054	0.785378	0.229036	0.791805	HIV/AIDS infects only poor people
b28	0.233199	0.785827	0.234403	0.791574	My faith in God protects me from HIV/AIDS

Cronbach Coefficient Alpha with Deleted Variable					
Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
b29	0.190159	0.787356	0.192511	0.793373	HIV/AIDS is hereditary
b30	0.135595	0.789104	0.142633	0.795498	Only uncircumcised people contract HIV/AIDS

13 Variables:	c1	c2	c3	c4	c5	c6	c7	c8	c9	c10
	c11	c12	c13							

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
c1	300	2.13333	1.33473	640.00000	1.00000	5.00000	Abstinence from sexual relations
c2	300	2.00333	1.30217	601.00000	1.00000	5.00000	Being faithful to one's sexual partner
c3	300	2.26667	1.28883	680.00000	1.00000	5.00000	The use of a condom
c4	300	1.91333	1.20443	574.00000	1.00000	5.00000	Avoidance of sharing piercing instruments
c5	300	2.33333	1.36446	700.00000	1.00000	5.00000	Avoidance of illicit drug use and abuse

Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
c6	299	1.94314	1.22889	581.00000	1.00000	5.00000	Sterilization of equipment and materials
c7	300	1.95333	1.28712	586.00000	1.00000	5.00000	Sexuality/sex education
c8	300	1.68333	1.04884	505.00000	1.00000	5.00000	Medical test before marriage
c9	299	2.01338	1.32090	602.00000	1.00000	5.00000	Banning of prostitution
c10	300	2.87333	1.43439	862.00000	1.00000	5.00000	Seeking immediate treatment after contracting STDs
c11	300	2.09667	1.28302	629.00000	1.00000	5.00000	Legalizing homosexuality
c12	299	2.00000	1.26650	598.00000	1.00000	5.00000	Refusing of casual sex
c13	300	1.87333	1.22021	562.00000	1.00000	5.00000	Refusing unsafe sex with multiple partners

Cronbach Coefficient Alpha	
Variables	Alpha
Raw	0.829201
Standardized	0.833011

Cronbach Coefficient Alpha with Deleted Variable					
Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
c1	0.437678	0.820203	0.439689	0.824286	Abstinence from sexual relations
c2	0.500968	0.815342	0.500831	0.819873	Being faithful to one's sexual partner
c3	0.334986	0.827560	0.334815	0.831694	The use of a condom
c4	0.591407	0.809164	0.592751	0.813105	Avoidance of sharing piercing instruments
c5	0.350270	0.827068	0.349268	0.830685	Avoidance of illicit drug use and abuse
c6	0.590660	0.809003	0.596350	0.812837	Sterilization of equipment and materials
c7	0.516819	0.814170	0.522488	0.818293	Sexuality/sex education
c8	0.470337	0.818275	0.473306	0.821869	Medical test before marriage
c9	0.509597	0.814659	0.511387	0.819104	Banning of prostitution
c10	0.295213	0.832134	0.293849	0.834533	The use of pills
c11	0.504920	0.815073	0.505636	0.819523	Legalizing homosexuality
c12	0.571283	0.810162	0.573420	0.814542	Refusing of casual sex
c13	0.526769	0.813682	0.527457	0.817929	Refusing unsafe sex with multiple partners

9 Variables:	e1	e2	e3	e4	e5	e6	e7	e8	e9
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Simple Statistics							
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum	Label
e1	300	2.98333	1.49572	895.00000	1.00000	5.00000	Gets in the way of having natural sex
e2	299	3.07023	1.48542	918.00000	1.00000	5.00000	Reduces sexual pleasure
e3	300	3.11333	1.33157	934.00000	1.00000	5.00000	Makes the process of sex abrupt
e4	300	3.15000	1.44028	945.00000	1.00000	5.00000	Reduces emotional intimacy
e5	300	3.18333	1.47319	955.00000	1.00000	5.00000	Can be embarrassing
e6	300	2.95667	1.49518	887.00000	1.00000	5.00000	Can be physically uncomfortable
e7	299	3.05686	1.46781	914.00000	1.00000	5.00000	It is inconvenient
e8	299	3.44147	1.36560	1029	1.00000	5.00000	We do not like using condoms
e9	299	3.72910	1.30956	1115	1.00000	5.00000	It makes you feel sexually promiscuous

Cronbach Coefficient Alpha	
Variables	Alpha
Raw	0.838420
Standardized	0.837721

Cronbach Coefficient Alpha with Deleted Variable					
Deleted Variable	Raw Variables		Standardized Variables		Label
	Correlation with Total	Alpha	Correlation with Total	Alpha	
e1	0.505893	0.826695	0.511151	0.824976	Gets in the way of having natural sex
e2	0.629142	0.812581	0.627887	0.812100	Reduces sexual pleasure
e3	0.544414	0.822386	0.543787	0.821425	Makes the process of sex abrupt
e4	0.602935	0.815760	0.600502	0.815164	Reduces emotional intimacy
e5	0.512319	0.825865	0.508655	0.825246	Can be embarrassing
e6	0.626621	0.812836	0.623679	0.812572	Can be physically uncomfortable
e7	0.586342	0.817551	0.582710	0.817141	It is inconvenient
e8	0.469424	0.829995	0.472008	0.829186	We do not like using condoms
e9	0.457412	0.831011	0.459061	0.830566	It makes you feel sexually promiscuous

Questionnaire

4 QUESTIONNAIRE

ADOLESCENT STUDENTS' PERCEPTIONS OF HIV/AIDS AND THEIR ATTITUDES TO PREVENTION METHODS (ASPHAATPMQ)

<p>INSTRUCTIONS:</p> <ol style="list-style-type: none"> 1. Kindly respond to all questions in black ink. 2. Mark with an "X" where relevant. 3. Please provide information on a separate page if not enough space is provided. 4. The questionnaire consists of 5 sections. <ul style="list-style-type: none"> Section A: Biographical Data Section B: Questions relating to perceptions of HIV/AIDS Section C: Questions relating to attitudes to prevention methods Section D: Questions relating to sexual behaviour Section E: Questions relating to the use of condoms <p>* All information will be treated confidentially</p>	<p>For Office Use Only</p> <table border="1" style="margin: 0 auto; border-collapse: collapse;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table> <p>1-3</p>																
<p>SECTION A BIOGRAPHICAL DATA</p> <ol style="list-style-type: none"> 1. Date of interview: <div style="text-align: center; margin-top: 5px;"> ____ / ____ / 2008 </div> 2. Age: <table style="margin: 5px auto; border-collapse: collapse;"> <tr> <td style="text-align: center; width: 20px;">1</td> <td style="text-align: center; width: 20px;">2</td> <td style="text-align: center; width: 20px;">3</td> <td style="text-align: center; width: 20px;">4</td> <td style="text-align: center; width: 20px;">5</td> </tr> <tr> <td style="text-align: center; border: 1px solid black;">13 - 14</td> <td style="text-align: center; border: 1px solid black;">15-16</td> <td style="text-align: center; border: 1px solid black;">16 -17</td> <td style="text-align: center; border: 1px solid black;">18 -19</td> <td style="text-align: center; border: 1px solid black;">19 -20</td> </tr> <tr> <td style="text-align: center; border: 1px solid black; height: 20px;"></td> <td style="text-align: center; border: 1px solid black; height: 20px;"></td> <td style="text-align: center; border: 1px solid black; height: 20px;"></td> <td style="text-align: center; border: 1px solid black; height: 20px;"></td> <td style="text-align: center; border: 1px solid black; height: 20px;"></td> </tr> </table> 	1	2	3	4	5	13 - 14	15-16	16 -17	18 -19	19 -20						<table border="1" style="margin: 0 auto; border-collapse: collapse;"> <tr> <td style="width: 40px; height: 20px;"></td> </tr> </table> <p>4</p>	
1	2	3	4	5													
13 - 14	15-16	16 -17	18 -19	19 -20													
<ol style="list-style-type: none"> 3. Gender: <table style="margin: 5px auto; border-collapse: collapse;"> <tr> <td style="text-align: center; width: 20px;">1</td> <td style="text-align: center; width: 20px;">2</td> </tr> <tr> <td style="text-align: center; border: 1px solid black;">Male</td> <td style="text-align: center; border: 1px solid black;">Female</td> </tr> <tr> <td style="text-align: center; border: 1px solid black; height: 20px;"></td> <td style="text-align: center; border: 1px solid black; height: 20px;"></td> </tr> </table> 	1	2	Male	Female			<table border="1" style="margin: 0 auto; border-collapse: collapse;"> <tr> <td style="width: 40px; height: 20px;"></td> </tr> </table> <p>5</p>										
1	2																
Male	Female																

Questionnaire

<p>4. Class: (Senior Secondary)</p> <table border="1" data-bbox="240 457 857 550"><thead><tr><th>SSS 1</th><th>SSS 2</th><th>SSS 3</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td></tr></tbody></table>	SSS 1	SSS 2	SSS 3				<div data-bbox="1377 302 1458 348" style="border: 1px solid black; width: 50px; height: 22px; margin: 0 auto;"></div> <p style="text-align: center;">6</p>									
SSS 1	SSS 2	SSS 3														
<p>5. Home situation</p> <table border="1" data-bbox="240 909 1122 1171"><tbody><tr><td>1</td><td>Living with both parents</td><td> </td></tr><tr><td>2</td><td>Parents separated/divorced – Living with mother</td><td> </td></tr><tr><td>3</td><td>Parents separated /divorced – Living with father</td><td> </td></tr><tr><td>4</td><td>Parents separated/divorced – living with grandparents</td><td> </td></tr><tr><td>5</td><td>Living with friends</td><td> </td></tr></tbody></table>	1	Living with both parents		2	Parents separated/divorced – Living with mother		3	Parents separated /divorced – Living with father		4	Parents separated/divorced – living with grandparents		5	Living with friends		<div data-bbox="1377 825 1458 871" style="border: 1px solid black; width: 50px; height: 22px; margin: 0 auto;"></div> <p style="text-align: center;">7</p>
1	Living with both parents															
2	Parents separated/divorced – Living with mother															
3	Parents separated /divorced – Living with father															
4	Parents separated/divorced – living with grandparents															
5	Living with friends															
<p>6. What is your religion?</p> <table border="1" data-bbox="347 1320 849 1545"><tbody><tr><td>1.</td><td>Christian</td><td> </td></tr><tr><td>2.</td><td>Islam</td><td> </td></tr><tr><td>3.</td><td>Traditional religion</td><td> </td></tr></tbody></table> <p>Other</p> <p>.....</p>	1.	Christian		2.	Islam		3.	Traditional religion		<div data-bbox="1377 1409 1458 1455" style="border: 1px solid black; width: 50px; height: 22px; margin: 0 auto;"></div> <p style="text-align: center;">8</p>						
1.	Christian															
2.	Islam															
3.	Traditional religion															

Questionnaire

7. What are your parents' occupations? Please indicate both parents' occupations (If retired, indicate their work before retiring)

		Mother	Father
1	Professional e.g. doctor, teacher		
2	Business		
3	Farmer or farm occupation		
4	Skilled worker e. g. plumber		
5	Clerical		
6	Factory worker e. g. waiter, guard		
7	Homemaker/housewife		

Others

.....

mother

9

father

10

8. How much formal education did your parents complete?

		Mother	Father
1	Never been to school		
2	Some primary education		
3	Finished primary education		
4	Some secondary education		
5	Completed secondary education		
6	University/diploma degree		

Other (Please specify).....

.....

mother

11

father

12

Questionnaire

<p>9. How many brothers and sisters do you have?</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr><td style="width: 5%;">1.</td><td style="width: 85%;">One</td><td style="width: 10%;"></td></tr> <tr><td>2.</td><td>Two</td><td></td></tr> <tr><td>3.</td><td>Three</td><td></td></tr> <tr><td>4.</td><td>Four</td><td></td></tr> <tr><td>5.</td><td>Five</td><td></td></tr> <tr><td>6.</td><td>Six</td><td></td></tr> <tr><td>7.</td><td>Seven</td><td></td></tr> <tr><td>8.</td><td>Eight</td><td></td></tr> <tr><td>9.</td><td>Nine</td><td></td></tr> </table> <p style="margin-left: 40px;">Others (Please specify):</p> <p style="margin-left: 40px;">.....</p>	1.	One		2.	Two		3.	Three		4.	Four		5.	Five		6.	Six		7.	Seven		8.	Eight		9.	Nine		<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div> <p>13</p>
1.	One																											
2.	Two																											
3.	Three																											
4.	Four																											
5.	Five																											
6.	Six																											
7.	Seven																											
8.	Eight																											
9.	Nine																											
<p>10. I belong to a culture where sex is permitted before marriage</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr><td style="width: 5%;">1.</td><td style="width: 85%;">Yes</td><td style="width: 10%;"></td></tr> <tr><td>2.</td><td>No</td><td></td></tr> </table> <p style="margin-left: 40px;">Other (Please specify):</p> <p style="margin-left: 40px;">.....</p>	1.	Yes		2.	No		<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div> <p>14</p>																					
1.	Yes																											
2.	No																											
<p>11. I belong to a gang in school.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr><td style="width: 5%;">1.</td><td style="width: 85%;">Yes</td><td style="width: 10%;"></td></tr> <tr><td>2.</td><td>No</td><td></td></tr> </table> <p style="margin-left: 40px;">Other</p> <p style="margin-left: 40px;">.....</p> <p style="margin-left: 40px;">.....</p>	1.	Yes		2.	No		<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div> <p>15</p>																					
1.	Yes																											
2.	No																											

Questionnaire

<p style="text-align: center;">12. I spend more time with my gang than I do at home</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 5%; text-align: center;">1.</td> <td style="width: 75%;">Yes</td> <td style="width: 20%;"></td> </tr> <tr> <td style="text-align: center;">2.</td> <td>No</td> <td></td> </tr> </table> <p>Other</p> <p>.....</p>	1.	Yes		2.	No		<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div> <p>16</p>															
1.	Yes																					
2.	No																					
<p style="text-align: center;">13. I obtain my information about HIV/AIDS by the following means:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 5%; text-align: center;">1.</td> <td style="width: 75%;">Television</td> <td style="width: 20%;"></td> </tr> <tr> <td style="text-align: center;">2.</td> <td>Parent/guardian</td> <td></td> </tr> <tr> <td style="text-align: center;">3.</td> <td>Friends</td> <td></td> </tr> <tr> <td style="text-align: center;">4.</td> <td>School teachers</td> <td></td> </tr> <tr> <td style="text-align: center;">5.</td> <td>Physicians</td> <td></td> </tr> <tr> <td style="text-align: center;">6.</td> <td>Magazines</td> <td></td> </tr> <tr> <td style="text-align: center;">7.</td> <td>Radio</td> <td></td> </tr> </table> <p>Others</p> <p>.....</p>	1.	Television		2.	Parent/guardian		3.	Friends		4.	School teachers		5.	Physicians		6.	Magazines		7.	Radio		<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div> <p>17</p>
1.	Television																					
2.	Parent/guardian																					
3.	Friends																					
4.	School teachers																					
5.	Physicians																					
6.	Magazines																					
7.	Radio																					
<p style="text-align: center;">13. Working status of parents</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 5%; text-align: center;">1.</td> <td style="width: 75%;">Both parents work</td> <td style="width: 20%;"></td> </tr> <tr> <td style="text-align: center;">2.</td> <td>Mother stays at home and father works</td> <td></td> </tr> <tr> <td style="text-align: center;">3.</td> <td>Father stays at home and mother works</td> <td></td> </tr> <tr> <td style="text-align: center;">4.</td> <td>Neither of your parents have a job</td> <td></td> </tr> </table> <p>Others (please specify)</p> <p>.....</p>	1.	Both parents work		2.	Mother stays at home and father works		3.	Father stays at home and mother works		4.	Neither of your parents have a job		<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div> <p>18</p>									
1.	Both parents work																					
2.	Mother stays at home and father works																					
3.	Father stays at home and mother works																					
4.	Neither of your parents have a job																					

Questionnaire

SECTION B

QUESTIONS RELATING TO ADOLESCENTS' OVERALL PERCEPTIONS OF HIV/AIDS

PLEASE CONSIDER EACH STATEMENT BELOW IN SECTIONS B – E WHICH APPLIES AND ANSWER AS HONESTLY AS YOU CAN. INDICATE YOUR PREFERENCE BY A TICK IN THE APPROPRIATE BOX IN THE MATRIX PROVIDED

CODE

1 – STRONGLY AGREE

2 - AGREE

3 - UNDECIDED

4 - DISAGREE

5 - STRONGLY DISAGREE

KEY

AIDS – ACQUIRED IMMUNE DEFICIENCY SYNDROME

HIV – HUMAN IMMUNODEFICIENCY VIRUS

	1	2	3	4	5	
	SA	A	U	D	SD	
1. I think HIV/AIDS is not real.						<input type="checkbox"/> 19
2. HIV/AIDS is a disease of the Whites.						<input type="checkbox"/> 20
3. HIV/AIDS is propaganda to reduce the Black population.						<input type="checkbox"/> 21
4. I think HIV/AIDS is used to discourage adolescents from having sex.						<input type="checkbox"/> 22
5. I do not think HIV/AIDS is a dangerous disease						<input type="checkbox"/> 23
6. I am not at risk of contracting HIV/AIDS						<input type="checkbox"/> 24

Questionnaire

	SA	A	U	D	SD
7. A healthy looking person cannot be HIV positive					
8. One can get HIV because of witchcraft					
9. I can tell by the way a person looks if he/she is HIV positive or not.					
10. HIV as a threat to the society is misrepresented by the Government.					
11. My friends are more at risk of contracting HIV than me					
12. I think only people who practice homosexuality can contract HIV/AIDS.					
13. I think HIV/AIDS concerns the adult population and not adolescents.					
14. Adolescents under the age of 16 years cannot be infected with HIV/AIDS.					
15. Sexual intercourse with a virgin can cure me of HIV.					
16. If I limit the number of sexual partners that I have it will stop me from contracting HIV/AIDS.					
17. I think HIV is a punishment from God.					
18. I think more females than males are infected with HIV/AIDS.					
19. If I shower immediately after sex it will stop me from contracting HIV/AIDS.					
20. Only people who live in cities can get HIV/AIDS.					
21. HIV could be spread by mosquitoes after biting an infected person.					
22. I think I can be healed from HIV/AIDS by the help of a spiritualist.					
23. Using lime to wash my genitals after sex would prevent me from contracting HIV/AIDS.					
24. I think malnutrition is the major cause of HIV/AIDS in my community.					
25. HIV can be transmitted by sharing cups, spoons, and plates with infected persons.					
26. I think the media is placing too much emphasis on HIV.					
27. HIV/AIDS infects only the poor people.					
28. I have faith in God and as such cannot be infected with HIV/AIDS.					
29. I think HIV/AIDS is hereditary.					

Questionnaire

30. Only uncircumcised people can contract HIV/AIDS.					
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Questionnaire

SECTION C

INDICATE TO WHAT EXTENT YOU AGREE WITH THE FOLLOWING AS PREVENTION METHODS AGAINST THE SPREADING OF HIV/AIDS

	1	2	3	4	5
	SA	A	U	SD	D
1. Abstinence from sexual relations.					
2. Faithfulness to one's sexual partner.					
3. The use of condoms.					
4. Avoidance of sharing piercing instruments like razors, needles, clippers and syringes.					
5. Avoidance of illicit drug use and abuse.					
6. Sterilization of equipment and materials, e.g. clippers.					
7. Sexuality/sex education					
8. Medical test before marriage.					
9. Ban (Abolition) of prostitution.					
10. Legalization of homosexuality in order for the Government to manage this risk category					
11. Refusing of casual sex					
12. Refusing unsafe sex with multiple partners					
13. Seeking immediate treatment when infected with sexually transmitted diseases					

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- 60
- 61

Questionnaire

**SECTION D
QUESTIONS RELATING TO SEXUAL BEHAVIOUR
PLEASE TICK THE ANSWERS APPLICABLE IN THE BOX
PROVIDED**

	1 YES	2 NO	3 UNSURE	
1. Have you ever engaged in any of the following activities with a member of the opposite sex?				
A. Holding hands				<input type="checkbox"/> 62
B. Kissing				<input type="checkbox"/> 63
C. Necking				<input type="checkbox"/> 64
D. Hugging				<input type="checkbox"/> 63
E. Breast fondling				<input type="checkbox"/> 66
2. Have you ever engaged in pre-marital sex?				<input type="checkbox"/> 67
3. Have you ever had a sexually transmitted disease?				<input type="checkbox"/> 68
4. Have you ever been pregnant or made someone pregnant?				<input type="checkbox"/> 69
5. Have you ever been sexually abused?				<input type="checkbox"/> 70

Questionnaire

<p>6. How many people have you had sex with?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">1</td> <td style="width: 85%;">I have never had sex</td> <td style="width: 10%;"></td> </tr> <tr> <td style="text-align: center;">2</td> <td>One person</td> <td></td> </tr> <tr> <td style="text-align: center;">3</td> <td>Two persons</td> <td></td> </tr> <tr> <td style="text-align: center;">4</td> <td>More than two persons</td> <td></td> </tr> </table> <p>OTHER (PLEASE SPECIFY).....</p>	1	I have never had sex		2	One person		3	Two persons		4	More than two persons		<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div> 71												
1	I have never had sex																								
2	One person																								
3	Two persons																								
4	More than two persons																								
<p>7. How old were you when you had your first sexual experience?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">1</td> <td style="width: 85%;">I have never had sex</td> <td style="width: 10%;"></td> </tr> <tr> <td style="text-align: center;">2</td> <td>12 or younger</td> <td></td> </tr> <tr> <td style="text-align: center;">3</td> <td>13 years</td> <td></td> </tr> <tr> <td style="text-align: center;">4</td> <td>14 years</td> <td></td> </tr> <tr> <td style="text-align: center;">5</td> <td>15 years</td> <td></td> </tr> <tr> <td style="text-align: center;">6</td> <td>16 years</td> <td></td> </tr> <tr> <td style="text-align: center;">7</td> <td>17 or above</td> <td></td> </tr> <tr> <td style="text-align: center;">8</td> <td>Cannot recall</td> <td></td> </tr> </table>	1	I have never had sex		2	12 or younger		3	13 years		4	14 years		5	15 years		6	16 years		7	17 or above		8	Cannot recall		<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div> 72
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4	14 years																								
5	15 years																								
6	16 years																								
7	17 or above																								
8	Cannot recall																								
<p>8. How old was your partner when you had sex for the first time?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">1</td> <td style="width: 85%;">I have never had sex</td> <td style="width: 10%;"></td> </tr> <tr> <td style="text-align: center;">2</td> <td>12 or younger</td> <td></td> </tr> <tr> <td style="text-align: center;">3</td> <td>13 years</td> <td></td> </tr> <tr> <td style="text-align: center;">4</td> <td>14 years</td> <td></td> </tr> <tr> <td style="text-align: center;">5</td> <td>15 years</td> <td></td> </tr> <tr> <td style="text-align: center;">6</td> <td>16 years</td> <td></td> </tr> <tr> <td style="text-align: center;">7</td> <td>17 years or above</td> <td></td> </tr> <tr> <td style="text-align: center;">8</td> <td>Cannot recall</td> <td></td> </tr> </table>	1	I have never had sex		2	12 or younger		3	13 years		4	14 years		5	15 years		6	16 years		7	17 years or above		8	Cannot recall		<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div> 73
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6	16 years																								
7	17 years or above																								
8	Cannot recall																								

Questionnaire

9. How long ago was your last sexual experience?			<input type="text"/> 74
1	I have never had sex		
2	Within the last three months		
3	Within the last six months		
4	Within the last year		
5	1 year ago or more		
6	Cannot recall		
10. How many times have you had sexual intercourse?			<input type="text"/> 75
1	I have never had sex		
2	Once		
3	Twice		
4	Thrice		
5	Four or more times		
6	Cannot remember		
11. Who influenced you to make the decision to have sexual intercourse?			<input type="text"/> 76
1	Parents		
2	Mass media		
3	Friends		
4	Sexual partner		
5	Never been influenced		
Others			
12. Who initiated (wanted to have) your first sexual intercourse?			<input type="text"/> 77
1	I have never had sex		
2	Myself		
3	My partner		
4	We both did		
5	Cannot remember		

Questionnaire

SECTION E						
QUESTIONS RELATING TO THE USE OF CONDOMS						
	1	2	3	4	5	
	SA	A	U	D	SD	
1. Using a condom gets in the way of having natural sex						<input type="text"/> 78
2. Using a condom reduces sexual pleasure						<input type="text"/> 79
3. Using a condom makes the process of sex abrupt						<input type="text"/> 80
4. Using a condom reduces emotional intimacy						<input type="text"/> 81
5. Using a condom can be embarrassing						<input type="text"/> 82
6. Using a condom can be physically uncomfortable						<input type="text"/> 83
7 Using a condom is inconvenient						<input type="text"/> 84
8 My partner and I don't like using condoms						<input type="text"/> 85
9 Using a condom makes you feel sexually promiscuous						<input type="text"/> 86
						<input type="text"/> 87