Mémoire

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FACUILTY OF SOCIAL SCIENCES,
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PERCEPTION AND KNOWLEDGE OF ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS) AMONGST SELECTED SECONDARY SCHOOLSTUDENTS IN LAGOS METROI'OLIS

Année académique :

1993

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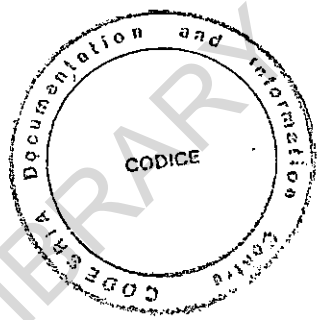


A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF SOCIOLOGY, FACULTY OF SOCIAL SCIENCES, UNIVERSITY OF LAGOS, IN PARTIAL FULFILMENT OF THE REQUIREMENTS GOVERNING THE AWARD OF MASTERS OF SCIENCE (M.Sc.) DEGREE OF THE UNIVERSITY.

MARCH, 1993.

DEDICATION

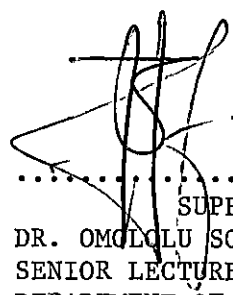
Dedicated to AIDS victims, especially those infected without deliberate activities,

and

Scholars who continue their relentless efforts to find solutions to the deadly disease.

ATTESTATION

This is to attest that this project was carried out by BADRU, F.A. in the Department of Sociology, University of Lagos, Akoka, Yaba, Lagos.



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ACKNOLWEDGEMENT

All Praises belong to Allah - the Irresistible, the Creator and Cherisher of all, Sustainer of the Living and non-Living, WHO again spared my life and infuses strength, knowledge and wisdom on whom He wills. May He accept it as an act of service to mankind. The ideas for the project were unilaterally conceived but the nurturing has been done by many people.

Dr. Tade Aina deserves my mention. He supplied a lot of materials for my literature review and pointed to areas for further research. He, in fact, strengthened my research skills. Again, Dr. 'Bayo Ninalowo planted my feet deeply in sociological theories. He is a source of inspiration who demands originality, hardwork and a high sense of organisation. I have also drawn a lot from Dr. Lai Olurode of the same Department with the two distinguished scholars mentioned earlier.

Moreover, my unassuming and indefatigable adviser/supervisor allowed and paved the way for my ideas to grow and bear fruits. His uncanny academic competence and infectious enthusiasm for excellence and sources for any information written or discussed is a rich source of inspiration that engenders credible data. He also pointed out to many green areas which I initially did not consider. My eggs were laid and hatched in his incubator.

Brother M.A. Adekogbe, Mrs. Olufadeju, Mr. Ojo and Mr. Sule also assisted in one way or another. I am also indebted to Mr. Durowade - a lecturer of Sociology, who has been a friend, colleague and scholar in the struggle to banish ignorance. Some of my classmates too numerous to mention, have provided immense stimulation for my graduate studies.

Again, I must acknowledge the tolerance and patience of my aged father and my little Sheun who bore more than their due share of frequent separation and occasional deprivation all in the name of my getting the various requirements of the programme out of the way.

To all, I say thanks and God's bless.

This effort may not be devoid of errors. It is not deliberate. The person who blazes a trail into a deep forest should not be hanged for not building a four lane highway.

Finally, I have benefitted from the Grant given by CODESRIA without which the project would have been stultified financially. I acknowledge unequivocably their financial support for the thesis.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF TABLES (CONT)

WORDS OF REFLECTION

KNOWLEDGE:

Desire for knowledge is the path of honour;
desire for wealth is the path of dishonour.
Wealth is the chain that slaves wear,
knowledge is the kingly crown.

- Abdullah Ansari - INVOCATION.

He alone is poor who is not possessed of knowledge.

- Talmud.

Knowledge is the only instrument of production that is not subject to diminishing returns.
Learning is pleasant fruit from bitter root.

- Confucius.

EDUCATION:

Education is an ornament in prosperity and refuge in adversity. Educated men are as much superior to uneducated men as the living are to the dead. Education is a controlling grace to the young, consolation to the old, wealth to the poor and ornament to the rich.

- Aristotle.

Education makes people easy to lead but difficult to drive; easy to govern but impossible to enslave.

- Lord Brougham's Speech -
House of Common,
29th January, 1828.

Not to enlighten one who can be enlightened is to waste a man; to endeavour to enlighten one who cannot be enlightened is to waste words. The intelligent man wastes neither his man nor his words.

- Confucius - Analects,
BK XV - Chap. 7.

THE RESEARCH ABSTRACT

There is a growing concern in the world about the rising number of deaths resulting from HIV infection. That Nigeria is engulfed is no longer news. But what can be done especially among the productive segments of the population (like students) in order to educate and thus prevent and modify AIDS-provoking behaviours, adopt safer sex activities and remove the misconceptions and fears about the scourge? This is the kernel of this study.

The research was conducted over a twenty week period. It was aimed at perusing and analysing the perception and knowledge of selected secondary school students in Lagos Metropolis towards AIDS and people infected with HIV. We also tried among others, to study the students' level of sexual activities and their knowledge of contraceptive devices which have manifest and unintended consequences for the spread of HIV infection.

The study drew its sample from a mixed comprehensive secondary school in Lagos State. The sample size was 150 out of about 1500 students in the school. The research instruments included questionnaire and focus group study guide. The students' school register was used as the sampling frame. It is an up to date list. The students in the Senior Secondary arms of the school were selected by multi-stage sampling technique. Four hypotheses were postulated and tested using chi-square statistics. Contingency co-efficient was employed to measure the strength of the association. The four hypotheses were validated by the empirical data. The results were presented and the implications of the study stressed.

It is argued that there is a need to intensify and develop more appropriate educational programmes concerning AIDS prevention strategies among students in schools. These must be included in their syllabi.

CHAPTER ONE

1.1 INTRODUCTION

An introduction should ideally put the researcher's thoughts in perspective, arrest the attention of the reader and create desire in him/her to read on. It should also give a synopsis of the study. This implies that the researcher should give full vent to imagination, creativity, create appropriate words and adhere to the scientific norms.

The choice of the topic for this study is influenced by my intellectual interest in the confusion, stigmatisation, myth, fear and ignorance surrounding the disease called Acquired Immune Deficiency Syndrome (AIDS). There is a need to eliminate the fears, ignorance and myths associated with the scourge. Besides, few studies have focused on secondary school children who constitute an important segment of the population. With the inhibition on chastity being eroded by factors of modernisation and urbanisation, increasing level of sexual activities among school children fuelled by the ready availability of diverse contraceptive devices, the risk of contacting sexually transmitted diseases including AIDS tends to increase. This necessitates a sociological inquiry since the syndrome is rooted in human behaviour and defies a monolithic medical approach.

In this chapter, we shall examine the term 'AIDS' its causes, manifestations, modes of infection and transmission and illuminate this with current global and local statistics. We shall also enunciate our objectives for study, highlight the study-scope, allude to the justification of the study subjects and point out the sociological significance of the study. It is to these tasks that we now turn.

What is AIDS? AIDS is an acronym for the Acquired Immune Deficiency Syndrome. AIDS is a growing global scourge. It is one of the most serious, if not the most devastating, socio-medical problem ever to face homosapiens. AIDS is no respecter of age, sex, status or geographical boundaries. The disease affects all ages and sexes. It cuts across geographical frontiers and races. No single disease has caused a panic of such magnitude in the history of man as AIDS (Sanusi, 1988).

It is illuminating to note that AIDS can have a latency period of several years during which time infected individuals may unknowingly infect others (Batchers, 1984, et. al., 1986; Badru, 1990, 1992). Apart from the fact that AIDS is a terminal disease, it subjects its victims to a lot of health problems. These include profuse night sweating, generalised wasting of body muscles and weight loss, fatigue, persistent diarrhoea, severe pneumonia, fever longer than one month, swollen glands around armpits, neck and groin, unusual sores especially in the anus (Badru, 1990; Odebiyi, 1991:77). AIDS became common in Nigeria in 1986. At that time, the Minister of Health - Professor Olikoye Ransome Kuti stated that the disease was not in Nigeria but he later set up a committee of experts to look into it and recommend immediate strategies to contain the scourge. The committee which was headed by Professor E.M. Essien worked in conjunction with the World Health Organisation (W.H.O.) global program on AIDS (WHO/GPA) and within a few months came up with the stunning revelation that the disease was indeed present in different parts of the country. The committee developed a short-term plan (S.T.P) of action and the implementation of the plan resulted in the establishment of HIV testing centres in all states of the federation including the Federal

Capital Territory (Abuja) (see Appendices 3 & 4). The Minister then set up the National AIDS Programme with Dr. (Mrs.) Abiola Tilley Gyado as the coordinator (Daily Times, Tuesday October 8th, 1991, p. 26).

AIDS is now a political issue as countries of the world are now engaged in the search for its origin. While American researchers peddle the notion of an African origin; African researchers tend to assert an American genesis. The controversy has again been linked with the cold war between the East and the West. For Soviet Scientists, AIDS is a biological warfare agent developed by the Central Intelligence Agency (C.I.A.) and the Pentagon and tested in Africa. The origin is still unclear (Odebiyi, 1988). It is, however, instructive to note that AIDS was first observed among the homosexuals in the United States of America in 1981 by the Centre for Disease Control in Atlanta. AIDS has since spread rapidly to all continents of the world; Africa being no exception (see Appendices 4 & 5).

However, AIDS is no longer a homosexual problem, infected hetero-sexuals, bi-sexual, drug addicts, students, pregnant and breast-feeding mothers can transmit the disease (Badru, 1992).

To date, there is no acceptable vaccine discovered yet to protect against the AIDS virus. However, there are a number of candidate vaccines at some stage of trial or the other. One of such drugs is AZT (Zidovudine) - made by Wellcome Pharmaceutical Company which researchers have found to have nasty side-effects. Besides, it is very expensive. A year's treatment at the recommended dose (500-600 milligrammes a day - in Britain costs about £2,000 (about ₦35,000) - an amount certainly unaffordable to most Africans (The Guardian, Monday, November 11, 1991, p. 9).

AZT works in the following ways:

Once the virus has entered the target cell, it uses the cell to reproduce itself. Retroviruses such as HIV, carry an enzyme called

"reverse transcriptase" which copies the viral RNA (genetic information) to make viral DNA; which is then integrated into the host cell's genetic material. The viral DNA (now part of the human cell) instructs the cell to make multiple copies of viral RNA. A new generation of viruses then emerges from the cell, AZT acts by interfering with the process of reverse transcription (Esparza, 1989).

The AIDS epidemic in sub-saharan Africa may well constitute the greatest public health challenge of our time. Examples of East African countries - especially Uganda and Kenya are instructive. In Nigeria, the AIDS victims rose from 0 to 91 as of November, 1991 (see SWAAN NEWSLETTER, 1992) Appendix 7.

AIDS containment is likely to rest ultimately upon social knowledge that is at present vestigial and upon sophisticated social research (Caldwell and Caldwell, 1987).

Actiology of AIDS: AIDS is caused by a human retrovirus called Human Immune deficiency Virus (HIV) formerly known as Human T-Cell Lymphotrophic Virus Type III (HTLV III) or Lymphadenopathy Associated Virus (LAV) or AIDS related virus (ARV). The virus belongs to the family of viruses called Retroviridae; Sub-family: Lentriviridae, and comprises several retroviruses of man and animals. Like other retroviruses, HIV cannot replicate without taking over the biosynthetic apparatus of a cell and exploiting it for its own end (Akinhanmi, 1988: Badru, 1990). There are two types of virus indicted: HIV 1 and HIV 2. HIV destroys the body's ability to fight.off even small infections. AIDS is the final stage of HIV infection. The virus is carried in the blood by attaching itself to T-Lymphocyte (White bloodcell). The virus attacks a person's immune system and damages the ability to fight other diseases this way: the virus infects the

T-4 helper lymphocytes which control immune effector mechanisms that attack and destroy invading organisms. The T-helper cells later become depleted and functionally defective, resulting in reduced stimulation of macrophages and other lymphocytes which normally attack invading organisms. Thus, HIV undermines body's defences against foreign organisms making it vulnerable to a wide range of infections (Akinhanmi, 1988; Okediji, 1991, SWAAN NEWSLETTER, 1992.

In 1981 Popovic, Gallo and Co-workers described the development of cell lines permanently and productively infected with another AIDS virus isolate which in line with two previously described retro-viruses, HTLV 1 and HTLV 11, they referred to as HTLV 111, LAVHTL VI and HTLV V. According to Akinhanmi (1988), AIDS virus was discovered by Barre Sinouss, Montagnier and colleagues at the Institute Pasteur, Paris in 1983. However, controversy still goes on whether AIDS virus was first discovered in U.S. or in Paris. We are not interested in the polemics here.

There are many routes to AIDS transmission: sexual relation - homosexual, bisexual and heterosexual, transfussion of infected blood or blood products, sharing or reusing contaminated needles and instruments, maternal-foetal route during pregnancy or childbirth, breast milk of infected mothers; secretions like saliva, tears and semen have been controversially implicated.

Recent evidence has shown that HIV is not only lymphotropic but also neurotropic i.e. can directly infect cells in the Central Nervous System (CNS). CNS infection is now known to occur commonly in patients with AIDS. Thus, in addition to its immunological consequences, AIDS also has neurological effects. This may explain why AIDS patients develop what is called AIDS dementia characterised by

depression, blunted affect, impaired memory, poor concentration and social withdrawal. Over several months, patients eventually become severely delusional and disoriented, demonstrating marked global cognitive deficits. The disease can gradually result in seizures, mutism and coma (Faulstich, 1987, Fenton, 1987, Hoffman, 1984, Akinhanmi, 1988).

AIDS is at present incurable. The only effective 'vaccine' seems to be education and change in behaviours and activities that may predispose to the disease.

The World Health Organisation (WHO) has described several broad patterns of HIV transmission and AIDS according to prevailing practices and social risk behaviours. These patterns are:

Pattern 1:

This is seen mostly in industrialized countries of North America, Western Europe, Australia, New Zealand, and to some extent, Latin America. In these areas, extensive spread of HIV probably began in late 1970s and 1980s affecting predominantly homosexual men and I.V. drug users. The male to female ratio has been 10:1 and as at 1989 the total cumulative number of HIV infected persons was estimated to be about two millions. Homosexuals are at risk of HIV infection because the simple columnar epithelium of the rectum gets easily traumatised during coitus, allowing the virus to gain entry into the systemic circulation. Also, in recent times, it has been shown that the rectal mucosa carries the "CD 4 receptor" which is necessary for viral invasion of host cells. However, transmission among heterosexuals with multiple sex partners is increasingly making this the dominant mode of HIV transmission and therefore, because of the shift in this region, the previous pattern (1) has been reclassified as pattern 1/11.

Pattern II:

These areas are primarily sub-Saharan Africa and countries in the Carribean and parts of Latin America. Here, heterosexual transmission predominates. The male to female ratio of HIV infection and AIDS is about equal and prenatal transmission is on the increase, paediatric AIDS has become an important cause of mortality below the age of 5 year.

Pattern III:

These areas are Asia, most of the pacific countries (excluding Australia and New Zealand), Eastern Europe, North Africa and the Middle East where HIV was introduced in the early to mid-1980s. The general prevalence of both AIDS and HIV infection is low. (SWAAN Newsletter, 1992). We shall illustrate this introductory section with two brief case-studies of AIDS.

Case 1: "Miss O.P. is a 16 year old Nigerian female who left home after leaving school at Primary Six and she came to Lagos to look for a job. She had difficulty in finding one, and consequently did favours to some men who promised her a job. One of them took her to live with him. She got pregnant and the man drove her out. She went to a teaching hospital as an unbooked case to have her baby. The baby was delivered by Caesarian Section. She manifested severe weight loss, fever, infections and failure of surgical wound to heal. She was treated and found to be HIV positive; her baby also tested positive. She was treated and she improved. But she disappeared for about 6 months. When she appeared at the clinic, she had lost weight again. On interview, she claimed to have returned to hotel life which to her was the only source of financial sustenance.

Case 2: Mr. N.P. is a 29 year old Nigerian Univesity graduate. He had travelled widely in Nigeria and abroad and had indulged in casual sex with lady friends who were attending the same institution as him. He never used a condom. He had no history of blood transfusion and cannot remember taking injections and was not an intravenous drug abuser. He was perfectly well while he was a student. He was even an athlete. After leaving University, he got a good and well-paying job. He started noticing swelling in his neck, armpits and groin, and also had some sores on his penis. He also noticed tiredness and skin infections. He was referred to LUTH (the Lagos University Teaching Hospital) from a private hospital and the HIV test was positive. He was counselled as he had a regular friend. He never took her along for testing, but he eventually died four months later.

These two cases point to two salient facts: AIDS is in Nigeria, and toes pattern II as delineated by the World Health Organisation as alluded to above.

1.2 STATEMENT OF THE PROBLEMS

In a dependent peripheral capitalist economic state such as Nigeria where the material culture is lowly developed, illiteracy is high, maternal death is rising and the life span is 51 (Nwabueze, 1990; Badru, 1991; Solarin, 1991). a socio-medical malady such as AIDS is fraught with a lot of manifest and unintended consequences. AIDS is a highly communicable pandemic disease worse than the Herpes epidemic, hastening an end to the sexual revolution. It is an infectious disease which spreads like a raging inferno. It is a public health hazard of the highest order. AIDS affects all age groups. It transcends geographical barriers. It is a threat to the integration, equilibrium and survival of individuals and groups and poses a

great danger to the social structure. Myths and misconceptions about AIDS are rife. How does a school child perceive an AIDS victim? What is his/her level of sexual activities or premarital affairs? Is he/she involved in substance abuse or other risk-behaviours to AIDS? These are some of the questions of research interest.

Let us, for now, illustrate the AIDS threat with some statistics. As of February 1988, 128 of the 159 countries in the World have reported AIDS. By mid-1988, there were some 250,000 AIDS victims world-wide (Caldwell, 1989). The World Health Organisation (WHO) estimates that 5-10 million people are infected. In parts of Africa and parts of the Western hemisphere, one in ten women coming to a big city antenatal clinic now have the virus. Children of mothers who have AIDS or who will have AIDS stand a fifty per cent chance of being born with AIDS (SWAAN Newsleter, 1991). Dr. Vlient, a retired epidemiologist with the W.H.O., gave a global picture of the AIDS pandemic. He disclosed that as at 31st October, 1990, 298,914 AIDS cases had been reported to the WHO against WHO estimates of over 800,000 adult cases. As at late 1990, WHO estimates at least 8-12 million HIV infections in adults worldwide, out of which a little over a third or three million are women, 20 per cent of whom are pregnant.

As of 31st December, 1991, a total of 446,681 AIDS cases had officially been reported to the WHO from 159 countries. Out of the reported cases, 252,977 (56.6%) were from 43 countries in the Americas, 129,066 (28.9%) from 52 African countries, 60,195 (13.5%) from 28 European countries, 3,189 from Asian countries. In Africa most of the AIDS cases have been reported form East and Central African countries. Ten countries (Uganda, Kenya, Tanzania, Malawi, Burundi, Rwanda, Zaire, Zambia, Zimbabwe and Congo) account for 81%

of the African cases. In West Africa only four countries: Ivory Coast - 8,297; Ghana - 2,474; Burkina Faso - 978 and Senegal - 552 had reported more than 500 cases (Munube, 1991:10).

Recent serological data suggests that about one percent of the Nigerian population is infected with HIV. (Dr. Tilley Gyado's Report at the Association of Community Physician's Seminar, April 24, 1992). When one juxtaposes this with a provisional population of the country which was put at 88.5 million, one can discern the implications of the AIDS scourge. Besides, estimates put the number of individuals infected under the age of 25 years throughout the world at 1-2 million. Roughly 20 per cent of all cases of AIDS are in their twenties, a large proportion of which get infected during adolescence. Due to exuberance and desire to experiment with all sorts of things, the youths tend to indulge in practices and actions which increase the risk of transmission of HIV (Munube, 1991:11).

Having pointed out what happens at the global scene, it is germane to look at the Nigerian scenario. According to the Health Minister, Professor Olikoye Ransome-Kuti at his pre-Wrold AIDS Press Conference on 23rd November, 1990 - out of 120,000 blood samples tested in the country, 516 tested seropositive, out of which 84 patients have developed AIDS with 26 deaths. As at June, 1991, a national sero-prevalence rate of one percent and 92 persons who h ad died of AIDS were reported by the National AIDS Control Programme, Federal Ministry of Health, (WHO Newsletter, 1991).

As at January 31st, 1992, 1,933 (0.97%) tested positive while 105 had developed the full blown AIDS (National Concord, April 9, 1992:6). According to the Osun State Director of Primary Health Care - Dr. Adeyela - a total of 379 persons have now developed the full blown AIDS in Nigeria. He said that tests carried out on 20,000 blood samples

in May 1992 also revealed that about 2,000 persons had tested positive for the virus (Daily Times, Thursday, July 30, 1992, pp. 30-31). The above statistics show an increased seroprevalence. Even this figure does not reveal the whole picture as under-recognition, under-reporting[2] and delayed reporting, coupled with factors of non-patronage of public hospital services by a significant population of Nigerians who prefer traditional cure and self-medication, may disguise a total closer to WHO's 700,000 estimate. Ibanga (1991) had reported that quite a number of people are ignorant or have false perceptions about AIDS. It is also said that medical doctors and other health care workers are among those unwilling to present themselves for AIDS test. Granted, this is fraught with a lot of ethical issues. Yet to get an almost accurate picture of the scourge, the tests must be done. Fear and ignorance have made the spread of the disease difficult to control. Recently, the Minister of DEfence and Chief of Defence Staff, General Sani Abacha, when launching the Armed Forces and Police Chapter of "Forces Blood Transfusion and AIDS Control Committee" (FOBTAG), identified ignorance among the populace and insincerity on the part of carriers as the greatest obstacle in the way of AIDS control, pointing out that the most effective weapons to combat AIDS so far are in the area of information and education (WHO Newsletter, Vol. 6, 1991). So far, the government has done quite a lot of disseminating information about AIDS and how to reduce the risks among the populace. Posters and hand-bills have been printed and distributed. Radio jingles are made. Seminars and workshops are being held on AIDS. The state and local governments have been directed to follow suit. This is borne out of the fact that most Nigerians (about 70%) are said to live in rural areas, and a concentrated media focus on urban centres make the efforts limited to these areas. It is a lopsided effort. It should be noted

that many rural dwellers can hardly afford Television or read some of the posters and handbills, and in a country where there is erratic power supply, the limitations of urban focus approach can thus be appreciated.

1.3 OBJECTIVES OF STUDY

The objectives of this study are to explore, describe and explain the students' level of awareness of AIDS and assess their perception of the disease. We shall also review the mode of its transmission and prevention. We also intend to peruse the extent of the students' sexual activity which has a concomittant consequence for AIDS.

The study shall illuminate the terrain of contemporary discussion on AIDS. It will contribute significantly to sociological literature in general and sociology of health and illnesss in particular. Medical sociology, which is used synonymously with sociology of health and illness, analyses social action and social factors in health and illness related situation in order to make it possible for all involved in the illness episode to understand what goes on. Health is a social construct. Sociological variables play significant roles in the definition of who is healthy and who is ill in any society. The findings would be of interest to health care professionals, educators, planners, medical sociologists and other social scientists.

1.4 METHODOLOGY OF STUDY

A combination of research methods - methodological triangulation would be employed, i.e. questionnaire, interview schedule and focus group study. Our population shall be drawn from the students in the Metropolitan Lagos. We shall contact the state's ministry of Education for a list containing the names of all the students. This list

shall serve as our sampling frame from which we expect to draw a random sample of the study. We shall adopt the use of table of random number to reduce researcher's bias and ensure representative sample. The sample would comprise both males and females in Senior Secondary Schools.

1.5 SCOPE OF STUDY

The socio-cultural dimension of AIDS, the political issues surounding it and the limitation of modern medicine will be critically examined. The secondary school students are the focus of our study. Very little attention has been paid to this category of people, and especially in Lagos State. The focus has always been on blood donors, drug addicts and prostitutes.

1.6 JUSTIFICATION FOR SELECTING SECONDARY SCHOOL STUDENTS

The justification for basing our study on this group is anchored on these facts: The rates of sexual activity are increasing most rapidly among the adolescent (Zabin, et al, 1986). Besides, substance abuse of many diversity has been reported among this group of students (Ebie, 1981, Uzoka, 1984, Badru, 1991).. Teenage pregnancy is on the increase (Action Health Incorporated Report, 1991). See also The Guardian, 17th November, 1991. Studies in America have also revealed an increase in the number of sexual partners among teenagers (Kovar, 1979). In a study by Haas (1979), 18 per cent of secondary school girls report four or more sexual partners. The most direct indication of HIV risk, however, can be inferred from the current rates of sexually transmitted diseases (STDs) among adolescents (Bell and Herin, 1984). 75 per cent of all cases of STDs are between the age of 15 and 24.(Bell and Homes, 1984). Several reports have stated

that STDs may facilitate transmission of HIV, chancroid, Herpes, and a host of others, which can precipitate genital entry into the blood-stream (SWAAN Newsletter, 1992).

Moreover, adolescence is particularly a period of profound physical and psychological changes and behaviour experimentation. Rapid social changes have provided the adolescents and young adults a wide range of behavioural styles from which to choose, a number of which, may predispose to acquisition of HIV infection. The teenagers may not realise the full import and consequences of unprotected sexual intercourse, promiscuity and experimentation with drugs. Without knowledge and correct perception of the hazards of such activities, they are likely to acquire and/or disseminate HIV infection.

Many socio-economic variables have been indicted for provoking HIV infection. As many as 40 million young people in the world indulge in sexual practices with unlimited number of partners as a means of earning a living and do this at great personal risk of acquiring AIDS (Munube, 1991).

Besides, the adolescent constitute the future productive sector in any economy and correct perception and an adequate knowledge of HIV infection and its mode of transmission, may go a long way to modify ther sexual behaviour. Thus, the need for the study of this group of students is very germane.

1.7 SUMMARY OF THE CHAPTER

This is the first chapter. It gives background information about the study, define some key terms like AIDS, alludes to its cause and courses, highlight the reasons for study, methodology, and polished with some current data on AIDS.

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CHAPTER TWO

2.1 REVIEW OF EMPIRICAL STUDIES

In the previous chapter, we gave background information to the study and illuminated this with some statistics. In this chapter, we shall critically review the empirical studies pertinent to our work. It is instructive to note, however, that few studies have been done specifically on perception and knowledge of secondary school students towards AIDS. There are, nevertheless some adjunct studies which shall be critically examined.

The Guardian of 17th November, 1991 reports that the influx of teenage girls into prostitution is increasing. The points to note about this is that the reader was not told how was the survey conducted, who conducted it, how valid is it, what was the sample size and how was the sample derived from the population? Why focusing only on teenage girls? These questions were not addressed. However, the generalisation is pregnant with meaning, and instructive to the increasing level of sexual activities among teenagers.

In a study conducted by Petosa and Wessinger (1990), it was found that about 21 per cent of diagnosed cases of AIDS were between the ages of 20-29. Given the long incubation period for AIDS (can extend to about 5 years), a number of these cases were possibly infected while they were teenagers.

Increasing Level of Sexual Activities

As Peterson and Boxer (1982) observe, there is an increasing rate of sexual activities among young people. By the time they have completed secondary schools, more than 50 per cent of the adolescents have had sexual intercourse (see Karfer, 1980; Zabin, et al. 1986); Hooferth, et al., 1987). The studies alluded to above were conducted

in United States of America and the conclusion may not fit perfectly into Nigerian scene.

Korar (1979) also found out that the rates of sexual activities are increasing most rapidly among the adolescents. This was complemented by Haas (1979) who revealed that 16 percent of secondary school students report four or more sex partners. Linderman (1974) argues that sex among the adolescent girls is mainly unprepared and unplanned for. And the state of unpredictability of knowing if and when sex will take place inhibits the use of birth control devices. Our position in this argument is that it is possible that some of adolescents will have made up their mind, and get prepared for the sexual activities by arming themselves with contraceptive devices like pill, and/or condom for their male partners. Besides, what of the increasing level of prostitution observed among the adolescent (see The Guardian of 17th of 1991). This contradicts the position of Linderman. It must be noted that none of the available contraceptive devices has 100 per cent effectiveness in preventing pregnancy, not to talk of preventing AIDS (see Zelnick and Kantner (1978); Rosenfield (1978); Dunn (1978). The manufacturers usually specify the failure rate when used properly. Talking of the failure rate, one has to delineate "User-failure rate" and "method-failure rate." We are not going into the full discussion of this here. But it is suffice to say that user-failure rate may depend on some factors such as age, motivation and education (see Golden (1981). Researchers point out that the failure rates among teenagers using contraceptives are much more higher than among older women (Ford and Swatz, 1979). The condom that is being promoted recently as the panacea of AIDS prevention has been found to be deficient when used alone. According to Dr. Leonie McSweeney, a reproductive physician and a catholic nun, condom is only 83 percent safe.

She contends that condom has 17 percent failure rate even if an individual remains faithful to one partner. And that the failure rate is positively correlated to the multiple partners. "Condom is, thus, not the answer to the AIDS pandemic," she concluded (see National Concord, Tuesday, March 24, 1992). In the same source, it was reported that the Uganda Health Ministry found that there are twice as many cases of AIDS among 15-19 years old adolscents especially girls. The reason was given as been due to the older men preferring younger girls for fear that the elderly girls already have AIDS.

Ibanga (1991) has observed that adolescent girls are a particularly vulnerable group as they often embark on sexual relations with very little knowledge about contraception or sexually transmitted disease at a time when their self-esteem and self-assertiveness are at crucial stage of development. While one may agree that adolescence is a delicate period in physical and sociopsychological development of an individual, one finds it difficult to believe that the adolescents have little knowledge of contraception especially with the current propaganda of the government and non-governmental organisations. However, the knowledge dissemination may be inadequate, deficient or misinterpreted by the adolescents. This is yet to be tested empirically by researchers. It has been found elsewhere that though people may have knowledge of contraception, it does not imply that they would accept to take contraceptives for religious, cultural and economic reasons (see Badru, 1990).

The most direct indication of HIV risk, however, can be discerned from the present rates of sexually transmitted diseases among adolescents. In a study by Bell and Herin (1984), gonorrhea, syphilis and chlamydia are highest among adolescents. Rates of STDs drop off sharply after the age 19. No reasons were given for the fall. It should,

however, be noted that the study under review was clinical and thus suffers from limitation of the clinical records. Besides, not everybody that has an infection may likely report to hospital because of shame and stigma attached to such infection. Moreover, even where survey method is used, how many infected individuals would genuinely admit of the infection? These factors may, thus, pose a serious limitations as under-reporting of these cases may bias the true finding. If there are adequate coverage and accurate reporting of prevalence rate, this may reduce or wipe out the problems. But this is a theoretical possibility, it is hardly achievable empirically.

In a similar study, using a clinical method, Bell and Homes (1984) replicated the finding of Bell and Herin. Their own study revealed that 75 percent of all cases of STDs are between the age of 15 and 24. The study by Society of Women Against AIDS in Nigeria (SWAAN) in 1990 disclosed that traditional female circumcision seems to engnder the risk of the spread of AIDS. The study adopted a survey method of circumcised females in Lagos State. The reasons for the spread of AIDS by circumcision can be adduced to the following: The traditional surgeon utilizes a 'knife' for many people. The knife is not properly boiled or sterilized before it is used for other females. The knife is just wiped and cleaned with the locally made leather container or sometimes by anything the 'surgeon' sees. Any infected individual's blood may transmit HIV to an innocent victim through the medium of the circumcision knife.

In some studies of Ekiti Yoruba Society by African scholars, a survey estimate of the level of sexual networking was given (see Orubuloye, Caldwell and Caldwell, 1991; Galdwell, et. al., 1989; Caldwell and Quiggin, 1991; LeBlanc, et. al. 1991). The studies

showed that the respondents' sexual activities had begun on average about the age of 17 for each sex.

In the Western Area of Sierra Leone in the 1960s, 30 percent of all births occured outside marriage (Harrell-Bond, 1975:127-128). Of the school girls over 15 years of age whom Akuffo (1987: 159-160) studied in Ghana, 93 percent had continuing sexual relations with a boyfriend. Survey research in Ibadan City, Nigeria, on umarried young persons 14-25 years of age (Ladipo et al., 1983; Nichols et al., 1986: 103) employing a non-probability sampling method-quota-found that 79 percent of males had experienced sexual relations, 60 percent within the previous month, in contrast to 55 percent of females, 40 percent within the last month. The incident was higher among non-students: 92 percent among males, with 76 percent during the previous month, and 92 percent among females with 70 percent during the last month. This higher rate was partly a product of age but it also demonstrates that the widespread discussion of school girl sexual activity is due less to its greater incidence than to the greater potential problems it poses. The Nigerian Segment of the 'Changing African Family Project' showed that one-third of contraceptors had begun contraception while single, over half of them learning of contraception while at school.(see Changing African Family Project, 1974: 34; P. Caldwell and J. Caldwell, 1987:238). Cherlin and Riley (1986: 59 and 70) point out that these levels are no higher than those currently found in American Metropolitan areas. Caldwell, et al. 1989: 211-212, observed that World Fertility Survey data on age at first sexual intercourse for women in four West African countries indicated median ages of 15 years for the Yoruba of Nigeria's Ondo State, 16 years in Ivory Coast and Cameroon, and 17 years in Republic

of Benin. As Caldwell et al. (1989:212) noted, in Africa, firm measures of extramarital sexual activity, especially for females, are difficult to obtain, not because most of the contemporary society regards them as contravening morality and religion but because they strike at husbands' rights. Male extramarital relations are so taken for granted that few researchers even bother to note that they are almost universal, although African women researchers sometimes do so (see Azu, 1974; Obbo, 1987: 265). Schuster (1979:76-77) points out that young women coming to stay with relatives are frequently pressed for sexual relations by members of the household. Guest (1978:30) found that when 1,361 male students in Kenya were asked what they most feared during their first sex experience, none indicated veneral disease. This was explained by Guest as due to the fact that most of the respondents replied that they only had sexual relations with teenagers and not 'prostitutes' and thus may not contact veneral disease. This view of course, is erroneous as any of their multiple female sexual partners may have contacted a veneral disease and may thus infect them. Our literature review has noted a paucity of specific general survey on sexuality across the people. A few of these would be alluded to, Mair (1953:3) observed that "the key to African attitude... is that the religious values associated with sex are concentrated on procreation and not on sexual activity, as such... sexual abstinence is not regarded as a virtue in itself." Earlier, Smith and Dale (1920: Vol. 2: 35-36) had reported of the Ila-speaking people (of what is now rural Zambia) that sex was thought of much as "eating and drinking," pointing out: "to write of Ba-ila and omit all reference to sex would be like writing of the sky and leaving out the sun; for sex is the most pervasive elements of their life. It is the atmosphere into which children are brought up." In some in-depth studies of young women in Ibadan City by Caldwell, P. and Caldwell, J.

1987: 240), it was observed that the subjects had a variety of emotional problems about beginning or not beginning sexual relations but even the younger girls did not raise religious or moral issues when discussing the loss of virginity, and they did not anticipate that their mothers or other relatives would do so. Some, in fact, began sexual relations in irritation that thier mothers assumed that they, at the age of 15 or 16 years, had already done so. However, Kisekka (1973: 149-152) contends that there is greater pressure among the Baganda of Uganda for their unmarried girls to remain chaste. But this contention was contradicted by Southwold (1973:165-166). Southwold (1973, p. 165) reported:

> there is a theoretical value attached to premarital chastity of girls and a real value for the more devout christians. But most people reckon there is no such thing as a virgin. The verb Kwonoona (to spoil) is used for seducing an unmarried girl, but most people do not seem to take it literally. The only female permanently celibate are catholic nuns, of whom there are of course very few.

The lack of guilt about sexual relations does not imply that everyone can handle sexual situations easily, nor does it suggest a lack of emotional involvement. As Okpewho (1987: 337) observes: "Love as a gut feeling is certainly a central factor in the relationship between the African couple - traditional and otherwise. Sex may imply love, but real love also implies sex: an argument that young Yoruba girls in Ibadan in 1973 (see Caldwell, 1973) found uncontestable when put by their boyfriends who demanded proof of their affection. It also does not suggest elaborate sexual activities, which admittedly might be expected to be found more as a reaction to puritanical repression. Reports are consistent (see Laughlin and Laughlin, (1973: 355); Jacobs (1973: 404) that most sexual relations are confined to the sexual act, with little foreplay. Indeed, Epstein (1981: 86-88) found that the mildest deviations from this norm were regarded as witchcraft.

In collections of regional surveys, Pauline (1963:3) concluded that in most African societies, female premarital sexual freedom was limited mainly by the requirement of discretion. Southhall (1961:52) largely agreed, although noting that there were variations in the exact measure. It is so universally assumed that all boys want sexual adventures and that little or no restraint is placed upon them that few researchers even mention the matter. The point is made explicitly by Nadel (1942:153) with regard to the Nupe; by David and Voas (1981: 658-659) about the settled Fulani of Cameroon; and by Southwold (1973: 169) of the Baganda.

Mushanga (1973:182) says that among the Nkole of Uganda, a boy not having frequent sex would be jeered at and called impotent, and Mayer (1973:132) reports of the Gusii that male "celibacy is not the ideal at any stage."

Most West African studies speak of the sexual freedom of girls, at least after initiation or nebulity ceremonies, with little worry in the traditional society about pregnancy. Examples are Fortes (1964:209) on the Ashanti, Dupire and Gessain (1963:24-30) on the Coniagui of Guinea. Other investigators say that sexuality is not discouraged, but a certain discretion is expected (see Bleck, 1976:104) on the Akan, and Pellow (1977:175) on Accra. E. Goody (1973:68) wrote of the Gonja of northern Ghana that "not all courtship leads to marriage, and the lover relationship is enjoyed for its own right." Leith Ross (1939:127) who wrote in a somewhat judgemental way, claimed that Ibo girls in the 1930s regarded sexual experiences as being identical with "a good time" but that this was a relatively new phenomenon. The exceptions are Nadel's (1942:155) claim about the villages where he did some intensive field work and Schildkrout's (1983:109-110) study of Muslim Hausa Women in Nigeria's Savannah North.

The interesting debate is anchored on the ascription of value to virginity, the extent to which the value being ascribed is only one of scarcity rather than a guide for general behaviour, and the reasons for this valuation. Dorjahn (1958:855) reported that among the Temne of Sierra Leone, elderly polygynists often paid higher bridewealth for virgins, although to attain their end, they usually had to choose from very young girls. Isaac (1980:304) reported the same finding among the Mende of the same country as did Azu (1974:32-33) about the Ga of Accra. Among the Yoruba of Nigeria, both Olusanya (1969:15) and Karanja (1987:249) described virginity as a value that had been held and was changing. Indeed, Karanja (1987:250) claimed that "today premarital virginity is no longer thought to be desirable and that many potential husbands wanted proof of fertility rather than virginity.

Ward (1938:29) reported of the Yoruba in the 1930s that sometimes a new husband who finds that his wife is not a virgin complains to everyone and asks who was responsible, but this should be seen also in the context of Ward's statement (p. 32) that most nubile girls have sex, and 'these girls see nothing wrong in all of this; sometimes they make fun of one of their members if she does not do as they." Karanja (1987:249) links virginity to matters that may have become more important with the spread of veneral disease and sterility and that may assume importance again in an age of AIDS. "A woman's premarital virginity was said to be important to her fertility. It was seen as a sign of purity which forced a man to treat his wife with care, since she could always remind him that she was not a 'loose woman' when he married her."

The picture of most groups not intervening to limit girls' premarital sexual freedom, but some requiring a degree of circumspec-

tion, hardly differs in East Africa from the situation in West Africa and is attested in the words of Evans-Pritchard (1951:51; 1968:116) on the Nuer and (1974:183) on the Azande, and by Musnanga (1973:181) on the Nkole of Uganda. Epstein (1981:320-321) believes that new husbands on the Copper Belt prefer as wives the sophisticated girls with sexual experience and Ueda (1973:115) reports of Kenya's Akamba that parents refrain from sexual relations when they hear their daughters steal out at night so as not to cause in the daughter the sickness or sterility that can arise from different generations having relations at the same time. In Kamba society, the boy and girl must have had practical experience of sex before marriage as part of the preparation for the social union (Caldwell, et al., 1989:206-208).

The 1989-90 Ekiti study (Orubuloye, Caldwell, and Caldwell, 1991: 65) demonstrated that probably one third of today's rural women, compared with one-fifth of the women currently living in towns (some of whom were of rural origin) were virgins at marriage). Fadipe (1970:82-85), however, claimed that virginity was important among the Yoruba, "so much so that two women waited outside the couple's room on the wedding night to take the good news to her parents that the bride had been intact." The fact that such news caused "much rejoicing" and that its absence was "not sufficient grounds for putting her away" suggests that virginity was not universal.

Bascom (1969:62) reported in 1937-38 in the Ife area that "only a small minority of girls are virgin at marriage." Talbot (1969: Vol. 3:426) writing in 1926 about the situation in Southwest Nigeria, wrote that "it is probably rare for a girl to be a virgin when she is wedded." The above data partly suggest that female premarital chastity nor male sexual abstention at anytime was traditionally supported, and partly in some areas, virginity was valued. Thus, there is a clash of

testimonies or evidences for or against value placed on chastity. Studies by Caldwell, et al., 1989, and Caldwell and Quiggin (1991) showed that one third of rural females and one fifth of urban females had been virgins at marriage. Of the most recent sexual acts in the community, 60 percent had not been between spouses, and almost half of those involving currently married persons had not been between spouses; around one fifth of females and over two-fifth of females had had three or more sexual partners during the previous years and finally, a significant proportions of the respondents had experienced sex over their life times with a substantial number of partners: ten or more in the case of about half of the males and one-quarter of the females.

In a pilot survey by Englehard and Seck (1991) in Senegal, it was found that 75 percent of the respondents affirmed having practised sexual intercourse, 60 percent of whom practise often; 15 percent only once. When they were asked if they had had different partners, 40 per cent of the boys (sample size not stated in the study) who accepted to answer the question replied positively; this percentage was 12 per cent for girls; 30 percent of whom said that they made love because they "felt like it," 15 per cent out of curiosity and 12 percent "to please their partners." The average age for first (complete) sexual relation is 15 years (standard deviation 2:37). It is also interesting to note that when adults were asked to estimate the current age adolescents have their first sexual experience, their response was 15 years old (see Scandinavian Journal of Development Alternatives, vol. X: No. 1 and 2, March-June, 1991:12-13).

So far, we have been reviewing studies relating to the levels of sexual activities in African countries in general, and Nigeria in particular, we shall in the next part look at studies dealing with knowledge of AIDS. It is to this that we now turn.

2.2 KNOWLEDGE OF AIDS

In a survey carried out in Lagos by a group called Society of Women Against AIDS in Nigeria (SWAAN) in 1990, a study of 500 girls and women between the age of 10 and 31 revealed that although 98.5 percent of the respondents had heard of AIDS, yet 70 percent still erroneously believed that AIDS was a foreigners disease and 40 per cent argued that AIDS did not exist in Nigeria. This may have implication for their perception of AIDS and their sexual behaviour which may predispose them to HIV infection. Fabiyi (1988):131-132, reported that most (68.7%) of his respondents (simple size was given as 230) said that AIDS is a 'White Man's sickness'. Some respondents replied that "AIDS is for the white people and perhaps black, who want to conduct themselves like 'Oyinbos.' Study by Ibanga (1991) revealed that adolescents' (in secondary schools) knowledge of AIDS/HIV transmission is superficial. It was found that many of the students held serious misconceptions. This, undoubtedly could lead to unintended risks of AIDS infection and transmission. Ibanga also found that a significant number of the adolescents engaged in behviours that put them at high risk of developing AIDS. The study was conducted in Jos - Plateau State. The study sample was 156. This comprises of students in the Senior Second Schools between the ages of 14-18 of Federal Government College, Jos. In the study, there were 117 males and 38 females. No reason was given for choosing more males than females. It may, however, be the bias of the researcher or the availability of the respondents. This lopsidedness may influence the overall result of the study. The research instrument employed was a questionnaire developed to assess the adolescents' knowledge, beliefs and preventive actions about AIDS and related AIDS risk - behaviours like drug abuse. Educational Models (The Health Belief

Model, Precede Model, Ajzens and Fishbeins Models) were used as a theoretical framework for the development of the questionnaire.

Voluntary participation of the subjects was sought in filling the questionnaires. This was done in classroom situation. Subjects were informed that anonymity would be ensured and that they should be honest in their answers. In his findings, 98.7 percent of the respondents knew that AIDS can result from sexual intercourse and I.V drug abuse, 60.9 percent. Besides, 32.05 percent of the respondents thoughts AIDS could be transmitted through mosquito bites, 30.8 percent through sharing spoons and other utensils and 33.3-48.7 percent through sleeping in the same room. The main source of information for these subjects was the Media as 41.03 percent first heard of AIDS on radio/TV and 29.85 percent in magazine/newspaper, with parents, teachers and health care personnels playing a smaller role-constituting only 29.12 percent. The study also revealed that a significant number of students was found to engage in sexual activities. As illustration, the researcher found out that 29.5 percent of the students have had sexual intercourse or were sexually active. Of these, 63.8 percent have had more than four different sexual partners (see also, Udofia, et al., 1984) who found that 26.8 percent of the students he studied in tertiary institutions had intercourse before the age of 16 years. As to whether this group considered their friends sexually active, 41.7 percent answered in the affirmative while 55.8 percent felt otherwise.

Besides, the study revealed that the students thought - (64.1%) that one can get AIDS from kissing an infected person, 29.5 percent felt otherwise and 6.4 percent did not respond to the question. 30.12 percent thought that AIDS is curable and that the disease can be prevented by the use of antibiotics. These findings show that

the subjects were not fully at home with AIDS as it has not been reported that AIDS can be contacted through casual contact like sleeping in the same room, sharing eating utensils, mosquito bites or that the disease could be prevented not to talk of being cured by antibiotics. These misconceptions need to be addressed by researchers.

It was earlier pointed that the study was predominantly male biased and, though, no reasons were adduced for this bias, some explanations were proffered. Again, it was observed that there was a significant gender differences in reported experience of sexual intercourse of the respondents. 89 percent of the males reported to have experienced sexual intercourse while only 11 percent of the females only admitted to this. The reasons that one may adduce for this gender sexual experience, may be a result of societal values of fidelity, chasity before marriage and mores against promiscuity especially among the females. It may be because of public knowledge of such experience differs for the sexes. Males feeling sexual encounters as conquests and may be over-reporting as opposed to the females who may feel conquered, and, therefore, less forthcoming in reporting such incidences. It may also be partly explained by the socio-cultural ethos that dictate that sexual matters are private and intimate among 'married' couple and discussion about this should be limited to prevent 'spoiling' the 'kids.'

In another study by Okediji, et al. (1987), knowledge and attitude of health and non-health professionals on AIDS' awareness were assessed by questionnaire technique among randomly selected 208 respondents at the University of Ife (now Obafemi Awolowo University), Ile-Ife, Nigeria. Their responses were measured based on perceived accurate and correct knowledge. A total of 320 questionnaire was distributed and 208 (65 percent) were duly completed and submitted.

In the study, about 94 per cent of the subjects reported that they have heard of AIDS. However, a critical analysis of the responses indicated that the majority did not have the correct knowledge of the aetiology of AIDS. The study disclosed that the respondents did not have up to date knowledge of the full causes of AIDS. About one-third of the respondents had a belief that AIDS is a result of sin. This revealed a misconception of the disease. The study concluded that the awareness on causes, prognosis and prevention of AIDS is very poor among the respondents. However, it should be noted that the above study was a pilot survey limited to a location, nevertheless, significant for our study. In another study of adolescents' AIDS knowledge and beliefs by Odunjinrin and Akinkuade (1991:21) almost similar finding was obtained. In this study, 398 randomly selected Nigeria adolescents comprising of 200 males and 198 females were surveyed using structured questionnaires. Most of the respondents aged 10-20 years were born in metropolitan cities (83:9%), grew up in such cities (93.2%) and have always lived in them (92.7%). Only 37.9% of these respondents knew the causative agent of AIDS; although 96% of them claimed to have heard of the disease called AIDS. Only 17% of them knew all the important routes of transmission and 19.1% identified the groups at high risk for contracting AIDS. Limited knowledge and practice of preventive measures were demonstrated; AIDS was identified by these respondents as a serious health problem for the world but not yet for Nigeria.

From the review of the above literature, it is clear that the knowledge and perception of AIDS among the Nigerian populace including a significant number of students is coloured with myth and some misconceptions. This has implication for our study as there is a

need for an intensive, extensive and effective health education campaign to combat AIDS in the country - a theme to be dilated later. Adolescence is characterised by experimentation with sex and high risk for AIDS infection. To be effective, HIV preventive education needs to begin prior to the onset of experimentation. The country's system of public and private schools has a strategic role to play in educating the students about the nature and mode of infections of AIDS and the specific actions they can take to protect themselves against the scourge.

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CHAPTER THREE

3.1 THEORETICAL FRAMEWORK

In the last two chapters, we alluded to the background information of the study, highlighted why the problem ticks and reviewed the pertinent literature.

In this chapter, we shall take a cursory look at the theoretical anchorage that seems to explain the issue under focus:- Perception and knowledge of AIDS." It should, however, be understood in Popperian conceptualisation that no theory is conclusively provable; it is only conclusively refutable. Besides, there is an inextricable linkage between theoretical categorisation and particular empirical regularities. Systematic anchorage may only be duly executed with due regard to particular theorising. It is through theoretical conceptualization that one gets a search light on what to look for empirically and how to interprete one's general findings.

But as Turner (1978) observes, no theoretizing, however ingenious and no observance of scientific protocol, however, meticulous are substitutes for developing familiarity with what is actually going on in the sphere of life under study. In the study, it is indubitable that the critical variables are perception and knowledge. How is the perception of the students influenced by the knowledge of AIDS? How would they relate to people with AIDS? and to what extent are their sexual behaviour influenced by the knowledge garnered?

We shall begin these theoretical issues with a look, firstly at cognition and cognitive dissonance theory and subsequently perusing the implication for the study.

What is Cognition? The term cognition refers to the mental processes of knowing, perceiving and judging which enable an indivi-

dual to interprete the world about himself. Persons, objects and events are perceived by an individual who endeavours to make sense of the stimuli to which he is exposed. In other words, he develops a 'cognitive map' which reflect his subjective view of social issue. Diverse forms of behaviour are generated therefore, by the beliefs, attitudes and value systems which are held by particular people.

We have noted in the previous chapters that the cognitive map of the 'whites' influences their perception of the 'blacks.' It shapes their attitudes toward people with HIV. The same can be said of the students' cognitive map. The level of cognition or awareness is likely to influence their attitudes and perception towards people with HIV.

Cognitive Dissonance Theory: This theory was first postulated by Festinger in the 1950s and elaborated by other workers such as Brehm and Cohen (see Festinger, 1957; Wolman, 1977; Brehm and Cohen, 1962).

The theory implies a number of counter-intuitive unique effects. 'Cognitive dissonance' occurs when one cognitive element or bit of knowledge implies the opposite of a second cognitive element. Dissonance here implies 'inconsistency . It is implied here that individual organises his beliefs and perception of the world in a particular fashion and strives to prevent anything that may engender disorganisation, or in the language of Festinger, dissonance. It should be noted that relationship among the cognitive elements may be relevant or irrelevant, consistent of inconsistent consonant or dissonant. An inconsistent relationship among cognitions produces dissonance - theoretically, a state of tension which leads to efforts to reduce it. Ways to reduce dissonance includes changing or distorting cognitive elements, adding cognitive elements and distorting the

relationship among elements. In a nutshell, people do organise their phenomenological world and the study of cognitive structure discloses many aspects of this organisation. Cognitive structure tends in general to be internally consistent. As Sampson (1976:131-132) notes:

> from P.S. perspective, two cognitiions - that is, beliefs, attitudes or knowledge about something can be either in an interdependent relationship to another or can be independent. If they are interdependently related, thus forming a cognitive system that can be either in a state of consonance or dissonance. Consonance occurs whenever the implications of one cognition are consistent with those of the other. Dissonance exists whenever the obverse of one cognition follows from the other.

From this explanation, it is theorised that the students' level of sexual activities is influenced by the amount of knowledge possessed with respect to the danger inherent in having or contacting AIDS. Contacting AIDS or been exposed to the risk of AIDS transmission is cognitively inconsistent, for the students. Thus, they are likely to take measures to reduce this inconsistence or dissonance.

Communication Explanation

Communication is exchange of meanings between individuals through a common system of symbol such as language. It is a discrete aspect of human enterprise (Encyclopaedia Britannica, 1980, Vol. 10:1010).

As Richards (1928) succintly describes:

> communication takes place when one mind so acts upon its environment that another mind is influenced and in that other mind an experience occurs which is like the experience in the first mind and is caused in part by that experience.

Technological advancement has definitely influenced communication network in the society. It is also undoubted that mass media have powerful effect on the individual's and group perception and knowledge of social issues. Students are no exception. Mass media like radio,

television, newspapers and magazines are enduring socializing agents (Olusanya and Olurode, 1988:49-50; Badru, 1992:23). The mass media, just like peer group and school, serve to influence the perception and knowledge of students regarding contraceptive devices and shape their sexual behaviour (Akande, 1988; Ibanga, 1991).

The students' perception and knowledge of AIDS could be plausibly explained by the influence of mass media. Though, the parental educational background and socio-economic status may play a part, it does not shed entire light on the students' perception. More importantly, most parents hardly discuss sex matters with their children for fear of communicating sex information to 'premature' mind and thus making them 'promiscuous.' We have argued in another work that most students have their initial knowledge of premarital and coital knowledge through friends and mass media (Badru, 1990). Thus, we are saying here that the mass media and by extension, communication network, have great impact on the students' knowledge and perception of people with AIDS.

Reference Group Theory: The groups which serve as standard of comparison for self education are called reference groups. There are many reference groups, but not all groups to which an individual belongs or does not belong constitute reference group. Reference groups serve as agents of anticipatory socialisation (Agbaje, 1990). Individuals tend to learn the supporting values and beliefs from their group. Students are likely to emulate and learn from their reference groups. This may, thus, shape their knowledge and perception of AIDS with resultant effect on their sexual behaviour.

Peer Pressure: The peer influence has been associated with a number of social ills. Plant (1975) in his work on drug taking observed that all his respondents attributed their first drug

experience to the direct influence and encouragement of friends and peers whom they knew well. Since intravenous drug abusers constitute a high risk group because they are frequently changing hypodermic syringes which may serve as a source of HIV infection, it is necessary for parents and educators to take the bull by the horn in order to stem the tide by educating children on the adverse pressure of the peers. In sum, we are explaining the perception and knowledge of the students towards AIDS by the pressure the peers have on them

Modernization Theory: Modernization is the current term for an old process - the process of social change whereby less developed societies acquire characteristics common to more developed societies. The process is activated by international or inter-societal communication (Sills, 1968:386). According to Eisenstadt (1966), modernization is a

> ... process of change towards those types of social, economic and political systems that have developed in western Europe and North America from the 17th Century to the 19th Century and have then spread to other European countries and in the 19th and 20th centuries to the South American, Asian and African continents.

Eisenstadt can be criticized for being 'eurocentric.' He equates modernization with westernization.

Modernization has engendered industrialization and industrializing waves have swept across the developing countries including Nigeria. There is, thus, urbanization, cornurbation, and rural-urban migration with their attendant consequences. Extended family is giving way to Nuclear family. Patrilocal residence is turning to neolocal. In Durkhemian language, the mechanically based society is moving toward organically based society where relationships are largely formal and contractual. In Parsonian term, functions are universalistic rather than particularistic and role is becoming specific rather than diffuse.

Movement of people from rural to urban areas in search of job can result in isolation and individualism. On getting to the cities, individuals may be compelled to seek sexual pleasure with prostitutes. Prostitution has been indicted by scholars and the World Health Organization in the spread of AIDS and other sexually transmitted diseases. As a matter of fact, prostitutes are one of the four target groups being studied by the National AIDS Control Program in the country. The other target groups are Tuberculous patients, pregnant mothers and those with drug abuse histories.

Towns have service centres with bars, night clubs and other abode of entertainment. Little (1973:76-101) points out that African novelists portray towns as being unusually sexually permissive. At a poorer level, selling sex as Nadel (1942:152) reported in Bida; and Gomm (1972:103) described on the Kenya Coast. There is certainly a selective movement to town of women who want something other than the rural customary marriage (Baker and Bird, 1959:102; Nelson, 1979:88). See also Bergel (1964); Piot, et al. (1984); Paper et al. (1985); Castro et al. (1985); Nunn (1987) and Dawson (1988).

Fortes (1978:22) argued that prostitution in West Africa is age-long because sex has always been treated in a common sense and consequently frequently in a commercial way. To a large extent, real prostitution with brief commercial relations is brought into existence by the demand and the nature of the clientele and those who demand such services in Africa have been described as migrant labourers, short-term miners, truck drivers, itinerant traders, soldiers, in some locations tourists and men in urban or mining areas who are unaccompanied by wives or where the immigration of women or others without jobs has been restricted (David and Voas, 1981:658-659; Dawson, 1988: 58-63; Larson, 1989). However, Miller and Rockwell (1988) in AIDS in

Africa: The Social and Policy Impact, write that:-

> ... there is no evidence that Africans are more likely to be sexually promiscuous than people from any other continent..... There is a tendency to look for other factors that explain promiscuous sex lives but in this is a serious risk of projecting age-long Western stereotypes and prejudices about sexuality unto African culture. Just like Waite (1988) points out, "most of the stereotypes were based on myths.... there was nothing inherent in African practices to support the notion that sexual excesses were widespread."

With the modernization and industrialization, the urban germ has made contraceptive devices easily available and may thus influence and partly explain the perception of the students towards AIDS.

Economic Explanation: The high cost of living in Nigeria fueled by the introduction of Structural Adjustment Programme (SAP) in 1986 (coincidentally the year AIDS was first reported in Nigeria), has alienated the masses and marginalised the people. Individuals are living at the subsistence level or below it. As Odebiyi (1988) points out, essential food h as jumped astronomically. Women in cities have taken to 'prostitution' to augment the family resources (Piot, et al. 1984; Pape, et al. 1985). Hospitals are mostly urban-based, expensive to attend and poorly staffed. Equipments and other medicaments are in dire shortage. In this condition, disposable syringes are being re-used rather than discarded after the first use. Unsterilized and improperly sterilized syringes are good means of transmitting HIV infection. The spread of the infection in this regard is enhanced by the misconception of many rural dwellers and illiterates that injection is an instant cure for any ailment. This category of people believe that they have not been properly treated if their prescriptions do not include injections. A greater proportion of illiterates tend to prefer injection more than the literates. Illiteracy and economic doldrum may thus fuel the spread of AIDS. Conversely, high literacy level and enhanced socio-economic status may likely reduce

the risk of HIV infection. The sexual behaviour of the students may consequently be conditioned by socio-economic straits prevalent in the country. This undoubtedly has consequence for their perception of HIV infection.

Socio-Cultural Theory: Certain cultural factors such as beliefs, taboos, habits and child rearing practices are either directly or peripherally connected with AIDS spread. Among some of the major ethnic groups in the country i.e. the Yoruba and the Ibos - it is a taboo for the parents and children to sit together discussing sexually related matters. The topic is usually avoided. And this could be more critical in the adolescent period. If the sex education or guidance is absent at this stage, the children may tend to look outwards for the fulfilment (Odebiyi, 1987).

Other traditional practices like circumcision, tatooning, scarification and polygyny have been implicated in the spread of AIDS. Circumcision and incisions are a veritable source of AIDS transmission if the used instruments are not properly sterilized, and since the 'surgical' operations are done at the traditional healer's home or even when done at the victim's home, the level of hygiene and the facilities for proper sterilization are questionable. In some communities, apart from male children, females are also subjected to the 'surgeon's knife with attendant consequences (see Dareer, 1982; Ifeakandu, 1963; Odebiyi, 1985). Females are said to be circumcised to prevent them from being 'promiscuous'. This operation may increase the chance of spreading AIDS through contact with contaminated blood. The knowledge of these socio-cultural practices may influence the perception of students towards people with AIDS especially those who got infected through any of the above factors rather than sexual promiscuity or drug abuse.

The above theories lead us to make the following propositions.

Proposition (i) - Students are likely to reduce cognitive disonance by restoring cognitive balance through acquiring relevant knowledge concerning AIDS with a spill over on their sexual behaviour.

Proposition (ii) - Students who have enriched knowledge about AIDS are likely to be favourably disposed to people with AIDS.

Proposition (iii) - Students whose parents occupy high educational attainment are likely to be more aware of contraceptive devices.

Proposition (iv) - Students who are religiously committed are likely to be unfavourable towards people with AIDS as they believe that people with AIDS got the disease from 'sinful' acts.

From the above propositions, we now formulate the hypotheses of the study in the next section.

3.2 HYPOTHESES FORMULATION

In this section, we shall formulate our hypotheses in a testable form and later test their logical and empirical consequences. It should be noted that hypothesis is a proposition that is stated in testable manner and predicts a particular relationship between two or more variables. Hypotheses must exclude all statements that are mere opinions or value judgements. For this study, knowledge of AIDS shall be the independent variable while the perception of the secondary school students shall form the dependent variable. This then leads us to formulate the following hypotheses.

(i) The higher the level of knowledge of AIDS the more sexual precautions taken by the students.

(ii) The more knowledge the students have about AIDS, the more favourably disposed they are towards people with AIDS.

(iii) The higher the level of educational attainment of parents, the higher the level of awareness of contraceptives devices by the students.

(iv) The more committed the student is religiously, the less favourably disposed is he or she towards people with AIDS.

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CHAPTER FOUR

CONCEPTUAL CLARIFICATION

In this part, we shall illuminate some words, concepts and terms which are somehow technical with a view of demystifying them and enriching their analytic clarity.

'AIDS' - This signifies Acquired Immune Deficiency Syndrome.

- Acquired because it is not inherited.
- Immune because it affects body's immune system
- Deficiency because it renders the immune system deficient in performing its functions.
- Syndrome because it manifests in conglomerate of symptoms and signs.

(see below where we shed more light on the word 'syndrome').

The causative agent of AIDS is called 'HIV' which means Human Immunodeficiency Virus. A clinical case definition of AIDS was developed at a WHO Workshop on AIDS held in Bangui, Central African Republic, 22-24 October, 1985. This definition was reviewed and slightly adapted at the second meeting of the WHO collaborating Centres on AIDS as follows:

ADULTS - AIDS in an adult is defined by the existence of at least 2 of the major signs associated with at least 1 minor sign, in the absence of known causes of immunosuppression such as cancer or severe malnutrition or other recognised aetiologies.

(1) MAJOR SIGNS

(a) Weight loss greater or equal to 10% of body weight.

(b) Chronic diarrhoea more than one month.

(c) Prolonged fever more than one month (intermittent or constant).

(2) MINOR SIGNS

(a) Persistent cough for more than one month.

(b) Generalised pruritic dermatitis.

(c) Recurrent herpes zoster.

(d) Oro-pharygeal candidiasis.

(e) Chronic progressive and disseminated herpes simplex infection.

(f) Generalised lymphadenopathy.

The presence of generalised Kaposi's sarcoma or cryptococcal meningitis are sufficient by themselves for the diagnosis of AIDS.

The secondary school students would fall within the "adult" class.

CHILDREN

Paediatric AIDS is suspected in an infant child presenting with at least two of the following major signs associated with at least two of the following minor signs in the absence of known causes of immunosuppression such as cancer or severe malnutrition or other recognised aetiologies.

(1) MAJOR SIGNS

(a) Weight loss or abnormally slow growth.

(b) Chronic diarrhoea more than one month.

(c) Prolonged fever more than one month.

(2) MINOR SIGNS

(a) Generalised lymphadenopathy.

(b) Oro-pharyngeal candidiasis.

(c) Repeated common infections (otitis, pharyngitis, etc.)

(d) Persistent cough.

(e) Generalised dermatitis.

(f) Confirmed maternal LAV/HTLV - III Infection.

(see the World Health Organisation's Weekly Epidemiological Record, No. 10, March 7, 1986, page 71), cited in Chirimuuta, A.J. (1987), pp. 139-140).

It is said that some scholars prefer not to use the term AIDS but to speak of 'HIV infection' or 'HIV$_3$ disease' even when referring to people who meet the WHO's definition. The reasons given include:

(a) AIDS is not a single condition but a symdrome. People with AIDS can be ill with very different opportunistic infections, and between attacks of opportunistic infections, not be ill at all.

(b) People can be seriously ill or die as a result of HIV infection and yet not have AIDS. People may suffer from severe weight loss, diarrhoea or fevers, and minor opportunistic infections such as shingles or oral candidiasis, and yet not exhibit the symptoms necessary for a clinical diagnosis of AIDS. On the other hand, someone who has been diagnosed with AIDS may recover from an opportunistic infection and go on to live a healthy life for several months or even years.

(c) HIV infection may not necessarily lead to AIDS. Zidovudine (AZT) has been shown to delay the onset of AIDS in people with no or minor symptoms of HIV infection. Other drugs reported in mid-1989 as potentially improving immune function include dideoxycytidine (DDC), dideoxyinosine (DDI) and alpha interferon. By treating HIV infection, it might be possible to avoid the development of AIDS.

(d) Because of the time-lag before symptoms appear, the number of AIDS cases today indicates how many people were infected up to 10 to 20 years ago but not how many are infected now.

(e) Many people do not understand the difference between HIV and AIDS. Some think that if someone has HIV, then he or she automatically has AIDS. Others believe they can only be

infected by people who have AIDS and not be people who only have HIV.

(f) In many circumstances the presence of HIV infection is important but the presence or absence of AIDS symptoms is not.

(g) The serological tests may be misleading by giving either 'false negative' or 'false positive'. There are, however, more sensitive tests that are used for confirmation of the initial tests.

'ELISA' tests are usually confirmed with 'Westerblot' tests. In contemporary literature, terms such as 'AIDS-Victims' and 'AIDS-sufferers' are avoided because they suggest a passive or helpless response to the illness whereas people with AIDS or HIV are often healthy, active people getting on with their lives. Thus, 'People with AIDS' (shortened to PWA) or people with HIV are preferred. 'AIDS patients' is a term that is only appropriate when talking about a specific doctor/nurse - patient relationship. It should be noted that 'HIV-infected' and 'HIV carrier' are frowned at because they place more emphasis on the Virus rather than the individual. A person becomes defined primarily in terms of his/her condition, rather than as an individual who happens to have particular virus. The term 'carrier', in particular, has historical associations with 'contagion', and implies that the individual is threatening rather than threatened. Terms which place the person first and the condition last are generally agreed to be better alternatives, Hence, a person who is seropositive, or HIV-positive or infected with HIV.

'AIDS-infected' and 'AIDS-carrier' are technically wrong, since people are infected with the virus and not the condition. The use of these terms ignores the distinction between AIDS and HIV.

(See the 'POWER OF LANGUAGE' cited in Panos Dossier (1990), p. 4 & 59).

Antibody - Serum protein produced by the body to fight infection.

Antigen - a substance which can stimulate the body to make an immune response for instance, to produce antibodies.

B-Lymphocyte - A type of white cell that when stimulated by antigen becomes a plasma cell and produces antibodies.

Cell-Mediated Immunity - An immune response to infection mediated by special type of white blood cells called T-Lympho cytes.

DNA - Deoxyribonueleic acid (see RNA for fuller note).

ELISA - A type of antibody test, which means Enzyme Linked Immunosorbent Assay.

Helper T-cells (T4 cells) - A type of T-Lymphocyte that controls the response of killer T-Lymphcytes and B-Lymphocytes. They carry 'CD 4' receptors and are the main type of cells infected by HIV.

Histopathology - Microscopic description or investigation of diseased tissues.

HIV - Human Immunodeficiency Virus.

Homophobia - fear of or aversion to homosexuality.

HTLV - Human T-lymphotropic Virus. The type 1 causes a disease called Leukaemia.

Immune System - This is the body's defence system against attack from viruses, bacteria and other organisms that cause disease or are harmful. The function of the system is to recognise and eliminate these organisms. A key element in this response is the production of antibodies - these recognise and link onto specific antigen. The combined antibody/antigen can then be engulfed by Macrophages - another cell of the immune system.

Immunodeficiency - a deficiency of the immune system that can be inherited or can be caused by certain drugs, malignant disease, infec-

tion or other factors. AIDS is an acquired infection.

Immunofluorescence - a technique of labelling specially prepared antibodies with fluorescent dyes.

KS - Kaposi's sarcoma - a skin cancer which was first described by an Australian skin specialist - MORTZ KOHN KAPOSI (1837-1902) in Mediterranean.

LAV - Lymphadenopathy Associated Virus.

Leukaemia - Malignant disease of the white blood cells.

Opportunistic infections - infections by commonly occuring micro organisms which ordinarily do not cause ill-health. Opportunistic infection is an infection which takes the opportunity to gain a foothold in a damaged immune system, except when the immune system is seriously impaired. Opportunistic pathogens include Toxoplasma gondi, crytococcus-neoformans, pneumocystis carinii and candida albicans. Thus, opportunistic infections are technically defined as 'crytococcal meningitis, cryptoporidiosis, extensive mucocutaneous herpes simplex virus (HSC9 infection, bilateral pneunonia (by radiography) that was unresponsive to antibiotics or anti-tuberculous drugs, extensive oral oesophageal candidiasis and chorioretinitis' (infection of eye).

Prostitution - a prostitute can be defined as a person who for immediate payment in money or valuables will engage in sexual activity with any other person known or unknown, who meets minimal requirements as to gender, age, cleanliness, sobriety, ethnic group and health. (see Encyclopaedia Britannica, Vol. 15:76).

A prostitute is usually a female who sells sex commercially charging standard rates on the spot on each occasion, dealing for the most part with strangers and making no emotional attachment and often operating from group commercial premises or a brothel that is primarily used for the purpose.

Radio-immunoassay - a type of antibody assay using radioactively labelled antigen..

Radio-immunoprecipitation - a variant of radio-immunoassay.

RNA - Ribonucleic acid. This and DNA store the genetic information of an organism i.e. the instruction for its growth and reproduction in every living cell. Most cells carry their genetic information in the form of DNA which then makes a mirror image of itself.

Retrovirus - A group of viruses including AIDS virus (HIV) which cause degenerative brain disease in sheep and goats. Retrovirus stores its genetic material as RNA and not DNA. 'Retro' means 'backward' or 'in reverse', so called because the virus persuades the invaded cell to convert viral RNA to DNA, which is 'in reverse' to the cells normal operation - which is to convert DNA into RNA, to make proteins to reproduce itself.

Safer Sex Behaviours - These include adhering to one regular sexual partner, using a new latex condom on each sexual occasion with casual sex-partners, avoiding sex with strangers and saying 'no' to deep intense kissing with people suspected to have HIV.

Seroepidemiology - The study of the incidence of an infection in a defined population by testing for serum antibodies in a sample of the population.

Seropositive (true and/or false) - Giving a positive reaction to serological tests. If the test is not specific, it may respond to more than one antibody and give a false positive result.

Suppressor T-cells - A type of T-lymphocyte that suppress antibody production by activated B-lymphocytes (plasma cells).

Syndrome - This is a collection of symptoms and signs signifying many disorders. It is defined in Harrison's Textbook of Internal Medicine as a group of symptoms and signs of disorders of somatic

(i.e. body) function, related to one another by means of some anatomic, physiologic or biochemical pecularity of the organism. It embodies a hypothesis concerned with the deranged function of an organ, organs, system or tissue...

A syndromic diagnosis usually does not indicate the precise cause of an illness but it greatly narrows the number of possibilities and thus suggests whatever further clinical and laboratory duties required.

T-Lymphocytes - are a type of small white blood cells. There are two main types - T-Lympohocytes which are responsible for cell-mediated immunity, and B-Lymphocytes that produce antibody. T-Lymphocytes are particularly susceptible to infection with the AIDS virus.

Toxoplasma gondi: a single celled parasite causing a congenital or acquired infection that frequently affects the nervous system.

Toxoplasmosis (cerebral): Toxoplasma infection in the brain, usually a reactivation of a previous dormant infection.

Virus - the smallest infective germ (micro-organism) known and can only be magnified and seen through a special microscope called the Electron microscope. Viruses differ and are grouped according to their shapes, sizes and type of genetic hereditary material made up of protein chains of DNA or RNA. Viruses can only grow and multiply inside the cells of the affected person (host cells). The viral genetic material then programmes the host cells to produce more of the viruses. HIV belongs to the retrovirus group. The first retrovirus was discovered in 1909 and was known to have cancerous potential in 1911. LAV virus was first isolated and identified in 1983 by Luc Montagier (of France) from the Lymph glands of a homosexual.

WER - Weekly Epidemilogical Record of World Health Organisation.

Wester blot - a special test for AIDS antibodies. It is more reliable but more expensive compared to ELISA test (see p.54).

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CHAPTER FIVE

RESEARCH DESIGN

A research design is like a sign-post guiding the researcher throughout his research effort. A design discusses the appropriate methods of collecting and analysing data. It must take into account the resources, time and purpose of the research. Research design must also ensure that minimal bias is introduced and that reliability of the evidence and replicability of the work must be given a prominent position. Besides, a researcher must possess methodological imagination employing appropriate methodological triangulation and diversification (Badru, 1991:55). This section will highlight how the design of the study is embarked on. The methodological issues and the research constraints on the field shall be mentioned.

Methodology: A combination of methods -methodological triangulation was employed (i.e.questionnaire, focus group study and documentary analysis). This approach was anchored on the premise that data collection techniques are not mutually exclusive. The use of one method in a given research operation by no means excludes the use of any other. In fact, considering the great complexity of the human subject, social scientists are enjoined always to apply more than one method of data collection to enhance the chances of attaining social reality. As Donald Warwick observed:

> the past two decades have seen a growing recognition of the need for merging two or more research methodologies in the same study. As the social science disciplines critically examined the epistemological foundations of their data sources, they have come to appreciate the limitations of single methods (1983:275).

In the same vein, Benneth and Thasis counselled:

> The human reality must be apprehended by a variety of viewpoints, not by one alone, because this very reality is always in part a construct, always in part an image,

> and only be encouraging difference in perspective and approach can one obtain the needed richness of imagery and consequently, theory (1967:307).

In the design, we shall follow these steps (a) drawing the sample; (b) sample procedure; (c) methods of data collection and editing.

(a) Drawing the Sample:

Probability sampling is a tool designed to reduce selection bias and ensure 'representativeness of the population by scientifically selecting a sample from the defined population (Kalton, 1983).

Population: Our population was taken from the students in Igbobi College. We contacted Lagos State Ministry of Education for a list containing the names of all the students. We were directed to the Administrator of Shomolu Local Education District. From the Administrator, after ensuring that we were bonafide students, she gave us a note to the Principal of Angus Memorial High School, Igbobi.

The school is a mixed one, located adjacent to the Igbobi College Road. It was founded in 1982. The current principal of the school is Mrs. M.O. Okunaiya - a postgraduate almuna of the University of Lagos. The school has about 10 arms consisting of about 50 students in each of three section in Senior Secondary School.

We went to Shomolu Local Gvoernment for the Area Map. We were directed to the Engineering Section, where a copy of the map was sold for fifty Naira. The relevant area of study (encircledin the map) was photocopied from the original map (see Appendix 6).

The list of the senior secondary students in the school was used as our sampling frame. This was considered as adequate as it is comprehensive, up to date and drawn from a reliable and central source. The list contains 1,500 students and these form

the total population of the study. A sample size of between 150-200 was considered adequate for the purpose of this research.

(b) Sampling Procedure: The best sampling method is that which ensures equal probability of being included in the sample from a given population. This is best done by simple random technique making use of random numbers. But it involves time and energy. It also requires a relatively larger sample. Here we adopted the techniques of systematic and multi-stage sampling techniques. This is for operational convenience.

As said earlier, there were three arms of classes used i.e. SSS I, SSS II and SSS III. There were 10 arms in each SSS containing 50 students each. The arms were labelled in the schools as A, B, C, D, E, F, G, H, I and J. We re-designated the alphabets with numbers 1-10 in decreasing order as follows:

SSS I	SSS II	SSS III
A = 1	A = 1	A = 1
B = 2	B = 2	B = 2
C = 3	C = 3	C = 3
D = 4	D = 4	D = 4
E = 5	E = 5	E = 5
F = 6	F = 6	F = 6
G = 7	G = 7	G = 7
H = 8	H = 8	H = 8
I = 9	I = 9	I = 9
J = 10	J = 10	J = 10

Five classes were randomly selected from each of the arm of the classes. All the class captains were identified and asked to pick a predetermined and coded rolled papers labelled, 1, 2, 3, 4, 5, 0, 0, 0, 0, 0. Those whose picked 1, 2, 3, 4, and 5, were chosen and those captains who picked '0' were thanked.

After getting the classes by random, the class register containing the names and numbers of the students was used. Those students who corresponded with these numbers were systematically selected. The numbers were 1, 5, 10, 15, 20, 25, 30, 35, 40, 45 and 50. The students who tallied with these numbers were given questionnaire to fill. There was a total questionnaire of 155 - 11 each in an arm of 5 classes. All the questionnaires were collected but only 150 of them were found useful for data analysis after cleansing and editing in order to detect and rectify incorrect entries with a view of enhancing the quality of the field data. Specifically, the questionnaires were edited for completeness, inconsistencies and inaccuracies.

(c) Methods of Data Collection

Structured questionnaires which were self-administered by the students was one of the research tools used to collect the primary data. The questionnaire is broadly divided into two parts. The first part was designed to obtain the socio-demographic data like age, sex, present class, marital status, state of origin, place of birth and religion. There were 14 questions in this part. All of them were close ended questions. The second part consists of 36 questions - an amalgam of close and open-ended types. A coding guide was provided for the opened ended questions which were nine in number (see appendix 2).

To test for validity of the instrument, a selected number of students was administered the questionnaire on a pilot study and pretested. This is to highlight whether there is any ambiguity and to verify whether it is a reliable and valid instrument for mesuring what we intend to study. Both construct and face validity were encouraging.

The methods for organising the data will be percentages and frequency distribution tables. Chi-square method will be employed to calculate the statistics. Chi-square is a test of significance which assumes only positive values. It shall be tested at .05 level of significance, i.e. the alpha is .05. The contigency co-efficient (C.C.) will be adopted to indicate the strength of the association between the variables at values ranging from between -1 to +1.

$$C.C. = \sqrt{\frac{CX^2}{CX^2 + N}}$$

where X^2 = chi-square value

N = total number of sample.

The chi-square formula is given as

$$X^2 = \sum \frac{0 - e)^2}{e}$$

where X^2 = calculated value of chi-square,

0 = observed value of chi-square.

e = expected value of chi-square

$\sum$ = summation.

To determine the strength of the relationship, the following guide will be adopted.

.80 and above = very strong.

.60-79 = strong.

.40-59 = slightly strong.

39-below = weak.

In testing the hypotheses of this study, these decision rules will be adhered to:

(1) state the research hypotheses.

(2) convert them into null or statistical hypotheses.

(3) choose a level of significance.

(4) calculate the statistics.

(5) make a decision

(6) interprete the decision.

In doing this, the following abbreviations shall be employed:

(1) O = observed frequencies.

(2) e = expected frequencies.

(3) O-e = observed frequencies minus expected frequencies.

(4) $(O-e)^2$ = Answers got from 3 shall be raised to power 2.

(5) $\frac{(O-e)^2}{e}$ = Answers got from 4 divided by expected frequencies.

(6) $\Sigma \frac{(O-e)^2}{e}$ = summation of 5 above.

(7) CX^2 = Calculated Chi-square.

(8) TX^2 = Table chi-square.

(9) V/or df = Degree of freedom.

(10) CC = Contingency Co-efficient.

(11) N = Total Number of respondents.

(12) C = Column.

(13) R = Row.

Let us say a word or two on another method we employed:

Focus Group Discussion

Focus group study is one of the best qualitative and contemporary method of data collection in social science. It is a method that encourages dialogue between the researcher and the research subjects. It has potential for identifying cultural patterns and less obvious but popular forms of communication which are essential

for encouraging discussion around sensitive issues such as current level of sexual activities, use and knowledge of contraceptive devices and adoption of safer sexual behaviours. The focus group study entails bringing together a small group to discuss and express their views on some topics that are of interest to a given research. The group is generally made up of 6-8 members under the guidance of the investigator who serves as the 'moderator' or facilitator. As Obikeze (1990) points out, the task of the moderator normally is not to conduct individual interview simultaneously but to facilitate a comprehensive exchange of views in which all participants are able to speak their minds and respond to the ideas of others" (Walker, 1985:5). The participants are selected purposively from specific target groups, preferably of the same sex, age groups, and socio-economic background, whose ideas and experience are germane to the study (Obikeze, 1990:67). Focus group study helps the researcher to uncover areas of agreement and disagreement on any given topic among members as participants try to justify their views. Besides, group dynamics permit the generation of ideas which may not have occurred to any one individual. Interaction among the group members itself may supply some crucial research evidence, provide insight for interpretation of research results and be a heuristic and sensitising experience to the participants. In steering the group discussion, the facilitator together with an assistant ensure that they do not personally influence the outcome of the discussion and to guard against the common tendency for one or two vocal members to dominate others. Two levels of interpretation have been identified with respect to analysis of data from focus group discussions. The first level has to do with deducing what people actually mean from what they say, while the seoond has to do with assessing the

implications of what they said for the problem on hand (see Hedges, 1985:88) cited in Obikeze, 1990:81). Although no attempt is made during the analysis to quantify the contributions of participants, it is envisaged that at the summary stage, it will be possible to make such statements as 'all group members', 'most of the group members,' 'a majority of the group members,' 'a few of the group members', 'only one member of the group', etc. spoke in favour or against the issue under consideration.

In this study, a group of 8 students was selected randomly for the focus group discussion. The students were divided into two groups. The first group consists of eight females of the same class of relatively the same age. The second group contains eight male students of the school. Focus group study guide questions were discussed freely. We recruited two research assistants for recording the transaction in the discussion. The two are undergraduate students of University of Lagos. One was a male, the other, a female - who recorded the female group discussion. The male research assistant recorded the transaction among the male students. Both have been given specific instructions and rules before the commencement of the discussion.

The students were warmly greeted and rapport created with them by the researcher and the two research assistants. We explained our mission to them and promised anonymity of their responses. We utilized one of the classes for the discussion. Members were encouraged to talk freely about AIDS-related issues. The discussion lasted about one hour, thirty minutes in each of the group.

At first, the students were quiet and a little shy but we re-assured them by our informal approach. We asked:
"What do you know about AIDS?" "Where did you hear about AIDS?"

"Is AIDS a problem in Nigeria?" "What are the modes of HIV infection?" "How old are you when you had your first boy or girl friend?" "How old are you now?" "How do you protect yourself from AIDS?" "Have you used or seen condoms before?" "Are you aware that there are now female condoms?"

As they heard each other answered they realised that it was the same for all of them and they got more confident.

Problems Encountered on the Field

There were a number of constraints along the path of the research endeavour. Firstly, the problem of school's choice and after choosing, how to get access to the school and the students.

This first problem was solved by contacting two teachers in the school, who are close friends, and who paved the way for the linkage with the principal and made the pilot study and the pre-test of the questionnaire possible.

However, the school principal initially declined to our first attempt until we got clearance from the Administrator of Shomolu Local Education District. She was not got until the third visit.

The Principal availed us the opportunity of the school register from which we drew our study sample.

We were initially concerned and even alarmed by the sheer number of students - about 1,500 in the school. We, however, set out to cover ten percent of the student's population.

The second problem concerned our mission especially with the focus group study. The students thought we were there to give lectures but we tactfully explained our objectives and encouraged them in conjunction with the school principal to participate in the study discussion. Two females were dominant in the discussion.

They were, however, tactfully encouraged to give room for other group members to air their views. The head prefect - one of the male members was also dominant in the discussion. We also appealed to him as the two domineering female students.

Again, we were amiss on how to classify the qualitative data elicited from the focussed group. However, literature review of Obikeze (1990), Osuala (1990), Goode and Hatt, (19952), and consultation with our research supervisor, reduced the problem to the barest minimum.

Besides, the time constraint of deadline of the project is another crucial factor.

Furthermore, we have to negotiate with school principal and class teachers for the release of their students for the focus groups study as they thought that it might distrupt the tight academic school programme. Even, when the negotiation was eventful, the students' enthusiasm has to be fired before they could gather for the study. Five of such students' questionnaire were improperly filled and thus excluded from the final draft of questionnaire used.

Another problem we faced concerned how to get a location map of the area. We were tossed from one unit to another in the Shomolu Local Government Office. At the end of the day, a worker directed us to the Local government engineering unit where we were told that the map could only be released on a price of fifty Naira. The researcher had no money with him. He had to go back the second day for it. Besides, when the map was obtained, it was too big and contained other irrelevant materials and boundaries. However, the relevant portion was photocopied and the school under study was encircled (see Appendix 6).

CHAPTER SIX

6.1 COLLECTION, ORGANISATION AND ANALYSIS OF DATA

The collection of information from the questionnaire and focus group study leads to a large mass of data. If they are to be understood, these must be organised in a systematic manner. Clear and forceful presentation is an important aid to the understanding and correct interpretation of such data. This will be done in tabular form. The period of collection, organisation and analysis took about twenty weeks. In all, 160 questionnaires were distributed. Of this, 155 were returned (i.e. 96.88%) but five of these were rejected for incomplete and defective responses. The analysis and hypotheses testing were, therefore, based on the properly completed 150 questionnaires which were self-administered, and focus group study. Knowledge gathered through a variety of sources about AIDS by the students was treated as independent variables. Religious commitment and socio-economic class were other independent variables. Perception of the students towards people with AIDS and HIV infection was treated as dependent variable.

Four hypotheses on these variables are tested by the use of the chi-square statistical analysis. The strength of relationship between the hypothesised variables are further measured by the use of the co-efficient of contingency test. The 150 respondents which form the sample size of this research have the following characteristics which are arranged in tables and some of these further analysed by measures of central tendency and dispersion. The standard error was also calculated.

TABLE I

Distribution of Respondents According to Class
N = 155

Class	Frequency	Percentage
SSS I	50	32.26
SSS II	50	32.26
SSS III	50	32.26
Incomplete	05	3.22
TOTAL	155	100

From Table I, the proportion of those who returned their questionnaires completely and properly filled were 32.26 percent for each class. 3.2% of the respondents did not fill the questionnaire as instructed. Thus, 96.77 per cent of the sample returned the questionnaire according to the instruction.

TABLE II

Distribution of Respondents According to Sex
N = 150

Value Label	Sex	Frequency	Percentage
1	Male	90	60
2	Female	60	40
TOTAL		150	100

From Table II, it is discerned that 60 per cent of the respondents are males and 40 percent are females. The larger proportion of the males may be explained by the fact that parents generally prefer to send their male children to schools compared with the females. Some of these parents nurse the fears that the female

pupils may be pregnant before completion of their course and thus constitute an economic waste and liability to the parents.

It is instructive to note that the recent provisional census result of 88.5 million for Nigeria disclosed that we have more males than females. Demographically speaking, the sex ratio is in favour of the males globally. From Table II, the sex ratio was 150 i.e. for every 100 females in the distribution, there are 150 males. Besides, result of the distribution could also be due to the sample decision of systematic and multi-stage sampling techniques.

TABLE III

Distribution of Respondents According to Age
N = 150

Age in years	Frequency	Percentage
11-13	28	18.67
14-16	59	39.33
17-19	60	40.00
20+	03	02.00
TOTAL	150	100.

From Table III, 40 percent of the respondents fall in age group 17-19, closely followed by age group 14-16, which constituted 39.33 percent of the distribution. 18.67 percent of the respondents belonged to the age group 11-13, while 2 percent of the respondents fall within 20 and above age bracket. The result is expected since the sample was drawn from the students in senior secondary school.

TABLE IV

Sampling Distribution of the Mean
N = 150

Age in years	F.	Mid X	FX
11-13	28	12	336
14-16	59	15	885
17-19	60	18	1134
20+	03	21	63
TOTAL	150		2418

From Table IV, Ef = N = 150, Efx = 2418

therefore, $\bar{X} = \frac{Efx}{N} = \frac{2418}{150} = 16.12$

thus, the mean age of the respondent is 16.

TABLE V

Sampling Distribution of the Variance, Standard Deviation and Standard Error N = 150.

Age in years	F.	Mid X	$(X-\bar{X})$	$(X-\bar{X})^2$	$f(X-\bar{X})^2$
11-13	28	12	-4.12	16.97	475.16
14-16	59	15	-1.12	1.25	73.75
17-19	60	18	1.88	3.53	211.8
20+	03	21	4.88	23.81	71.43
TOTAL	150			45.56	832.14

From Table IV, $\bar{X} = 16.12$ and N = 150.

Variance $= S^2 = Ef\frac{(x-x)^2}{N}$ or $\frac{x^2}{N} = \frac{832.14}{150}$

$Ef\frac{(x-\bar{x})^2}{N} = \frac{832.14}{150} = 5.55 = S^2$

$S^2 = 5.55$, $\therefore$ $S = \sqrt{5.55} = 2.36$

Standard error $= \frac{6}{\sqrt{N}} = \frac{SD}{\sqrt{N}} = \frac{2.36}{\sqrt{150}} = \frac{2.36}{12.25}$

$= 0.19$

From Tabele V, the age range is 9, the mean is 16.12, the variance is 5.55, the standard deviation is 2.36 and the standard error is 0.19.

TABLE VI

Distribution of Respondents According to Marital Status
N = 150

Marital Status	Frequency	Percentage
Single	148	98.67
Married	2	1.33
Others	Nil	0
TOTAL	150	100.00

From Table VI, nearly all (98.67 percent) of the respondents are single and 1.33 percent claimed to be married. This corresponds with the fact that the respondents are secondary school students between the age of 11 and 21, and from Table IV, we gathered that their mean age was 16.12. The two respondents who claimed to be married belonged to age group 20 and above and were in SSS III class.

TABLE VII

Distribution of Respondents According to their Religion
N = 150

Religon	Number	Percentage
Islam	73	48.67
Christianity	77	51.33
Others	Nil	Nil
TOTAL	150	100

From Table VII, 48.67 percent of the respondents are Muslims and 51.33% claimed to be christians. None of the respondents ticked 'others' bracket.

TABLE VIII

Distribution of Respondents According to Their Level of Religious Commitment (Islamic Religion Adherents)
N = 73

Belief in five pillars' of Islam	Number	Percentage
Yes	68	93.15
No	04	5.48
Don't know	01	1.37
TOTAL	73	100

From Table VIII, most of the respondents who claimed to be muslims believed in the five pillars of Islam. 5.48 percent answered negatively while 1.37% was indifferent to the question. It should be noted that 'five pillars' namely belief in oneness of Allah and that Muhammad is His messenger, five times daily prayers, fasting during Ramadan, paying alms to the poor and the needy and going to Mecca once in a life time' are cardinal principles of ISLAM. Most of the respondents above seemed to believe in these.

TABLE IX

Distribution of Muslim Respondents According to the Number of Times Prayers are Said
N = 73

No. of Prayers	No. of Respopndents	Percentage
Once	7	9.59
twice	nil	nil
thrice	3	4.11
Five	62	84.93
Not at all	1	1.37
TOTAL	73	100.00

From Table IX, 84.93% of the respondents prayed five times a day, 9.59% prayed once, 4.11% prayed thrice and 1.37% did not believe in the ritual.

TABLE X

Distribution of Muslim Respondents According to Whether They Would Care for People with AIDS.
N = 73

Should Muslims care for People with AIDS	No.	Percentage
Yes	19	26.03
No	50	68.49
Don't know	04	5.48
TOTAL	73	100.00

From Table X, most of the respondents - 68.49% felt otherwise in caring for people with AIDS, 26.03% answered in the affirmative while 5.48% sat on the fence. It is discerned from this Table that the preponderant of these respondents have negative attitude towards people with AIDS coloured by their religious adherence.

TABLE XI

Distribution of Christian Repondents According to Their Church Attendance N = 77

Church Attendance	No. of Respondents	Percentage
Every day	6	7.79
Every Sunday	52	67.53
Once in a while	5	6.49
Christmas	12	15.58
Not at all	2	2.60
TOTAL	77	100.00

From Table XI, 7.79% of the christian respondents attend church every day, 67.53% attend every Sunday, 6.49% attend once in a while, 15.58% only attend during the christmas and 2.60% do not attend any church service. Most of the respondents claimed to be baptised and some claimed to be born again.

TABLE XII

Distribution of Christian Respondents on Whether They Would Care for People with AIDS N = 77

Should Christians care for People with AIDS	No.	Percentage
Yes	28	36.36
No	42	54.55
Don't know	7	9.09
TOTAL	77	100.00

From Table XII, most of the respondents (54.55%) were negatively disposed to the care of people with AIDS, 36.36% claimed that they could care for the people while 9.09% did not know what to do.

The negative disposition of most of the students have implication for the students' perception of people with AIDS.

It is significant to note that both muslim and christian adherents in the sample showed negative attitude to the people with AIDS.

TABLE XIII

Distribution of Respondents According to Their Belief in 'Sin' Factor of AIDS N = 150

Is AIDS Caused by Sin?	No.	Percentage
Yes	95	63.33
No	28	18.67
Don't know	27	18.00

From Table XIII, 63.33% of the respondents believed that AIDS result because of sin, 18.67% did not share this belief and 18% claimed not to know whether AIDS is caused by sin.

TABLE XIV

Distribution of Respondents According to Their Belief in Female Virginity Before Marriage N = 150

Belief in Virginity	No.	Percentage
Yes	70	46.67
No	53	35.33
Don't know	27	18
TOTAL	150	100.00

From Table XIV, the preponderant number of the respondents - 46.67% believed in female virginity, 35.33% did not share the belief while 18% were indifferent to female virginity before marriage. To believe is one thing, to adhere to the virtue of virginity is another.

TABLE XV

Distribution of Respondents According to Whether they have Heard of AIDS N = 150

Responses	No	Percentage
Yes	121	80.67
No	29	19.33
TOTAL	150	100.00

From Table XV, 80.67% of the respondents have heard of AIDS and 19.33% claimed not to have heard of it. Even among those who indicated to have heard about AIDS in the question, only about 30% could accurately write correctly the full meaning of AIDS in question 18 of the questionnaire (see appendix I).

TABLE XVI

Distribution of Respondents According to the Knowledge Duration of AIDS N = 121

Duration	No	Percentage
1-2 years	51	42.15
3-4 years	43	35.54
5-6 years	25	20.66
6 years +	2	1.65
TOTAL	121	100.00

From Table XVI, 42.15% have heard about AIDS within 1-2 years before the study was carried out, 35.54% within 3-4 duration, 20.66% within 5-6 years and 1.65% of the respondents fall within 6 years and above duration.

TABLE XVII

Distribution of Respondents According to the Source of Knowledge of AIDS N = 121

Source	No.	Percentage
Radio	33	27.27
Newspapers	12	9.92
T.V.	61	50.41
Friends	8	6.61
Others	7	5.79
TOTAL	121	100.00

From Table XVII, majority of the respondents heard about AIDS from television, 27.27% got their knowledge through radio, 9.92% through newspapers, 6.61% through friends and 5.79% claimed to have heard through other means such as workshop, handbill and posters.

However, it must be noted that individuals may get their knowledge of AIDS through several sources rather than unitary and exclusive categories as depicted in the above table.

TABLE XVIII

Is AIDS a Health Problem in Nigeria?
N = 150

Responses	No.	Percentage
Yes	57	38
No	64	42.67
Don't know	29	19.33
TOTAL	150	100.00

From Table XVIII, 38% of the respondents believed that AIDS is a health problem in Nigeria, 42.67% disagreed with this view while 19.33% of the respondents were indifferent.

TABLE XIX

Is AIDS A Health Problem in Advanced Countries Only
N = 150

Responses	No.	Percentage
Yes	68	45.33
No	52	34.67
Don't know	30	20.00
TOTAL	150	100.00

From Table XIX, 45.33% felt that AIDS scourge is only limited to advanced countries only, 34.67% felt otherwise, while 20% did not pitch their tent in any of the above two categories.

TABLE XX

Distribution of Respondents According to Their Father's Level of Education N = 150

	Educational Attainment	Frequency	Percentage
1.	University	59	39.33
2.	Polytechnic/College of Education	38	25.33
3.	Schools of Nursing	20	13.33
4.	School Certificate	24	16.00
5.	First School Leaving Certificate	4	2.67
6.	No formal education	5	3.33
	TOTAL	150	100.00

From Table XX, 39.33% of the respondents' fathers had University education, 25.33% attended Polytechnics/Colleges of Education, 13.33% had schools of nursing education, 16% had 'O' Level, 2.67% attended primary school and 3.33% had no formal education.

TABLE XXI

Distribution of Respondents According to Their Mother's Level of Education N = 150

	Educational Attainment	Frequency	Percentage
1.	University/College of Education	21	14.00
2.	Polytechnic/College of Education	52	34.67
3.	Schools of Nursing	35	23.33
4.	School Certificate	24	16.00
5.	First School Leaving Certificate	10	6.67
6.	No formal education	8	5.33
	TOTAL	150	100.00

From Table XXI, 14% of respondents mothers had University education, 34.67% had Polytechnic/College of Educaiton, 23.33% went to schools of nursing, 16% had school certificate, 6.67% had first school leaving certificate and 5.33% had no formal education.

TABLE XXII

Number of Sexual Relationship Within Last One Year
N = 150

Response	Number	Percentage
None	38	25.33
1-2	79	52.67
3-4	28	18.67
5-6	3	2.00
7 & above	2	1.33
TOTAL	150	100.00

From Table XXII, it is clear that the students had active sexual activities for 52.67% claimed to have indulged in sexual relationship 1-2 times in the past one year, 25.33% claimed not to have engaged, 18.67% about 3-4 times, 2% between 5-6 times and 1.33% in 7 times and above.

TABLE XXIII

Distribution of Respondents According to the Number of Current Sexual Partners N = 150

No. of Partners	Frequency	Percentage
None	32	21.33
1-2	114	76.00
3-4	2	1.33
5-6	1	0.89
7 & above	1	0.89
TOTAL	150	100.00

From Table XXIII, a preponderant of the respondents - 76% had 1-2 sexual partners, 21.33% had none, 1.33% had between 3-4 sexual partners, and 0.89% in 5-6, and 7 and above sexual partners respectively. This has implication for AIDS transmission because multiple sexual partners have been associated with HIV transmission.

TABLE XXIV

Distribution of Respondents According to Their Knowledge of Contraceptive Devices N = 150

Responses	Frequency	Percentage
Yes	88	58.67
No	39	26.00
Don't know	23	15.33
TOTAL	150	100.00

From Table XXIV above, 58.67% of the respondents claimed to have the knowledge of contraceptive devices like condoms, pills, intra-uterine devices and spermicides. 26% did not know and 15.33% were indifferent. To us, the second and third responses 'no' and 'don't know' look similar and drew almost the same responses.

6.2 TEST OF RESEARCH HYPOTHESES

The decision rules for testing these hypotheses have been earlier enunciated in the research design chapter. In this study, we formulated four statistical hypotheses for the purpose of rejecting or accepting them depending on whether the empirical data run contrary or in harmony with such hypotheses. Thus, we have NULL HYPOTHESES denoted by H_o and ALTERNATIVE HYPOTHESES denoted by H_i. In the tests of the hypotheses and strength of association, we are cautious of what is referred to as "Type I" and "Type II" errors. This is because if we reject a hypothesis when it should be accepted, we say that a Type I error has occurred. If, on the other hand, we accept a hypothesis when it should be rejected we talk about Type II error. In either case, a wrong decision or error in judgement has been made. In order for any test of hypotheses to be good, it must be designed so as to minimise errors of decision. The only way to reduce both types of errors is to increase the sample size where possible. 25 percent of the sampled population is generally regarded as the minimum, but in our case since the sample is drawn from a homogenous population in a scientific way both types of errors were taken care of. (see Spiegel, 1988:168).

Hypothesis 1: Declarative Hypothesis = H_i

- The higher the level of knowledge of AIDS, the more sexual precautions taken by the students.

This hypothesis seeks to test the association between the knowledge of AIDS garnered by the students and their subsequent sexual behaviours.

NULL HYPOTHESIS - H_o

The higher the level of knowledge of AIDS, the less sexual precautions taken by the student.

Alpha = .05

TABLE XXV

Association Between AIDS Knowledge of the Students and Sexual Precautions Taken Subsequently.

AIDS Knowledge	Sexual Precaution			Total
	High	Moderate	Less	
High	43	21	10	74
Moderate	18	27	6	51
Less	5	7	13	25
TOTAL	66	55	29	150

O	e	O-e	$(O-e)^2$	$(O-e)^2$
43	32.56	10.44	108.99	13.79
18	22.44	+4.44	19.71	0.88
5	11	-6	36	9.27
21	27.13	-6.13	37.62	1.39
27	18.7	8.3	68.89	3.68
7	9.17	-2.17	4.71	0.51
10	14.31	-4.31	18.58	1.30
6	9.86	-3.86	14.90	1.51
13	4.83	8.17	66.75	13.82

$$X^2 = E\frac{(o-e)^2}{e} = 46.15$$

$$V = (3-1)(3-1) = 04$$

$$CC = \sqrt{\frac{X^2}{X^2 + N}} = \sqrt{\frac{46.15}{46.15 + 150}} = \sqrt{\frac{46.15}{196.16}}$$

$$= \sqrt{0.24} = 0.49$$

$$P = .05, \quad TX^2 = 9.49$$

Decision and Interpretation

(a) Accept H_o if $CX^2 < TX^2$ 0.95 at 4df

(b) Reject H_o, if otherwise.

From the above calculation since $CX^2 > TX^2$ 0.95 at 4df, we reject H_o and accept H_i.

Calculated chi-square is more than the table chi-square, therefore, the null hypothesis is rejected while the research or declarative hypothesis (H_i) is accepted. There is, therefore, an association between the knowledge of AIDS and the subsequent sexual precautions taken by the students.

We can, therefore, conclude that the higher the level of knowledge of AIDS the more sexual precautions taken by the students.

The CC is slightly strong at 0.49 i.e. the association between AIDS knowledge and sexual precautions taken by the students is slightly strong.

Hypothesis 2 - Declarative Hypothesis = H_i

- The more knowledge the students have about AIDS, the more favourably disposed they are towards people with AIDS.

This hypothesis seeks to test whether there is a positive association between knowledge of AIDS and attitude (favourable) shown towards people with AIDS.

NULL HYPOTHESIS - H_o

The more knowledge the students have about AIDS, the less favourably disposed they are towards people with AIDS.

The level of significance denoted by P = .05,

TABLE XXVI

Association Between AIDS Knowledge of the Students and the Attitude to the People with AIDS

AIDS Knowledge	Favourable	Unfavourable	Total
Yes	101	20	121
No	08	21	29
TOTAL	109	41	150

O	e	o-e	$(o-e)^2$	$\frac{(o-e)^2}{e}$
101	87.93	13.07	170.82	15.01
08	21.07	-13.07	170.82	8.11
20	87.93	-67.93	4614.49	52.48
21	21.07	-0.07	0.005	0.0002

$$X^2 = E\frac{(o-e)^2}{e} = 75.60$$

$$V = (2-1)(2-1) = 1$$

$$CC = \sqrt{\frac{CX^2}{CX^2 + N}} = \sqrt{\frac{75.60}{75.60 + 150}} = \sqrt{0.335}$$

$$= \sqrt{0.34} = 0.58$$

at .05, $TX^2 = 3.84$

Decision and Interpretation

(a) Accept H_o if $CX^2 < TX^2$ 0.95 at 1 df.

(b) Reject H_o if otherwise.

From the above calculation, $CX^2 = 75.60$

and $TX^2 = 3.84$ at 1 df, we therefore, reject H_o and accept H_i.

Calculated chi-square is greater than the table Chi-square at 1 df, therefore, the null hypothesis is rejected while the research or declarative hypothesis is accepted. There is, thus, a positive association between the knowledge of AIDS possessed by the students and favourable disposition shown towards people with HIV infection or AIDS.

We can, therefore, conclude that the more knowledge the students have about AIDS, the more favourable disposed they are toward people with AIDS.

Besides, the association between AIDS knowledge of the students and their attitude is slightly strong with co-efficient contingency of 0.58.

The difference in the computed value from the table chi-square implies that the difference is reliable and significant.

Hypothesis 3 - **Declarative Hypothesis** = H_i

- The higher the level of educational attainment of parents, the higher the level of awareness of contraceptive devices by the students.

This hypothesis seeks to test association between the level of educational attainment of parents and the level of awareness of contraceptive devices by their children.

NULL HYPOTHESIS = H_o

The higher the level of educational attainment of parents, the lower the level of awareness of contraceptive devices by the students.

The level of significance denoted by P = .05.

TABLE XXVII

Association Between the Level of Educational attainment of Parents and the level of awareness of contraceptive devices by the Students N = 150

Educational Attainment of Parents	Level of Awareness by the Students			Total
	High	Middle	Low	
University/Polytechnic	48	20	5	73
College of Education/ School of Nursing	23	3	6	32
School Certificate	10	9	2	21
Primary Six	4	3	1	8
No formal education	2	3	11	16
TOTAL	87	38	25	150

O	e	o-e	$(o-e)^2$	$\frac{(o-e)^2}{e}$
48	42.34	5.66	32.04	0.76
23	18.56	4.44	19.71	1.06
10	12.18	-2.18	4.75	0.39
4	4.64	-0.64	0.41	0.09
2	9.28	-7.28	53.00	5.71
20	18.49	1.51	2.28	0.12
3	8.11	-5.11	26.11	3.22
9	5.32	3.68	13.54	6.23
3	2.03	0.97	0.94	0.46
3	4.05	-1.05	1.10	0.27
5	12.17	-7.17	51.41	4.22
6	5.33	0.67	0.45	0.08
2	3.5	-1.5	2.25	0.64
1	1/33	-0.33	0.11	0.08
11	2.67	8.33	69.39	34.32
				57.65

$$X^2 = E\frac{(o-e)^2}{e} = 57.65$$

$$df = (3-1)(5-1) = 8$$

$$CC = \sqrt{\frac{X^2}{X^2 + N}} = \sqrt{\frac{57.65}{57.65 + 150}} = \sqrt{\frac{57.65}{207.65}}$$

$$= \sqrt{\frac{57.65}{207.65}} = \sqrt{0.28} = 0.53$$

$$P = .05, TX^2 = 15.5$$

Decision and Interpretation

(a) Accept H_o if $CX^2 < TX^2$ 0.95 at 8 df

(b) Reject H_o if otherwise.

From the above calculation, $CX^2 = 57.65$, and $TX^2 = 15.5$. Since $CX^2 > TX^2$ 0.95 at 8 df, we reject H_o and accept H_i.

The Null Hypothesis is rejected and the declarative hypothesis is accepted. There is therefore, an association between the level of educational attainment of parents and the awareness of contraceptive devices by the students. We, thus, conclude that the higher the level of educational attainment of parents, the higher the level of awareness of contraceptive devices by the students.

The CC is slightly strong at 0.53 i.e. the association between the educational attainment of parents and level of awareness of contraceptive devices is slightly strong.

Hypothesis 4 - Declarative Hypothesis = H_i

- The more committed the students are religiously the less favourably disposed they are toward people with AIDS.

This hypothesis seeks to test the association between the religious commitment of the students and their attitude toward people with AIDS.

NULL HYPOTHESIS - H_o

The more committed the students are religiously, the more favourably disposed they are toward people with AIDS. Alpha = .05.

TABLE XXVIII

Association between religious commitment of Students and Attitude towards People with AIDS N = 150

Religious Commitment	Agree	Undecided	Disagree	Total
Very strong	8	3	43	54
Strong	13	2	32	47
Liberal	27	15	7	49
TOTAL	48	20	82	150

O	e	O-e	$(O-e)^2$	$\frac{(O-e)^2}{e}$
8	17.28	-9.28	86.12	4.98
13	15.04	-2.04	4.16	0.28
27	15.68	11.32	128.14	8.17
3	7.2	-4.2	17.64	2.45
2	6.27	-4.27	18.23	2.91
15	6.53	8.47	71.74	10.99
43	29.52	13.48	181.71	6.16
32	25.69	6.31	39.82	7.86
7	26.79	-19.79	391.64	14.62
				52.42 = E $\frac{(O-e)^2}{e}$

$X^2 = E \frac{(o-e)^2}{e} = 58.42$

df = (3-1)(3-1) = 4

P = .05, TX^2 = 9.49

$CC = \sqrt{\frac{X^2}{X^2 + N}} = \sqrt{\frac{58.42}{58.42 + 150}} = \sqrt{\frac{58.42}{208.42}} = 0.53$

Decision and Interpretation

(a) Accept H_o if $CX^2 < TX^2$ 0.95 at 4 df.

(b) Reject H_o if otherwise.

From the above calculation, $CX^2 = 58.42$ and $TX^2 = 9.49$. Since $CX^2 > TX^2$ 0.95 at 4 df, we reject H_o and accept H_i.

Therefore, we accept the research hypothesis and reject the null hypothesis. There is, thus, an association between the religious commitment of students and the attitude toward people with AIDS. Our declarative hypothesis that is stated as "the more committed the students are religiously, the less favourably disposed they are towards people with AIDS" is sustained.

The contingency co-efficient is slightly strong at 0.53.

6.3 BRIEF SUMMARY OF FOCUS GROUP DISCUSSION

From the focus group discussion, a few of the students claimed to be sexually active. Most of the group members were aware of AIDS and had good knowledge of contraceptive devices. They were able to name many of these. However, only one of the group members claimed to have heard and seen a female condom. Most of the male group members claimed to have, at least, two girl friends, though a few of them claimed to have more than one sexual partners presently. Most of the group members believed that AIDS was a problem in Nigeria but few asserted that the scourge was limited to advanced countries. Most of the group members claimed to protect themselves from AIDS by saying 'NO' to sex and few encouraged their partners to use condom, avoided unsterilised syringes and needles and had been careful about blood transfussion. Most of the group members heard their knowledge

of AIDS from the mass media especially the television, radio and handbills. A few of the group members read dailies.

Brief Discussion of the Findings

Even though the findings have been generally and specifically alluded to, it is pertinent to highlight the salient points briefly here. Many authors have pointed out increasing level of sexual activities among young people (Karfer, 1980, Zabin et al., 1986, Hooferth, 1987, Karar, 1979, Ibanga, 1991, Manube, 1990). Our result support the above findings. Our results tally with Ibanga (1990) that students know that AIDS can result from sexual intercourse yet some still indulge in unprotected sex. A significant percentage of the students thought that transmission occurred through mosquito bites or through sharing the same rooms or personal effects with people with AIDS. Some even thought that AIDS is caused by bacteria rather than virus. Most religiously committed students believe that AIDS is caused by sin and so would not care for people with AIDS. The perception of these students is thus coloured by the amouint of knowledge of AIDS, socio-economic background, and their religious commitment. The implications of these have been stressed in various portions of this research.

6.4 SUMMARY OF THE STUDY

In the study, we aimed at perusing, describing, exploring, and explaining the perception and knowledge of AIDS of Secondary School Students in Lagos Metropolis. We chose a mixed school in Igbobi College. We tested four hypotheses and these were supported by the empirical data. The average age of our respondents is 16 and most of them had their first boy or girl friend as well as having

their first sexual experience at this age. This tallies with the findings of other researchers in sub-Saharan Africa and United States of America. Most of the respondents have heard of AIDS but this knowledge is deficient as they could not adequately perceive the danger involved in risky behaviours such as unprotected sex. Some of the respondents erroneously believed that AIDS can be transmitted through sharing plates and beds of people with AIDS, hugging them or using their toilets. Also, a few did not know that AIDS cannot be transmitted through mosquito bites or caused by bacteria, nor is AIDS a result of sin. Most of the religiously committed respondents thought that the lives of people with AIDS are hopeless and they cannot care for them.

Thus, there is a need for effective and adequate educational campaign in secondary schools to nip the problems inherent in risky behaviours in the bud and for the students to be able to take responsible actions in their lives.

6.5 LIMITATION OF STUDY

This study was conducted in a comprehensive mixed secondary school. The result obtained and the generalisation made may be coloured by the location and peculiar characteristics of the school. Again, the study is constrained by time, and financial resources. We initially thought we would obtain a research grant which never came until the research report is being written. Thus, the initial plan of table of random number, adoption of computer for analysis and covering wider scope had to be suspended for expediency. The study is, however, illuminating as the result obtained from homogenous population of the secondary school support, with some divergencies, earlier studies in related subject matter.

6.6 IMPLICATION FOR FURTHER RESEARCH

Research endeavour in future should aim at covering more ground than we had covered. Three different schools i.e. single - male, female and mixed consisting of both male and female students could be investigated to see if there is going to be a departure or congruence from the previous study.

Moreover, the use of computer could generate enriched data for future study. The study is indubitably an eye-opener for other researchers interested in perception and knowledge of students in secondary schools towards people with HIV infection.

Again, the level of knowledge and actual behaviour of secondary schools, and post-secondary schools' students could be investigated and compared. It is pertinent at this time when AIDS has become malignant and its metastases have spread to the nooks and corners of the world. Monolithic approach of biology is inadequate to combat the menace of the disease. A Multi-dimensional measure including a succinct sociological input is mandatory.

6.7 CONCLUDING REMARKS

It is no exaggeration to assert that AIDS is a growing global scourge. It has grown by leaps and bounds in virtually all countries of the world. It is one of the most serious socio-medical problems every to face mankind (Butcher, 1984; Quinn, et al., 1986; Panos Dossier, 1990). Over a period of years after infection with HIV, the body's immune system gradually breaks down and becomes increasingly vulnerable to hitherto innocuous microbes causing opportunistic infections. The average period between infection and the onset of AIDS appears to be seven years in those who were infected through blood transfussion (Ward, et al., 1989:924-952) and 11 years in homosexual men (Munoz, et al., 1989:530-539). It has been suggested that trans-

fussion recipients tend to develop AIDS earlier because they receive a high concentration of the HIV in infected blood transfussion. It should be noted that a person who is infected with HIV may have no symptoms for years and may be quite unaware of the infection. However, such a person can pass the virus on to others - the main route of spread is through sexual contact. Again, people infected with HIV can continue to be fully functioning members of society. They should be helped to do so and to behave responsibly so as to prevent further spread of HIV. The AIDS - risk behaviours are amenable to the exercise of individual responsibility and control. Safer sex is not just about using a condom, or reducing the number of sexual partners. It is not how many people you have sex with that counts, it is what you do with them. You could have safer sex with a lot of people and never catch anything or you could have unsafe sex with just one person and get/pass on HIV infection. There is no evidence that HIV can be transmitted through everyday contact such as hugging one another, sharing eating utensils, shaking hands, kissing, sharing the same toilet or bed linen. Neither is AIDS caused by sin or bacteria. There is no proof that HIV can be transmitted by coughs and sneezes or via water as in swimming pools. Nor is AIDS transmitted by mosquitoes or other insects (Piot and Schofield, 1986:294). Although traces of the virus have been found in tears and saliva, there are no proven cases of transmission through either of these body fluids (Panos Dossier, 1990:5). In a study by Fisch, et al., 1987: 640-644) of 90 children with AIDS, even though they had had frequent close physical contact with their parents and shared all the household facilities with them, there was no reported cases of AIDS in any of them. AIDS was first described in 1981 by the Centre for Disease Control in Atlanta in U.S.A. The first case was reported in Nigeria

in 1986. Fears nursed by ignorance and fueled by prejudice devoid of humanity and rationality have characterised our responses to AIDS epidemic. Although, homophobia was the mainstay of early response to AIDS, heterophobia is beginning to draw attention of researchers.

The AIDS epidemic has provoked fear and misunderstanding about what HIV infection and AIDS mean for social relationships and society. Policy makers, health workers, students and the public have been influenced by this baseless misconception. In the words of Dr. Mann, founder of the World Health Organization's Global Programme on AIDS, "the scourge has involved not one but three successive global epidemics. The first epidemic is said to be largely hidden and rapidly accelerating spread of HIV. The first epidemic probably started sometimes in the 1950s or 1960s and spread invisibly through the 1970s, soon reaching a number of widely separated locations including U.S.A. France, Belgium, Haiti, and Zambia. The second epidemic is by contrast wholly visible: a steady rise in cases of AIDS. In Nigeria, 379 AIDS cases had been diagnosed so far. In 1986, 1 case was recorded; in 1987, 9 cases; in 1988, 16 cases; in 1989, 35 cases; in 1990, 84 cases, in 1991, 98 cases, and in 1992, a total of 379 cases (Ondo State Commissioner of Health - Dr. Abdul Rahman Mimiko in The Guardian, Tuesday October 13, 1992, p. 3).

The third epidemic is said to be dissimilar to the first two in that it is a social rather than a medical infection: the denial, blame, ignorance, prejudice, discrimination and stigmatisation which surround people with HIV.

As Mann (1990:3) observes the third epidemic has sometimes shattered and occasionally bound together families and friendships, has divided and also united the medical professions, and has posed new and agonising choices for governments and legislatures. The third

epidemic is a challenge to our compassion, our judgement and our humanity. It poses difficult dilemma at every level of society, from the bedroom via the hospital to the presidential palace. The third epidemic is not just a matter of the prejudice and intolerance, it has immediate and direct consequences on public health, policy implementation and on the spread of HIV infection.

As Mann contends "discrimination may endanger public health, stigmatisation may itself represent a threat... protecting the human rights and dignity of HIV infected people... is not a luxury - it is a necessity. It is not a question of the rights of the many versus the rights of the few, the protection of the uninfected majority depends upon and is inextricably bound up with the right and dignity of the infected persons."

Human kind is fighting the first epidemic: that of hidden HIV infection by safeguarding blood supplies and by encouraging people to adopt safer and more responsible sex. It is combating the second epidemic - that of illness and death from AIDS with care and nursing assistance. Against the third epidemic we need tolerance, understanding and adequate information about the disease.(Tinker, 1990:4). AIDS is not only a medical issue but has triggered off a lot of socio-political dilemma. There is a dangerous epidemic of blame and racial prejudice. AIDS is being blamed on gays, or on drug addicts or on blacks. Britain has blamed Haitians, Africa has blamed Europeans. Japan has blamed foreigners; the French right has blamed Arab immigrants. African researchers tend to assert an American origin while Americans peddle the notion of an African root. The controversy has again been linked with cold war between the east and the west. For Soviet scientists, AIDS is a biological warfare agent developed by the Central Intelligence Agency (C.I.A.) and the Pentagon and tested in Africa.

The origin is, however, controversial (see Chirimuuta and Chirimuuta, 1987:227; Odebiyi, 1998:20; Sabatier, 1988). To date, there is no acceptable vaccine or cure for AIDS. The scourge in Sub-Saharan Africa may well constitute the greatest public health challenge of our time. AIDS containment is likely to rest ultimately upon social knowledge that is at present vestigial and upon sophisticated social research.

Although, the general message has been the same - protect yourself from HIV - it has been aimed at different audiences, ranging from the general population to men who have sex with men, from cultural minorities to frequent travellers, from adolescents to injecting drug users. Such is the abundance of information it seems that anyone who wishes to do so can get information about AIDS. Yet the abundance is often illusory. For a number of reasons, not everybody receives accurate facts about AIDS or HIV. In Nigeria, commenting on a lack of AIDS awareness among Lagos prostitutes, a journalist observed: "when the radio is on they are working. When the television is on, they are asleep. Newspapers, forget it". Moreover, it is now generally acknowledged that information alone is insufficient to change behaviour. What this means is that information directed from 'outside' (through leaflet talks, or mass media) towards individuals hardly act on them. People change their behaviour because those around them are changing - in the case of sexual behaviour - they particularly change because their lovers are changing: it does, afterall, take two to have sex. Although mass media undoubtedly play a part, programmes which encourage constant, sustained, interpersonal communication and 'peer' pressure are fundamental.

At a time when we are struggling to curb the incidence of long standing diseases and achieve the objective of Health for all by the

year 2000, the growing epidemic of AIDS can only frustrate the pursuit of this desired goal. The government will need to intensify publicity on the activities of the National Blood Transfussion service towards ensuring that a larger percentage of Nigerians have their blood samples screened from time to time. Enlightenment campaigns about the disease are still at a very low level and this has resulted in an attitude of indifference amongst Nigerians. The Federal Ministry of Health and Human Services, in conjunction with the Ministries of Information and Education should enlist the support of various agencies including religious organisations in ensuring that the campaign against AIDS covers a wider network than has hitherto been the case with a clear definition of roles the various agencies are expected to play in spreading vital information and awareness of AIDS.

Just like Dr. Tilley Gyado notes: the campaign against the spread of AIDS must be fought and won largely in the minds of individuals. This campaign will achieve ultimate success only if individuals conducted their sexual lives with greater discipline and responsibility. Our youngsters, particularly, must be admonished to avoid the lures of sexual excesses and depravity. And all Nigerians must constantly strive to weigh the momentary pleasures of an ephemeral indulgence against the discomfort of life-long wastage (see the Sunday Concord, August 16, 1992, p. 18).

In the final analysis, there is one generic point upon which agreement would have been reached: just like in philosophy, it is the task of the philosopher to capture in rigorous form the essential meaning of man's experience in the life world without denying the complex ambiguity of that world and without robbing it of its warmth and cunning, it is the duty of the sociologist to delineate and capture in more rigorous manner the data of social reality, examine social

facts such as AIDS and peruse social phenomena. To have failed to do this is not to respond to the task of sociology. The contribution of sociology is a sine qua non to the control of AIDS scourge.

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World Health Oeganization Weekly Epidemiological Report, April, 1992.

APPENDIX 1

QUESTIONNAIRE

School of Postgraduate Studies
Department of Sociology,
University of Lagos,
Akoka, Yaba, Lagos.

Dear sir/madam,

Perception and Knowledge of Acquired Immune Deficiency Syndrome (AIDS) Among Selected Secondary School Students in Lagos Metropolis

I am a postgraduate student of the University of Lagos. I am doing a research work on the above topic. The study is in partial fulfilment of the award of M.Sc. degree of the University.

The information given by you will be treated in strict confidence and will be used for research purpose only. Please feel free to answer all the questions. Your name is not required.

Tick the option that you feel corrésponds to your answer.

Thanks for answering all the questions.

Yours sincerely,

Badru, F.A.

1. What is your present class? (a) SS I (b) SS II (c) SS III.

2. What is your sex? (a) Male ( ) (b) Female ( )

3. What is your age? (a) 11-13 yrs (b) 14-16 yrs
   (c) 17-19 yrs (d) 20 yrs and above.

4. What is your marital status? (a) Single (b) Married
   (c) Others - Please specify.....

5. What is your state of origin? .....

6. How would you describe your place of birth?
   (a) Rural (b) Urban (c) Don't know.

7. What is your religion? (a) Islam (b) Christianity
   (c) Others - Please specify .....

8. If you practise Islam, do you believe in the five pillars of Islam.
   (a) Yes (b) No (c) Don't know.

9. As a Muslim, how many times do you pray in a day?
   (a) Once (b) Not at all (c) 4 times (d) 2 times
   (e) five times (f) 3 times.

10. Should Muslims care for people with AIDS?
    (a) Yes (b) No (c) Don't know.

11. Is AIDS caused by SIN? (a) Yes (b) No (c) Don't know.

12. If you are a Christian, (a) Are you born again?
    (b) Baptised? (c) Confirmed? (d) None of the above.

13. As a Christian, how often do you go for church services?
    (a) Every Sunday (d) Every day (c) Once in a while.
    (d) Christmas and other special occasions. (e) Not at all.

14. Should a Christian care for a person with AIDS?
    (a) Yes (b) No (c) don't know.

15. Do you believe that a girl must be a virgin before marriage?
    (a) No (b) Yes (c) don't know.

16. Do you believe that a boy must be a virgin before marriage?
    (a) No (b) Yes (c) don't know.

17. Have you ever heard about a disease called 'AIDS'?
    (a) Yes (b) No

18. If yes, what is 'AIDS'?
    .....

19. How long have you known about AIDS?
    .....

20. From which source? (a) radio (b) Newspapers (c) T.V.
(d) Friends (e) others - specify.....

21. Is AIDS a health problem in Nigeria?
(a) Yes (b) No (c) Don't know.

22. Is AIDS a health problem in advanced countries only?
(a) Yes (b) No (c) Don't know.

23. Can AIDS be transmitted through hugging one another?
(a) Yes (b) No (c) Don't know.

24. Can AIDS be transmitted through kissing?
(a) Yes (b) No (c) Don't know.

25. Can one contact AIDS by sleeping in the same room with infected person?
(a) Yes (b) No (c) Don't know.

26. Can one contact AIDS by using plates of an infected person?
(a) Yes (b) No (c) Don't know.

27. Is AIDS caused by a special bacteria?
(a) Yes (b) No (c) Don't know.

28. Is AIDS caused by a special virus?
(a) No (b) Yes (c) Don't know.

29. Can AIDS be transmitted through blood transfussion?
(a) Yes (b) No (c) Don't know.

30. Can AIDS BE CURED?
(a) Yes (b) No (c) Don't know.

31. What is your father's level of education?
(a) University and Polytechnic.
(b) Schools of Nursing and/or College of Education.
(c) First School Leaving Certificate.
(d) No education.
(e) Don't know
(f) School Certificate.

32. What is your mother's level of education?
(a) University and/or Polytechnic.
(b) School of Nursing/College of Education.
(c) First School Leaving Certificate.
(d) School Certificate.
(e) No education.
(f) don't know.

33. Do you have a boy or girl friend?
(a) Yes (b) No (c) Don't know.

34. How old were you when you had your first boy or girl friend?
.....

35. How many boy or girl friends do you presently have?
    .....

36. Do you support sexual relationship between two unmarried people?
    (a) Yes (b) No

37. Have you had any sexual relationship/intercourse with any of your friends?
    (a) Yes (b) No

38. If your answer to 37 above is yes, how many of these in the last one year? .....

39. On the average, how often have you had sexual relationship in the last one year? .....

40. How many sexual partners do you presently have? .....

41. How old were you when you had your first sexual experience?
    .....

42. Do you know of any contraceptive or birth control device?
    (a) Yes (b) No (c) Don't know.

43. If your answer is Yes, name it/them .....

44. Do you use or encourage your partner to use condom?
    (a) Yes (b) No (c) Don't know.

45. Do you protect yourself from contacting AIDS?
    (a) Yes (b) No

45b. If yes, How?.....

45c. If no, why?.....

46. Can you live with someone with AIDS?

47. Is the life of an AIDS patient hopeless.
    (a) Yes (b) No (c) Don't know.

48. Give other suggestions or views that can be used to combat AIDS.
    .....

APPENDIX 2

CODE FORMAT FOR OPEN-ENDED QUESTIONS

(A) What is AIDS?

1. Acquired Immune Deficiency Syndrome.
2. It is an incurable disease.
3. It is caused by bacteria.
4. It is a viral infection.

(B) How long have you known about AIDS?

1. 1-2 years.
2. 3-4 years.
3. 5-6 years.
4. 6 years and above.

(C) How old were you when you had your first boy or girl friend?

1. 11-13 years.
2. 14-16 years.
3. 17-19 years.
4. 20 years and above.

(D) How many boys or girl friends do you presently have?

1. 1-2.
2. 3-4.
3. 5-6.
4. 6 and above.

(E) How many times have you had sexual intercourse in the last one year?

1. 1-2.
2. 3-4.
3. 5-6.
4. 6 and above.

(F) How many sexual partners do you presently have?

1. 1-2.
2. 3-4.
3. 5-6.
4. 6 and above
5. None.

(G) How old were you when you had your first sexual experience.

1. 10-13 years.
2. 14-17 years.
3. 18-21 years.
4. More than 21 years.

(H) How do you protect yourself from contacting AIDS?

1. by saying no to sex.
2. By using or encouraging partner to use condom.
3. Adhering to one sexual partner.
4. Avoiding unsterilised syringes/needles.
5. Careful about blood transfussion.,
6. Avoiding deep kissing with strangers.

(I) Suggestions on how to combat AIDS.

1. Avoiding unnecessary injection.
2. Intensify health education and campaign against AIDS through mass media.
3. Use condom always.
4. Have trusted sexual partner.
5. Screen all blood before transfussion.

Appendix · 3(a)

Appendix 3(a)

TREATMENT

Drug Development

Several attempts have been made to develop effective drugs against AIDS, but the existence of a large number of regulatory genes in HIV provides multiple targets. The only effective drug so far is Zidovudine (Retrovir) formerly known as azidothymidine (AZT). Results of a placebo controlled double blind study indicated that AZT decreased the occurrence of opportunistic infections and extended survival time of persons with AIDS by approximately 12-18 months. The early administration of AZT delays onset of symptoms in HIV seropositives who are healthy, and delays progression of those with symptoms to full blown AIDS.

The cost of AZT has put it out of reach of most patients, however a recent finding that half the dose previously prescribed has the same beneficial effect as the full dose has reduced both cost and toxicity. Another drug called DDC (Haffman-La-Roche) has been used in patients who cannot tolerate AZT. A combination of DDC and AZT has been used to reduce toxicity of AZT.

Whether such benefits continue beyond the first 6-9 months of therapy or not is still being investigated.

PUBLIC H.I.V. SCREENING CENTRES/CONSULTANTS.

1. *Prof. I. Akinsete*
   Lagos University Teaching Hospital
   Lagos.
2. *Dr. T.O. Harry*
   University of Maiduguri Teaching Hospital.
   Maiduguri
3. *Prof. O Tomori*
   University College Hospital,
   Ibadan
4. *Dr. Femi Oyewole*
   Federal Public Health Central Laboratory,
   Yaba - Lagos
5. *Prof. Ayinwo*
   Uthman Dan Fodio University Teaching Hospital, Sokoto
6. *Prof. (Rev) C.S.S. Bello*
   Jos University Teaching Hospital
   Jos
7. *Dr. I. Ipadeola*
   Adeoyo Hospital, Ibadan
8. *Prof. F. Soyinka*
   Obafemi Awolowo University Teaching Hospital Complex,
   Ile-Ife.
9. *Lt. Col. Ibogie*
   Military Hospital, Kaduna
10. *Prof. Egler*
    Ahmadu Bellow University Teaching Hospital, Zaira.
11. *Dr. E.E. Williams*
    University of Calabar Teaching Hospital
    Calabar.

Appendix 3(b)

12. *Dr. S.M. Itina*
St Luke Hospital
Uyo

13. *Dr. F.E. Opara*
University of Port-Harcourt Teaching Hospital
Port-Harcourt

14. *Dr. I Mohammed*
General Hospital,
Minna.

15. *Mallam Shehu Yakubu (CMLST)*
Specialist Hospital
Bauchi.

16. *Dr. Z. Kumanda*
Specialist Hospital
Yola

17. *Mal. U. Dodo*
Murtala Mohammed Hospital
Kano

18. *Dr. Oni (DSP)*
General Hospital
Abeokuta.

19. *Dr. T.O. Oke*
General Hospital
Akure.

20. *Dr. Adewuyi*
University of Ilorin Teaching Hospital
Ilorin

21. *Dr. C.I. Ityonzughul*
General Hospital
Makudi.

22. *Dr. Mohammed*
General Hospital
Kastina

23. *Dr. F.E. Orbih*
General Hospital Gwagwalada
Abuja. FTC

24. *Dr. E. Offar*
University of Benin Teaching Hospital
Benin City

25. *Dr. E. I. Omeni (MOH)*
Central Ministry Hospital
Benin City

26. *Dr. G.O. Okafor*
University of Nigeria teaching Hospital
Enugu

27. *Dr. R.A. Okpara*
General Hospital
Owerri

28. *Orthopaedic Hospital, Enugu*

29. *Orthopaedic Hospital, Lagos*

30. *Orthopaedic Hospital, Dala, Kano.*

31. *Sq. Ldr. R.O. Sodeyi*
NAF Medical Centre (Ikeja)

32. *Lt Col. Njoku*
Military Hospital

The names listed are the current contact persons in each institution. All Screening Centres are open to the public. They operate a cost recovery system. All centres screen with ELISA for HIV I and II Akwa-Ibom States and the FCT which use the Rapid Kits pending the commissioning of the ELISA machines. Confirmatory tests are done at UCH. UMTH and LUTH.

Cost =N=80 - =N=100 perscreening test

Rapid test takes 45 mins

ELISA takes 2 hours

Confirmtory Test

Cost =N=500.00 per test

Takes 2-4 hours.

Appendix A.

H.I.V SCREENING RETURNS (UP TO 18 NOVEMBER, 1991)

GROUPS	NO. SCREENED	NO. POSITIVE	PREVALENCE (%)
Blood Donors (80.08%)	66,139	569	0.86
Ante Natal Clinic Mothers: (4.52%)	3,731	18	0.33
Sexually Transmitted Diseases patients (3.50%)	2,894	44	1.58
Female Commercial sex workers (3.23%)	2,671	225	8.42
Patients (5.33%)	4,406	88	1.99
Others (3.33%)	2,750	31	1.13
TOTAL	82,591	975	118

Source :- SWAAN NEWSLETTER, 1992.

Appendix 5 (a)

1992, 67, 97-104

No. 14

World Health Organization, Geneva — Organisation mondiale de la Santé, Genève

WEEKLY EPIDEMIOLOGICAL RECORD
RELEVÉ ÉPIDÉMIOLOGIQUE HEBDOMADAIRE

3 APRIL 1992 • 67th YEAR

67e ANNÉE • 3 AVRIL 1992

CONTENTS — SOMMAIRE

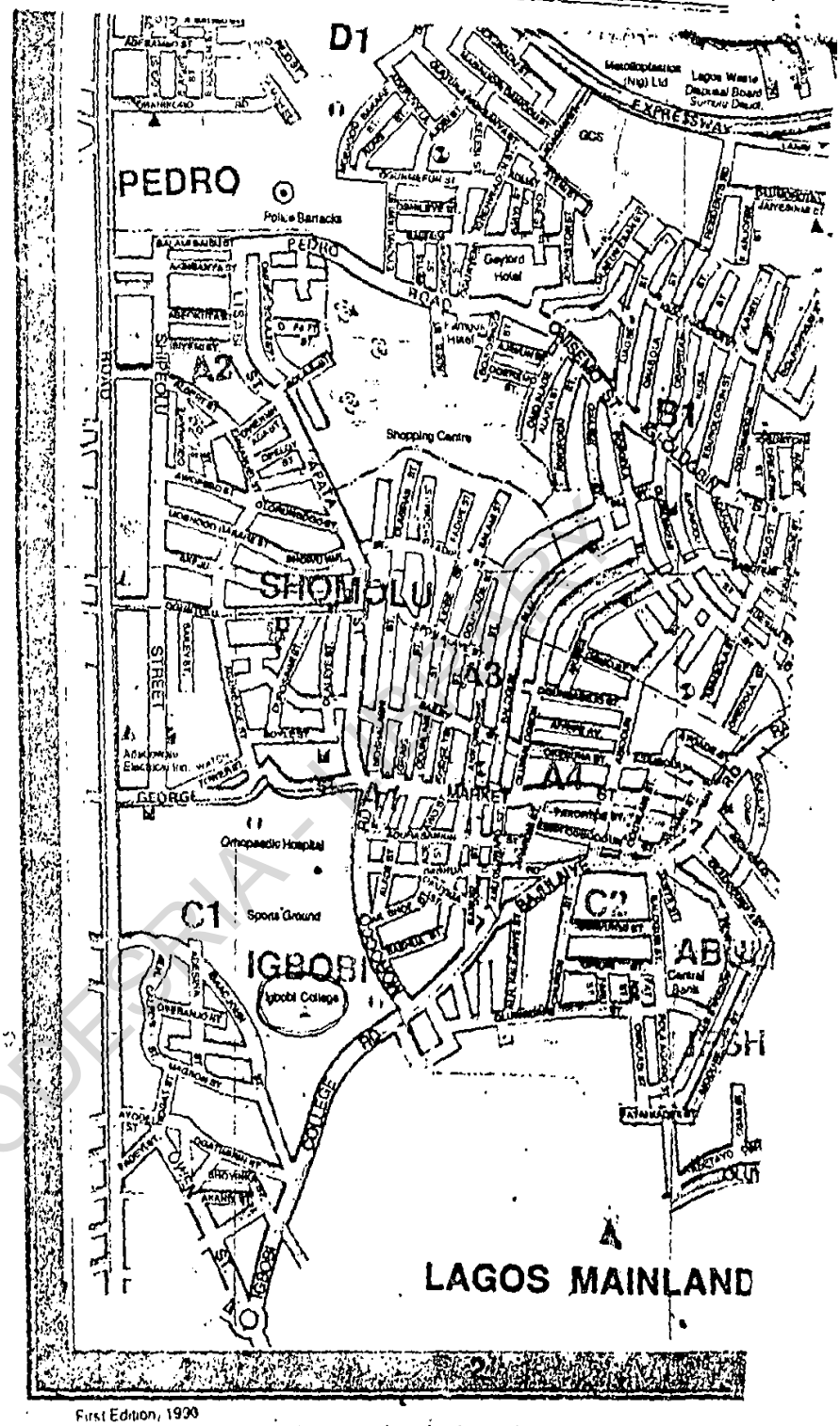
ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) — DATA AS AT 1 APRIL 1992
SYNDROME D'IMMUNODÉFICIENCE ACQUISE (SIDA) — DONNÉES AU 1er AVRIL 1992

Country/Area — Pays/Territoire	Number of cases Nombre de cas	Date of report Date de notification
Africa — Afrique		
Algeria — Algérie	92	31 08 91
Angola	421	31 12 91
Benin — Bénin	185	30 09 91
Botswana	277	01 03 92
Burkina Faso	978	11 06 90
Burundi	3 305	31 08 90
Cameroon — Cameroun	429	30 04 91
Cape Verde — Cap-Vert	32	30 06 90
Central African Republic — République centrafricaine	1 864	30 06 90
Chad — Tchad	130	25 06 91
Comoros — Comores	2	30 01 91
Congo	2 405	31 12 90
Côte d'Ivoire	8 297	30 06 91
Djibouti	165	31 12 91
Egypt — Egypte	39	31 12 91
Equatorial Guinea — Guinée équatoriale	9	01 03 92
Ethiopia — Ethiopie	1 818	28 02 92
Gabon	117	31 12 90
Gambia — Gambie	180	25 02 92
Ghana	2 852	30 09 91
Guinea — Guinée	338	01 07 91
Guinea-Bissau — Guinée-Bissau	157	26 03 91
Kenya	9 139	31 05 90
Lesotho	44	31 12 91
Liberia — Libéria	74	31 12 91
Libyan Arab Jamahiriya — Jamahiriya arabe libyenne	7	31 12 91
Madagascar	2	30 06 91
Malawi	12 074	31 10 90
Mali	338	30 06 90
Mauritania — Mauritanie	26	31 07 91
Mauritius — Maurice	9	25 07 91
Morocco — Maroc	98	31 12 91
Mozambique	288	31 10 91
Namibia — Namibie	311	31 05 90
Niger	497	31 12 91
Nigeria — Nigéria	84	29 01 91
Reunion — Réunion	49	17 05 90
Rwanda	6 578	31 12 91
Sao Tome and Principe — Sao Tomé-et-Principe	6	31 01 92
Senegal — Sénégal	648	09 03 92
Seychelles	—	31 12 91
Sierra Leone	40	30 04 91
Somalia — Somalie	13	01 12 91
South Africa — Afrique du Sud	1 019	21 11 91
Sudan — Soudan	500	31 12 91
Swaziland	71	30 09 91
Togo	100	01 06 90
Tunisia — Tunisie	105	31 12 91
Uganda — Ouganda	30 190	31 12 91
United Republic of Tanzania — République-Unie de Tanzanie	27 396	31 08 91
Zaire — Zaïre	14 762	31 12 90
Zambia — Zambie	5 802	31 10 91
Zimbabwe	10 551	31 12 91
Total	**144 863**	
Americas — Amériques		
Anguilla	4	30 06 91
Antigua and Barbuda — Antigua-et-Barbuda	6	31 12 90
Argentina — Argentine	1 298	31 12 91
Bahamas	834	31 12 91
Barbados — Barbade	250	31 12 91
Belize	12	31 03 90
Bermuda — Bermudes	191	31 12 91
Bolivia — Bolivie	41	31 12 91
Brazil — Brésil	22 583	31 12 91
British Virgin Islands — Iles Vierges britanniques	4	31 12 91
Canada	5 348	31 12 91

Appendix 5b.

Country/Area — Pays/Territoire	Number of cases Nombre de cas	Date of report Date de notification
Cayman Islands — Iles Caïmanes	10	31 03 91
Chile — Chili	500	31 12 91
Colombia — Colombie	2 189	31 12 91
Costa Rica	315	31 12 91
Cuba	95	30 09 91
Dominica — Dominique	12	31 12 91
Dominican Republic — République dominicaine	1 574	31 12 91
Ecuador — Equateur	155	30 09 91
El Salvador	792	31 12 91
French Guiana — Guyane française	232	30 09 90
Grenada — Grenade	29	30 09 91
Guadeloupe	195	24 09 90
Guatemala	236	31 12 91
Guyana	205	30 09 91
Haiti — Haïti	3 086	31 12 90
Honduras	1 595	31 12 91
Jamaica — Jamaïque	235	30 06 91
Martinique	181	30 06 91
Mexico — Mexique	9 073	31 12 91
Montserrat	1	31 12 91
Netherlands Antilles and Aruba — Antilles néerlandaises et Aruba	77	15 05 91
Nicaragua	24	31 12 91
Panama	328	31 12 91
Paraguay	36	31 12 91
Peru — Pérou	541	31 12 91
Saint Kitts and Nevis — Saint Kitts-et-Nevis	33	31 12 91
Saint Lucia — Sainte-Lucie	40	31 12 91
Saint Vincent and the Grenadines — Saint-Vincent-et-Grenadines	35	30 09 91
Suriname	99	31 12 91
Trinidad and Tobago — Trinité-et-Tobago	971	31 12 91
Turks and Caicos Islands — Iles Turques et Caïques	21	31 12 91
United States of America — Etats-Unis d'Amérique	213 641	29 07 92
Uruguay	245	31 12 91
Venezuela	1 573	31 12 91
Total	**268 445**	
Asia — Asie		
Afghanistan	—	30 06 91
Bahrain — Bahreïn	—	31 12 91
Bangladesh	1	31 08 91
Bhutan — Bhoutan	—	31 08 91
Brunei Darussalam — Brunéi Darussalam	7	25 07 91
Burma see Myanmar — Birmanie voir Myanmar		
Cambodia — Cambodge	—	15 05 91
China — Chine	6	20 04 91
Cyprus — Chypre	23	31 12 91
Democratic People's Republic of Korea — République populaire démocratique de Corée	—	30 11 90
Hong Kong	49	24 06 91
India — Inde	102	31 12 91
Indonesia — Indonésie	21	31 12 91
Iran (Islamic Republic of) — Iran (République islamique d')	44	31 12 91
Iraq	7	31 12 91
Israel — Israël	169	30 12 91
Japan — Japon	453	31 12 91
Jordan — Jordanie	17	31 12 91
Kuwait — Koweït	8	31 12 91
Lao People's Democratic Republic — République démocratique populaire lao	—	05 08 91
Lebanon — Liban	29	01 12 91
Macau	—	30 08 91
Malaysia — Malaisie	28	13 06 91
Maldives	—	30 11 90
Mongolia — Mongolie	—	31 01 92
Myanmar	—	30 09 91
Nepal — Népal	5	31 08 91
Oman	24	31 12 91
Pakistan	18	31 12 91
Philippines	53	28 08 91
Qatar	31	31 12 91
Republic of Korea — République de Corée	8	10 07 91
Saudi Arabia — Arabie saoudite	40	31 12 91
Singapore — Singapour	30	25 06 91
Sri Lanka	10	30 11 91
Syrian Arab Republic — République arabe syrienne	17	31 12 91
Thailand — Thaïlande	179	31 10 91
Turkey — Turquie	62	30 01 92
United Arab Emirates — Emirats arabes unis	8	31 12 91
Viet Nam	—	31 03 91
Yemen — Yémen	—	31 12 91
Total	**1 442**	
Europe		
Albania — Albanie	—	30 12 91
Austria — Autriche	707	30 01 92
Belgium — Belgique	1 046	30 12 91
Bulgaria — Bulgarie	13	30 12 91
Czechoslovakia — Tchécoslovaquie	26	30 12 91
Denmark — Danemark	947	30 01 92
England — Angleterre	100	30 12 91
France	17 836	30 12 91
Germany — Allemagne	7 533	30 12 91
Greece — Grèce	559	30 12 91
Hungary — Hongrie	82	30 01 92
Iceland — Islande	22	30 12 91
Ireland — Irlande	241	30 12 91
Italy — Italie	11 609	30 12 91
Luxembourg	45	30 12 91
Malta — Malte	22	30 12 91
Monaco	7	30 09 91
Netherlands — Pays-Bas	2 017	30 01 92
Norway — Norvège	252	30 01 92
Poland — Pologne	87	30 01 92
Portugal	816	30 01 92
Romania — Roumanie	1 704	31 12 91
Russian Federation — Fédération de Russie	70	30 12 91
San Marino — Saint-Marin	1	30 09 91
Spain — Espagne	11 555	30 12 91
Sweden — Suède	645	30 12 91
Switzerland — Suisse	2 728	30 12 91
United Kingdom — Royaume-Uni	5 451	30 12 91
Yugoslavia — Yougoslavie	754	30 12 91
Total	**65 875**	
Oceania — Océanie		
American Samoa — Samoa américaines	—	21 08 91
Australia — Australie	3 147	31 01 92
Cook Islands — Iles Cook	—	11 07 91
Federated States of Micronesia — Etats fédérés de Micronésie	7	27 11 91
Fiji — Fidji	3	24 11 91
French Polynesia — Polynésie française	27	19 08 91
Guam	10	13 09 91
Kiribati	—	19 07 91
Mariana Islands — Iles Mariannes	—	25 07 91
Marshall Islands — Iles Marshall	2	22 11 91
Nauru	—	22 11 91
New Caledonia and Dependencies — Nouvelle-Calédonie et dépendances	18	16 07 91
New Zealand — Nouvelle-Zélande	274	18 06 91
Niue	—	11 07 91
Palau	—	22 11 91
Papua New Guinea — Papouasie-Nouvelle-Guinée	37	01 07 91
Samoa	1	11 07 91
Solomon Islands — Iles Salomon	—	24 07 91
Tokelau	—	11 07 91
Tonga	2	10 07 91
Tuvalu	—	31 01 91
Vanuatu	—	19 07 91
Wallis and Futuna Islands — Iles Wallis et Futuna	—	22 05 91
Total	**3 523**	
World total — Total mondial	**484 148**	

APPENDIX 6 - MAP OF SOMOLU LOCAL GOVERNMENT AREA



First Edition, 1990

USERS NOTE Map Users are invited to inform the Council Engineer, Somolu Local Govern. Lagos of any error, Additions or Ommissions.

Culled from Map of Somolu Local Government Area

SHOMOLU.

Appendix I(7)

AIDS IN NIGERIA

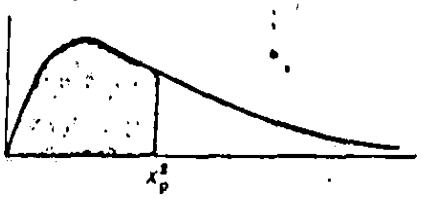
H.I.V PREVALENCE IN NIGERIA NOV 1991

State (Old Structure)	Number of Blood Samples screened	No. Positives On ELISA + WB or Dual ELISA/ One ELISA	Prevalence (%)	No. AIDS Cases
1. Akwa-Ibom	2,407	4	0.17	1
2. Anambra	27,434	648	2.36	3
3. Bauchi	1,715	5	0.29	-
4. Bendel	5,121	32	0.62	-
5. Benue	5,587	34	0.95	-
6. Borno	13,098	83	0.88	7
7. Cross River	11,750	103	0.63	20
8. Gongola	2,524	31	3.41	3
9. Imo	2,312	79	3.41	4
10. Kaduna	10,138	72	0.71	7
11. Kano	15,134	195	1.29	-
12. Katsina ----			--------	-
13. Kwara	2,292	6	0.26	-
14. Lagos	20,525	107	0.52	31
15. Niger	2,673	21	0.79	-
16. Ogun	18,315	154	0.84	-
17. Ondo	3,000	2	0.07	-
18. Oyo	34,609	186	0.54	13+9
19. Plateau	10,071	35	0.35	5
20. Rivers	2,977	14	0.47	-
21. Sokoto	6,336	78	1.23	-
22. FCT Abuja	106	3	2.83	-
23. FOBTAC	1,645	4	0.24	-
TOTAL	199,663	1,896	0.97	91

Source : SWAAN NEWSLETTER, 1992

Appendix 8

PERCENTILE VALUES (χ_p^2) for THE CHI-SQUARE DISTRIBUTION with ν degrees of freedom (shaded area = p)



ν	$\chi^2_{0.995}$	$\chi^2_{0.99}$	$\chi^2_{0.975}$	$\chi^2_{0.95}$	$\chi^2_{0.90}$	$\chi^2_{0.75}$	$\chi^2_{0.50}$	$\chi^2_{0.25}$	$\chi^2_{0.10}$	$\chi^2_{0.05}$	$\chi^2_{0.025}$	$\chi^2_{0.01}$	$\chi^2_{0.005}$
1	7·88	6·63	5·02	3·84	2·71	1·32	0·455	0·102	0·0158	0·0039	0·0010	0·0002	0·0000
2	10·6	9·21	7·38	5·99	4·61	2·77	1·39	0·575	0·211	0·103	0·0506	0·0201	0·0100
3	12·8	11·3	9·35	7·81	6·25	4·11	2·37	1·21	0·584	0·352	0·216	0·115	0·072
4	14·9	13·3	11·1	9·49	7·78	5·39	3·36	1·92	1·06	0·711	0·484	0·297	0·207
5	16·7	15·1	12·8	11·1	9·24	6·63	4·35	2·67	1·61	1·15	0·831	0·554	0·412
6	18·5	16·8	14·4	12·6	10·6	7·84	5·35	3·45	2·20	1·64	1·24	0·872	0·676
7	20·3	18·5	16·0	14·1	12·0	9·04	6·35	4·25	2·83	2·17	1·69	1·24	0·989
8	22·0	20·1	17·5	15·5	13·4	10·2	7·34	5·07	3·49	2·73	2·18	1·65	1·34
9	23·6	21·7	19·0	16·9	14·7	11·4	8·34	5·90	4·17	3·33	2·70	2·09	1·73
10	25·2	23·2	20·5	18·3	16·0	12·5	9·34	6·74	4·87	3·94	3·25	2·56	2·16
11	26·8	24·7	21·9	19·7	17·3	13·7	10·3	7·58	5·58	4·57	3·82	3·05	2·60
12	28·3	26·2	23·3	21·0	18·5	14·8	11·3	8·44	6·30	5·23	4·40	3·57	3·07
13	29·8	27·7	24·7	22·4	19·8	16·0	12·3	9·30	7·04	5·89	5·01	4·11	3·57
14	31·3	29·1	26·1	23·7	21·1	17·1	13·3	10·2	7·79	6·57	5·63	4·66	4·07
15	32·8	30·6	27·5	25·0	22·3	18·2	14·3	11·0	8·55	7·26	6·26	5·23	4·60
16	34·3	32·0	28·8	26·3	23·5	19·4	15·3	11·9	9·31	7·96	6·91	5·81	5·14
17	35·7	33·4	30·2	27·6	24·8	20·5	16·3	12·8	10·1	8·67	7·56	6·41	5·70
18	37·2	34·8	31·5	28·9	26·0	21·6	17·3	13·7	10·9	9·39	8·23	7·01	6·26
19	38·6	36·2	32·9	30·1	27·2	22·7	18·3	14·6	11·7	10·1	8·91	7·63	6·84
20	40·0	37·6	34·2	31·4	28·4	23·8	19·3	15·5	12·4	10·9	9·59	8·26	7·43
21	41·4	38·9	35·5	32·7	29·6	24·9	20·3	16·3	13·2	11·6	10·3	8·90	8·03
22	42·8	40·3	36·8	33·9	30·8	26·0	21·3	17·2	14·0	12·3	11·0	9·54	8·64
23	44·2	41·6	38·1	35·2	32·0	27·1	22·3	18·1	14·8	13·1	11·7	10·2	9·26
24	45·6	43·0	39·4	36·4	33·2	28·2	23·3	19·0	15·7	13·8	12·4	10·9	9·89
25	46·9	44·3	40·6	37·7	34·4	29·3	24·3	19·9	16·5	14·6	13·1	11·5	10·5
26	48·3	45·6	41·9	38·9	35·6	30·4	25·3	20·8	17·3	15·4	13·8	12·2	11·2
27	49·6	47·0	43·2	40·1	36·7	31·5	26·3	21·7	18·1	16·2	14·6	12·9	11·8
28	51·0	48·3	44·5	41·3	37·9	32·6	27·3	22·7	18·9	16·9	15·3	13·6	12·5
29	52·3	49·6	45·7	42·6	39·1	33·7	28·3	23·6	19·8	17·7	16·0	14·3	13·1
30	53·7	50·9	47·0	43·8	40·3	34·8	29·3	24·5	20·6	18·5	16·8	15·0	13·8
40	66·8	63·7	59·3	55·8	51·8	45·6	39·3	33·7	29·1	26·5	24·4	22·2	20·7
50	79·5	76·2	71·4	67·5	63·2	56·3	49·3	42·9	37·7	34·8	32·4	29·7	28·0
60	92·0	88·4	83·3	79·1	74·4	67·0	59·3	52·3	46·5	43·2	40·5	37·5	35·5
70	104·2	100·4	95·0	90·5	85·5	77·6	69·3	61·7	55·3	51·7	48·8	45·4	43·3
80	116·3	112·3	106·6	101·9	96·6	88·1	79·3	71·1	64·3	60·4	57·2	53·5	51·2
90	128·3	124·1	118·1	113·1	107·6	98·6	89·3	80·6	73·3	69·1	65·6	61·8	59·2
100	140·2	135·8	129·6	124·3	118·5	109·1	99·3	90·1	82·4	77·9	74·2	70·1	67·3

Source: Catherine M. Thompson, *Table of percentage points of the χ^2 distribution*, Biometrika, Vol. 32 (1941), by permission of the author and publisher.