

**KNOWLEDGE, EXPERIENCE AND HEALTH SEEKING BEHAVIOUR  
ABOUT SEXUALLY TRANSMITTED INFECTIONS AMONG OUT-OF-  
SCHOOL ADOLESCENTS IN IBADAN NORTH WEST  
LOCAL GOVERNMENT**

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**BY**

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**A PROJECT SUBMITTED TO  
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**DEDICATION**

This research work is dedicated to God; my helper for His grace and strength has been sufficient for me throughout the programme and to my mother, Mrs Aderonke Kolade Ogunkoya for all her support; you are indeed a mother in a million.

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My sincere appreciation goes to my supervisor; Prof. Oladimeji Oladepo for his fatherly encouragement and supervision in the course of this research work. Your contributions to this research work have made it a better piece and I am a better researcher due to your great tutelage. I am so grateful Sir.

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To the staffs of PEPFAR especially Mrs Adenuga for the provision of condoms that were distributed to the out-of-school adolescents while on field, the research assistants that were involved in the study and the out-of-school adolescents in Ibadan North West Local Government who participated in the research, I am so grateful to you all. STIs will soon become a thing of the past among you.

**Ogunkoya Abiola A.**

## ABSTRACT

Sexually Transmitted Infections (STIs) is one of the diseases that plaques our world and it pose much threat to the adolescents. Though, there are few number of researches carried out on STIs among adolescents but it is most time one-sided as most of these researches are conducted only among females. This study, therefore, investigated the knowledge, experience and health seeking behaviour about sexually transmitted infections among out-of-school adolescents in Ibadan North West Local Government Area thereby putting into consideration both sexes.

The study was a descriptive cross sectional survey that used a multi-stage sampling technique to select 240 out-of-school adolescents across five selected wards in Ibadan North West Local Government Area. A validated and reliable semi-structured questionnaire which contained a 14-point knowledge scale, 7-point perception scale, questions relating to factors predisposing them to STIs, their experience so far in sexually transmitted infections and the type of health seeking behaviour they practice when they contract STIs among out-of-school was used for data collection. Knowledge scores  $\leq 4$ , 5-9 and  $>9$  were classified as poor, fair, and good respectively. Perception scores  $\leq 3$  and  $>3$  were categorised as unfavourable and favourable perception respectively. The data was analysed using descriptive statistics and Chi-square test at  $p \leq 0.05$ .

Respondents' mean age was  $18.9 \pm 3.4$  years, 58.8% of the respondents were male, majority 83% were single, 55.8% were Christians, 63.3% had secondary education and the most common apprentice group was tailoring 24.5%. Mean knowledge score was  $4.93 \pm 2.18$ ; respondents with poor, fair and good knowledge of STIs were 45%, 52.9% and 2.1% respectively. 31.6%, 50.4% and 18% gave incorrect, partial and correct definition of STIs respectively. 26.4% mentioned HIV as the most common STI known. The mean perception score was  $4.79 \pm 1.23$  and 85% of the respondents had favourable perception as it pertains to STIs. 72.3% of the males and 68.6% of the females were sexually active; there was early sexual debut among the respondents

especially the males. The prevalence of STIs among the respondents was about 40% with 47.5% males and 28.3% females experienced one or more STI signs and symptoms, this could be due to the fact that STIs most times is asymptomatic in females. Self treatment emerged as the most common health seeking behaviour practiced among respondents as 39.8% males and 51.9% females were involved. Low and incorrect condom use, multiple sexual partners and alcohol intake were all factors predisposing the respondents' to STIs.

In conclusion, the knowledge of respondents on sexually transmitted infections was low, perception was favourable, the health seeking behaviour was poor and the prevalence of sexually transmitted infections was high. To adequately address the problem, effective education is necessary to combat ignorance of the out-of-school adolescents and also social marketing to promote the use of contraceptives.

**Keywords: Sexually Transmitted Infections, knowledge, experience, health seeking behaviour, out-of-school adolescents.**

**Word count: 470**

### CERTIFICATION

I certify that this work was carried out by Ogunkoya Abiola A. in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan, Nigeria.

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## GLOSSARY OF ABBREVIATION

<b>AIDS</b>	Acquired Immunodeficiency Syndrome
<b>HIV</b>	Human Immunodeficiency Virus
<b>HPV</b>	Human Papilloma Virus
<b>HSV2</b>	Herpes Simplex Virus 2
<b>NACA</b>	National Action for the Control of AIDS
<b>PEPFAR</b>	President Emergency Plan For AIDS Relief
<b>PID</b>	Pelvic Inflammatory Disease
<b>PMV</b>	Patent Medicine Vendor
<b>STI</b>	Sexually Transmitted Infection
<b>STD</b>	Sexually Transmitted Disease
<b>USAID</b>	United States Agency for International Development
<b>WHO</b>	World Health Organization

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background

Sexually Transmitted Infections (STIs) are infections that are transferred from one person to another via sexual intercourse. It can be caused by a variety of bacteria, fungi, viruses and parasites. STIs include many different sexually transmittable infectious diseases such as chlamydia, gonorrhoea, genital herpes, human papilloma virus (HPV), human immunodeficiency virus (HIV), and syphilis. An STD (Sexually Transmitted Disease) is transmitted through vaginal, oral and anal sexual contact as well as through blood products. They cause a great problem in populace especially among the out-of-school adolescents. For instance, untreated chlamydia and gonorrhoea can lead to salpingitis for women and to epididymitis for men, which can affect fertility and in worst case lead to sterility. Hepatitis B, genital herpes, HPV and HIV are still incurable infections. HPV can lead to cervical cancer and HIV to premature death (Svensson, 2013).

Adolescence, the second decade of life, is a period in which an individual undergoes major physical and psychological changes. Alongside this, there are enormous changes in the person's social interactions and relationships. Adolescence is a time of opportunity, but also one of risk, it presents a window of opportunity to set the stage for healthy and productive adulthood and to reduce the likelihood of problems in the years that lie ahead. It is a period when health problems that have serious immediate consequences can occur or when problem behaviours that could have serious adverse effects on health in the future are initiated (WHO, 2010). Adolescents are quite difficult to handle at this stage, they want to challenge every rule, they feel like they are on top of the world and they can do and undo. They want to explore all there is to life especially sexually. It is during this stage that they develop secondary sexual characteristics which involve spermatogenesis in males, development of breast and onset of menarche in females. Also, there is attraction to the opposite sex and since they are inexperienced, they engage in unsafe sexual practices. This is mostly the age of sexual debut (the age in which they initiate sexual activity). Adolescence is the period during which sexuality issues naturally arise and sexual behaviour may determine both physical health and psychosocial development. Beginning sexual



activity at an early age exposes an individual to the risk of acquiring sexually transmitted infections, especially because the age is usually early for the individual to have acquired the necessary sex education to navigate relationships successfully (Envuladu, Agbo, Ohize, and Zoakah, 2013). Young people below the ages of 25 are disproportionately affected by STIs because of their engagement in unsafe sexual practices such as multiple sexual partnerships, casual sex and inconsistent condom use. Correspondingly, WHO stated that young people in this age category have experienced over 100 million new cases of STIs annually. This shows that the age between 15–24 years is a very sensitive and important aspect of young people's life. It is explained that this period remains an evolutionary period to early adulthood, a critical period in a man's life in terms of physical growth and development, social and emotional maturity, sexual maturity and the onset of sexual activity experimentation (Kadiri, Ahmad, and Mustaffa, 2014).

## **1.2 Statement of problem**

STIs have a profound impact on sexual and reproductive health worldwide, and rank among the top 5 disease categories for which adults seek health care. More than 1 million people acquire a sexually transmitted infection every day. Each year, an estimated 500 million people acquire one of these four sexually transmitted infections: chlamydia, gonorrhoea, syphilis and trichomoniasis. More than 530 million people are living with HSV2. More than 290 million women have an HPV infection, one of the most common STIs (WHO, 2015). Also, according to World Health organization (WHO) estimates, about 484.4 million new cases of curable STIs occurred among both sexes aged 15 to 49 years old every year with the highest rates among 20 - 24 years age group, followed by 15 - 19 years age group. One in 20 young persons is believed to contract an STI each year excluding HIV and other viral infections. (World Health Organization, 2012).

In developing countries such as sub-Saharan Africa, STI case burden is very high. About 108 million STIs cases are occurred every day. It is estimated that 80 to 90% of the global burden of STIs occurs in the developing world where there is limited or no access to diagnostics (Fisseha, 2015). About a third (31%) of the Nigerian population is between the ages of 10 – 24 years (USAID, 2013). Based on the report from National Population Commission (2014), the prevalence of STI in Nigeria is 6.0%

among adolescents with age group 15-24 years and that of Oyo state is 1.3 though individual researches has higher prevalence rates. There is likelihood that there is a high prevalence of STI among out-of-school adolescents in Ibadan North West owing to the fact that it is an urban area and urban areas have a higher prevalence of STIs as predicted by NPC.

For a variety of behavioural, biological, and cultural reasons, sexually-active adolescents 15 – 19 years old and young adults 20 – 24 years old are at higher risk for acquiring STIs. For some STIs, adolescent women may have a natural, physiological susceptibility to infection. The disproportionate rate of STIs among adolescents demonstrates other barriers to necessary health services. These barriers include lack of insurance or ability to pay, lack of transportation, a feeling of awkwardness in facilities designed for adults, questions about confidentiality (CDC fact sheet, 2010) and quality education about the dangers of STIs. The implications of these barriers are loss of eyesight as in the case of chlamydia, abnormal genital discharge in syphilis and gonorrhoea, effect on the unborn child in syphilis, fatigue, weight loss and immuosupression in HIV cases.

The consequence of STI can be very severe if not properly managed which means our future as a nation is at stake. Nigeria, the most populous country in Sub-Saharan Africa, has a high prevalence of STIs among young people (Oladepo and Fayemi, 2011) Also, statistics from the Nigerian National AIDS/STD Control Program reveals that one-third of young people between the ages of 15 and 25 years are infected with new cases of HIV/AIDS infections. Based on the report from National Population Commission (2014), the prevalence of STIs in Adamawa is 1.5%, Yobe is 1.85%, Jigawa is 0.75%, Kano is 0.95%, Delta is 0.7%, Abia is 2.2%, Lagos is 2.5%, Osun is 0.75% and Oyo is 1.3%.

The high prevalence of the infections resulted in making STIs to be ranked among the top five diseases which young people in Nigeria seek medical attention for and the major sexually transmitted infections such as gonorrhoea and syphilis are ranked among the ten most reported noticeable diseases in Nigeria (Kadiri et al., 2014). It was reported that a high level of unprotected sexual activities varying from 72.7 per cent among out of school adolescents to more than 50 per cent among their in-school counter-parts. Also, in a survey of urban Nigeria found that 50 to 60 per cent of

adolescents by age 19 were sexually active. It was reported further that in Ibadan, 49 per cent of 16 years old boys reported premarital intercourse compared to 28 percent of 16 years old girls (Atere, Wahab, Ajiboye, Shokoya, Akinwale and Oyenuga, 2010).

The report of UNFPA, (2013) revealed the incidence of sexually transmitted infections (STIs) to be high, with 60% of all new annual STI infections occurring among young people. This is largely due to high sexual networking and unsafe sex practices. Then, they proposed the National Education Strategic Plan to reduce the prevalence amongst young people. The out-of-school youth, another sub-population is missed through the in-school interventions and this gap will be addressed through non-governmental organization (NGO) partnership to promote adolescent sexual and reproductive health (ASRH) and integrated SRH/HIV/AIDS services. The knowledge level of STI has increased among the in-school adolescents while the out-of-school group still has a low level of knowledge about STIs.

Although, there have been a quite a number of individual researches carried out on out-of-school youth (Atere et al., 2010; Kalesanwo and Adewoye, 2013; Envuladu et al., 2013; Kadiri et al, 2014). However, there is dearth of information regarding the knowledge, experience and health seeking behaviour of out-of-school adolescents towards STIs. There are gaps in knowledge which this study is designed to bridge.

In Ibadan, there is a high prevalence of hotels, brothels and pubs in the area where these out-of-school adolescents parade and by their involvement with these places, they involve in several risky behaviours like alcohol use, tobacco use, etc. especially sexual involvement without the use of condoms. Also, in the personal experience of the author, there was a case of an adolescent that had a STI and was too ashamed to go to a hospital or pharmacy for treatment or open up to the family members owing to the stigmatization of attached to the treatment of STIs but rather opened up to the author. Since literatures and personal experiences had confirmed the growing rate of problems related to STIs, hence, there is the need to investigate.

### **1.3 Justification**

The knowledge, experience and health seeking behaviour of out-of-school adolescents will provide current information which can be used to understand barriers to effective management of STIs and for which programme managers can revise their strategies. This will improve their sexual health and also reduce the prevalence of STIs in the study area and other places with similar socio-demographics. Also, the result obtained from this study will be useful for policy review in reference to sexual health of adolescents. This will enhance better sexual health among the out of school adolescents. The result will also add to the body of existing literature.

### **1.4 Research questions**

1. What is the level of knowledge of out-of-school adolescents about STIs?
2. To what extent do the out-of school adolescents perceive themselves to be at risk to STIs?
3. What are the factors associated with the spread of STIs among out-of-school adolescents?
4. What is STI experience of out-of-school adolescents?
5. What are the health seeking behaviours of out-of-school adolescents when they have STIs?

### **1.5 Objectives**

#### **1.5.1 Broad objective**

To investigate the knowledge, experience and health seeking behaviours about sexually transmitted infections among out-of-school adolescents in Ibadan North West Local Government.

#### **1.5.2 Specific objectives**

The specific objectives that guided this study were to:

1. Assess the level of knowledge of the out-of-school adolescents about Sexually Transmitted Infections
2. Determine the perception of out-of-school adolescents towards STIs
3. Identify factors associated with the out-of-school adolescents having STIs

4. Determine the STI experiences of out-of-school adolescents
5. Identify the health seeking behaviours of respondents when they contract STIs

#### **1.6 Hypothesis**

1. There is no significant association between respondents' socio-demographic characteristics (e.g. sex, age, level of education) and knowledge of out-of-school adolescents about STIs
2. There is no significant association between respondents' sex, age, wealth-index and sexually transmitted infection experiences of out-of-school adolescents
3. There is no significant association between respondents' sex and health seeking behaviour of out-of-school adolescents with STIs
4. There is no significant association between factors associated with STIs (alcohol use, money or gift in exchange for sex, will power to say no to sex, more than one sexual partner, STI screening, and insistence on condom use) and sexually transmitted infection experiences of out-of-school adolescents

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Sexually Transmitted Infections (STIs)

STIs are caused by more than 30 different bacteria, viruses and parasites and are spread predominantly by sexual contact, including vaginal, anal and oral sex. Eight of the more than 30 pathogens known to be transmitted through sexual contact have been linked to the greatest incidence of illness. Out of these 8 infections, 4 are currently curable: syphilis, gonorrhoea, chlamydia and trichomoniasis. The other four are viral infections and are incurable, but can be mitigated or modulated through treatment: hepatitis B, herpes, HIV, and HPV (WHO media centre, 2015).

##### 2.1.1 STIs; Types and Effects

There are three basic causative organisms for STIs which are bacteria, virus and parasites. Bacterial STIs are caused by bacteria and can be treated and cured with antibiotics. Here we have Chlamydia, Gonorrhoea, and Syphilis. Viral STIs are caused by virus and they include Genital Herpes, Hepatitis B, Human Papilloma Virus, and Human Immunodeficiency Virus (HIV). They do not have cure but they can be prevented or managed if contracted and those caused by parasites which include Pubic lice and Scabies.

**Chlamydia:** is a common STI caused by the bacterium *Chlamydia trachomatis*. Chlamydia can be transmitted during vaginal, oral or anal sexual intercourse with an infected partner. While many individuals will not experience symptoms, Chlamydia can cause fever, abdominal pain, and unusual genital discharge in both sexes. Males may present with urethral discharge, dysuria and infrequency, non-specific urethral symptoms such as redness, itching, and swelling. Females may show the following signs and symptoms: a cervical discharge with edema, dysuria, dyspareunia, erythema and easily induced endocervical bleeding. Also in women, chlamydia can cause Pelvic Inflammatory Disease (PID). In PID, the untreated STI progresses and involves other parts of the woman's reproductive system, including the uterus and fallopian tubes. This progression can lead to permanent damage to the woman's reproductive organ. This damage may lead to ectopic pregnancy, infertility, tubal blockage and long-term pelvic/abdominal pain (Kennedy, 2013). Babies born to mothers with

chlamydia can have eye and lung infections. The rate of chlamydia is higher among females, and has been rising up to the end of 2012. Reported rates are highest among youth and young adults aged 15 to 24 years (Infectious diseases protocol, 2014)

**Gonorrhoea:** Gonorrhoea is caused by *Neisseria gonorrhoeae* (*N. gonorrhoeae*), a gram-negative diplococcal bacterium. The source of the organism is exudates and secretions from infected mucosal surfaces in humans. Although, majority of the infected persons do not show any symptoms, they act as a “silent” reservoir for the spread of this infection. Transmission occurs through direct sexual contact with exudates from mucous membranes of infected people via oral, genital or rectal routes. The disease affects both men and women, especially sexually active adolescents and young adults. Prevalence is highest in communities of lower socioeconomic status. The highest incidence of gonorrhoea and its complications occurs in developing countries. *N. gonorrhoeae* infects mucosal surfaces and causes urethritis in men and endocervicitis in women, pharyngeal and rectal gonorrhoea in both men and women and ophthalmic infections in neonates, children and adults. Premenstrual girls may present with vaginal infection (Communicable Disease management protocol, 2013). Urethral discharge and dysuria (usually without urinary frequency) are the major symptoms of genital infection in men. Urethral itch may also occur. A small percentage of gonococcal infections in males are asymptomatic. Infection in women is often asymptomatic but symptoms may include lower abdominal pain, abnormal vaginal discharge, deep dyspareunia, vaginal bleeding after intercourse and dysuria (often without urgency or frequency). The only effective option for treating the disease and reducing its prevalence is the use of antimicrobial therapy (Ezewudo, Sandeep, Santiago and Dean 2015).

**Syphilis:** Syphilis is one of the oldest STDs. Presently, syphilis is fairly easy to treat with antibiotics, if left untreated the infection can cause severe symptoms (e.g. contagious ulcers on the genitals, anus and mouth; then infection of the brain, eyes or ears) and is potentially life-threatening (Winckler, 2015). As reported by Planned Parenthood Federation of America Inc (2014), syphilis is caused by the bacteria called *Trepanoma pallidum* that are passed sexually. It can infect the vagina, anus, urethra, or penis, as well as the lips and mouth. Often, syphilis is asymptomatic or has such mild symptoms that a person doesn't notice them. There are also several stages of syphilis, which may overlap. The stages may be separated by latent stages, or times

when no symptoms are present. Symptoms differ with each stage. But the syphilis symptoms do not always occur in the same order. The first stage is regarded as the primary stage in which there is a painless sore or open, wet ulcer, which is called a chancre, appears. Chancres usually appear about three weeks after infection, but may take up to 90 days. Chancres can appear on the genitals, in the vagina, on the cervix, lips, mouth, breasts, or anus. Swollen glands may also occur during the primary phase. Then, followed by the secondary stage, other symptoms often appear 3–6 weeks after the sores appear. These syphilis symptoms may be intermittent for up to two years. They include body rashes often on the palms of the hands and the soles of the feet that last 2–6 weeks. There are many other symptoms, including mild fever, fatigue, sore throat, hair loss, weight loss, swollen glands, headache, and muscle pains. During the late stage, one out of three people who have syphilis that is not treated suffer serious damage to the nervous system, heart, brain, or other organs, and death may result. This can occur 1–20 years after the start of the infection.

**Human Papilloma Virus (HPV):** More than 100 types of HPV exist, at least 40 of which can infect the genital area. Most HPV infections are asymptomatic or unrecognized. Oncogenic, or high-risk HPV infection (e.g., HPV types 16 and 18), causes most cervical cancers and many penile, vulvar, vaginal, and anal cancers, as well as oropharyngeal cancers. Non-oncogenic, or low-risk HPV types (e.g., HPV types 6 and 11), are the cause of genital warts and recurrent respiratory papillomatosis. Asymptomatic genital HPV infection is common and usually self-limited. It is estimated that most sexually active persons become infected at least once in their lifetime persistent oncogenic. HPV infection is the strongest risk factor for development of HPV-associated precancers and cancers. There is a substantial burden of cancers and anogenital warts due to HPV. Two HPV vaccines are licensed a bivalent vaccine (Cervarix) that prevents infection with HPV types 16 and 18 and a quadrivalent vaccine (Gardasil) that prevents infection with HPV types 6, 11, 16, and 18. Both vaccines offer protection against the HPV types that cause 70% of cervical cancers (STD Treatment Guideline, 2014).

**HIV/AIDS:** HIV causes AIDS. HIV stands for human immunodeficiency virus. It breaks down the immune system; body's protection against disease. HIV causes people to become sick with infections that normally would not affect them. Acquired immune deficiency syndrome (AIDS) is the most advanced stage of HIV disease.



Some people develop HIV symptoms shortly after being infected. But it usually takes more than 10 years. The most common ways HIV is spread are by having vaginal or anal intercourse without a condom with someone who has HIV/AIDS, sharing needles or syringes with someone who has HIV/AIDS, being deeply punctured with a needle or surgical instrument contaminated with HIV and getting HIV-infected blood, semen, or vaginal secretions into open wounds or sores. There are several stages of HIV disease. Early HIV symptoms include slight fever, headaches, fatigue, and muscle aches. These symptoms may last for only a few weeks. Then there are usually no HIV symptoms for many years. AIDS symptoms appear in the most advanced stage of HIV disease. In addition to a badly damaged immune system, a person with AIDS may also have severe or recurring vaginal yeast infections, chronic pelvic inflammatory disease, severe and frequent infections, periods of extreme and unexplained tiredness that may be combined with headaches, light-headedness, and/or dizziness, quick loss of more than 10 pounds of weight that is not due to increased physical exercise or dieting, bruising more easily than normal, long periods of frequent diarrhoea, frequent fevers and/or night sweats (Planned Parenthood Federation of America Inc, 2014).

Based on the research carried out by in four states in Nigeria by (Samuels, Blake and Akinrimisi, 2012) on HIV vulnerabilities and the potential for strengthening social protection responses in the context of HIV in Nigeria, groups vulnerable to HIV/AIDS in Nigeria include youth (mainly young women), pregnant women, orphans and vulnerable children (OVC) and the elderly. Such groups are particularly vulnerable because of socioeconomic, age and gender characteristics as well as the location in which they live.

## **2.2 Epidemiology of STI among adolescents**

From the report from WHO (2012), on estimated incidence of curable STIs, African region, Chlamydia is 10.0/million, Neisseria gonorrhoea is 17.5/million, Syphilis is 3.4/million, Trichomonas vaginalis is 78.8/million making a total of 109.7 out of 448.4/million in the world. African region has the highest prevalence as compared to other regions.

Approximately half of the new STI cases that occur each year are acquired by individuals between 15 and 24 years of age, even though they represent only

one-quarter of the sexually active population. Adolescent girls are much more likely than boys to have a reported case of chlamydia (3,043 versus 715 cases per 100,000), or gonorrhoea (459 versus 221 cases per 100,000, in 2013). However, boys were more likely than girls to have a reported case of syphilis in 2013 (6.4 cases versus 1.9 cases per 100,000, respectively). Since 2010, rates of syphilis have been increasing among males and decreasing among females (Child's Trend Data Bank, 2015).

### **2.3 Prevalence of STIs among out-of-school adolescents**

More than 1 million people acquire a sexually transmitted infection every day. Each year, an estimated 500 million people acquire one of four sexually transmitted infections: chlamydia, gonorrhoea, syphilis and trichomoniasis. More than 530 million people are living with HSV2. More than 290 million women have an HPV infection, one of the most common STIs (WHO, 2015). Also, according to World Health organization (WHO) estimates, about 484.4 million new cases of curable STIs occurred among both sex aged 15 to 49 years old every year with the highest rates among 20 - 24 years age group, followed by 15 - 19 years age group. One in 20 young people is believed to contract an STI each year excluding HIV and other viral infections. (WHO, 2012).

In developing countries such as sub-Saharan Africa, STI case burden is very high. About 108 million STIs cases occur every day. It is estimated that 80 to 90% of the global burden of STIs occurs in the developing world where there is limited or no access to diagnostics (Fisseha, 2015). Based on the report from National Population Commission (2014), the prevalence of STI in Nigeria is 6.0% among adolescents with age group 15-24 years and that of Oyo state is 1.3 though individual researches has higher prevalence rates.

In a study on the prevalence of sexually transmitted infections (STIs) among attendees of Lead City University medical centre in Ibadan, South western, Nigeria with a total respondents of 200 patients. It showed that *Candida albicans* had the highest percentage of infection occurrence [163(81.5%)], followed by, *Gardenella vaginalis* (Bacterial vaginosis) [23(11.5%)], *Trichomonas vaginalis* [4(2.0%)], *Treponema pallidum* (syphilis) [3(1.5%)], and *Nesseria gonorrhoeae* [2(1.0%)]. Others were *Staphylococcus aureus* [5(2.5%)]. *Chlamydia trachomatis*, HBsAg, HCV and HIV

were not detected. They found out that the prevalent rates of infections were inversely associated with increase in age, sex and marital status (Okonko, Okerentugba, Adejuwon and Onoh, 2012a).

In a similar study conducted by Okonko et al (2012b), on Prevalence of Sexually Transmitted Infections (STIs) among Attendees of Association for Family and Reproductive Health Centre in Ibadan, South western Nigeria. 200 patients were screened randomly to determine the prevalence of common sexually transmission infections (STIs) among them, using conventional methods. One hundred and ten (55.0%) of the subjects harboured various agents of STIs and 21 (10.5%) harboured other bacterial isolates. The study showed that *Candida albican* 54(27.0%) was the most predominant organisms among these subjects. This was followed by *Gardnerella vaginalis* 21(10.5%) and *Trichomonas vaginalis* 3(1.5%). Other isolates include *Staphylococcus aureus* 4(2.0%), *E. coli* 1(0.5%), coliforms 1(0.5%) and normal genital flora 15(7.5%). However, *Trepanema pallidium* (syphilis), *Neisseria gonorrhoea* and *Chlamydia trachomatis* were not detected. Risk factors associated with significant STI were young age, sex and marital status (Okonko et al., 2012).

From the study on prevalence of sexually transmitted infections including HIV in street-connected adolescents in western Kenya. Of the 200 participants, 81 (41%) were female. 70.4% of females and 60.5% of males reported sexual activity. Of those that participated in at least one STI test, 28% (55/194) had  $\geq 1$  positive test, including 56% of females; 14% (28/194) had  $>1$  positive test. Twelve females and zero males (6% overall, 14.8% of females) were HIV positive.  $\geq 2$  sexual partners were associated with having any STI (Winston, Chirchir, Muthoni & Ayuku, 2015).

#### **2.4 Perception of STIs among young people**

In a study conducted by Nwabueze et al., (2014) on perception of sexually transmitted infection-preventive measures among senior secondary school students in Nnewi-North Local Government Area, Anambra State, Nigeria. Out of the 334 students, the majority of respondents (71%) felt they cannot be infected with an STI, 92.8% believed that STIs can be prevented, about 75.7% of respondents knew that HIV/AIDS cannot be cured. Unprotected sex and multiple sexual partners (57.5%) and (42.2%) respectively was seen as the highest risk factors. Majority knew that

avoiding sexual intercourse, being faithful to one partner and use of condom are preventive measures respectively.

Based on the work of Kadiri et al. (2014) on knowledge and treatment seeking behaviour of University of Ilorin students in Kwara State, Nigeria young people have a lot of misconceptions about STIs; this makes them to have erroneous understanding of what STIs means. Some of the respondents have the perception that lice on the head can later transform into STIs while a significant others explained that gonorrhoea occur when the pubic hair of one of the sexual partners penetrates into the private part of the other partners. Yet, another respondent explained that one of the symptoms of syphilis is an ulcer of the mouth. The vast majority of the female informants explained that toilet infection is a type of STIs. They believed that once a lady uses a dirty public toilet and got infected then she can pass the infection to her boyfriend if they have unprotected sex.

From a study on attitude, sexual behaviour and risk perception to sexually transmitted infections including HIV/AIDS among students of University of Abuja, Nigeria with 405 respondents on the perception of risk of contracting STIs and HIV/AIDS, and rate of use of condom among the respondents, the results showed that only eight (2.3%) reported their risk to be high compared to those reporting low risk (n=159, 44.7%), and no risk at all (n=148, 41.6%). Among those reporting high risk, only 3 (0.84%), and 2 (0.56%), use condom regularly and occasionally respectively. Among those perceiving their risk of contracting HIV/AIDS as low, 16.9% used condom regularly, and 5.6% use it occasionally. Of the number reporting no risk at all, 11.8% use condom regularly while 4.49% use it occasionally. Also, of those who used condom and stopped for whatever reasons, 1.4% reported low risk perception and 0.28% reported no risk at all. Totally, 11.8% perceives their risk of contracting STIs and HIV as low or no risk at all and this same percentage either uses condom occasionally or stopped using it. These ones do not believe that they are personally susceptible to HIV (Edith & Ahmad Hadiza, 2014).

## **2.5 Knowledge of STIs among out-of-school adolescents**

In a study on awareness of STIs and contraceptives use among out-of-school youths in Nigeria, the study was situated among out-of-school youths in the motor parks Lagos, South-western Nigeria with 200 participants showed that the relationship between educational qualifications and knowledge about STIs is noteworthy. The largest proportions of out-of-school youths had knowledge of gonorrhoea followed by other STIs such as syphilis, candidiasis and staphylococcus. Level of education appeared to be a major factor contributing to the knowledge of STIs among out-of-school youths. The out-of-school youths who attended both senior and junior secondary schools demonstrated more knowledge about STIs than their counterparts who had lower educational qualifications. For instance, the out-of-school youths with primary education provided little information (relatively average knowledge) about STIs. Therefore, knowledge about STIs increases with rising educational qualifications especially from primary to secondary schools. This result is expected within the context of the impact of western education on information about reproductive health (Atere et al., 2010).

From a study on knowledge and attitude towards sexually transmitted infections among female students living in hostels in a university community of the south-south region of Nigeria with 420 respondents, the source of STI knowledge was mostly from media (55.7%). This may be due to the sensitive nature of the issue, social stigma attached to it and feelings of shame among students when talking about STIs. Knowledge of the range of symptomatology of STI was limited. Majority of the respondents knew of vaginal itching (70.2%) and vaginal discharge (65.7%). Other modes of presentation (fever, abdominal pain, bleeding, headache and body weakness) was limited (Ntia, Ekott, Okwejie, Nchewi, Hagan and Afulukwe 2015).

From the study conducted by Makwe and Ovaioza (2013) on awareness of sexually transmitted infections ( STIs ) including HIV/AIDS among undergraduate students of University of Abuja with a total of 405 respondents showed that the most known types of STIs among the 87.4% respondents were gonorrhoea and syphilis while the least known STI was chancroids, which accounted for 25%. Also the routes of transmission of STIs including HIV/AIDS can be through many ways. Whatever the route, the basic denominator is the admixture of body fluids. Consequently, the

infection could be transmitted through sexual intercourse, blood transfusion, mother to unborn child, sharing sharp objects like needle, razor etc. Although most of the respondents indicate knowledge about the basic routes of transmission of STIs including HIV/AIDS, about 23.6% of the respondents also have a misconception on the routes of transmission. This is because they believe that STIs including HIV/AIDS can be transmitted through kissing, sharing of eating utensils and witchcraft. Then, on knowledge about preventive measures of STIs, faithfulness to one uninfected partner, use of condom, abstinence, avoiding commercial sex workers are some preventive measures. The result showed that there was a relatively high level of knowledge of preventive measures with condom use was the most known preventive measure, accounting for 88.2%.

From the study conducted by Fisseha (2015) on knowledge and misconception of young women towards sexual transmission and condom use in Northern Ethiopia with a total of 305 respondents revealed regarding the knowledge of prevention of STIs that the predominant prevention method of STIs mentioned by participants was faithfulness 199 (70.7%) and about 40.4% of the youths had poor knowledge.

From a study on vulnerability and knowledge of sexually transmitted infections among female traders of reproductive age in Enugu, Nigeria (Ikeako, Ekwueme, Ezegwui and Okeke, 2014) with a total of 200 respondents, knowledge of specific STIs was highest for HIV/AIDS 90% (130/200). 51.5%, 55.4%, 32.3%, 19.5%, 22.5%, 13.2% respectively knew that, infertility in men, infertility in women, chronic pelvic pain, ectopic pregnancy, abortion and cancer are consequences of STIs in both men and women (Nwabueze, Azuike, Ezeyeaku, Aniagboso, Azuike, Iloghalu and Ebulue 2014).

## **2.6 Attitude of adolescents to STIs**

Also from the study on attitude, sexual behaviour and risk perception to sexually transmitted infections Including HIV / AIDS among students of University of Abuja, Nigeria. Sexual activity among unmarried adolescents in Nigeria is high and rising. Despite the growing associated problems of premarital sex such as STIs and HIV/AIDS, teenage pregnancy and illegal abortion, majority of sexual intercourse among adolescents are unprotected. Studies across the globe, Africa and Nigeria have

recorded increasing incidence of sexually transmitted infections associated with increasing sexual activity among adolescents (Edith & Hadiza, 2014). Majority of these youths do not take STI to be a serious health challenge.

In a study on knowledge and attitudes towards sexually transmitted diseases among Thai university students, of the 250 respondents, a total number of 36 students (24.5%) believed that STDs are not dangerous because they can be cured. When asked the question if it's necessary to avoid a person who has contracted an STD because he or she can transmit it to other people, 62% of the students agreed (n=92). When being asked whether people who are infected with an STD must get treatment or not, 95.6% of the students (n=143) stated that they believe they should get treatment. Almost all of the students (96.6%, n=144) stated that a person who believes that he or she has gotten an STD, but is unsure about the symptoms, should directly contact health personal. When answering how concerned one is with contracting an STD while having unprotected intercourse, 9 participants (6%) answered that they were not worried at all. Over one fourth (n=32, 21.5%) answered that they were worried a little, and the majority (n=86, 21.5%) stated that they were "worried a lot". When being asked what one was most afraid of when having unprotected sex, 134 (91.1%) participants stated that contracting HIV was their greatest concern. Becoming pregnant (n=131, 89.1%) and contracting another STD (n=130, 88.4%) was also concerning (Svensson, 2013).

## **2.7 Factors predisposing adolescents to STIs**

From the article published by Sales & Diclemente, (2010) on Adolescent STI / HIV prevention programs : what works for teens showed that adolescents are at especially high risk of contracting STIs, including HIV, for the following reasons: Immature biology; biologically, adolescents' immature reproductive and immune systems make them more vulnerable to infection by various STI pathogens. For example, cervical ectopy, a benign condition common in young girls, increases susceptibility to infection. The second being earlier sexual debut and later onset of marriage. Recently, both the onset of puberty and the initiation of sexual intercourse have occurred at decreasing ages, yet the age at first marriage has increased, with the median age of first marriage 28.6 years for men and 26.6 years for women. Thus, adolescents usually have had sexual intercourse with multiple partners prior to marriage, thereby increasing their risk of acquiring an STI or HIV. The third being contextual conditions; conditions such as poverty, homelessness, political strife, and dislocation, all problems that are increasingly common among adolescents in developing countries, are associated with sexual abuse or sexual intercourse in exchange for money or support for basic needs. Also, for social and cultural reasons, adolescents, especially young girls may be less able to refuse sex or less able to insist on adequate protection, thereby increasing their risk for STI/HIV infection.

Also from the study conducted by Envuladu et al., (2013) on social factors associated with teenage sexual behaviour: A risk factor for STI / HIV among female adolescents in a rural community in Plateau State, Nigeria with a total of 349 respondents showed that not being in school was found to be statistically associated with having sexual intercourse with the opposite sex. The findings of this study suggest that more teenagers are getting involved in sexual behaviour that is risky and predisposing to STI. The risky sexual behaviour here was the initiation of sexual intercourse with the opposite sex especially sexual intercourse without any form of protection (use of condom). This is a global trend many teens are regretting initiating sexual intercourse early in life which indicates that most get into it unprepared and wish they had waited longer.

In a study on statistical modelling of social risk factors for sexually transmitted diseases among female youths in Nigeria explained that female youths, particularly



adolescents, are more vulnerable to risks of STDs from unprotected sexual activity both biologically and as a result of cultural norms that limit their ability to protect themselves. For instance, in adolescent females, the immature cervix is made up of constantly changing cells which make young females susceptible to certain sexually transmitted organisms. Also, entrenched gender norms continue to constrain young women's control over their sexual and reproductive lives. Condom use is still infrequent during early premarital sex and is extremely low within early marriage. Also, the percentage of female youths who have STDs increase consistently with increasing wealth index, with the poorest and richest experiencing least to highest prevalence of STDs respectively. In the Nigerian context, female youths from poor homes begin sexual activity earlier than those from richer homes and as such are more knowledgeable in terms of the acquisition and utilization of STD control measures, including the use of condoms (Adebowale, Titiloye, Fagbamigbe, & Akinyemi, 2013). Ikeako et al., (2014) revealed that risk factors identified for STIs were multiple sexual partners 75.5% (151/200), non-use of condoms 62% (124/200) early debut 58% (116/200) and premarital sex 39.5% (79/200).

### **2.8 Experience of out-of-school adolescents on STIs**

Based on the research carried out by Otwombe, Dietrich, Laher and Hornschuh, (2015) on Health-seeking behaviours by gender among adolescents in Soweto, South Africa with 830 adolescents as participants showed that males were more likely than females to report sexual debut (64% vs. 49%; pB0.0001).

According to the study conducted by Envuladu et al., (2013) showed that sexual intercourse with the opposite sex was found to be significantly associated with having symptoms of STI. Out of the teenagers that participated in the study, 67.7% said they had a relationship with the opposite sex and 186(48.4%) admitted to having sexual intercourse with the opposite sex. And among those who have had sexual intercourse with the opposite sex, 67.7% have ever used condom and only 50.5% used condom in the last sexual intercourse. A survey of female adolescents in a rural Nigerian population revealed that 80% had vaginal discharge, 19.8% had candidiasis, 11% had trichomoniasis, and 10.5% had chlamydia infection (Kadiri et al., 2014).

According to the study conducted by Nwabueze et al., (2014) with 334 respondents' age range for first sexual intercourse was 13 - 18 years for females and 8 - 19 years for males. Of the 86 that have had sexual intercourse, 48.8% had experienced one or more of the symptoms of STIs and the majority (80.9%) went to a hospital for treatment. Males (31.4%) are more likely to have multiple sexual partners than females (4.7%).

### **2.9 STI health seeking behaviour of out-of-school adolescents**

People seeking screening and treatment for STIs face numerous problems. These include limited resources, stigmatization, poor quality of services, and little or no follow-up of sexual partners. STI is often stigmatized hence many adolescents do not like to be seen as having it so they rarely seek standard treatment. Based on the research carried out by (Atere et al., 2010) on adequacy of income and treatment of STIs, majority of the out-of-school youths with inadequate income preferred medicine hawkers followed by traditional healer and self-medication. However, few out-of-school youths with adequate income preferred self-medication followed by attending regular hospitals and medicine hawkers. Also, according to Kadiri et al., (2014), it was observed that there were few differences in the treatment preferences between the male and female informants. While the male informants prefer the use of herbal drugs, the female informants prefer orthodox self-medication. Also, another STIs treatment that was mentioned was prayers, which according to a female student was the last option that she opted for when her condition was deteriorating.

In a study on AIDS and clinical knowledge of sexually transmitted infections and barriers to seeking health services among high school adolescents in Addis Ababa, Ethiopia with a total respondents of 3543 participants, nearly one in 20 adolescents reported that they had symptoms of STIs in the past 12 months. Of these only 117(66.9%) sought treatment for their symptoms. Almost half of those who sought treatment delayed seeking treatment for sometime after they observed the symptoms. Of those who sought treatment, 50(42.7%) of them treated themselves using drugs obtained from private pharmacies. The main reasons for delayed treatment reported by respondents were: I don't know where to go 42(70.0%), most health institutions are open during school hours 42 (70.0%), I do not know what it is 41(68.3%), health professionals are not friendly 39(65.0%), I am ashamed 37(61.7%), I didn't have

money 34(56.7%) and it was not that much serious 11(18.3%). Reasons for not seeking treatment were: I do not know what it is 49(84.4%), most health institutions are open during school hours 49(84.40%), I don't know where to go 47(81.0%), health professionals are not friendly 47(81.0%), I am ashamed 42(72.4%), I didn't have money 41(70.7%), I may meet people whom I know 31(53.4%) and it was not that much serious 18(31.0%) (Cherie and Berhane, 2012).

Compared to females, males were more likely to seek healthcare for condom breakage (8% vs. 2%;  $p_0.02$ ). Relative to males, a significantly higher proportion of females desired general healthcare services (85% vs. 78%;  $p_0.0091$ ), counselling (82% vs. 70%;  $p_0.0001$ ), and reproductive health services (64% vs. 56%;  $p_0.02$ ) (Otwombe et al., 2015).

## **2.10 Barriers to STI treatment among out-of-school adolescents**

From the article published by (Sales & Diclemente, 2010) revealed that often adolescents are confronted with multiple barriers to seeking and receiving STI testing and treatment, such as lack of insurance, lack of money to pay, lack of transportation, discomfort with facilities and services designed for adults, and concerns about confidentiality. Moreover, adolescents may be ill informed about STIs, their symptoms, the need for treatment, and where and how they can obtain treatment.

Also, based on the study conducted by (Cherie and Berhane, 2012) in Ethiopia reported several key barriers to seeking STIs treatment, in addition to low knowledge of STIs symptoms. Availability of health services: The first barriers indicated by the participants were availability of health services. Under this major theme, three sub themes emerged: unavailability of STIs services targeting adolescents; they emphasized that the existing health institutions are not for adolescents it is either for adults or children, adolescent health is not given attention at all, unfriendliness of health professionals working in the existing health institutions and lack of knowledge of where to seek treatment for STIs. The second major barrier raised was difficulty to access available health services. Most public health services are available during working hours requiring missing classes to get the service. In addition, the services are not readily available and the waiting time is often long. The third barrier expressed was the perceived high cost of health services. The issues of cost were

expressed by discussants in all groups as follows: “Adolescents do not have money to pay for health services, they cannot afford to pay.” The fourth barrier was acceptability of the services because of perceptions of lack of privacy and confidentiality.

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## 2.11 Conceptual framework

### The Health Belief Model

The Health construct to be used is the Health Belief Model based on Polit and Beck, (2010). The Health Belief Model (HBM) addresses the individual's perceptions of the threat posed by a health problem (susceptibility, severity), the benefits of avoiding the threat, and factors influencing the decision to act (barriers, cues to action, and self-efficacy). The Health Belief Model (HBM) was one of the first theories of health behaviour, and remains one of the most widely recognized in the field. It was developed in the 1950s by a group of U.S. Public Health Service social psychologists who wanted to explain why so few people were participating in programs to prevent and detect disease. Their focus was on increasing the use of then-available preventive services, such as chest x-rays for tuberculosis screening and immunizations such as flu vaccines. They assumed that people feared diseases, and that health actions were motivated in relation to the degree of fear (perceived threat) and expected fear-reduction potential of actions, as long as that potential outweighed practical and psychological obstacles to taking action (net benefits). In ensuing years, researchers expanded upon this theory, eventually concluding that six main constructs influence people's decisions about whether to take action to prevent, screen for, and control illness.

**Perceived susceptibility:** This refers to one's chance of getting a condition. It looks at the participants' beliefs about what would happen if they did not take precautions or medications. It is one of the more powerful perceptions in prompting people to adopt healthier behaviours. The greater the perceived risk, the greater the likelihood of people engaging in behaviours that will decrease the risk.

**Perceived severity:** Perceived seriousness of a given health condition also operates at the psychological level and is demonstrated through an individual's attitude or behaviour. The severity can be measured by the outcome of a disease in an individual's life and how he/she is responding to the outcome in his/her life. The outcome can be shown in two ways; denial or acceptance of the susceptibility.

**Perceived threat:** The recognition of the susceptibility of the disease to occur, and the acceptance of its severity are more likely to pose a health threat to an individual and force him/her to adopt a health behaviour.

**Perceived benefits:** This refers to a person's opinion of the value or usefulness of a new behaviour in decreasing the risk of developing a disease. People tend to adopt healthier behaviours when they believe the new behaviour will decrease their chances of developing a disease.

**Perceived barriers:** This is one's tangible and psychological costs of the advised action. It is also an individual's own evaluation of the obstacles in the way of him/her adopting a new behaviour.

**Cues to action:** are strategies, events, people or things that move people to change their behaviour. The HBM suggests that with enough susceptibility and severity of a health threat, and with a perceived benefit of the health action, sometimes a cue acts as a trigger to take the recommended health action.

**Self efficacy:** This refers to the confidence in one's ability to take action towards health.

#### **The application of the health belief model**

As behaviour is defined under health promotion and education as what we do or fail to do that affects our health. The use of HBM in this study will improve the behaviour of the out-of-school adolescents especially in their sexual health. In the application of HBM in this study, the six major concepts of HBM will be explained as it relates to STI: perceived susceptibility which refers to a person's perception that STI is personally relevant or that a diagnosis of STD is accurate. Perceived severity; even when one recognizes personal susceptibility, action will not occur unless the individual perceives the severity to be high enough to have serious biological or social complication. Perceived benefits refer to the patient's belief that a given treatment will cure the STI or help to prevent it. Perceived barriers refer to the complexity, duration, and accessibility and accessibility of the treatment. Cues to action which are strategies to activate readiness to change. For instance, when an adolescent see mass media campaign on the effect of STI or hearing of a friend contracting STI, this may trigger him/her to go for STI screening and also reduce his/her risky sexual behaviours. Motivation (Self efficacy): includes the desire to comply with a treatment and the belief that people should do what. Modifying factors: include personality variables, patient satisfaction, and socio-demographic factors of the adolescent such as age, gender, religion, marital status, educational level, ethnicity, and wealth index (see Figure 1).

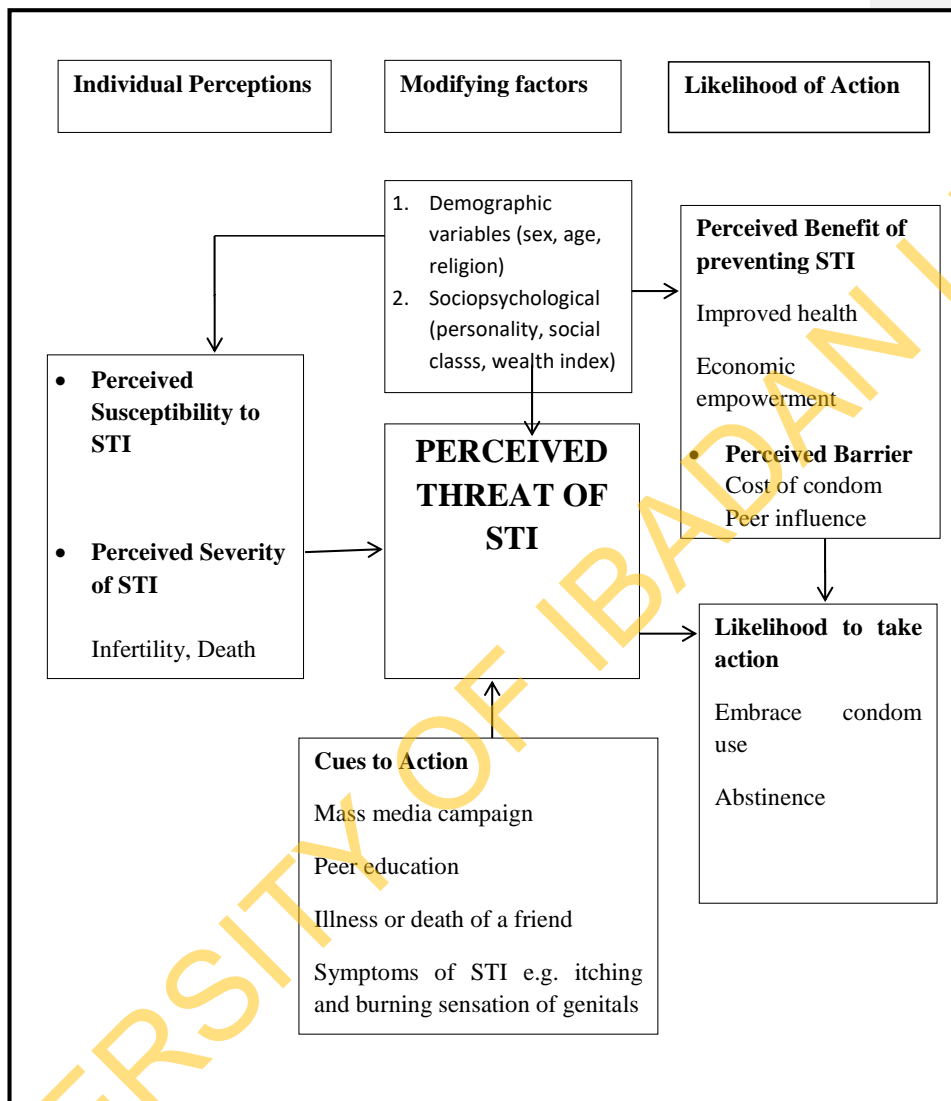


Figure 1: Application of the Health Belief Model to the Study

## CHAPTER THREE

### METHODOLOGY

#### 3.1 Study design and scope

The study design was a descriptive cross-sectional study and the scope of the study was limited to out-of-school adolescents' socio-demographic characteristics, knowledge of STIs, their experiences relating to STIs and their health seeking behaviour when they contract STIs.

#### 3.2 Study area and site

The study was carried out in Ibadan North West Local Government Area in Oyo State. Its administrative headquarters is at Dugbe/Onireke. It has an area of 26km<sup>2</sup> and an estimated population of 196,844. Ibadan North West Local Government was created in 1991 by the then military head of state; Major General Gbadamoshi (Rtd). It was bounded in the north by Iddo Local Government, in the west by Ibadan South West Local Government, in the east by Ibadan North East Local Government and in the south by Ibadan South East Local Government. Its inhabitants include Yoruba, Hausa, Igbo, and other tribes who engaged in trading, farming, and civil service. The local government consist of 11 political wards and the communities in these wards include; Onireke, Sapati, Agbede-adodo, Beere, Asukuna, Ayeye, Dugbe, Inalende, Ologuneru, Ogunpa, Akilapa, Agbeni, Agbede-adodo, Galaxy Oke-are, Origbegi, Adagbade, Adamasingba, Abebi, Oke Padre, Oniyanrin, Oopo, Daily times, etc ( Data obtained from Ibadan North West Local Government, 2015 ).

From the report form National Population Commission, Oyo State, 2015; population of adolescents with age range of 10-24 years is 47,720. The health facilities available in the community include Oniyanrin, Eleyele, Koseunti, Ogunpa, Origbegi, Ayeye and Orieleru primary health centres. They render services such as family planning, treatment of common ailments, provision of essential drugs, health education, counseling, provision of maternal care and ante-natal care to the adolescents. The social facilities available in the study area include the Cocoa dome in Dugbe which is the foremost club in Ibadan, Club 18, Jericho; Sagitarius Consult, Adamasingba; Grand Serene hotel Iyaganku G.R.A; Omotalan's kitchen; Edu Guest House; Oni Adex Guest House; London Short Stays, Jericho; De Access Hotel, Apete amongst



others. All these social facilities provide relaxation sites for the adolescents and it also negatively affects their sexual life. These adolescents are exposed to alcohol, smoking and risky sexual behaviours at early age. All these acts can predispose them to STIs.

### 3.3 Study population

The study population was out-of-school adolescents from ages 10 – 24 years in Ibadan North West Local Government Area.

### 3.4 Inclusion and exclusion criteria

Adolescents who were out-of-school and between the ages of 10-24 years residing in the study site for at least a year prior to the study were included and all those who do not fall within the inclusion criteria were excluded.

### 3.5 Sample size determination

The desired sample size was gotten using the Leslie Kish statistical formula,  $N=Z^2pq/d^2$

The prevalence of STIs was 17% (Adebowale et al., 2013)

Where N=sample size, Z, confidence limit at 95% =1.96, P=prevalence = 0.17, q=1-p, Error=0.05.

$N= 1.96^2 \times 0.17 \times 0.83 / 0.05^2 = 217$ , and adding 10% for loss to follow-up and attrition making a sample size of 240.

### 3.6 Sampling techniques

A multistage random sampling was used for this study. It involved the following stages:

**Stage 1:** using simple random sampling, 5 wards were selected from the local government based on their socioeconomic class. The simple random was done by balloting in which the 5 wards were selected. Five wards out of the 11 wards were urban-slum, 4 were transitory and 2 were urban communities. So to have all the socioeconomic class represented, 2 wards out of the urban-slum, 2 out of the transitory and 1 out of the urban were selected.

**Stage 2:** communities were randomly selected from the wards. Using stratified random sampling, one community was selected from each ward. The communities chosen were Idikan and Inalende in wards 4 and 8 which fell in the urban slum areas. Dugbe and Adamasingbain wards 7 and 9 which are in the transitory areas, Eleyele in ward 10 which was the urban area.

**Stage 3:** Respondents were selected using convenient sampling. Forty-eight respondents were interviewed from each community in each ward. These respondents fell into various apprenticeship groups. All consenting adolescents in various artisan shops were interviewed.

### **3.7 Instrument of data collection**

The instrument of data collection was semi-structured questionnaire. The questionnaire contained six sections; the section had questions on the socio-demographics. The remaining five sections contained all the variables to be measured per specific objective which were the experience of the out-of-school adolescents on STIs, health seeking behaviour of the out-of-school adolescents towards STIs, their knowledge about STIs, perception towards STIs and factors predisposing them to STIs.

### **3.8 Validity**

Validity is defined as the ability of a study to measure what the investigator wants to measure. The questionnaire was translated into Yoruba; the local language for ease of administration to respondents who do not understand English and back translated into English language so as to retain the original meaning. The questionnaire underwent independent review from peers and experts in the field of public health. The questionnaire also underwent the constructive criticism and fine tuning with the supervisor to ascertain the face and content validity of the developed instrument.

### **3.9 Reliability**

A pilot study was carried out in Bodija and Sango in Ibadan North Local Government Area, these communities share similar characteristics with the study area. The pre-test was conducted on 24 out-of-school adolescents in these communities which represented 10% of the total population for the proposed study. The pre-test result was

useful in determining the trend in the respondents, their level of understanding of the items in the research instrument and revealed the adjustments that need to be done on the instrument. Also the pre-test result reliability was ascertained using the Cronbach – Alpha test, the coefficient was 0.83 and this revealed that the instrument was very reliable.

### **3.10 Method of data collection**

Data collection procedure included recruitment and training of four research assistants. Visits were made to all the selected communities in company of the research assistants that were trained before so as to familiarize ourselves with the terrain of the communities. They were trained on the objectives of the study, understanding of the instrument for data collection, building rapport with respondents, interviewing skills, and the ethical issues involved in research prior to the time of data collection. The data collection process involves the following steps:

1. Visit and permission from the Ibadan North West Local Government, this was done by the researcher prior to the commencement of the research. Permission was sought and gotten to carry out the research.
2. Identification of each wards, selected communities and associations by the interviewers prior to the research.
3. The respondents were selected based on the inclusion criteria.
4. Questionnaires were administered to the respondents based on informed consent.
5. Data was collected within the period of two weeks; 25<sup>th</sup> July to 8<sup>th</sup> August, 2015, Tuesdays to Saturdays of each week with the exemption of Sundays and Mondays because respondents do not open shops on Sundays and on Mondays they are so particular about their business that they hardly have time for anything else.
6. Condoms were distributed freely to respondents during interviews; each interviewee was given a pack of condom and each pack contains four (4) condoms and for those that requested for more, they were given. Also counselling was offered on sexuality while interviewing them. These served as a good incentive and motivation to the participants.

### 3.11 Ethical consideration

The study was reviewed and approval for the study was gotten from Oyo State Ethical Review Committee. The ethical approval letter was shown in Appendix IV.

**Confidentiality:** Privacy of participants was ensured by using a serial number on the information collected rather than the name. It was only the researchers that knew the identity of the respondents and the information was kept secret.

**Beneficence:** The result of the research will be made available to the study population.

**Non- maleficence:** The proposed research was relatively risk free.

**Voluntariness:** Participation in the study was completely voluntary and based on informed consent. Participants were made to understand that they were free to withdraw from the study at any time.

### 3.12 Data management and analysis

The investigator checked all copies of administered questionnaire one after the other for purpose of completeness and accuracy. Serial number was assigned to each question for easy identification and for correct data entry and analysis. Processing of the data included sifting of questionnaires, sorting of questionnaires, collation and scoring. A coding guide was developed to code and enter each question into the computer for analysis. Analysis was done with the use of statistical package for social science (SPSS) version 20. The data entered into the computer was subjected to descriptive (mean, median, mode) and inferential (Chi-square) statistical analysis. The demographics were analyzed with the use of frequency distribution tables and cross tabulations of categorical variables (demographics) against the outcome variables (knowledge, experience and health seeking behaviour of out-of school adolescents towards STIs) and Chi-square was used to test the hypotheses.

Also the knowledge and perception sections were scored. The knowledge of STI was assessed using the number of correct responses the participants gave. Each correct response equalled one score. The maximum score obtainable was 14. Respondents were evaluated based on the points they received from knowledge questions.

0 – 4 points = poor knowledge, 5 – 9 = fair knowledge, 10 – 14 = good knowledge.

The perception was measured on a 3-level likert scale of agree, disagree and undecided. The perception score was determined using number of correct responses the participants gave. Each correct response equalled one score. The maximum score obtainable was 7. Respondents were evaluated based on the points they received from perception statements.

0 – 3 points = unfavourable perception, 4 – 7 = favourable perception.

### **3.13 Limitation of study**

The limitation that was encountered in this study was that some adolescents were reluctant in giving information on their sexual life. This happened because our culture frowns on speaking openly on sex. So, the respondents were guaranteed that all the information gotten will be kept confidential and also a friendly environment was created so that they were free to express themselves.

## CHAPTER FOUR

### RESULTS

#### 4.1 Socio-demographic characteristics of respondents

A total of 240 respondents participated in the study. They were all out-of-school adolescents within the age range of 10 - 24 years. The detailed presentation of their socio-demographics is shown in table 1 below. One hundred and forty one (58.8%) were males and 99 (41.3%) were females.

Most of the respondents 112 (46.7%) fall in between the age range 15 – 19 years, followed by 20 – 24 years which were 105 (43.8%) and the least age group were 10 – 14 years which were 23 (9.6%). The mean age of respondents was  $18.9 \pm 3.4$ .

Some of the respondents belonged to hair making apprentice group 39 (16.3%), 57 (23.8%) were traders, 59 (24.5%) were tailors, 20 (8.3%) were mechanics, 15 (6.3%) were furniture makers, 50 (20.8%) belonged to other apprentice group which include aluminium, phone engineering, shoe making, binding, nursing, patent medicine vending, catering, painting, etc.

Most of these out-of-school adolescents 152 (63.3%) had secondary education, then primary education 56 (23.3%), followed by tertiary education 27 (13.3%) and the least had no formal education 5 (2.1%). Majority of the respondents 212 (88.3%) were single, 16 (6.7%) were married, 3 (1.3%) were divorced, 9 (3.8%) were living with either their boyfriends or girlfriends.

The most common ethnicity was Yoruba which was 197 (82.1%), followed by Igbo 21 (8.8%), then Hausa was 7 (2.9%) and others was 15 (6.3%) and this comprised of Jukun, Esan, Idoma, Akan, Igbira and Efik. Majority of the respondents 134 (55.8%) are Christians while others 106 (44.2%) belong to Islam religion. Most of the respondents 162 (67.5%) earn below 2000 weekly, followed by 43 (17.9%) earned between 2000 to 5000 while others 35 (14.6%) earn above 5000 weekly.

**Table 1: Socio-demographic characteristics of respondents**

<b>Variables</b>	<b>Freq (n=240)</b>	<b>Per (%)</b>
<b>Sex</b>		
Male	141	58.8
Female	99	41.3
<b>Age (years)</b>		
10 - 14	23	9.6
15 – 19	112	46.7
20 – 24	105	43.8
<b>Apprentice group</b>		
Hair making	39	16.3
Trading	57	23.8
Tailoring	59	24.5
Mechanics	20	8.3
Furniture	15	6.3
Others*	50	20.8
<b>Level of education</b>		
No formal education	5	2.1
Primary education	56	23.3
Secondary education	152	63.3
Tertiary education	27	11.3
<b>Marital Status</b>		
Single	212	88.3
Married	16	6.7
Divorced	3	1.3
Living with boy/girlfriend	9	3.8
<b>Ethnic group</b>		
Yoruba	197	82.1
Hausa	7	2.9
Igbo	21	8.8
Others*	15	6.3
<b>Religion</b>		
Christianity	134	55.8
Islam	106	44.2
<b>Wealth quintile</b>		
≤ 2000	162	67.5
2000- 5000	43	17.9
≥ 5000	35	14.6

\*Other apprentice groups included catering, painting, aluminium, binding, draughtsman, electrical/electronics, patent medicine vendor, computer training, nursing, welder, cobbler.

\* Other ethnic groups were Ijaw, Isan, Jukun, Efik, Akan, Igbira and Idoma.

#### 4.2 Knowledge of respondents on STIs

Responses on knowledge questions were as follow; based on knowledge on STI; majority of the respondents 121(50.4%) had partial knowledge on the definition of STI, 76 (31.6%) had incorrect knowledge and the least 43 (18%) had correct knowledge; the details are shown on table 2. Knowledge on STI known, prevention and consequence of STI were multiple response questions. Each respondent was asked three times on each sub heading making a total of 720; the responses were as follow: HIV appeared to be the most common STI known with 190 (26.4%) respondents mentioned it, Gonorrhoea 89 (12.4%) was the second most common STI known by respondents and the knowledge about other STIs like syphilis, staphylococcus, genital warts, hepatitis was very low, some of the respondents even mixed up symptoms of STIs as STIs while others mentioned diseases as cancer, ebola, magun, etc details are shown in table 3. On the knowledge on prevention of STI; most of the respondents 145(20.1%) knew condom use, followed by abstinence 69(9.6%), then faithfulness was given by 12(1.7%), and prayer 10 (1.4%) (see table 4 for details). On the knowledge of consequence of STIs; most of the respondents 186 (25.8%) recognized death as the main consequence of STIs, followed by sickness 38 (5.3%), transfer to others was mentioned by 19 (2.6%) respondents, and Infertility was known by 24 (3.3%) (see table 5 for full details).

When the knowledge on STIs was scored, majority of the respondents 127 (52.9%) had fair knowledge level o STIs, followed by those that had poor knowledge who were 108 (45%) and the least were those who had good knowledge 5 (2.1%), this is shown in figure 2. The overall mean score on knowledge was  $4.93 \pm 2.18$  out of a maximum of 14. This score falls between the poor and fair knowledge levels as shown in table below.

Comparing socio-demographics to the knowledge levels of respondents; most of the males 76 (53.9%) and most of the females 51 (51.5%) had fair knowledge. Based on age range, most of the respondents had fair knowledge and also based on level of education, most of the respondents had fair knowledge (see details in table 6).



The most common source of information about STIs was school 97 (40.4%), while media and Family & Friends group both had the same 57 (23.8%), followed by others 19 (7.9%) which include herb sellers, personal experience, patent medicine vendors and the least was hospital 10 (4.2%) (See details in figure 3).

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**Table 2: Knowledge of respondents' on definition of STI**

<b>What is STI?</b>	<b>(N = 240)</b>
	<b>No (%)</b>
Disease from unprotected sex with infected person***	43(18)
Disease from sex, men, women and humans**	121(50.4)
Disease from dirty environment, various ways & no cure*	76(31.6)

Incorrect \*, Partially correct\*\*, Totally correct \*\*\*

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**Table 3: Knowledge of respondents' on the type of STIs known**

STI known	( N = 720)
	No (%)
HIV/AIDS**	190(26.4)
Gonorrhoea**	89(12.4)
Syphilis**	20(2.8)
Staphylococcus**	8(1.1)
Genital warts**	2(0.3)
Hepatitis**	1(0.1)
Ebola*	30(4.2)
Other diseases*	46(6.4)
Don't know*	334(46.4)

\*\* Correct

\*Incorrect

Other diseases were Magun, Pile, Malaria, Cancer, Kwashiokor, Typhoid, STDs and STI symptoms such as itching, Pain while urinating, rashes.

**Note:** @ table 3 is multiple response.

**Table 4: Knowledge of respondents' on prevention of STIs**

<b>Ways to avoid STIs</b>	<b>( N = 720)</b>
	<b>No (%)</b>
Condom use**	145(20.1)
Abstinence**	69(9.6)
Be faithful**	12(1.7)
Personal hygiene*	13(1.8)
Medical screening**	17(2.4)
Prayer*	10(1.4)
Drug usage*	9(1.2)
Avoid sharing sharp objects**	24(3.3)
Others*	20(0.2)
Don't know*	401(55.7)

\*\* Correct

\*Incorrect

Others were good diet, reduction of boy/girl friends, herb usage and hand washing.

**Note:** @ table 4 is multiple response.

**Table 5: Knowledge of respondents' on consequence of STIs**

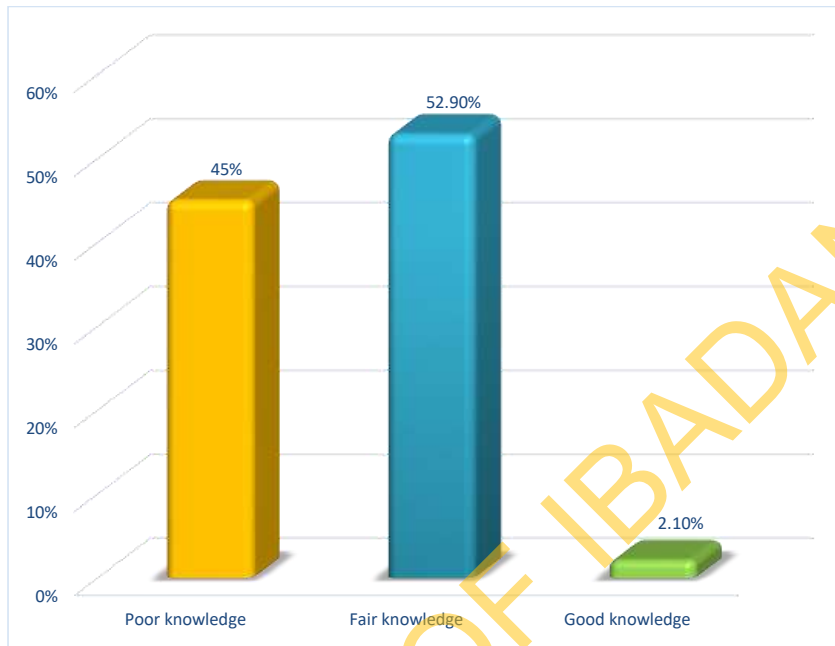
Consequence of STIs	( N = 720)
	No (%)
Death**	186(25.8)
Sickness**	38(5.3)
Transfer to others**	19(2.6)
Cause other diseases**	8(1.1)
Infertility**	24(3.3)
Worsens or deteriorates**	24(3.3)
Stigmatization**	2(0.3)
Don't know*	419(58.2)

\*\* Correct

\*Incorrect

Others were good diet, reduction of boy/girl friends, herb usage and hand washing.

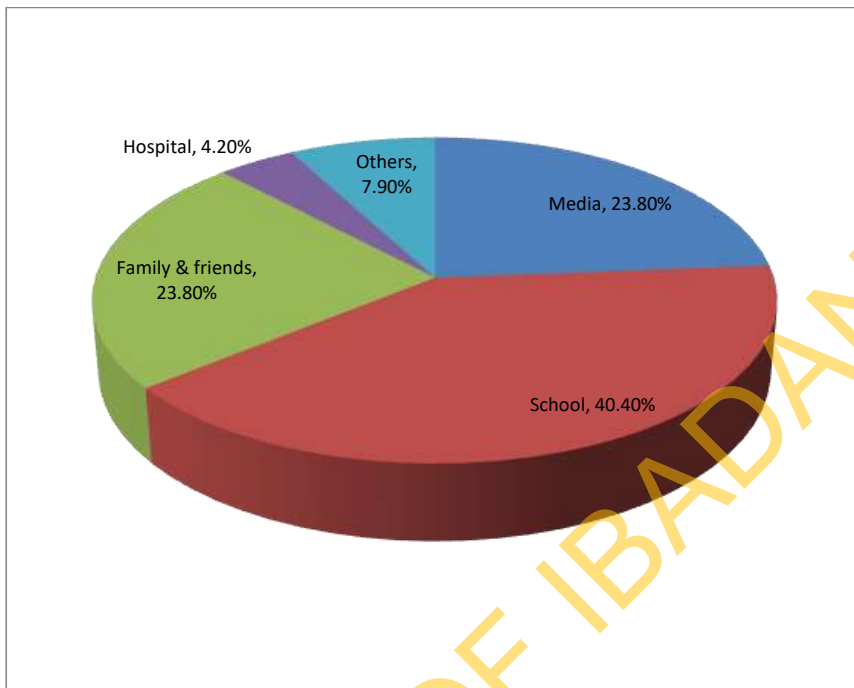
**Note:** @ table 5 is multiple response.



**Figure 2: Knowledge categorization of respondents on STIs**

**Table 6: Comparison of respondents' knowledge levels on STIs to socio-demographics**

	Poor knowledge n(%)	Fair Knowledge n(%)	Good knowledge n(%)
<b>Sex</b>			
Male	62(44)	76(53.9)	3(2.1)
Female	46(46.5)	51(51.5)	2(2)
<b>Age</b>			
10-14	11(47.8)	12(52.2)	0(0)
15-19	51(45.3)	58(51.8)	3(2.7)
20-24	46(43.8)	57(54.3)	2(1.9)
<b>Level of education</b>			
< Secondary education	27(44.3)	33(54.1)	1(1.6)
≥ Secondary education	81(45.3)	94(52.5)	4(2.2)



\*Others included herb sellers, personal experience and PMV.

**Figure 3: Source of respondents' information on STIs**



#### 4.3 Perception of respondents towards STIs

Table 7 shows the various beliefs relating to STIs among respondents. Most of the respondents, 173 (72.1%) disagreed that STI was not a serious infection, 179 (72.1%) disagreed that it was only the wayward that have STI, 133 (55.4%) disagreed that STI was hereditary, 183 (76.3%) believed that STI is caused by witchcraft, 92 (38.3%) considered herbs to be more effective than drugs in treating STIs while 93 (38.8%) believed otherwise. 109 (45.4%) believed that faithfulness to their sexual partners will prevent them from having STIs while 107 believed otherwise. 206 (85.8%) think disagreed that everyone will have STI. 223 (92.9%) perceived STI as a disease that needs urgent treatment. 102 (42.5%) disagreed about being sure of their to persuade their sexual partners to use condom with them in order to avoid STI.

Majority of the participants 204 (85%) had favourable perception and 36 (15%) had unfavourable perception as it pertains to STIs. The overall mean score on perception was  $4.79 \pm 1.23$  out of a maximum of 7. In comparing socio-demographics e.g. age, sex and level of education, most of the respondents had good perception (see details in table 8)

**Table 7: Responses of participants to perception statements on STIs**

Statement	Responses		
	Agree No (%)	Disagree No (%)	Undecided No (%)
I think STI is not a serious infection	55(22.9)	173(72.1)	12(5)
It is only the wayward that have STI	51(22.3)	179(74.6)	10(4.2)
I feel STI is hereditary	81(33.8)	133(55.4)	26(10.8)
STI is caused by witchcraft	39(16.3)	183(55.4)	18(7.5)
I consider herbs to be more effective than drugs in the treatment of STI	92(38.3)	93(38.8)	55(22.9)
Since I am faithful to my partner, I cannot have STI	109(45.4)	107(44.6)	24(10)
I believe everyone will have STI at one point or the other	26(10.8)	206(85.8)	8(3.3)
STI is normal, so it does not have to be treated	9(3.8)	223(92.9)	8(3.3)
I am sure I can easily persuade my sexual partner to use condom to avoid STI	99(41.3)	102(42.5)	39(16.3)

**Table 8: Comparison of respondents' perception towards STIs to socio-demographics**

	Poor perception n(%)	Good perception n(%)
<b>Sex</b>		
Male	19(13.5)	122(86.5)
Female	17(17.2)	82(82.8)
<b>Age</b>		
10-14	5(21.7)	18(78.3)
15-19	18(16.1)	94(83.9)
20-24	13(12.4)	92(87.6)
<b>Level of education</b>		
< Secondary education	10(16.4)	81(83.6)
≥ Secondary education	26(14.5)	153(85.5)

#### 4.4 Experience of STIs among respondents

##### 4.4.1 Sexual behaviour of respondents

Out of 141 males, 114 (80.9%) had girl friends or wives and 67 (67.8%) out of 99 females had boyfriends or husbands. 102 (72.3%) of the males with 46 (46.5%) of the females are sexually active and 70 (68.6%) of the 102 males had more than one sexual partner while 10 (21.7%) of the 46 females had more than one sexual partner. Full detail is shown in table 9 below.

Sexual debut varied based on sex; at less than 10 years; 12 (11.8%) of the boys were sexually active while none of the girls were. Within age 10 – 14 years, there is increased sexuality with 24 (23.5%) boys had had sex while 5 (10.9%) females had had sex. At age 15 – 19 years, there is the highest level of sexual debut with 60 (58.8%) males and 26 (56.5%) females. At age 20 – 24 years, 6 (5.9%) males and 15 (32.6%) females are sexually active (see figure 4 for details). Most of the males 82 (80.4%) had more than one sexual partners while most of the females 25 (54.3%) had one sexual partner ever. Currently, 62 (60.8%) of the males and 5 (10.9%) of the females had more than one sexual partner, 38 (37.3%) males while 41 (89.1%) females had one sexual partner, 2 (2%) males had no sexual partner while 0 female had no sexual partner.

Regularity of sex in a month differs among gender; most of the respondents 69 (67.6%) males and 37 (80.4%) females had sex less than five times while others 24 (23.5%) males and 4 (8.7%) had sex more than five times in a month and 9 (8.8%) males and 5(10.9%) females are too ashamed to say the number of sexual partners they had.

Most of the males 42 (41.2%) use condom always while most of the females 24 (52.7%) do not use condoms during sex. Condom use was more common among males than females; 54 (52.9%) males compared to 18 (39.1%) females (see details in table 10). When scored on the knowledge of correct use of condom, 57 (55.9%) males and 34 (73.9%) females had poor knowledge while 45(44.1%) males and 12(26.1%) females had good knowledge of correct use of knowledge (refer to table 10).

**Table 9: Sexual behaviour of the respondents**

Behaviour	(N=240)	
	Male (n = 141) No (%)	Female (n = 99) No (%)
Boy/girlfriend or husband/wife	114(80.9)	67(67.8)
Ever had sex with him/her	102(72.3)	46(46.5)
	<b>(n=102)</b>	<b>(n=46)</b>
Had other sexual partners	70(68.6)	10(21.7)
<b>Age at first sexual experience</b>		
<10	12(11.8)	0(0)
10-14	24(23.5)	5(10.9)
15-19	60(58.8)	26(56.5)
20-24	6(5.9)	15(32.6)
<b>Sexual partners ever had</b>		
One	20(19.6)	25(54.3)
More than one	82(80.4)	21(45.6)
<b>Sexual partners currently had</b>		
None	2(2.0)	0(0)
One	38(37.3)	41(89.1)
More than one	62(60.8)	5(10.9)
<b>No of times sex was had in the last one month</b>		
<5	69(67.6)	37(80.4)
>5	24(23.5)	4(8.7)
No answer	9(8.8)	5(10.9)
<b>No of times condom was used in the last one month</b>		
None	32(31.4)	24(22.2)
Sometimes	23(22.5)	3(6.5)
Always	42(41.2)	17(37)
No answer	5(4.9)	2(4.3)
<b>Was condom used the last time</b>		
Yes	54(52.9)	18(39.1)
No	48(47.1)	28(60.7)

**Table 10: Respondents' score on condom usage**

Condom use	Male (n = 102)	Female (n = 46)
	No (%)	No (%)
Poor use	57(55.9)	34(73.9)
Correct use	45(44.7)	12(26.1)

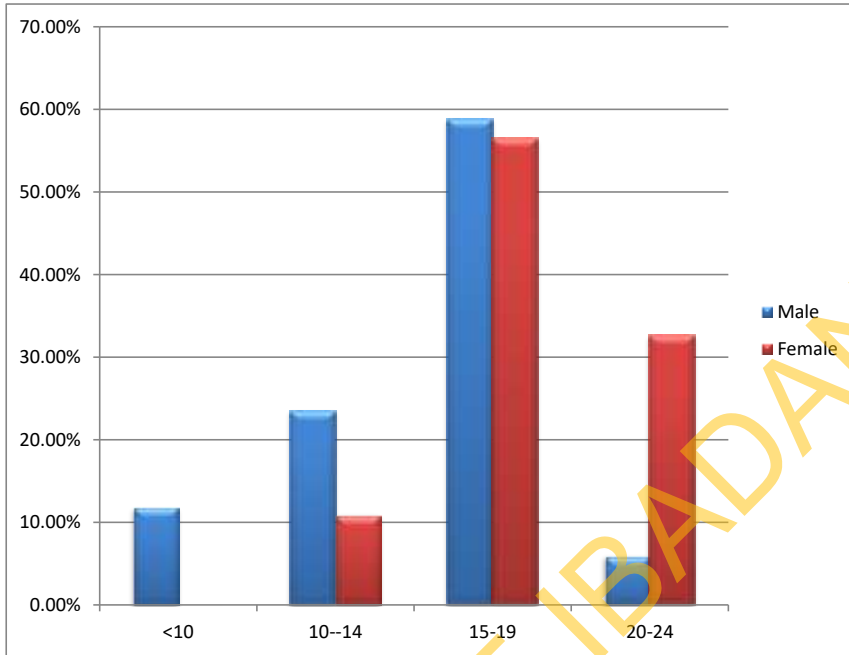


Figure 4: Age at first sex of males as compared to females

#### 4.4.2 STI signs and symptoms experienced by respondents

The STI experience of respondents as compared to the sex is shown in table 11. Based on the signs and symptoms respondents ever experienced; among the males, genital itching was the most common sign and symptom 41 (29.1%), followed by lower abdominal pain 39 (27.7%), pain while urinating 33 (23.4%), urethral discharge 31 (22%), rashes on genital 16 (11.3%), irregular growth or wart on genital area 16 (11.3%) and the least sign and symptom was sores or blisters on the genitals 11 (7.8%). Among the females; vaginal discharge was the most common sign and symptom 35 (35.4%), followed by genital itching 31 (31.3%), lower abdominal pain 25 (25.3%), rashes on genitals 15 (15.2%), pain while urinating 7 (7.1%), irregular growth or wart on genital areas 7 (7.1%) and the least was sores or blisters on the genitals 5 (5.1%).

Based on the signs and symptoms respondents experienced in the last one year; among the males, lower abdominal was the most common sign and symptom 38 (27%), followed by genital itching 37 (26.2%), urethral discharge 29 (20.6%), pain while urinating 27 (19.1%), rashes on genitals 15 (10.6%), irregular growth or wart on the genital area 14 (9.9%) and the least sign and symptom was sores or blisters on the genitals 10 (7.1%). Among the females; vaginal discharge was the most common sign and symptom 33 (33.3%), followed by genital itching 28 (28.3%), lower abdominal pain 23 (23.2%), rashes on genitals 14 (14.1%), pain while urinating 7 (7.1%), irregular growth or wart on genital area 6 (6.1%) and the least was sores or blisters on the genitals 5 (5.1%).



**Table 11: Experience of STI signs and symptoms by respondents**

Signs & Symptoms	(N=240)	
	Male (n = 141)	Female (n = 99)
	No (%)	No (%)
Rashes on genitals	16(11.3)	15(15.2)
Urethral or Vaginal discharge	31(22.0)	35(35.4)
Pain while urinating	33(23.4)	7(7.1)
Lower abdominal pain	39(27.7)	25(25.3)
Irregular growth or wart on genital area	16(11.3)	7(7.1)
Sores or blisters on the genitals on or around the anus or mouth	11(7.8)	5(5.1)
Genital itching	41(29.1)	31(31.3)
<b>STI signs and symptoms experienced in the last one year</b>		
	<b>(n = 141)</b>	<b>(n= 99)</b>
Rashes on genitals	15(10.6)	14(14.1)
Urethral or Vaginal discharge	29(20.6)	33(33.3)
Pain while urinating	27(19.1)	7(7.1)
Lower abdominal pain	38(27.0)	23(23.2)
Irregular growth or wart on genital area	14(9.9)	6(6.1)
Sores or blisters on the genitals on or around the anus or mouth	10(7.1)	5(5.1)
Genital itching	37(26.2)	28(28.3)

#### 4.4.3 Prevalence of STIs among respondents

When respondents were asked about having experienced sign(s) and symptom(s) of STIs; 83 (58.9%) males and 54 (54.5%) females shown one or more STI signs and symptoms not necessarily having a sexual partner while 67 (47.5%) males and 28 (28.3%) females shown STI signs and symptoms had sexual partners. In totality, 95 (39.6%) of the total population had STIs.

In comparing, socio-demographic characteristics to the STI experience of respondents, it is highest in males as 67 (47.5%) males had it, for age, it is most common in 20 – 24 years with 57 (54.3%) experiencing STIs (details in table 12).

**Table 12: Comparison of respondents' STI experience to socio-demographics**

	<u>STI experience</u>	
	<b>Yes (%)</b>	<b>No (%)</b>
<b>Sex</b>		
Male	67(47.5)	74(52.5)
Female	28(28.3)	71(71.7)
<b>Age</b>		
10-14	2(8.7)	21(91.3)
15-19	36(32.1)	76(67.9)
20-24	57(54.3)	48(45.7)
<b>Socioeconomic class</b>		
≤ 2000	47(29)	115(71)
2000-5000	24(55.8)	19(44.2)
≥ 5000	24(68.6)	11(31.4)

#### 4.5 Respondents' health seeking behaviour towards STIs

Out of the 141 males; 83 (58.9%) and 54(54.5%) of the 99 females had experienced one STI sign and symptom or the other. Considering the mode of first treatment respondents sought after, self treatment was the most common among both sexes as 33 (39.8%) males and 28 (51.9%) females practised it (details in figure 5) followed by patent medicine vendor 22 (26.5%) males and 13 (24.1%) females, hospital 15 (18.1%) males and 10 (18.5%) females, and herb sellers were the least patronized as 13 (15.7%) males and 3 (5.6%) females patronized it (see table 13 for details).

The outcome of the first treatment were as follow; 64 (77.1%) males and 38 (70.4%) females were cured totally and the reasons they gave were personal hygiene, effective drug, completed the dose while others believed the sign will go by itself. 14 (16.7%) males and 12 (22.2%) females were partially cured with their reasons being ineffective drug, poor personal hygiene, STI was hard to treat while others do not know. 5(6%) males and 4 (7.4%) females were not cured for reasons such as don't know, STI hard to treat and ineffective drug (see details in table 13).

For second treatment for those that are partially cured or not cured, herb sellers was more predominant among the males and self- treatment was more common among the females (details in table 13)

**Table 13: STI health seeking behaviour of respondents**

	(N=240)	
	Male (n = 141)	Female (n = 99)
	No (%)	No (%)
Those with symptoms of STI	83(58.9)	54(54.5)
	<b>(n = 83)</b>	<b>(n = 54)</b>
<b>Place of 1<sup>st</sup> treatment</b>		
Hospital	15(18.1)	10(18.5)
Self treatment	33(39.8)	28(51.9)
Herb sellers	13(15.7)	3(5.6)
Patent medicine vendors	22(26.5)	13(24.1)
<b>Outcome of 1<sup>st</sup> treatment</b>		
Cured totally	64(77.1)	38(70.4)
Partially cured	14(16.7)	12(22.2)
Not cured	5(6)	4(7.4)
<b>Place of 2<sup>nd</sup> treatment</b>	<b>(n = 19)</b>	<b>(n = 16)</b>
Hospital	1(15.2)	5(31.3)
Self treatment	5(26.3)	6(37.5)
Herb sellers	7(36.8)	3(18.8)
Patent medicine vendors	6(31.6)	2(12.5)

#### **4.5.1 Awareness of respondents' sexual partners about their STI status and their reactions**

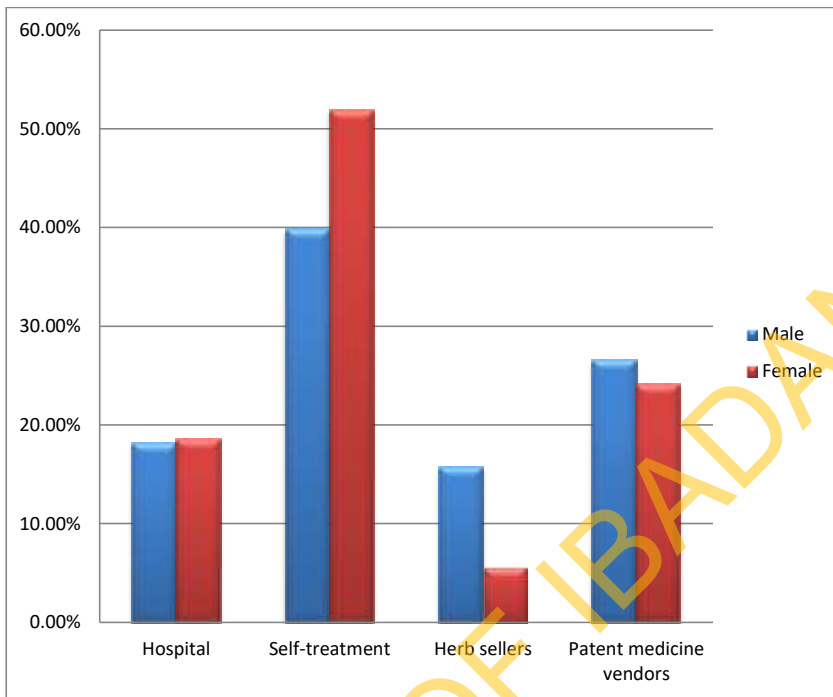
Twenty (29.9%) out of the 67 males that had STI told their sexual partners while 10 (35.7%) out of the 28 females that had STI told their sexual partners.

Those that informed their sexual partners of their status took the following actions; 7(35%) males and 3 (30%) females did nothing, 10 (50%) males and 6 (60%) females helped out in getting treatment for their infected partners and 3 (15%) males and 1 (10%) female also went for treatment (see table 14 for details).

Those that did not inform their sexual partners, the reasons they gave were; not necessary by 27 (57.4%) males and 8 (44.4%) females followed by shame 12 (25.5%) males and 5 (27.8%) females, won't agree for sex or marriage later by 7(15%) males and 2 (11.1%) females and the least was fear by 1 (2.1%) male and 3 (16.7%) females.

**Table 14: Awareness of respondents' sexual partners about their STI status**

	<b>Male</b>	<b>Female</b>
	<b>No (%)</b>	<b>No (%)</b>
<b>Did you tell your sexual partner</b>	<b>(n = 67)</b>	<b>(n = 28)</b>
Yes	20(29.9)	10(35.7)
No	27(70.1)	18(64.3)
<b>If yes, what action did the person take</b>	<b>(n = 20)</b>	<b>(n = 10)</b>
Nothing	7(35)	3(10)
Also went for treatment	3(15)	1(10)
Helped out in seeking for treatment	10(50)	6(60)
<b>If no, why</b>	<b>(n = 47)</b>	<b>(n = 18)</b>
Shame	12(25.5)	5(27.8)
Fear	1(2.1)	3(16.7)
Not necessary	27(57.4)	8(44.4)
Won't agree for sex/marriage later	7(15)	2(11.1)



**Figure 5: Place of first treatment patronized by respondents**



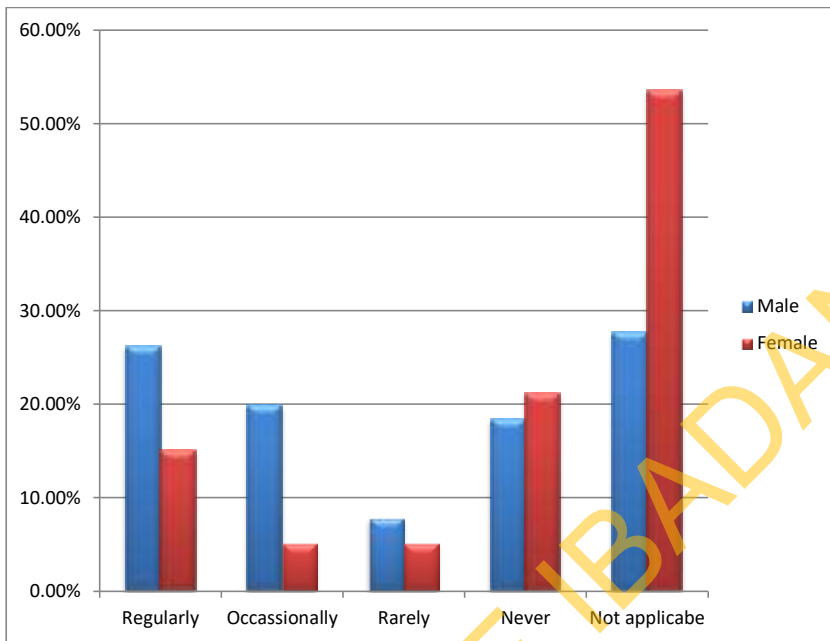
#### 4.6 Factors contributing to STIs among respondents

Table 15 showed the various factors contributing to STIs among participants. Alcohol use was more common among the males than females as 60 (42.6%) males and 14 (14.1%) females were involved in it and the frequency of their intake. Forty (28.4%) males and 5 (5.1%) females said they will accept money or gift in exchange for sex, 94 (66.4%) males and 91 (91.9%) females will not while 7 (5%) males and 3 (3%) females are not sure of what they will do.

Most of the respondents 81 (57.4%) males and 86 (86.7%) females had the will power to say no when asked for sex while 51 (36.2%) males and 13 (13.1%) females do not and 9 (6.4%) males and 0 (0%) females are not sure. More males 70 (49.6%) had more than one sexual partners than females 10 (10.1%). More females 26 (26.3%) had done STI screening before than males 29 (20.6%). Majority of the males and females do not use condoms regularly (see figure 6 for details) and most of the males 68 (44.7%) said that they insist on condom use with their sexual partners while most of the females 62 (62.6%) said that they will not insist on condom use with their sexual partners (see details in table 15).

**Table 15: Factors contributing to STIs in both males and females**

	(N=240)	
	Male (n = 141)	Female (n = 99)
	No (%)	No (%)
<b>Alcohol use</b>		
Yes	60(42.6)	14(14.1)
No	81(57.4)	85(85.9)
<b>Frequency of alcohol intake</b>		
Regularly	24(17)	3(3)
Occasionally	31(22)	10(10.1)
Rarely	5(3.5)	1(1)
Never	81(57.5)	85(85.9)
<b>Acceptance of money or gifts in exchange for sex</b>		
Yes	40(28.4)	5(5.1)
No	94(66.4)	91(91.9)
Don't know	7(5)	3(3)
<b>Will power to say no to sex</b>		
Yes	81(57.4)	86(86.8)
No	51(36.2)	13(13.1)
Don't know	9(6.4)	0(0)
<b>More than one sexual partner</b>		
Yes	70(49.6)	10(10.1)
No	32(22.7)	36(36.4)
No sexual partner	39(27.7)	53(53.5)
<b>Done STI screening before</b>		
Yes	29(20.6)	26(26.3)
No	112(79.4)	73(73.4)
<b>Frequency of condom use</b>		
Regularly	37(26.2)	15(15.1)
Occasionally	28(19.9)	5(5.1)
Rarely	11(7.8)	5(5.1)
Never	65(65.7)	74(74.7)
<b>Insistence of condom use</b>		
Yes	63(44.7)	29(29.3)
No	48(34)	62(62.6)
Don't know	30(21.3)	8(8.1)



**Figure 6: Frequency of condom use among respondents**

#### 4.7 Test of hypothesis

**Hypothesis 1:** There is no significant association between respondents' socio-demographic characteristics (sex, age, level of education) and knowledge of out-of-school adolescents about sexually transmitted infections. The result of the finding is shown in table 16 and it revealed that there were no significant association between sex ( $p = 0.930$ ), age ( $p=0.930$ ), level of education ( $p=0.950$ ) and knowledge towards STIs. The null hypothesis was therefore accepted for sex, age and level of education of respondents.

**Hypothesis 2:** There is no significant association between respondents' sex, age, wealth index and about sexually transmitted infections experiences of out-of-school adolescent. The result is shown in table 17 and it revealed that there was a significant association between sex ( $p = 0.003$ ), age ( $p<0.001$ ), wealth index ( $p<0.001$ ) and respondents' STI experience. This implied that the socio-demographic status of respondents has a significant influence on STI experiences of respondents. Therefore, the null hypothesis was rejected for sex, age and wealth index of respondents.

**Hypothesis 3:** There is no significant association between respondents' sex and health seeking behaviour of out-of-school adolescents with sexually transmitted infections. The result as shown in table 18 revealed that there was no significant association between sex ( $p = 0.260$ ) and respondents' STI health seeking behaviour. This implied that the socio-demographic status of respondents has no significant influence on STI health seeking behaviour of respondents. So, the null hypothesis was accepted for sex, age and wealth index of respondents.

**Hypothesis 4:** There is no significant association between factors associated with STIs (alcohol use, money or gift in exchange for sex, will power to say no to sex, more than one sexual partner, STI screening and insistence on condom use) and their experience of STIs. The result showed the association between the aforementioned factors and their effects on respondents' sexual experience. However, there were significant association between alcohol use ( $p< 0.001$ ), acceptance of money/ gift in exchange for sex ( $p <0.001$ ), will power to say no to sex ( $p<0.001$ ), more than one sexual partner ( $p <0.000$ ), insistence on condom use ( $0.004$ ) and respondents' STIs experience while there was no significant association between respondents' STI

screening status ( $p = 0.784$ ) and their STI experiences. Therefore, the null hypothesis was rejected for all the variables above except for STI screening (details in table 20).

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**Table 16: Association between respondents' socio-demographics and level of knowledge**

	<u>Level of knowledge</u>			X <sup>2</sup> value	df	p value	Null hypothesis
	Poor	Fair	Good				
<b>Sex</b>							
Male	62	76	3	0.146	2	0.93	Accepted
Female	46	51	2				
<b>Age</b>							
10-14	11	12	0	0.833	4	0.93	Accepted
15-19	51	58	3				
20-24	46	57	2				
<b>Level of education</b>							
< Secondary	27	33	1	0.109	2	0.95	Accepted
≥ Secondary	81	94	4				

**Table 17: Association between respondents' sex, age, wealth-index and STI experiences**

	<u>STI experience</u>		X <sup>2</sup> value	df	p value	Null hypothesis
	Yes	No				
<b>Sex</b>						
Male	67	74	0.998	1	*0.003	Rejected
Female	28	71				
<b>Age</b>						
10-14	2	21	21.259	2	*0.000	Rejected
15-19	36	76				
20-24	57	48				
<b>Wealth index</b>						
≤ 2000	47	115	24.604	2	*0.000	Rejected
2000-5000	24	19				
≥ 5000	24	11				

\*Statistically significant

**Table 18: Relationship between respondents' sex and health seeking behaviours**

	<u>Health seeking behaviour</u>				X <sup>2</sup> value	df	p value	Null hypothesis
	Hospital treatment	Self	Herb sellers	PMV				
<b>Sex</b>								
Male	15	33	13	22	4.015	3	0.260	Accepted
Female	10	28	3	13				



**Table 19: Association between factors associated with STIs and STIs experience**

Factors	<u>STI experience</u>		X <sup>2</sup> value	df	p value	Null hypothesis
	Yes	No				
<b>Alcohol use</b>						
Yes	50	24	35.034	1	*0.000	Rejected
No	45	121				
<b>Money or gift in exchange for sex</b>						
Yes	52	16	20.075	2	*0.000	Rejected
No	59	126				
Don't know	7	3				
<b>Will power to say no to sex</b>						
Yes	52	115	16.634	2	*0.000	Rejected
No	37	27				
Don't know	6	3				
<b>More than one sexual partner</b>						
Yes	44	17	36.230	1	*0.000	Rejected
No	51	128				
<b>STI screening</b>						
Yes	23	32	1.49	1	0.754	Accepted
No	72	113				
<b>Insistence on condom use</b>						
Yes	44	48	11.298	1	*0.004	Rejected
No	31	79				
Don't know	20	18				

\*Statistically significant

## CHAPTER FIVE

### DISCUSSION, CONCLUSION AND RECOMMENDATIONS

This study investigated the knowledge, experience and health seeking behaviour about sexually transmitted infections among out-of-school adolescents in Ibadan North West Local Government. This chapter explains the results provided in the chapter four. The demographic characteristics of the respondents, their knowledge about STIs, perception about STIs, STIs experiences and factors predisposing them to STIs were explored. Implication of the findings of this study to health promotion and education was also discussed and recommendations were made at the end of this report.

The major findings of the research were as follow:

1. Low knowledge level of respondents
2. Early sexual debut of respondents
3. Low contraceptive use among respondents
4. High prevalence of STIs amongst respondents
5. Poor health seeking behaviour of respondents

#### 5.1 Respondents' knowledge about sexually transmitted infections

Almost half of the respondents 45% had poor knowledge and the overall mean score on knowledge was  $4.93 \pm 2.18$  out of a maximum of 14 this could be attributable to the low level of knowledge as almost all of the respondents 88.7% had secondary school or less than that, this contributes to the fact of their low knowledge level on STIs. This could be because some of them do not finish secondary school or even while at school sexual education was not part of the curriculum. This is in support of the study conducted by Adebowale et al., (2013) in all the geopolitical zones in Nigeria affirmed that having higher education inhibits contracting STIs than those with no formal education. This implies that the knowledge level of the respondents is so low; this contradicts the findings of Fisseha et al., (2015) in Ethiopia in which 40.4% of the respondents have poor knowledge. This could be owing to the fact that there is a better education system in Ethiopia than the one obtainable in Nigeria.

The most common source of information about STIs was school 40.4% while from the research carried out by Ntia et al., (2015) in South south, media 55.7% was found out to be the most popular source of information about STIs. Peradventure, out-of-school adolescents in the South south have better access to internet due to higher socioeconomic class than South west. It was found statistically that there is no association between level of education of father and knowledge level of the respondents on STIs with  $p=0.950$ , this is opposite of the research made by Atere et al., (2010) in Lagos, South west that showed that the relationship between educational qualifications and knowledge about STIs is noteworthy, this disparity cannot be explained.

Based on knowledge on STI; majority of the respondents 50.4% had partial knowledge on the definition of STI, if they cannot give correct definition of STIs, how are expected to know the signs and symptoms, types of STIs and how best they can prevent themselves against. On knowledge on type of STI known, HIV appeared to be the most common STI known with 26.4% respondents mentioned it while they barely know other STIs; this is similar with the work of Ikeako et al (2014) in Enugu, South east that affirmed HIV/AIDS as the most common STI known among respondents. This could be because since the inception of NACA, they have so much reinforced the awareness of HIV/AIDS such that everyone in the country knows what HIV/AIDS is. On the knowledge on prevention of STI; most of the respondents 20.1% knew condom use, while others mentioned abstinence, faithfulness and prayer. When compared to Fisseha (2015) research in Ethiopia, faithfulness was reported as the most common prevention method known. The reason for this difference could be that out of school adolescents may not be sexually active as those in Nigeria. On the knowledge of consequence of STIs; most of the respondents 25.8% recognized death as the main consequence of STIs, Nwabueze et al (2014) in southeast also had similar result.

Furthermore, it is found that there is a significant association between knowledge and experience of STIs among respondents with  $p=0.044$ . Since they do not have adequate knowledge on STIs definition, types, symptomatology, consequence and prevention; the out-of-school adolescents are more susceptible to STIs and they are incapacitated on how to manage themselves when they contract STIs.

## **5.2 Sexual debut of respondents**

Sexual debut is early, < 10 years for males and 10 -14 years for females. This revealed that there is early sexual debut amongst the respondents especially the males and there is predominance of premarital sex among them, this is supported by Ikeako et al., (2014) in South east that identified the predominance of premarital sex among adolescents. This is also similar to Envulado et al., (2013) in Plateau state; North central that there is high rate of sexual debut among adolescents. This suggests that the sexual activity of out-of-school adolescents in the three geopolitical zones is similar.

## **5.3 Contraceptive use among respondents**

Contraceptive use among respondents is quite low. Some of the sexually active males 52.9% use condom while most of the females 52.7% do not use condoms during sex. This implies that most of the adolescents do not embrace the use of contraception. This is comparable to the work done by Ikeako et al., (2014) in South east which revealed that there is non-use of condoms 62% among respondents. This shows that out of school adolescents both in the east and west do not enjoy condom usage during sex. Even among those that use condoms, there is high inconsistency rate in their usage. For example, 41.2% males and 37% females use condoms regularly, 22.5% males and 6.5% females use condoms, even those that use condoms, most of the respondents' 55.9% males and 73.9% do not know the correct use of condom whilst they have more than one sexual partner. Mostly, non-use and incorrect use of condoms is a main predisposing factor to them having STIs.

## **5.4 Prevalence of sexually transmitted infections among respondents**

The prevalence of STIs is almost 40% in the total population; this doubled the prevalence of the research carried out by Adebawale et al., (2013) which was 17%. Though when compared to the findings of Nwabueze et al., (2014) in South east that has the prevalence of 48.8%, it is quite similar while reports from National Population Commission (2014) bare much lesser prevalence. For instance, based on their report, Nigeria has a STI prevalence of 6% and Oyo state has a prevalence rate of 1.3%. This suggests that there is a growing incidence of STIs among our adolescents. Socio-

demographic characteristics like sex ( $p = 0.003$ ), age ( $p < 0.001$ ) and wealth index ( $p < 0.001$ ) had a significant influence on respondents' STI experience. This implied that males are more liable to have STIs than females, STI is most prevalent among the age range 20 – 24 years and this supports the report from Child's Trend Data Bank (2015) that revealed that approximately half of the new STI cases that occur each year are acquired by individuals between 15 and 24 years of age, even though they represent only one-quarter of the sexually active population.

### **5.5 Health seeking behaviour of respondents**

The health seeking behaviour of respondents is poor as self treatment was the most common among both sexes as 39.8% males and 51.9% females practiced it, this implied most of these adolescents prefer to handle their STI cases themselves rather going public seeking for treatment. This result differs from the result of Atere et al., (2010) in South west that stated that majority of the out-of-school youths with inadequate income preferred medicine hawkers followed by traditional healer and self-medication. Males prefer to seek treatment from herb sellers than females and this is comparable to the work done by Kadiri et al., (2014) in South west which showed that male informants prefer the use of herbal drugs, the female informants prefer orthodox self-medication. There is also no significant association between sex ( $p = 0.260$ ) and respondents' STI health seeking behaviour this is dissimilar to the findings of Otvombe et al., (2015) in Ethiopia which revealed that a significantly higher proportion of females desired general healthcare services (85% vs. 78%;  $p = 0.0091$ ), counselling (82% vs. 70%;  $p = 0.0001$ ), and reproductive health services (64% vs. 56%;  $p = 0.02$ ). The reason for the difference in the out-of-school adolescents' preference of health seeking behaviour could be that those in Ethiopia are more open discussing their sexuality than those in Nigeria. Also, another key factor militating the adolescents from seeking appropriate health as it regards STIs is low income. Wealth quintile among respondents is quite low as most of the respondents 67.5% earn below 2000 weekly, this is owing to the fact that the respondents are apprentice and they do not earn money from their masters. This is comparable to the result of Raheem et al; (2014) in South west that affirmed that poverty incidence is 69%.

### **5.6 Implication for health promotion and education**

Education of the out-of-school adolescents on STIs, this will effectively address the challenge of low knowledge on STIs. This education should cover knowledge definition, types, presentation of various STIs, prevention and consequence of STIs. This can be done in two levels; firstly, education to masters; this entails health educators to first train the masters of various apprentice groups on STIs wherein they will in turn teach their apprentice, this will be easy so far all the respondents belonged to one apprentice group or the other. Secondly, peer education among the apprentice; like the saying goes that birds of a kind flock together, using this medium will cause faster spread of knowledge as one apprentice can cover others who are within his/her sphere of influence regardless of the apprentice group the adolescent belongs. Also, this will bring better conduct as it concerns sexual health because it is so easy for the adolescents to open up to one another than to open up to their masters due to shame and stigmatization. The masters and the peer educators need a didactic training so as to efficiently educate their apprentice and colleagues. The trainers will be community health officers of the local government, the trainees are the masters and the apprentices, the monitoring and evaluation officers will be the state ministry of health staffs. This research will serve as needs assessment as it will provide the baseline information for the training. The training approach will be andragogical for the masters and the combination of both andragogical and pedagogical for the peer educators. Andragogical approach is the art and science of teaching of adults while pedagogical is the art and science of teaching children.

In addition, adolescents at the pre-teen (<10) and early teens (10 - 14) most especially the males should be targeted and taught sexual education. Catch them young is the slogan for this stage, and educators that can effectively handle them are their parents. They should be taught abstinence at this stage and for those of them that cannot practice abstinence should be taught on correct use of condoms in order to protect themselves from STIs. Also health educators which are the community health officers should teach parents on better ways to encourage their teenagers to talk more on sexuality, they should not judge them but they should encourage them in love even if they are involved in many risky behaviours.

To reduce the burden of STIs among the out of school adolescents, advocacy should be done on behalf of the adolescents to the local government especially the medical officer and the chairman of the local government, there should be health care made available for them at all the primary health care centres in the local government especially on sexual health. Advocacy involves fighting for the right of an underprivileged from a higher authority. The masters can advocate on behalf of their apprentices. In addition, routine screening accompanied with patients' education and counselling should be done on the adolescents for a fixed period of time say biannually where in all the adolescents will be screened for several STIs especially the common ones like HIV, gonorrhoea, syphilis, and staphylococcus. This is important so as to increase their knowledge on STIs and so as to prevent further occurrence of the disease.

Social marketing should be done to promote the usage of condoms among out of school adolescents. Social marketing is a borrowed tool in education that is used in promotion and utilization of a product. It involves five basic principles called 5Ps which are product, price, place, promotion and person. The most common and affordable condom is gold circle brand that sells for around fifty naira, while durex and rough rider sells for about three hundred naira. Although gold circle which is produced by Society of Family Health (SFH) sells for about fifty naira, SFH released the advert on "who get this rain coat" in 1994, this advert was sponsored by USAID and then there was increase in the patronage of Gold circle condoms (USAID; 2014). Such advert should be redesigned and made, though the price of the condom is fair; if it is possible that it can be distributed fairly on a regular basis. Also the place of sale should be secretive as most adolescents do not like people seeing them when they purchase stuffs that pertain to sexuality. Also at the point of sales, young people with amiable characters should be involved both as sellers and marketers.

Furthermore, the staffs of primary health care centres need training on how to attend and manage these adolescents in order to improve their sexual health. They should be trained not to judge them when they open up that they had contracted STIs and they come seeking for treatment. Also persuade the state ministry of health to open an adolescent clinic in at least one of the primary health care centres in the local government and ensure that majority of the health workers are young or adults that are

young at heart. This will promote better health seeking behaviour among the out-of-school adolescents.

Also, for all these aforementioned recommendations to be carried out successfully there is the need of an expert most likely a public health consultant who will first of all train the local government's front line health workers so that they can effectively manage the sexual health challenges of the out-of-school adolescents especially as it regards STIs.

### **5.7 Conclusion**

Generally, humans do not take diseases serious until they perceive themselves susceptible to it (Polit et al., 2010) especially the adolescents probably due to their strength and vigour. STIs though seem easy to manage can become deadly when it is not promptly treated. This study revealed that out-of-school adolescents knowledge on STIs was poor, there is a high prevalence of STIs among the respondents, there is also poor health seeking behaviour as most of them indulge in self treatment for they believe that then they experience STI signs and symptoms, it should disappear without treatment and due to their lack of knowledge of how best to treat it, and early sexual debut of adolescents especially the males.

### **5.8 Recommendation**

In view of the findings of this study, the following recommendations are made:

1. Training sections and campaigns that will increase the level of knowledge of the adolescents on STIs should be embarked upon by health promoters
2. There should be contraceptive campaign especially abstinence for those that delay sex until marriage and condom use for those that cannot afford not to have sex among these adolescents so as to prevent themselves effectively from STIs
3. There should be step-down training of the masters who will in turn train their apprentice on sexual health and sexually transmitted infections



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**APPENDIX I**

**QUESTIONNAIRE**

**KNOWLEDGE, EXPERIENCE, AND HEALTH SEEKING BEHAVIOURS ABOUT SEXUALLY TRANSMITTED INFECTIONS AMONG OUT-OF-SCHOOL ADOLESCENTS IN IBADAN NORTH WEST LOCAL GOVERNMENT**

Greetings. My name is Ogunkoya Abiola. I am a post graduate student of Health Promotion and Education Department, Faculty of Public Health, College of Medicine, University of Ibadan. Presently, I am undertaking a research work on the above topic which centres on the out-of-school adolescents knowledge, experience and health seeking behaviour about Sexually Transmitted Infections (STIs). Your sincere response is encouraged as participation in this study is voluntary, absolute anonymity and confidentiality shall be maintained. There is no right or wrong answers and the information provided will only be used for the research purpose.

Serial Number \_\_\_\_\_ Location of Interview \_\_\_\_\_

Name of Interviewer \_\_\_\_\_ Date of Interview \_\_\_\_\_

**SECTION A: SOCIODEMOGRAPHIC DATA**

NOTE: Please tick as appropriate [√] in the appropriate boxes.

1. Sex 1. Male [ ] 2. Female [ ]
2. How old were you as at last birthday: .....
- 3 To what group of apprentice do you belong 1. Hairdresser [ ] 2. Barber [ ] 3. Trader [ ] 4. Tailor [ ] 5. Mechanics [ ] 6. Others (specify).....
4. Highest level of education: 1. No formal education [ ] 2. Primary education [ ]  
3. Secondary education [ ] 4. Tertiary education [ ]
5. Marital Status: 1. Single [ ] 2. Married [ ] 3. Divorced [ ] 4. Widowed [ ] 5. Living with boy/girlfriend [ ]
6. Ethnic group: 1. Yoruba [ ] 2. Hausa [ ] 3. Igbo [ ] 4. Others (specify).....

7. Religion: 1.Christianity [ ] 2. Islam [ ] 3. Traditional 4. Others ( specify).....

8. What is your estimated income on weekly basis.....

**SECTION B: EXPERIENCE ON STIs**

9. Which of these signs and symptoms of STIs have you ever experienced or experienced in the last one year?

SN	Signs and Symptoms	Ever experienced		Last one year	
		Yes	No	Yes	No
a	Rashes on genitals				
b	Urethral or Vaginal discharge				
c	Pain while urinating				
d	Lower abdominal pain				
e	Irregular growth or warts in genital area				
f	Sores or blisters on the genitals, on or around the anus, or mouth				
g	Genital itching				
h	Others specify .....				

10. Do you have a boy/girlfriend or husband/ wife 1. Yes [ ] 2. No [ ]

11. Have you ever had sex with him/ her 1.Yes [ ] 2. No [ ]

12. Do you have other sexual partner(s) asides him/her 1.Yes [ ] 2. No [ ]

13. At what age did you have you first sexual intercourse .....

14. How many sexual partners have you ever had? .....(actual number)

15. How many sexual partners do you currently have? ..... (actual number)

16. How often do you have sex in a month? .....

16b. How many times of such sexual encounters did you use Condom?.....

17. The last time you had sex, did you use a condom? 1.Yes [ ] 2. No [ ]

18. List the steps on how to use condoms correctly

a	
b	
c	

**SECTION C: HEALTH SEEKING BEHAVIOUR**

19. The last time you experienced either itching, genital discharge, painful urination, rashes on genitals or lower abdominal pain where did you go for treatment?

1.Hospital [ ] 2. Self-treatment [ ] 3.Herb sellers [ ] 4. Patent Medicine Vendor (PMV) [ ] 5.Others .....

19b.What was the outcome of the treatment? 1. Cured totally [ ] 2. Partially cured [ ] 3. Not cured [ ]

19c. What was the reason for the outcome of the cure.....

20.If Partially cured or not cured in the first place you went, where did you go for treatment as a second step? 1.Hospital [ ] 2. Self-treatment [ ] 3.Herb sellers [ ] 4. PMV [ ] 5.Others.....

21. Did you tell your sexual partner when you had these symptoms 1. Yes [ ] 2. No [ ] 21b. If yes, what action did the person take .....

21c. If no, why? .....

**SECTION C: KNOWLEDGE ON STIs**

22.What is sexually transmitted infections.....  
.....

23. Where did you get your information about STIs.....



24. Name the STIs that you know with its signs and symptoms?

SN	STI	Signs and symptoms
a		
b		
c		

25. Mention things that can be done to avoid contracting STIs

a	
b	
c	

26. What are the consequences of STIs if not treated promptly?

a	
b	
c	

#### SECTION D: PERCEPTION TOWARDS STIs

No	Perception Statement	Agree	Disagree	Undecided
27	I think STI is not a serious infection			
28	It is only the wayward that contract STI			
29	I feel STI is hereditary			
30	STI is caused by witchcraft			
31	I consider herbs to be more effective than drugs in the treatment of STI			
32	Since I am faithful to my partner, I cannot have STI			
33	I believe everyone will have STI at one point or the other			
34	STI is normal, so it does not have to be treated			
35	I am sure I can easily persuade my sexual partner to use condom to avoid STI			

**SECTION D: FACTORS CONTRIBUTING TO STIs**

37. Do you take alcohol 1. Yes [ ] 2. No [ ]

38. How often do you take it 1. Regularly [ ] 2. Occasionally [ ] 3. Rarely [ ] 4. Never [ ]

39. If you are offered money or gift in exchange for sex, would you accept 1. Yes [ ] 2. [ ]

3. Don't know [ ]

40. Do you have the will power to say no when you are asked for sex 1. Yes [ ] 2. [ ] 3. Don't know [ ]

41. Do you have more than one sexual partner 1. Yes [ ] 2. No [ ]

42. Have you ever gone for STI screening before 1. Yes [ ] 2. No [ ]

43. How often do you use condom 1. Regularly [ ] 2. Occasionally [ ] 3. Rarely [ ] 4. Never [ ]

44. Will you insist on constant use of condom with your sexual partner(s) 1. Yes [ ] 2. No [ ] 3. Don't know [ ]

Thank you for your response.

## APPENDIX II

### IWE IBEERE

#### IMO, IRIRI ATI ONA TI AWON ODO TI KO SI NI ILE IWE N GBA TOJU ARUN IBALOPO NI IBADAN NORTHWEST LOCAL GOVERNMENT

Ikini, Ogunkoya Abiola ni oruko mi, mo je akeko agbati Health Promotion and Education Department, Faculty of Public Health, College of Medicine, University of Ibadan. Lowolowo, monse iwadi lo riimo, iriri ati ona tia won odolangba n gba toju arun ibalopo. Iwadi yi ki se fun ilodi si eniken. Gbogbo ohun tieba so yio wani arinwa fun idieyi agba yin niyanju lati so otito lati towa sona lori iwadi yi.

Nomba idanimo \_\_\_\_\_ Gbongan iforowanilenuwo \_\_\_\_\_  
Oruko oluforowanilenuwo \_\_\_\_\_ Ojo ti ase iforowanilenuwo \_\_\_\_\_

#### IPA A: AWON NKAN IDANIMO NIPA YIN

Fala si eyi ti oba omu

1. 1. Ako [ ] 2. Abo [ ]
2. Ojo ori woni epekeyin .....
3. Egbe ikose woni ewa 1. Aserunloge [ ] 2. Gerigeri [ ] 3. Onisowo [ ] 4. Aranso [ ] 5. Atokose 6. Iseomiran [ ]
4. Imo eko yin tio gajulo 1. Nko lo ile iwe rara [ ] 2. Ile eko alakobeere [ ]  
3. Ileeko girama [ ] 4. Ile ekogiga [ ]
5. Ipo igbeyawo 1. Nkoti gbe iyawo [ ] 2. Moti gbe iyawo [ ] 3. Mo tigbe iyawo ri [ ]  
4. Opo [ ] 5. Mo n gbepo pelu ololufe mi [ ]
6. Eya wo niyin 1. Yoruba [ ] 2. Hausa [ ] 3. Igbo [ ] 4. Eya miran [ ]
7. Esin wo ni e n se 1. Kristeni [ ] 2. Musulumi [ ] 3. Abalaye [ ] 4. Esinmiran [ ]
8. Oto elo ti ema npa lose \_\_\_\_\_

**IPA B: IRIRI MI LORI ARUN IBALOPO**

9. Ewo ninu ami ati apeere ibalopo wonyi ni ose yin ri tabi ti ose yin ni iwon odun kan seyin

SN	Ami ati apeere	O se mi ri		Ni iwon odun kan seyin	
		Beeni	Beeko	Beeni	Beeko
a	Sisu oju ara				
b	Itutu oju ara tabi oju ato				
c	Irora nigba ti aba nto				
d	Ki isale inu ma ro yan				
e	Ewo adamodi ni oju ara				
f	Ogbe tabi egbo ni oju ara tabi ninu iho idi tabi lenu				
g	Ki oju ara ma yun yan				
h	Omiran (so ni pato).....				

10. Se eni ololufe tabi oko tabi iyawo 1. Beeni [ ] 2. Beeko [ ]
11. Ti oba je be, se eti jo se ere ife ri 1. Beeni [ ] 2. Beeko [ ]
12. Se eni olubalopo miran 1. Beeni [ ] 2. Beeko [ ]
13. Ki ni ojo ori yin nigba ti e koko ni ibalopo .....
14. Bi eniyan melo ni eti bani ibasepo ri?.....
15. Ololufe melo ni eni lowolowo? .....
16. Bi igba melo ni ema n sere ife ninu osu kan? .....
- 16b. Bi igba melo leti lo ora idabobo laarin asiko te se ere ife yi.....
17. Nje elo ora idabobo nigba keyin ti e se ere ife 1. Beeni [ ] 2. Beeko [ ]

18. Salaye igbese bi ase n lo ora idabobo ni ona ti oto

a	
b	
c	

**IPA C: WIWA ITOJU FUN ARUN IBALOPO**

19. Nigba ti eni arun ibalopo gbeyin nibo ni elo fun itoju 1. Ile iwosan [ ] 2. Mo se itoju ara mi [ ] 3. Alagbo [ ] 4. Ile ita ogun [ ] 5. Ibi miran .....

19b. Kini e babo; 1. Itoju ti opeye [ ] 2. Itoju ti ko peye [ ] 3. Airi itoju [ ]

19c. Kini idi re ti ofi ribe .....

20. Nibo ni eti wa pada ri itoju ti opeye nigba ti ibi ti ekoko lo kuna 1. Ile iwosan [ ] 2. Mo se itoju ara mi [ ] 3. Alagbo [ ] 4. Ile ita ogun [ ] 5. Ibi miran .....

21. Nibo ni eti wa pada ri itoju ti opeye nigba ti ibi ti e lo se keji kuna .....

22. Se obun lolufe re gbo nigbati nigba ti oni arun ibalopo 1. Beeni [ ] 2. Beeko [ ]

22b. Ki ni igbese ti ogbe nigba to so fun.....

22c. Ti oko ba so fun, ki ni idi re .....

**IPA D: IMO LORI ARUN IBALOPO**

23. Kini ero pe arun ibalopo je .....

24. Ni bo leti gbo nipa arun ibalopo .....

25. Daruko awon arun ibalopo to mo pelu ami ati ifarahan won

SN	Arun ibalopo	Ami ati ifarahan
a		
b		
c		

26. So ona ti ale gba lati ma ko arun ibalopo

a	
b	
c	

27. Ki ni atunbotan arun ibalopo

a	
b	
c	

**IPA E: ERO YIN LORI ARUN IBALOPO**

S/N	Ero	Mo gba	Mi o gba	Nko mo
28	Mo lero pe arun ibalopo ki se arun to buru jai			
29	Awon oniranu nikan ni o ma nko arun ibalopo			
30	Mo lero pe arun ajogunba ni arun ibalopo			
31	Aye le fa ki eniyan ni arun ibalopo			
32	Egbogi lole se itoju arun ibalopo julo			
33	Nko le ni arun ibalopo tori mo je olooto si ololufe mi			
34	Mo gbagbo pe enikeni lole ni arun ibalopo nigbakugba			
35	Arun ibalopo ko nilo itoju ni toripe arun gbajumo ni			
36	Lati le pa ara mi mo kuro lowo arun ibalopo, mo ni idaniloju pe mo le so fun ololufe mi lati lo ora idabobo			

**IPA F: AWON OHUN TI ON SE OKUNFA ARUN IBALOPO**

37. Se ema n se faaji pelu oti lile 1. Beeni [ ] 2. Beeko [ ]
38. Ti oba je beeni, se 1. Ni gbogbo igba ni [ ], 2. Ni ekan kan [ ] tabi 3. Ose owon [ ] 4. Lai lai [ ]
39. Se ele gba owo tabi ebun lati ni ibalopo 1. Beeni [ ] 2. Beeko [ ]
40. Se eni okan idale lati lati ko si ololufe yin lenu to ba beere fun ibalopo 1. Beeni [ ] 2. Beeko [ ]
41. Se eni ju olubalopo kan lo 1. Beeni [ ] 2. Beeko [ ]
42. Nje eti se ayewo ri fun arun ibalopo ri 1. Beeni [ ] 2. Beeko [ ]
43. Bawo ni ese nlo ora idabobo ti eba fe sere ife 1. Ni gbogbo igba ni [ ], 2. Ni ekan kan [ ] tabi 3. Ose owon [ ] 4. Lai lai [ ]
44. Nje ele kan nipa fun ololufe yin tabi awon ololufe yin lati lo ora idabobo pelu yin 1. Beeni [ ] 2. Beeko [ ] 3. Nko mo [ ]

Ese pupo fun awon idahun yin wonyi.






APPENDIX IV

ETHICAL APPROVAL

TELEGRAMS..... TELEPHONE.....



**MINISTRY OF HEALTH**  
DEPARTMENT OF PLANNING, RESEARCH & STATISTICS DIVISION  
PRIVATE MAIL BAG NO. 5077, OYO STATE OF NIGERIA

Your Ref. No. ....  
All communications should be addressed to  
the Honorable Commissioner quoting  
Our Ref. No. AD 13/479/E/11

July, 2015


The Principal Investigator,  
Department of Health Promotion and Education,  
Faculty of Public Health,  
University of Ibadan,  
Ibadan.

**Attention:Ogunkoya Abiola**

**ETHICAL APPROVAL FOR THE IMPLEMENTATION  
OF YOUR RESEARCH PROPOSAL IN OYO STATE**

This is to acknowledge that your Research Proposal titled, "Knowledge, Experience and Health Seeking Behaviour about Sexually Transmitted Infections among Out-of- School Adolescents in Ibadan North West Local Government." has been reviewed by the Oyo state Review Ethical Committee.

2. The committee has noted your compliance. In the light of this, I am pleased to convey to you the full approval by the committee for the implementation of the Research Proposal in Oyo State, Nigeria.
3. Please note that the National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations, in line with this, the Committee will monitor closely and follow up the implementation of the research study. However, the Ministry of Health would like to have a copy of the results and conclusions of findings as this will help in policy making in the health sector.
4. Do your best and all the best.



Sola Akande (Dr)  
Director, Planning, Research & Statistics  
Secretary, Oyo State, Research Ethical Review Committee