PERCEPTION AND OUTCOME OF ABORTION AMONG FEMALE STUDENTS OF FEDERAL POLYTECHNIC, EDE, OSUN STATE, NIGERIA

BY

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ABSTRACT

Abortion can be defined as the termination of pregnancy by the expulsion of a foetus or embryo from the uterus. Abortion can occur spontaneously due to complications during pregnancy or can be induced. It is most commonly refers to the induced abortion of a human pregnancy, while spontaneous abortions are usually termed miscarriages. According to the WHO, 19 out of 20 unsafe abortions are carried out in developing countries and common among young women. Of the women obtaining abortion, 85% were younger than 25 years. Therefore, this study was designed to investigate the perception and outcome of abortion among female students of Federal Polytechnic, Ede, Osun State, Nigeria.

This study was a descriptive cross-sectional survey involving the use of three stage sampling technique to select 426 female students of Federal polytechnic, Ede. Quantitative data were collected using validated semi-structured self-administered questionnaire. A 60-point Knowledge scores: ≤ 24, >24 – 41 and > 41 were categorised as poor, fair and good respectively. A 20-point Perception scale with score < 10 and ≥ 10 was categorised as negative and positive perception, respectively. Qualitative data were collected using an In-depth interview (IDI) guide from 22 consented participants identified to have experienced abortion from the questionnaire to explore their perception and experience on abortion and its potential consequences. Quantitative data were analysed using descriptive and inferential statistics and $p<0.05$ as level of significance while Qualitative data were also analysed thematically.

Age of the respondents was 21.5 ± 3.0 years. More than half (52.6%) of the respondents had good knowledge, while fair and poor knowledge were 46.0% and 1.4%, respectively. Majority (89.4%) of the respondents had heard of family planning methods but the uptake was low as only one of them used pills. Excerpts from the interview of one of the participants stating reasons for non-adoption of any family planning method; *not seen any reason to do it, nothing is pursuing me'*. Most of the respondents performed abortion because they were not ready and couldn't keep the pregnancy. One of the respondents said '*Because I am not willing to have it. I don't know that it will lead to pregnancy because it is my first experience of having sex intercourse.* More than half (57.5%) of the respondents had positive perception while 57.5% experienced complications as outcome of abortion. Less than half (43.9%) have had sexual experience with 13.4% being pregnant before. The experience/prevalence of abortion among

respondents was 9.6% and 77.5% of them were performed by professionals. There was a significant association between perception and contributing factor to termination of pregnancies among respondents.

The perception was good and more than half of those who had experienced abortion had complication. However, the prevalence of abortion among the respondents was high. It is imperative to employ a holistic approach to educate people on the need for family planning, campaigns to reduce unwanted pregnancy to improve the knowledge, perception and reduce its prevalence in the society. Policies should be formulated to allow safe abortions.

Keywords: Abortion, sexual experience and Female Polytechnic students

Word count: 490

DEDICATION

This research work is humbly dedicated to the most high, the most beneficent and the most merciful, the source of all wisdom, the lover of my soul, the author and the finisher of my faith, the one who knew me and knows what I can achieve before I was conceive of it. May His name be glorified.

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CERTIFICATION

I hereby certify that this study was carried out by Yetunde Fauziyah, SALAU under my supervision in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Nigeria.

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TABLE OF CONTENTS

CHAPTER THREE: RESEARCH METHODOLOGY

LIST OF TABLES

LIST OF FIGURES

APPENDICES

LIST OF ABBREVIATIONS

AIDS	Acquired immune deficiency syndrome
DFID	Department for International Development
HIV	Human immunodeficiency virus
HRFN	Health Reform Foundation of Nigeria
IUD	Intra Uterine Devices
MoH	Ministry of Health
MOHP	Ministry of Health and Population
NDHS	National Demographic Health Survey
NPC	National Population Commission
NSS	National Statistical Service
PAS	Post-Abortion Syndrome
PID	Pelvic Inflammatory Disease
PTB	Preterm Birth
PTSD	Post-Traumatic Stress Disorder
SEM	Social Ecological Model
STI	Sexually transmitted infections
TFMHA	Force on Mental Health and Abortion
WHO	World Health Organization
UNAIDS	United Nations programme on HIV/AIDS
VLBW	Very Low Birth Weight

OPERATIONAL DEFINITION OF TERMS

Perception: This is the organization, identification, and interpretation of sensory information.

Outcome: This is the information, event, object or state of being produced as a plan, effort, or other similar action or occurrence.

Abortion: This is the termination of pregnancy before the foetus becomes capable of sustaining an independent extra-uterine life

Knowledge: This is the fact of knowing about something; general understanding or familiarity with a subject, place and situation.

Prevalence: The quality or condition of widespread or preferred; superior strength, force, or influence; general existence, reception, or practice; wide extension; as the prevalence of virtue, of a fashion, or of a disease; the prevalence of a rumor.

Sexual violence: This is any sexual act or attempt to obtain a sexual act by violence or coercion, acts to traffic a person or acts directed against a person's sexuality regardless of the relationship to the victim.

CHAPTER ONE

INTRODUCTION

1.1 Background of study

Abortion can be defined as the termination of pregnancy by the expulsion of a foetus or embryo from the uterus. Abortion can occur spontaneously due to complications during pregnancy or can be induced. The term abortion most commonly refers to the induced abortion of a human pregnancy, while spontaneous abortions are usually termed miscarriages. According to Leveno Cunningham, Alexander, Bloom, Casey and Dashe (2007), induced abortion is usually defined as pregnancy termination prior to 20 weeks for developed countries and 28weeks for developing countries. Abortion can also be said to be the termination of pregnancy before the foetus becomes capable of sustaining an independent extra-uterine life i.e. while the foetus is non-viable". In other words, whether spontaneous or deliberate, abortion refers to any pregnancy that does not end in a live birth or that ends in a premature birth that does not result in a live infant.

All over the world, women of reproductive age experience unwanted pregnancy and some of them seek to terminate the pregnancy and undergo induced abortion (Shimeli, Meaza, Fanuel and Mengistu, 2015). Abortion can also be classified as safe or unsafe. World Health Organization (WHO, 2012) defines unsafe abortion as a procedure for terminating unwanted pregnancy either by people lacking the necessary skills or in an environment lacking minimal medical standards or both.

Worldwide approximately one in five pregnancies end in an induced abortion. Worldwide, an estimated 43.8 million of abortion was procured in 2008 in which about 38 million of these were done in developing countries. It continues to occur in measurable numbers in all regions of the world, regardless of the status of abortion law (WHO, 2012; Sedgh, Singh, Shah, Ahman, Henshaw and Bankole, 2008). Abortion is one of the most common gynecological experiences, which the majority of women will perhaps undergo in their lifetimes (Ahman and Shah 2004).

Despite the restrictive abortion law, the incidence of induced abortion is widespread in Nigeria and its practice takes many forms among Nigerian women of reproductive age. It is for the reason of this restriction that most abortion procedures in Nigeria are clandestine, and

many are carried out in unsafe circumstances and are therefore classified as unsafe abortion (Bankole, Boniface, Oye-Adeniran, Singh, Adewole, Wulf, Sedgh and Hussain 2006).

1.2 Statement of problem

The World Health Organization (WHO, 2011) states that induced and unsafe abortion is a critical public health problem and an important cause of maternal mortality in developing countries. Worldwide, of the 600, 000 maternal deaths from pregnancy-related causes each year, an estimated 13% are attributable to complications of induced and unsafe abortion. Studies have also shown that 40% of maternal death is due to abortion (mostly unsafe abortion) (WHO, 2011). Many of these deaths occur in developing countries where abortion laws are often restrictive and where access to safe abortion is largely denied to women who experience unwanted pregnancies. It has been estimated that about 46 millions of abortion are done in a year. About 1,250,117 abortions are done in Nigeria in a year in which 72.5% of those involved in abortion are female students while about 60% of these people have complications (Bankole, Adewole and Akinyemi 2015).

Abortion is more common among unmarried adolescent girls than the married women. Due to the social stigma of having unwanted pregnancies, young girls (undergraduate female students) seek abortion as the only way to end unwanted pregnancies (Wahab *et al.,* 2006; Nojomi, Akbarian, Ashory-Moghadam, 2006). This however has serious risk to their health which sometimes lead to their death. Evidence from national surveys suggests that the number of abortions in Nigeria is likely to remain high in the absence of intervention. According to the WHO, 19 out of 20 unsafe abortions are carried out in the developing countries with lower economic status and this is most common among the young women because they mostly have poor access to family planning and are less likely than older women to have money to seek for safe abortion. According to conservative estimates, more than 3,000 women die annually in Nigeria as a result of unsafe abortion. Of the women obtaining abortion, 85% were younger than 25 years (Sudhinaraset, 2008).

An estimated value of about 192 reproductive aged women die every day because of complications arising from unsafe abortion due to different reasons and nearly all of them occur in developing countries. In most developing countries, despite the technological advancements in modern contraception methods, unintended pregnancy is the root cause of

abortion which still remains a big problem. More than 60% of the pregnancies in adolescents are unintended; ones which result from contraception non-use, contraception method failure and rape (Thomas, Gedif, Abeshu and Geleta, 2016).

A lot of work has being done on abortion in Nigeria but most of these research works done focused more on married women (Ibrahim *et al.,* 2011, Henshaw *et al.,* 2008, Bankole *et al.,* 2006) and university students (Adegboyega *et al.,* 2016, Bankole *et al.,* 2015, Owoaje *et al.,* 2015 and Bamidele, 2014) thereby neglecting the polytechnic students which is causing dearth of knowledge and inadequate information among polytechnic students.

This research work was carried out among the female students of Federal polytechnic, Ede to bridge the gap in knowledge by investigating their out of abortion and their perception on its potential consequences.

1.3 Justification of the study

Abortion has become a serious public health concern because of its dire reproductive health consequences and impact on maternal morbidity and mortality. In most developing countries, there are laws which restrict abortion and make induced abortion illegal which denied most young ladies with unwanted pregnancies access to safe abortions which make them opt for unsafe abortion which leads to social and health complications like ruptured or perforated uterus, salphingitis, infections, infertility and death. Large proportion of maternal mortality is caused by abortion.

An unsafe abortion can endanger a woman's reproductive health and can lead to serious, life-threatening complications such as severe hemorrhage, sepsis, chronic pelvic inflammatory disease, ectopic pregnancy, secondary infertility, and even death (Carrie 2010).Unprotected sex, unwanted pregnancy, unsafe abortion and the likely consequent post-abortion complications is rampant amongst undergraduate students. Despite the fact that students and young people are known to be the most sexually active population, issues relating to their lifestyles which include sexual relations are seldom examined and are under-researched. However, it was discovered that despite the awareness and information on the use of contraceptives and law restriction on illegal abortion, young women are still having unwanted pregnancies which makes them opt for induced and unsafe abortion which is leading to some immediate or later consequences on their health.

The result of this study would provide information on the perception and outcome of abortion among female students as this will gear up the public health department in the state to intensify its health education and promotion exercise among the female students to educate and inform them more on the use of contraceptives, utilization of youth friendly services; reducing the determining factors of these abortions and the danger of unsafe abortion on health. Lastly, the result could be useful during seminars, work shop and conferences by health educators and public health specialist to effect changes among the female undergraduate students on abortion and its potential consequences.

1.4 Research questions

This study attempts to find answers to the following questions:

1. What is the level of knowledge of female students of federal polytechnic, Ede on the potential consequences of abortion?
2. What are the factors influencing the sexual behavior of the female students of Federal polytechnic, Ede, Osun state?
3. What is the outcome of abortion experienced by the female students of Federal polytechnic, Ede, Osun state?
4. What are the perceptions of female students of Federal polytechnic, Ede on abortion and its potential consequences?
5. Under what context female students of Federal polytechnic student in Ede performed abortion?

1.5 Broad objective

The broad objective of this study is to investigate the perception and outcome of abortion among female students of the Federal polytechnic, Ede, Osun State, Nigeria.

1.6 Specific objectives

1. To assess the knowledge of female students of federal polytechnic, Ede on the potential consequences of abortion
2. To describe the factors influencing the sexual behavior of the female students of Federal polytechnic, Ede.
3. To document the outcome of abortion experienced among the female students of Federal polytechnic, Ede.
4. To assess the perception of the female students of Federal polytechnic, Ede on abortion and its potential consequences.
5. To describe the context under which female students of Federal polytechnic, Ede performed abortion.

1.7 Research hypotheses

1. There is no association between the religion and the factors influencing the sexual behavior of the female students.
2. There is no association between the age of the female students and their outcome of abortion.
3. There is no association between the marital status of the female students and their perception about abortion.
4. There is no association between the age of the female students and their perception on the potential consequences of abortion.
5. There is no association between the religion of the female students and the factors influencing the rate of induced abortion.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview on abortion

Abortion is the termination of pregnancy before the foetus becomes capable of sustaining an independent extra-uterine life i.e. while the foetus is non-viable". In other words, whether spontaneous or deliberate, abortion refers to any pregnancy that does not end in a live birth or that ends in a premature birth that does not result in a live infant. This act is observed to be done by all classes of women, especially female undergraduates and secondary school students from all socio-economic and marital status; cultural and religious backgrounds are no restrictions. Abortion is a sensitive and contentious issue with religious, moral, cultural, and political dimensions (Deborah and Donna, 2011). Regardless of its legal status, abortion is still practiced and nearly half of all abortions are performed by unskilled practitioners or in an unhygienic condition, or both. Early initiation of coitus in the adolescent is often done without birth control and many result in pregnancy which most likely lead to abortion (National Statistical Service, Ministry of Health, and ICF, 2017).

Abortion is illegal in Nigeria and it carries a heavy jail sentence of up to 14 years' imprisonment unless it is performed to save the life of the pregnant woman (Okagbue, 1999). Today, abortion is one of the most common gynecological experiences, which the majority of women will perhaps undergo in their lifetimes (Ahman and Shah 2004). Induced abortion normally involves a surgical or non-surgical/medicinal procedure that terminates a pregnancy by removing the foetus and depending on the circumstances as well as the environment, induced abortion can either be legal or illegal. In Nigeria, induced abortion is illegal except in circumstances where the life of a woman is in jeopardy during the pregnancy (Bamidele, 2014). A large number of female undergraduates do so personally at home, taking self-prescribed drugs and herbs.

Some carry out abortion personally by self-administration of drugs that they have seen from the social media online as the Revolutionary Information Age has made possible ,Some get it done with drugs or herbs prescribed by unprofessional doctors, nurses, midwives pharmacist as well as traditional birth attendants/herbalists. However, a few get it done secretly in private hospitals and clinics by professional doctors and nurses (Kpolovie and Lale, 2017; Kpolovie

and Onoshagbegbe, 2017). Abortion, though widely practiced in the Nigerian society, has long-term attendant consequences that include physical health problem, psychological and social problems that are dangerous and destructive, sometimes culminating in death.

In Nigeria, abortion is legal only when performed to save a woman's life. Most of the abortions done are unsafe because they are done by unskilled providers or both. Nigeria has one of the highest maternal mortality ratios in the world in which the major contributor is unsafe abortion. There is low utilization of Contraception use in Nigeria. In 2013, only 16% of all women of reproductive age (15-49) were using any contraceptive method, and only 11% were using a modern method-levels that remain virtually unchanged since 2008 (National Demographic Health Survey, 2013).

Curiously, the term abortion is used loosely by the lay-person to refer to the termination of a pregnancy, which in everyday use often takes on the meaning, solely of induced abortion even though abortion may occur spontaneously in the course of a pregnancy, when it is known as a miscarriage; or it may be due to deliberate outside intervention, when it is termed as induced abortion.

According to Bartlett 2004, the relative risk of abortion increases exponentially at higher gestations. Abortion has a higher medical risk when the procedure is performed later in pregnancy compared to abortion at eight weeks of gestation or earlier age. Gestational age is the strongest risk factor for abortion-related mortality and the risk increases by 38% for each additional week. In other words, a woman seeking an abortion at 20 weeks (five months) is 35 times more likely to die from abortion than she was in the first trimester. At 21weeks or more, she is 91 times more likely to die from abortion than she was in the first trimester.

Study done by Coleman, 2010 and some other researchers revealed that it may not be possible to reduce the risk of death in later term abortions because of the "inherently greater technical complexity of later abortions. This is because later-term abortions require a greater degree of cervical dilation, with an increased blood flow in a later-term abortion which predisposes the woman to hemorrhage, and because the myometrium is relaxed and more subject to perforation. Studies have also concluded that second-trimester abortions (13-26 weeks) and third-trimester abortions (26-39 weeks) pose more serious risks to women's physical health than first-trimester abortion (Gaufberg and Dyne, 2012).

2.2 Incidence of unintended pregnancies

Atere, Ayodele and Omololu (2012) Fourteen percent of reproductive aged women in Nigeria have an unmet need for family planning. Most are married and sexually active and they want to space their births or stop childbearing, but are not using contraceptives. Among sexually active unmarried women, 22% have an unmet need. In 2012, about one-fourth of Nigeria's 9.2 million pregnancies were unintended a rate of 59 unintended pregnancies per 1,000 women aged 15–49. More than half (56%) of these unintended pregnancies ended in an induced abortion; 32% ended in an unplanned birth and 12% in a miscarriage.

In Nigeria 40% cause of maternal mortality is unsafe abortion and this is a serious problem in the country which needed an urgent intervention (Adinma, 2011). Despite the fact that there is no specific official data on abortion due to the Restrictive law in the country, but significant number of abortions are carried out in the country annually out of which many women die as a result of complications (Otoide, Oronsaye, and Okonofua, 2011).

Due to the restrictive law in the country, 60% of the procedure is being done by Non-physicians and the majority of these are done in the private health facilities or at home by quacks (Adinma, 2011). Nigeria permits abortion only if the life of the woman is in danger; otherwise the perpetrators (woman and the abortionist) will be imprisoned for a prescribed number of years (Adinma, 2011). No matter what the justification for inducing abortion is, section 229 of Nigeria constitution states that any woman who intend to procure her own miscarriage and unlawfully administers to herself any poison or noxious substance, or uses any force of any kind, or permits any harmful thing to be administered or used to her, is guilty of a felony, and is liable to imprisoned for seven years. The implication of this law is that, a woman with unwanted pregnancy cannot get a safe abortion in the government facilities; instead she has to use the service of unqualified quacks which is unsafe and most of the time results in serious unwanted consequences (Adinma, 2011).Unsafe abortion often results in serious medical consequences and also some psychological consequences.

According to WHO, in developing countries, more than half (55 per cent) of abortion done are unsafe which makes the world health organization recognizes unsafe abortion as a silent pandemic and believes safe and legal abortion is a fundamental right of women, irrespective of where they live (WHO and Guttmacher Institute, 2007). Globally, about 210 million pregnancies occur each year and out of which 80 million pregnancies are unintended (Singh,

Wulf, Hussain, Bankole, and Sedgh, 2009). A report by the World Health Organization (WHO) in 2008 reveals that, about 21.6 million unsafe abortions were performed from which 5.3 million women suffer disabilities and unsafe abortion was responsible for 13% or 47,000 maternal deaths worldwide (WHO, 2011). Nigeria is one of the countries with the highest fertility rate in the world, which is on average 5.7 children per woman (DHS 2008). In Nigeria, unsafe abortion is a serious public health problem, according to Health Reform Foundation of Nigeria (HRFN); and Nigeria contributes significantly to the global burden of unsafe abortion related mortality (HRFN, 2006).

According to available research, annually 760,000 abortions are performed in the country, at the rate of 25 abortions for every 1,000 women of childbearing age (Henshaw, Singh, Oye-Adeniran, Adewale, Iwere, and Cuca, 2008). This resulted in 142,000 complications, severe enough to warrant admissions (Bankole *et al.,* 2006). To ascertain the correct figure of mortality from unsafe abortion is difficult, but the Society of Gynecologist and Obstetrician of Nigeria and Henshaw revealed that each year about 3,000 women are dying as a result of complications due to unsafe abortions and more than half of them are adolescents (Orisaremi 2012; Henshaw *et al.,* 2008). This could be one of the reasons why maternal mortality is very high in the country (WHO, 2007). Unfortunately no evidence exists to suggest that the authorities have any tentative programs in place to improve the Situation.

2.3 Types of abortion

Adeleke (2007), classified abortion into two major types, which are spontaneous and induced abortion. He also classified the induced abortion into therapeutic and criminal abortion. In his view criminal abortion is an abortion performed illegally against the law.

Several methods have been employed to induce abortion. Induced abortion could be done byprocuring and drinking self-prescribed abortion drugs, traditional herbal preparations, concoctions, including mechanical manipulations with sharp/solid objects which are collectively considered as crude, unscientific, and native traditional methods.

Okoye (2006) outlined three classes of abortion based on the circumstances that led to it. These include; spontaneous abortion, which is natural, therapeutic abortion which is life-saving and induced abortion which he called ‘criminal or illegal’ abortion. Okoye also

explained that induced abortion is an "artificial or intentional termination of pregnancy using any of the numerous methods against the law of the country.

Unsafe abortion is defined by World Health Organization as "a procedure for terminating unwanted pregnancy either by person lacking the necessary skills or in an environment lacking the minimum standard or both'' (WHO, 2014). It is one of the leading causes of maternal morbidity and mortality all over the world, especially in developing countries like Nigeria. Annually about 20 million unsafe abortions are performed, most of which are in the developing countries with restrictive abortion laws (Adinma, 2011). According to WHO, 550 unsafe abortions are performed every day (WHO, 2014). Unsafe abortion often results in serious medical consequences, such as sepsis, hemorrhage and injury to the uterus bowel or genital organs. Others are renal failure and death from complications (Ibrahim, Jeremiah, Abasi, and Adda, 2011; Bankole *et al.,* 2006). If the woman survives she may end up with some serious related complications, such as secondary infertility, chronic pelvic pains, ectopic pregnancy that will jeopardize her future reproductive life (Ibrahim *et al.,* 2011) and consequently her economic wellbeing. Most of these complications arise due to the fact that, abortions in most cases (68%) are carried out in the late first and second trimesters, only 20% are carried out early in the first three months (Ibrahim *et al.,* 2011).

2.4 Sexual behavior among female students

Most female undergraduate's students in Nigeria are young adults or adolescents who are at that phase of their lives when they start to discover and explore their sexuality behavior, typified by development of sexual values, the initiation of sexual acts and an upsurge of sex drives, leading to a rather consistent aggression of intense sexual activities (Bamidele, 2014)

According to UNAIDS/WHO 2000, majority of adolescents throughout the world are sexually active by the age of 19, with boys having the mean age of sexual activity at 14.4 years and girls at 15.9 years and that more than one-half of 17 year olds have had sexual intercourse and majority of them by the end of adolescent which is 19 years of age.

There is consensus in the literature that people in this age bracket engage in high risk sexual behaviour, which predisposes them to different reproductive health challenges, including unwanted pregnancy (Alubo, 2000). Young adults and undergraduate students are more likely to experiment sexually, often with multiple partners without using any form of protection (or

preventive mechanism) such as condoms on a regular basis. Sexual behaviour is explained to the initiated in most African societies and in most cases, the initiation of the girl usually starts when her breasts become enlarged or when the girl experiences her first menses during which she is not only instructed on the mechanics of sexual intercourse and acceptable sexual behaviour, but also on how to raise a family, teaching on various other issues related to gender roles including personal hygiene especially during menstruation; respect for her future husband expressed by being faithful, obedient and submissive to him and by learning how to look after him and how to behave (Kapungwe, 2003).

2.5 Prevalence of abortion among young people

Students and other young people are known to be a most sexually active population. More than 60% of the pregnancies in young people are unintended; ones which result from contraception non-use, contraception method failure and rape. The incidence of unintended pregnancy and unsafe abortion, particularly among adolescents, remains high. Abortion emanating from unintended pregnancy is one of the most significant causes of maternal morbidity and mortality; it is also a major medical and public health problem (Thomas, Gedif, Abeshu and Geleta, 2016).Young women who obtain abortion care tend to access it later in pregnancy than older women and are more likely to delay seeking help for abortion-related complications. These delays likely are attributable, to stigma surrounding adolescent sexuality (Kathryn, Ram, Alexandra, Shailes, Sharad, Valerie and Maria, 2015). Many youth lack the negotiation and decision-making skills necessary for abstaining from unsafe sexual practices. Adolescents also perceived sexual health service providers as judgmental and raise concerns about lack of confidentiality which could influence women's decision-making and access to abortion. Sex preference is also one of the reason for abortion for example having a male offspring is considered crucial for continuing the family lineage, providing financial support to parents as they age and so on, while female children are often viewed as a burden (Ministry of Health and Population (MOHP), 2012. Induced abortion was prevalent among singles group owing to their autonomy and marital insecurity. Singles are more likely to have unplanned for pregnancy and induced abortion compared to their married counterparts reasons being that singles may not be in the stable union, and also single parenthood is frowned upon in the African cultural context (Auka, Mukui and Mbithi 2015).

Unintended pregnancy and early child bearing impacts negatively on the educational prospects of female students by forcing them to drop out of school (jeopardizing students' educational progress and future careers) because of the morbidity resulting from unsafe abortion when the pregnancy is unwanted. Abortion is more prevalent among youthful school age population or in premarital relationship as well as females with career aspirations (Auk *et al.*, 2015). The Prevalence and experience of abortion depends on the geographical zone and cultural beliefs. According to a study carried out by Bamidele (2014), among the female undergraduate students of the University of Lagos (UNILAG), 85.6% of the students are in relationships and 87.8% of these people have had sex before and 29.1% has done abortion before. While according to a study done by Adegboyega *et al.,* 2016 among the female students of Kaduna state university, about 8.38% of the students has involved in pre-marital sex while 6.7% of these students has done abortion before.

Today, abortion is one of the most common gynaecological experiences, which the majority of women will perhaps undergo in their lifetimes (Ahman and Shah, 2004). Induced abortion normally involves a surgical or nonsurgical/medicinal procedure that terminates a pregnancy by removing the foetus and depending on the circumstances as well as the environment, induced abortion can either be legal or illegal. In Nigeria, induced abortion is illegal except in circumstances where the life of a woman is in jeopardy during the pregnancy. However, Bankole *et al.,* (2004), note that despite the restrictive abortion law, the incidence of induced abortion is widespread in Nigeria and its practice takes many forms among Nigerian women of reproductive age. It is for the reason of this restriction that most abortion procedures in Nigeria are clandestine, and many are carried out in unsafe circumstances and are therefore classified as unsafe abortion.

2.6 Factors contributing to unwanted pregnancy and abortion

Unplanned pregnancy is a serious public health concern all over the world especially among the adolescents. It is responsible for majority of the death and morbidities among 15-19 year old girls (WHO, 2014). Apart from health implications, it also has financial, educational and psychological implications for the women and their families in general (Olaitan, 2010). Unplanned pregnancies occur to both married and unmarried women and the reasons differ depending on the circumstances. Many factors are responsible for unsafe abortion in Nigeria.

It starts with factors responsible for unplanned pregnancy, like unmet need for family planning and lack of sex education in schools. Others are low educational status, sexual violence (rape) and lack of knowledge about family planning. To some extent the unplanned pregnancy may lead to motherhood but it is not always the case. Most unplanned pregnancies end in abortion. Certain factors like social responsibilities, culture, economic situation and education predispose women to seek abortion.

The factors causing unwanted pregnancy include;

2.6.1 Early initiation of sexual activity

Lack of sexual education in schools that teaches young girl how to deal with sexuality and fertility issues, sexual violence (rape and coercive sex) and unmet need for contraception is very high in the country and this contribute to the rate of unwanted pregnancy in the country. (NDHS 2008; Olaitan 2010; Illika and Anthony 2004).

Material gain is another reason that pushes young girls to become pregnant, because of absolute poverty especially in the rural areas. A study conducted in Anambra state Nigeria reveals that, over 98% of teenagers had sex or became pregnant because of material gratification (Illika and Anthony 2004).

2.6.2 Unmet need for family planning

Unmet need for family planning is "the percentage of married and unmarried women who want to space their next birth or to stop childbearing entirely but are not using any method of contraception" (NPC AND ICF Macro, 2014). According to NDHS of 2008, one fifth of all sexually active women in Nigeria experience such an unmet need (NPC AND ICF Macro, 2014). The prevalence of unmet need cuts across the country, the characteristics of the women with unmet need also differ. Unmet need in order to space the children is common among younger women while the older women have unmet need to limit the number of the children. Educational background does not play any significant role with regards to unmet need, however the percentage is slightly lower among those with university education (Family Planning West Africa, 2005). Women without desire to use modern methods of contraception despite the unmet need are afraid of infertility in the future. Some express religious and others cultural reasons.

According to Adebara and Ijaya (2010) and Attitudes of the health workers and side effects of the drugs are reported to sometimes discourage women from using contraception. Among those desiring to use contraception 30% prefer injectable, 25% pills, 2% Norplant and 19% do not have any preferred method.

2.6.3 Knowledge about Family Planning

The contraceptive prevalence rate in Nigeria is very low and stood at only 10% for modern methods, while 5% more are using traditional methods (NPC and ICF macro 2014; Guttmacher Institute, 2008). The use of modern contraception differs between rural and urban settings. In the urban areas about 17% mostly use the modern methods while those in the rural areas are only 7%. As most of the development indices, the use of the modern contraception also differs between the southern and northern part of Nigeria. The use of modern contraception is more in the south about 21% than in the north, which is only 3% (NPC and ICF macro 2014), where the preferred method is injectable (3%), followed by pills and male condoms (2%) while intra uterine devices (IUD) use is only (1%). 30-34 years age group are the highest users of contraceptives, while 20 years and below are the lowest users (Adebara and Ijaiya, 2010). This shows that there is low prevalence use of contraceptives among female undergraduate students. This is a serious cause for concern considering the fact that these age groups are the most vulnerable when it comes to unsafe abortion. Knowledge about contraception is very crucial, because without adequate information young girls and women may not know where to obtain and how to use the products. 38% of those not using contraception said they are not even aware of the product, while 19% had the perception they will not get pregnant. Desire of a large family may prevent some women from using any form of contraception (Guttmacher Institute, 2008; Monjok, Smesny, Ekabua, and Essien, 2010).

Knowledge or exposure to family planning information varies between men and women. According to NDHS of 2013, men are more informed about family planning than women mostly because they are more socially exposed. Therefore men have a prominent role to play in determining the uptake of contraception. On the other hand, knowledge about family planning is more developed in the urban than in the rural areas. The majority of the population is exposed to the message of family planning through different media sources; the main

source is the radio, followed by television, newspaper and other sources (NPC AND ICF Macro 2014)

The healthcare workers are supposed to play a vital role in promoting the family planning messages, and to be the main source of information. But in Nigeria the healthcare providers are often not friendly enough to discuss the issues with their clients especially with the youth (NPC AND ICF Macro, 2014; Guttmacher Institute, 2008 and Monjok, 2010). Most of the providers are not youth friendly, and that is why majority of the unmarried youth are unable to access the products because of fear of being accused of promiscuity (Monjok, 2010).

2.6.4 Lack of sex education in schools

"Sexuality education is a lifelong process of acquiring information and forming attitudes, beliefs, and values. It encompasses sexual development, sexual and reproductive health, interpersonal relationships, affection, intimacy, body image, and gender roles" (Kann, Telijohann and Wooley, 2007). Sex education in Nigeria is considered as a taboo, and most of the parents do not speak about sexuality with their children until shortly before marriage. Most parent believes that if children are exposed to the sexuality education at an earlier age, it may increase promiscuity even though evidence has shown that it does not (Dienye, 2011; Akpama, 2013).

Sex education is very important considering the fact that, adolescents in Nigeria constitute about 36% (Adetunji, 2013) and they are constantly faced with many challenges in life especially due to early sexual initiation. Some of the negative implications of lack of sexual education in schools include: sexual coercion, unprotected sex, failure or don't know how to use contraception. These would lead to STI including HIV, unplanned and ultimately unwanted pregnancies with possible death from the complications of unsafe abortions. All these problems are due to the fact that adolescents are not adequately informed about the above consequences.

2.6.5 Sexual Violence

Sexual violence can be defined as "any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any

setting, including but not limited to home and work" (WHO, 2002). Sexual violence has profound implications to the lives of young girls, which includes effect on mental and physical health. It is also responsible for many sexual and reproductive health problems including HIV/AIDS and unplanned pregnancy (WHO, 2002). Sexual violence in Nigeria is very common, even though the statistical data is difficult to obtain because majority of the cases are not reported.

According to Mirabel, a sexual assault referral center in Lagos supported by UK Department for International Development (DFID), some of the health implications of sexual assaults are: STI including HIV/AIDS, physical injuries and unwanted pregnancies (Mirabel, 2013).

Rape is a serious problem in Nigeria. According to statistical data, annually about 32,000 pregnancies occur in Nigeria as results of rape (Okoro-Eweka, 2014). The crime is being committed in all sectors of the society from churches to mosques, and from domestic residencies to workplaces. The crime perpetrators include pastors, Imams, military, and the police and sometime the victim's relatives are the ones committing the crime. Most of the time the perpetrators escape any form of punishment. This has largely contributed to the high incidence of unsafe abortion in the country. Because if a victim of rape becomes pregnant, she will do everything possible to get rid of the pregnancy no matter the consequences (Okoro-Eweka, 2014).

Study conducted in 2012 among Tarok people in north central Nigeria about their perceptions on abortion. The findings mostly justify the above reasons why women resort to abortions. The reasons they gave mostly are: refusal of the father of the child to accept the pregnancy, fear of stigma if people find out, poverty and availability of abortion methods especially the availability of pills over the counter. Others believed that the reasons for pregnancy termination include; failure of upbringing from the parents, moral decay, fear of not getting a husband in the future, sex and getting pregnant with total stranger. (Orisaremi, 2012; Sedgh *et al.,* 2006; Okonofua *et al.,* 2009).

2.7 Reasons for abortion: Some of which are:

Being single: One of the most common reasons women give for terminating pregnancy is being single (Sedgh *et al.,* 2006; Adebusoye, Singh and Audam 1997). A study conducted by Guttmacher institute in Nigeria reveals that 31% of the adolescents 15-19 year old cited being single as the main reason of wanting to procure abortion. While 30% revealed that they are too young to carry the responsibility of child bearing or they are in schools (Sedgh *et al.,* 2006; Adebusoye, Singh and Audam, 1997).

Financial difficulty: This is another reason women give for wanting to terminate pregnancy. This is due to lack of financial resources in raising the kids while continuing with their education (Ibrahim et al. 2011; Adebusoye, Singh and Audam, 1997).

Fear of the parents: The fear of the parents to find out about the pregnancy and disapprove the young girl is another reason for pregnancy termination. Most of the time, a young girl who is pregnant will try to conceal the pregnancy so that the parents will not find out because of fear they might disapprove her for bringing shame to the family (Bankole *et al.,* 2006; Okonofua, Hammed, Nzeribe, Saidu, Abbas, Adeboye, Adegun and Okolocha, 2009). Sometimes the parents will refuse to continue paying her school fees and some parents will forced her to marry the father of the baby even if it is against her wish, so as to save the dignity of the child and the family (Sedgh *et al.,* 2006; Okonofua *et al.,* 2009; Koster, 2010).

Rape or incest: This is another reason for pregnancy termination in Nigeria (Otoide, Oronsaye and Okonofua, 2001; Okonofua *et al.,* 2009).

2.8 Consequences of abortion

The INED says that 40% of French women have an abortion during their lifetime. Despite the fact that many women are affected by this act, very few of them admit to this painful experience or are able to talk about it openly: it is difficult to touch upon this suffering, the guilt, the absence of the child and the need to mourn the aborted child**.** Most of the people that has done abortion before regret doing it and later faced the following consequences:

Sexual Dysfunction

About thirty to fifty percent of women who have had abortions report experiencing sexual dysfunctions, of both short and long duration, beginning immediately after their abortion.

These problems may include one or more of the following: loss of pleasure from intercourse, increased pain, an aversion to sex and/or males in general, or the development of a promiscuous lifestyle.

Repeat Abortions

Women who have one abortion are at an increased risk of having additional abortions in the future. Women with a prior abortion experience are four times more likely to abort a current pregnancy than those with no prior abortion history. This increased risk is associated with the prior abortion due to lowered self-esteem. Subsequent abortions may occur because of conflicted desires to become pregnant and have a child, and continued pressures to abort, such as abandonment by the new male partner. Aspects of self-punishment through repeated abortions are also reported.

Approximately 45% of all abortions are now repeat abortions. The risk of falling into a repeat abortion pattern should be discussed with a patient considering her first abortion. Furthermore, since women who have more than one abortion are at a significantly increased risk of suffering physical and psychological effects, these heightened risks should be thoroughly discussed with women seeking abortions.

Suicidal Ideation and Suicide Attempts

Approximately 60 percent of women who experience post-abortion sequelae report suicidal ideation, with 28 percent actually attempting suicide, of which half attempted suicide two or more times. Researchers in Finland have identified a strong statistical association between abortion and suicide in a records based study. They identified 73 suicides associated within one year to a pregnancy ending either naturally or by induced abortion. The mean annual suicide rate for all women was 11.3 per 100,000. The suicide rate associated with birth was significantly lower at 5.9 per 100,000.

Rates for pregnancy loss were significantly higher. For miscarriage, the rate was 18.1 per 100,000, and for abortion the rate was 34.7 per 100,000. The suicide rate within one year after an abortion was three times higher than for all women, seven times higher than for women who carried to term, and nearly twice as high as for women who suffered a miscarriage. Suicide attempts appear to be especially prevalent among post-abortion

2.9 Emotional and psychological effect of abortion

According to research carried out by AMRC, 2011. A woman with an unwanted pregnancy is as likely to have mental health problems from abortion as she is from giving birth. A woman with a history of mental health problems before abortion is more likely to have mental health problems after abortion. Circumstances, conditions, behaviors, and other factors associated with mental health problems are similar for women following abortion and women following childbirth. Pressure from a partner to terminate a pregnancy, negative attitudes about abortion, and negative attitudes about a woman's experience of abortion may increase a woman's risk of mental health problems after abortion. Among its recommendations for further study, the AMRC suggested that researchers focus on the mental health repercussions of unwanted pregnancy rather than on the repercussions of how a woman resolves it (AMRC, 2011).

The term Post-Abortion Syndrome (PAS) is sometimes used to describe the mental turmoil experienced after abortion. European institute of bioethics- psychological suffering due to abortion are those associated with anxiety, depression and some corollaries of post-traumatic stress disorder (PTSD). Depression, suicide, withdrawal from relationships, loss of self-esteem, acute feelings of guilt, shame, and failure at motherhood—these are the risks faced by those who decide to abort.

In a study of post-abortion patients only, 8 weeks after their abortions, researchers found that 44% complained of nervous disorders, 36% had experienced sleep disturbances, 31% had regrets about their decision, and 11% had been prescribed psychotropic medicine by their family doctor.

A major random study found that a minimum of 19% of post-abortion women suffer from diagnosable Post-Traumatic Stress Disorder (PTSD). PTSD is a psychological dysfunction which results from a traumatic experience which overwhelms a person's normal defense mechanisms resulting in intense fear, feelings of helplessness or being trapped, or loss of control. The risk that an experience will be traumatic is increased when the traumatizing event is perceived as including threats of physical injury, sexual violation, or the witnessing of or participation in a violent death.

Women may experience abortion as a traumatic event for several reasons. Many are forced into an unwanted abortion by husbands, boyfriends, parents, or others. If the woman has

repeatedly been a victim of domineering abuse, such an unwanted abortion may be perceived as the ultimate violation in a life characterized by abuse.

In 2008, the American Psychological Association's Task Force on Mental Health and Abortion (TFMHA) evaluated all empirical studies on the emotional effects of abortion that had been published since 1989. It concluded that the relative risk of mental health problems is no greater among adult women who resolve unplanned pregnancy with a single, elective, first-trimester abortion than it is among those who give birth.

Any association between multiple abortion and mental health problem may be due to co-occurring factors circumstances, conditions, and behaviors that may predispose a woman to both multiple unwanted pregnancies and mental health problems (TFMHA).

Women may experience abortion as a traumatic event for several reasons. Many are forced into an unwanted abortion by husbands, boyfriends, parents, or others. If the woman has repeatedly been a victim of domineering abuse, such an unwanted abortion may be perceived as the ultimate violation in a life characterized by abuse. Other women, no matter how compelling the reasons they have for seeking an abortion, may still perceive the termination of their pregnancy as the violent killing of their own child. The fear, anxiety, pain, and guilt associated with the procedure are mixed into this perception of grotesque and violent death. Still other women, report that the pain of abortion, inflicted upon them by a masked stranger invading their body, feels identical to rape. Indeed, researchers have found that women with a history of sexual assault may experience greater distress during and after an abortion.

2.10 Potential consequences of abortion

Dada, (2011) noted that there are several ways by which abortion can be done, and there are different stages with their accompanying risks. If for some reason a medical abortion does not work, a woman has the option of getting it done surgically. Immediate medical complications affect approximately 10 percent of women undergoing abortions, and approximately one-fifth of these complications are life threatening (Shadigian and Elizabeth, 2005).

In Nigeria induced unsafe abortion is a serious cause of morbidity and mortality among women of childbearing age. Although the real magnitude of the problem can only be estimated because only a small proportion (9%) of those complicated cases are presented to the hospitals. The Nigeria Demographic and Health Survey affirmed the high rate of abortion

when it revealed that 91.73 percent of government hospitals and 97.58 percent of private hospitals in Nigeria have attended to patients suffering from abortion complications on an annual basis (National Population Commission Federal Republic of Nigeria, 2014). Because abortion is illegal in the country, most of the pregnancy terminations are carried out by illegal unqualified quacks or by the women themselves. The terminations are by using all sorts of instruments in dirty environments (Okonofua, 1991). Unfortunately, even the registered medical practitioners in the country sometimes lack the necessary skills and motivation to perform the procedures safely. And the worst part of it is that most of the hospitals lack the necessary equipment and skilled personnel to handle such complications when they arise (Okonofua, 1991)

The most common early complications of unsafe abortion are: hemorrhage, sepsis, uterine perforation, bowel perforation, trauma to the cervix mostly by the instruments used, acute renal failure, bladder injury, deep vein thrombosis, tetanus, bowel fistulae and death from anesthesia. (Ibrahim *et al.,* 2011; Bankole *et al.,* 2006; Rehan, 2011).

AUL, 2013 Studies reveal that the long-term physical and psychological consequences of abortion include an increased risk of:

• Subsequent preterm birth;

• Placenta previa (a complication during pregnancy where the placenta partially or totally Covers the mother's cervix and which can cause severe bleeding before or during delivery);

• Serious mental health problems;

• Breast cancer as a result of the loss of the protective effect of a first full-term pregnancy;

• Miscarriage;

• Death

Sepsis is the commonest early complication of unsafe abortion. It normally manifests itself with high-grade fever and purulent offensive vaginal discharge. It mostly arises due to use of unsterilized instruments by quacks or by the women themselves. It accounts for 50-80% of all complications from illegal abortion in the country. Genital sepsis carried 88.9% of all the complications of unsafe abortions followed by retained products of conception 82.5% (Ibrahim et al. 2011). Sepsis is considered as the main cause of maternal mortality and if the woman survives she might end up with long-term health consequences.

2.10.1 Preterm birth

Mayo clinic (2013), A preterm birth (PTB) is a birth occurring three or more weeks before the due date of the baby (Richard *et al.,* 2007). The link between having an induced abortion and preterm birth has been recognized in over 130 peer-reviewed scientific studies, as well as being listed as an "immutable medical risk factor" by the Institute of Medicine. Some of the reasons given for abortion increasing a woman's risk for PTB in later pregnancies commonly include: "mechanical trauma to the cervix, infection, and scarring of the endometrium. A recent study found that 31.5% of preterm births are likely to be the result of a woman having an abortion earlier in her life (Bryon and Calhoun 2007). Preterm birthis the leading cause of infant death both globally and in the United States.Worldwide PTB causes over 3 million deaths every year (Bryon *et al.,* 2012).

Another major concern with preterm birth is the baby being significantly underweight when born ("very low birth weight" or VLBW). Babies born with a VLBW face many health consequences and have an increased risk for developmental problems. Some of the potential long term complications include: cerebral palsy, cognitive impairment, vision problems, hearing problems, dental problems, behavioral problems, psychological problems, and chronic health issues.

2.10.2 Late complications

Some of the late complications of unsafe abortion include: secondary infertility, chronic pelvic pains, chronic pelvic inflammatory diseases and maternal mortality, which is devastating for the woman and her family.

2.10.2.1 Infertility

Infertility is defined as "failure of couple to establish pregnancy within one year of unprotected regular sexual intercourse" (Shah, 2009). In the case of primary infertility there has not been any pregnancy, but in secondary infertility there is a history of pregnancy in the past, either delivered or aborted (Shah, 2009).

Infertility is one of the serious complications of unsafe abortions worldwide. According to WHO estimate, 20-30% of unsafe abortions cause reproductive tract infections and 20-40% of which is responsible for the upper genital tract infection and secondary infertility (Grimes,

Benson, Singh, Romero, Ganatra, Okonofua, and Shah 2006). Furthermore the report revealed that 2% of women of childbearing age 15-49 years are infertile as a result of unsafe abortion (Grimes et al. 2006). In spite of the high fertility rate in Nigeria (5.7 Children per woman) (NPC AND ICF Macro, 2014).

The growing rate of secondary infertility due to abortion has been attributed to the various methods used by both trained and untrained illegal abortionist, such as inserting different instruments in the uterus. Sometimes-foreign bodies such as needles, bones and tree's back are inserted. These result in multiple injuries to the reproductive organs especially the vagina, tubes and the uterus. Such injuries result to various forms of long term complications from vaginal atresia, uterine synecae, cervical incompetence and cervical fibrosis to complete tubal blockage that consequently lead to secondary infertility (Eyo, Epuji, and Ukpong 2012). Sometimes infertility results because of complete removal of the uterus to treat complications of unsafe abortions (Okonofua, 1991).

A study conducted in Southwestern Nigeria reveals that 37% of the 59 women with secondary infertility had never had any child after an induced abortion either due to failure to conceive or due to repeated abortions (Koster, 2010) while study conducted in Southeastern Nigeria revealed that among women that had a pregnancy termination by instruments, 88% of them are infertile as against only 8% among those that terminated their pregnancies by medications only and Abbas, (2014) said using instruments is the worst method of terminating pregnancy in terms of causing secondary infertility. The study further stated that, among women attending fertility clinics, only 4% out of 100% had never terminated a pregnancy (Eyo, Epuji, and Ukpong, 2012).

2.10.2.2 Maternal mortality

"Maternal mortality is the death of a woman while pregnant or within forty two days of termination of the pregnancy, irrespective of the site or duration of the pregnancy, from causes that are directly related or aggravated by the pregnancy or its management, but not from accidental or incidental causes" (WHO, 2014). Maternal mortality from unsafe abortion is a serious global problem that continues to threaten the lives of many women.

According to (WHO), every eight minutes a woman is dying of unsafe abortion, at the rate of 367 maternal deaths per 100,000 unsafe abortions (Grimes *et al.,* 2006). More than 97% are in

the developing countries with restrictive abortion laws and poorly organized healthcare services. Among those that survive the early complications; over 5 million will suffer serious long-term complications (Haddad, 2009).

Unsafe abortion is one of the leading causes of all maternal mortality in the country, it is responsible for about 30-40% of maternal mortality in Nigeria (Henshaw *et al.*, 1998), and the estimate is likely to be higher considering those dying at home and before reaching the health facilities (Henshaw *et al.,* 1998). The case fatality rate ranges between 1.0% and 1.5%, which means that, for every 100 illegal abortions performed one woman will die. This is three times higher than the global estimate (Bankole *et al.,* 2006).

2.10.2.3 Ectopic pregnancy

Another serious long-term complication of unsafe illegal abortion is ectopic pregnancy in subsequent pregnancies "Ectopic pregnancy is a pregnancy that occurs outside the uterus (womb) which is considered life threatening to the woman" (UMMC, 2014). According to the Guttmacher Institute, unsafe abortion increases the chance of ectopic pregnancy, premature labor and recurrent spontaneous abortion in the subsequent pregnancies (Grimes *et al.,* 2006).

Another study revealed that, post abortive infection as a result of unsafe illegal abortion increases the chance of ectopic pregnancy five-fold in women that had pelvic abscess and adhesions because of a complicated unsafe abortion.

2.10.2.4 Chronic pelvic inflammatory disease

Pelvic inflammatory disease (PID) is "an infection of the woman's reproductive organs (uterus, fallopian tubes and ovaries) and upper genital tract" (Center for Disease Control 2014). PID is one of the late complications of unsafe abortions. It normally presents with lower abdominal pains, vaginal Discharge and sometimes-adnexal tenderness. A study conducted in India shows that, there is a link between induced illegal abortions and PID. PID is a result of an infection already existing in the women's reproductive tract or introduced by the abortionist through the instruments used to terminate the pregnancy.

2.11 Theoretical framework

Ecological model

The theoretical framework that will be used for this study is social ecological model. SEM is a framework that was developed to further the understanding of the dynamic interrelations among various personal and environmental factors. SEM can provide a theoretical framework to analyse various context in multiple types of research and in conflict communication (Oetzel, Ting-toomey, and Rinderle, 2006). Hawley (1950), said social ecology is the study of people in an environment and the influences on one another. Oetzel *et al*., (2006) further said this model allows for integration of multiple levels and context to establish the big picture in conflict communication, health or physical context. There have been several adaptation of the social ecological model; however the initial and most utilize version is Urie Bronfenbrenner's (1977 and 1979).The core of the model is the individual, surrounded by four bands of influence representing the interpersonal, organizational, community and policy levels. Urie Bronfenbrenner's Ecological framework of human development also describe the model in such a way that the individual level is the core of the model which was also divided into four levels, which are: microsystem (comprises family, peers, school, health services, churches etc), mesosystem, (border or intermediary between microsysytem and exosystem) the exosystem (industry, mass media, local politics, social services and neighbours) and macrosystem (attitudes and ideologies of the culture), all these describe influences as intercultural/society, community, organizational, and interpersonal/individual.

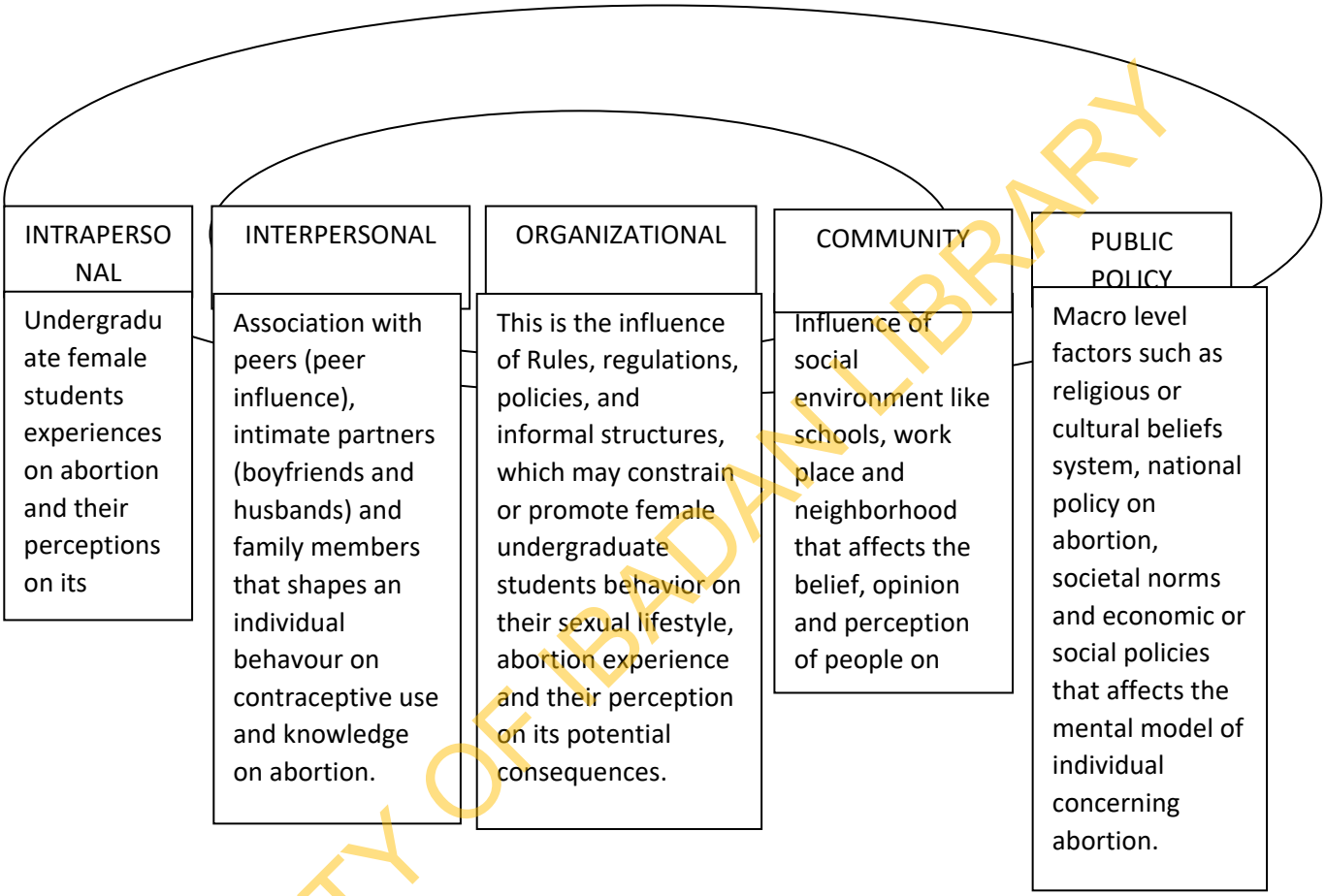

Figure 2.1: Ecological Model

Table 2.1:Explanation of Ecological model on experience of abortion using its constructs

LEVEL OF INFLUENCE	EXPLANATION
Intrapersonal	Individual characteristics such as knowledge, attitudes, beliefs, and personality traits that influence their behavior towards abortion experience and its potential consequences.The specific approach to resolve this may include education. Questions on experience of abortion, knowledge of the consequences of abortion and perception towards abortion were asked. For example, is inability to give birth a consequence of abortion (yes or no), is having miscarriages a consequence of abortion (yes or no). abortion can NEVER lead to regret later in life (yes or no), the higher the age of the pregnancy, the more risky abortion is (true or false), abortion should be done in all cases of unwanted pregnancy (agree, disagree, undecided)
Interpersonal	These are the primary groups which include family, friends, and peers that provide social identity, support, and role definition. The approach at this level is to design a program on increase awareness and knowledge about the use of contraception which will be very effective in preventing unwanted pregnancy. Questions on the persons who supported the abortion of pregnancy were asked which could be friends, boyfriend/fiancé or parents. For example, who made the decision to carry out abortion? Who paid for the abortion (self, boyfriend, friends, parent, others specify)
Organizational	Rules, regulations, policies, and informal structures, which may constrain or promote the female students behaviors towards abortion experience and its potential consequences. Questions on sexual activities were asked to determine the regulations and provisions on safe sex and abortion in health facilities. For examples, can the consequences of abortion be prevented by the use of contraceptives (yes or no), can the consequences of abortion be prevented by the abstinence (yes or no), can the consequences of abortion be prevented by having good sexuality education from parent (yes or no), can the potential consequences of abortion be prevented by training the health workers on attitude (yes or no).
Community	Social networks and norms, or standards, which exist as formal or informal among individuals, groups, and organizations. Examples of approach that can be employed are community outreaches, group programmes and services, use of mass media and use of social media to educate and sensitize people. Questions on where the abortion was carried out, the person who did the procedure and the cost were asked. For example, service done by quacks are cheap and affordable (yes or no), where was the abortion done? How much does the abortion cost? Who performed the procedure?
Public policy	Local, state, and federal policies and laws that regulate or support healthy actions and practices for disease prevention, early detection, control, and management. The approach to this will be review of the national policy on abortion, family planning and proper implementation. Questions on abortion being accepted as a means of family planning or controlling population and the regulations guiding abortion in the country were asked. For example, abortion should be promoted as a means to reduce family planning (agree, disagree, undecided)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Study design and scope

The study is descriptive cross-sectional in design. It investigated the perception and outcome of abortion among female students of Federal polytechnic, Ede, Osun state, Nigeria.

3.2 Description of study area

The study was carried out in the Federal polytechnic, Ede Osun state. The federal polytechnic, Ede is popularly known as Ede Poly. The institution was established in the year 1992 and it was sited in Ede town, Osun state. Federal polytechnic, Ede runs mainly Ordinary National diploma (OND) and Higher National diploma (HND) programme. Presently, there are five (5) faculties in the school which are faculty of engineering technology (having 4 departments), faculty of applied sciences (having 7 departments), faculty of environmental studies (having 5 departments), faculty of business studies (having 7 departments) and faculty of part-time and developmental studies. The departments in each faculty run both OND and HND programme except for few and the new departments which run only OND programme. These departments includes: Mechanical engineering department, Geological technology (geotech) department, Nutrition and dietetics (N&D) department, surveying and geo-informatics department and general studies department. The basic studies department runs only preliminary programme while the faculty of part-time and development studies runs daily part-time, regular part-time and distance learning programme.

The polytechnic has two campuses, the main campus is located in Ede North local government area while the other campus which is popularly called south campus is located in the Ede South local government area, Ede. The south campus is directly opposite Adeleke's university. The main campus (which is the study area for this research work) is located in the main town which is about 5minutes drive from the palace of Timi Agbale of Ede town. The affair of each of the campus is being directed by a director who is responsible to the Rector for the school administration. The polytechnic offers a wide range of specialized short courses to provide opportunities for creative development and research related to the needs of teaching and industry and the business community, particularly in its service area.

Table 3.1: Faculties and departments in federal polytechnic, Ede.

Faculties in federal polytechnic, Ede.	The departments in each faculty
Faculty of engineering technology	Electrical/electronic engineering department Mechanical engineering department Computer engineering department Civil engineering department
Faculty of applied sciences	Science laboratory technology (SLT) department Statistics department Computer science department Hospitality, leisure and tourism management (HLTM) department Geological technology (geotech) department Nutrition and dietetics (N&D) department Basic studies department
Faculty of environmental studies	Estate management department Architectural technology department Building technology department Quantity surveying department Surveying and geo-informatics department
Faculty of business studies	Accountancy department Business administration department Banking and finance department Marketing department, General studies department, Library information department Office technology department.
Faculty of part-time and developmental studies	

3.3 Population for the study

The target population was the female students of Federal polytechnic, Ede, Osun state, Nigeria. The study was limited to the perception and outcome of abortion among female students of federal polytechnic, Ede, Osun state, Nigeria.

3.4 Sample size determination

The Cochran's formula was used to calculate the sample size as shown below:

$n = Z^2pq/d^2$

n = minimum sample size

Z = 1.96 (obtained from the normal distribution table)

p = prevalence of abortion in Nigeria estimated at 47.2% (0.472) (Adegboyega et al, 2016)

q = 1- p, then, q = 1 - 0.472 = 0. 528

d = 5% level of significant

$n= (1.96)^2(0.472)\ (0.528) / 0.05^2$

n=382.96 = 383 female students of Federal polytechnic, Ede, Osun state.

Adding 10% for non - response rate:

n ÷ (1 - 10%) = 383 ÷ (1 – 0.1) = 383 ÷ 0.9 = 425.56 which will be approximately or sum up to 426

3.5 Sampling technique

A three (3) stage multi-stage sampling technique involving simple random sampling, systematic and proportionate sampling at different stage was used to select participants from all faculties and departments in the school.

Stage one (1)

The school has four (4) faculties in all with different departments and the number of students in each department was determined and grouped into male and female using the stratified random sampling.

Table 3.2: The number of departments in each faculty.

S/n	Faculty/school	Number of departments in the faculty
1.	School of applied science	9
2.	School of business studies	5
3.	School of engineering	3
4.	School of environmental studies	5
	Total	**22**

Table 3.3: The number of male and female students in each department

S/N	Department	Number of male students	Number of female students	Total number of students
1.	Science laboratory technology (SLT)	194	357	551
2	Computer science	381	168	549
3	Nutrition and dietetics	31	168	199
4	Library information science (LIS)	125	124	249
5	Physics electronics	27	20	47
6	Biochemistry	21	37	58
7	Applied chemistry	22	36	58
8	Microbiology	16	51	67
9	Hospitality, leisure, tourism and management	62	334	396
10	Geological technology	86	68	154
11	Quantity and surveying	168	78	246
12	Architectural technology	186	21	207
13	Estate management	251	188	439
14	Building technology	298	48	346
15	Mechanical engineering	167	2	169
16	Electrical electronics engineering	469	31	500
17	Office and technology management	298	332	630
18	Accounting	380	391	771
19	Banking and finance	321	269	590
20	Business administration	393	397	790
21	Computer engineering	358	117	475
22	Marketing	49	53	102

Stage two (2)

Participants were selected from all the departments except the mechanical engineering department which has only 2 females. Proportionate sampling was used in determining the number of female students recruited in each departments based on the female student's population in all the departments for all levels (HND II, HND I, ND II FT, ND I FT, ND I PT, ND II PT, ND III PT, ND I DPT and ND II DPT) using the formula below;

Number of respondents to be selected from each department =

$$\frac{\text{Number of female students in each department}}{\text{Total number of female students in all departments}} \times \text{Sample size}$$

E.g.

$$\text{No. of Respondents in S.L.T department} = \frac{357 \times 426}{3173} = 48$$

Table 3.4: Total number of students recruited per department for the study

S/N	Department	Total number of female students in each department	Total number of female students recruited in each department for the study
1.	Science laboratory technology (SLT)	357	48
2	Computer science	168	22
3	Nutrition and dietetics	168	22
4	Library information science (LIS)	124	17
5	Physics electronics	20	3
6	Biochemistry	37	5
7	Applied chemistry	36	5
8	Microbiology	51	7
9	Hospitality, leisure, tourism and management	334	45
10	Geological technology	68	9
11	Quantity and surveying	78	10
12	Architectural technology	21	3
13	Estate management	188	25
14	Building technology	48	6
15	Mechanical engineering	2	-
16	Electrical electronics engineering	31	4
17	Office and technology management	332	46
18	Accounting	391	53
19	Banking and finance	269	36
20	Business administration	397	53
21	Marketing	53	7
	Total	3,173	426

Stage three (3)

The participants were selected per departments using systematic sampling in the department. Sample interval K was calculated and this was done by dividing the number of female students in each department by the number of female students needed to participate in the study per department.

Sample interval (K) =

$$\frac{\text{Total number of female students in a department}}{\text{Number of female students needed to participate in the study in each department}}$$

E.g.

Sample interval (**K**) for S.L.T department $= \frac{357}{48} = 7$

The first respondent was selected by simple random sampling e.g. **N1**while the other respondents were selected consecutively e.g. N1 + 7 = **N2**, N2 + 7 = **N3**, N4 + 7 = **N5**…….

The questionnaires were administered to the consenting female students who met the criteria for participating in the study.

3.6 Inclusion criteria

All female students of Federal polytechnic, Ede, Osun state who consented to participate in the study will be included in the study.

3.7 Exclusion criteria

Male students of Federal polytechnic, Ede, Osun state were entirely excluded from the study. Also, female students of the school who did not consent (those who would give informed dissent) was excluded from the study.

3.8 Instrument for data collection

A quantitative (questionnaire) and qualitative method (In-depth interview) were used for data collection.

A. **Quantitative method**

A semi- structured, pre-tested, self-administered 64 items questionnaire containing close ended questions was used to collect information from the research participants (See Appendix II).

This was developed based on the set objectives, review of literature and guidance of the research supervisor. The questionnaire consisted of six (6) sections. Section A assessed the socio-demographic characteristics of study participants. Section B assessed the knowledge of subjects on the potential consequences of abortion. Section C described the sexual behavior of the respondents. Section D documented the outcome of abortion among the respondents who had done abortion before. Section E assessed the perception of the participants on abortion and its potential consequences.

B. Qualitative method

The in-depth interview guide was used to conduct an in-depth interview on those who during the questionnaire administration were identified as having experienced abortion and who consented to being interviewed in-depth after the questionnaire administration (See Appendix III).

Qualitative and quantitative methods were used in order to have in-depth knowledge and information on the research topic. This also helped in creating an avenue for those that has experienced abortion to share their experience, factors that influenced it, where it was done, the amount it was done, the person that did it, who encouraged them to do it and whether there was any complications or regrets. All these information helped in having a more genuine and authentic information from the students which strengthened the power of the study.

3.9 Validity of the instruments

The validity is the ability of the instrument to measure what is set out to measure and this was ensured through the following procedures:

i. Review of relevant literatures for the development of research questions and research objectives
ii. Development of a draft instrument by consulting relevant literatures.

iii. Subjecting the draft instrument to independent, peer and expert reviews, particularly expert in public health.

iv. Comments from supervisor was used to further fine-tune the instruments.

3.10 Reliability of the instruments

Reliability is the accuracy or precision of a research-measuring instrument. Reliability also refers to consistency, stability or dependability of data.

The drafts of both the qualitative and the quantitative instrument were reviewed by the supervisor and some other experts in public health for quality and consistency. The drafts were revised and field tested among students from Federal polytechnic, Offa which has similar characteristics as the study site. The purpose of the field test was to determine whether the questions are clear and simple enough for the participants' comprehension, and to determine the time it will take to administer the questionnaire. The pretested questionnaire was analyzed using SPSS version 21 while the pre-tested in-depth interview was analyzed using atlas TI. The reliability of the questionnaire was tested using Cronbach's Alpha model based on standardized items. The reliability test done gave a Cronbach's Alpha value of 0.817. After the analysis of the pilot study, some of medical terms like ectopic pregnancy, foetus and gestational age in the questionnaire were removed and some were made simpler. The open ended questions in the questionnaire were reframed into close ended questions.

3.11 Training of the research assistants

Four female research assistants were recruited and trained to ensure viable collection of data. The training entailed providing an overview of the research topic (what it entailed and the sensitivity of the research topic), obtaining informed consent, data collection procedure, how to review questionnaire to ensure completeness and accuracy, issues relating to privacy and good interpersonal relationship, respect for persons and the importance of confidentiality. The note-taker was also trained on how to operate the audio-recorder for the in-depth interview part (qualitative method) while the investigator conducted the interview using the In-Depth Interview guide.

3.12 Data collection process

The ethical approval letter from the UI/UCH Ethics Review Committee was submitted to the school management in other to solicit for their support during the data collection process. Each of the participants were duly informed about the research work. Informed consent was ensured and this was through verbal and written form. The questionnaires were administered to the respondents which were designed to be in self-completed. The female research assistants helped in the administration and collection of the filled questionnaires. Data were collected in the selected classrooms of the study participants during the day's lectures between 12noon and 5:00 pm to be able to reach a reasonable number of participants. There was a section in the questionnaire which was on experience of abortion, this was checked during submission of the questionnaires. Any of the respondents who reported that they had experienced abortion was recruited for an in-depth interview after giving their consent for the interview. The recruited female research assistants were the note taker and recorder while the investigator conducted the interview. The qualitative aspect was used to enrich and complement the quantitative aspect of the study.

3.13 Data management and analysis

A. Quantitative data

All completed copies of the questionnaires were reviewed and edited for completeness. Serial number was written on each copy of the questionnaire for easy identification and recall of any instrument with the data. Data were processed by sorting, coding and scoring of items on the questionnaire. The data were manually coded and entered into the computer. The Statistical Package for Social Science (SPSS) version 21 was used in analyzing the Quantitative data. Frequencies were generated for all the variables while some items were cross tabulated with other variables to determine the strength of their relationship. The Chi-square and descriptive statistics such as percentages and mean were used in the analysis of the data. The results of the variables were summarized was presented in tables in chapter 4 of the report writing. The questionnaires were stored in a place that was safe from destruction by water or fire and where unauthorized persons will not have access to them. More so, there may be need to refer to them in the course of the research process.

Data on knowledge was analyzed using sixty (60) point knowledge scale by allotting one (2) points to any correct answer and zero (0) point for any incorrect answer. Total score of >41 was classified as a good knowledge, a score of >24 to 41 was considered as fair knowledge while ≤ 24 was classified as having poor knowledge. Data on perception was analyzed using (20) points perception scale by allotting one (2) points to any positive answer and zero (0) point for any negative answer. Total score of ≥ 10 was be classified as having a good perception, while < 10 was classified as having poor perception. The in-depth interviews sessions was transcribed and reported using thematic approach. Quantitative data was presented on tables.

B. Qualitative data management

The In-depth interview was recorded on audio-tapes, it was transcribed and analyzed using atlas TI. Important themes were generated, and the relevant points were noted.

3.14 Ethical considerations

Ethical approval was obtained from the University of Ibadan/University College Hospital Ethics Review Committee to ensure the proposed study has met all the principles and National guidelines in research involving human participants (Appendix IV). Informed consent were sought from each participant and the information received was be kept confidential. The ethical principles guiding human participants (respect for person, beneficience, justice and non-maleficience) were considered which include providing comprehensive information about the study procedure, duration, its purpose and benefits. Respondents were allowed to participate voluntarily, there was no coercion nor any form of undue influence into the study

Confidentiality of the respondents was ensured by not writing names or address on the questionnaire. The right and integrity of the respondents was fully protected.

The collected data was securely kept to prevent unauthorized access and loss of the materials.

3.15 Limitation of the study

The limitation of this study was participants' holding back some information due to the sensitivity of the topic but this was minimized by taking more time in assuring the respondents of actions that will be taken to ensure confidentiality. Joint filling of the questionnaires was also avoided by telling the respondents that a questionnaire is strictly for individual and the information should be personal and there should be no any form of influence by friends.

CHAPTER FOUR

4.0 RESULTS

4.1 Socio demographic Characteristics

Tables 4.1 show the socio-demographic characteristics of the respondents. The mean age of the respondents was 21.47years with age range between 16 and 31 years. Majority were between the ages 16 and 20 years (46.2%). Most of the respondents were single (95.1%) and Yorubas constituted majority of the study participants (92.3%). Christianity was the major religion of the respondents (62.7%), higher percentages were in the faculty of applied science (58.5%), more were in ND I (37.6%). In terms of number of children, majority of the respondents had no child (96.9%).

Table 4.1: Socio-demographic characteristics **N=426**

Socio-demographics	Frequency	Percentage (%)
Age group(n= 385)		
11-20	178	46.2
21-30	165	42.9
31-40	42	10.8
Mean age: 21.47 years		
Marital status		
Single	406	95.3
Married	20	4.7
Ethnic group		
Yoruba	393	92.3
Ibo	21	4.9
Hausa	8	1.9
Others*	4	0.9
Religion		
Christianity	267	62.7
Islam	155	36.4
Traditional	4	0.9
Level of study		
ND I	160	37.6
ND II	136	31.9
ND III	16	3.8
HND I	57	13.4
HND II	57	13.4
No. of children		
None	413	96.9
One	8	1.9
Two	4	0.9
Three	1	0.2

*Other ethnic group include; Edo(1), Tiv (1), Akwa-ibom (1) and Benin (1)

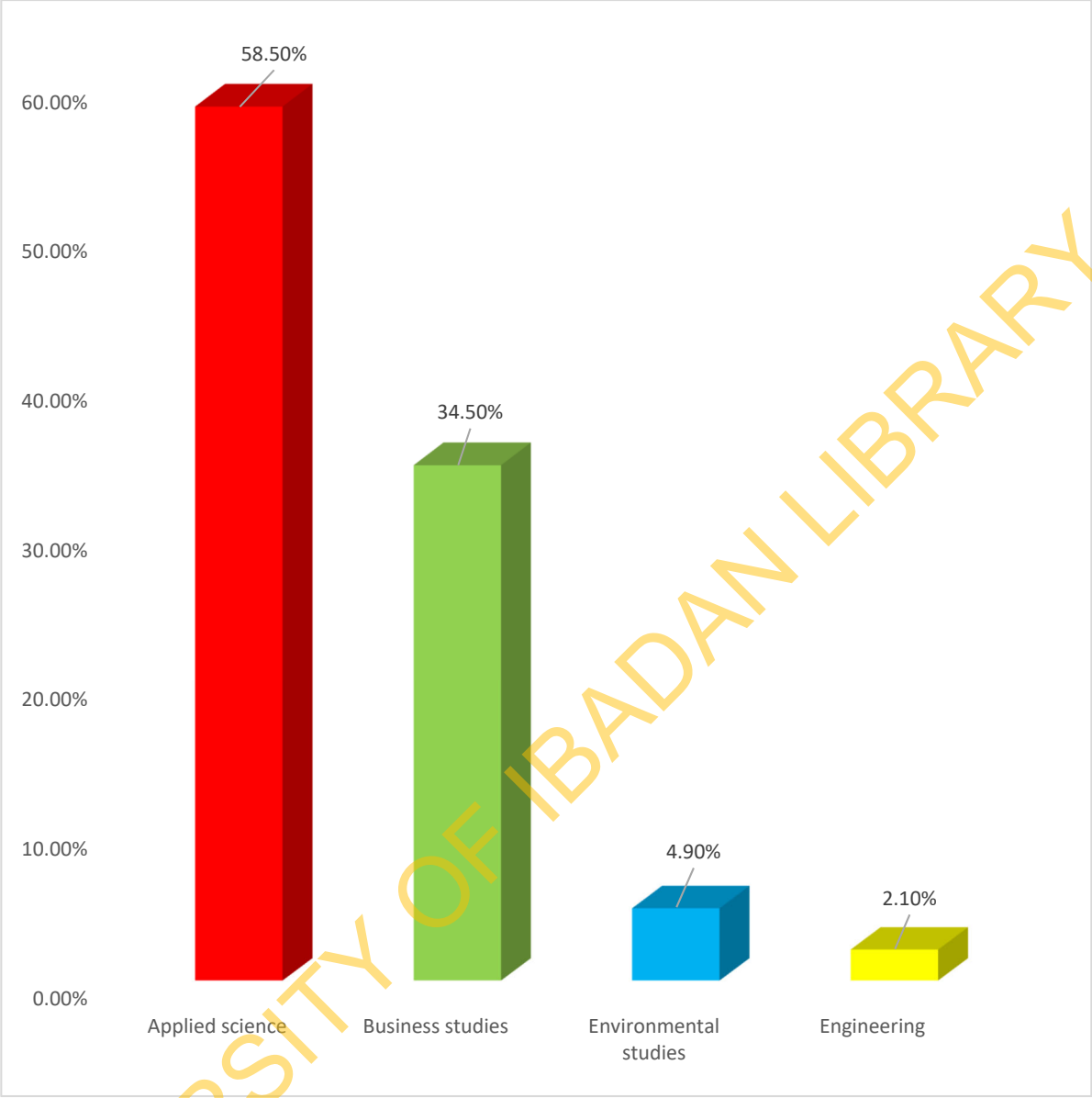

Figure 4.1: Respondents' faculties of study

4.2 Respondents faculties of study

More than half of the respondents are from the faculty of applied science (58.50%), 34.50% of the respondents are from the faculty of business studies while 4.90% and 2.10% of the respondents are from the departments of environmental studies and engineering respectively.

4.3a Knowledge of respondents on abortion

Results from quantitative method

In assessing knowledge of respondent on consequences of abortion, more than half (52.6%) had a good knowledge as presented on figure 4.1. 96.7% agreed that abortion was a sin against God, 95.5% considered excessive bleeding as another consequence of abortion; 88.5%, 91.5%, 80.5% and 73.7% agreed that inability to give birth, death, miscarriages are consequences of abortion respectively. This is presented on table 4.2.

In assessing knowledge of respondents on ways of preventing abortion 80.3%, 48.8%, 53.8%, 80% and 89% agreed that use of contraceptives, not having boyfriend, early detection of pregnancy, abstinence and having a good sexuality education from parents as effective ways of preventing abortion respectively while 78.4% disagreed that having multiple sexual partners was a way of preventing abortion as presented on table 4.3.

b. Findings from In-depth interview

From the in-depth interview, majority of the respondents defined abortion as termination of unwanted pregnancy except one of the respondents that went further to explain it as the means of removing a foetus to prevent it from growing into a child.

When asked reasons why women perform abortion, some of the reasons mentioned were; not ready to have a child, denial, not ready for marriage, rape, threatened birth, change of spouses attitude, parental reactions, financial constraints and none preparedness.

Table 4.2 Knowledge of respondents on consequences of abortion

The consequences of abortion are:	Yes freq(%)	No freq(%)	No response (%)
Sin against God	412(96.7)*	14(3.3)	-
Excessive bleeding	407(95.5)*	17(4.0)	2(0.5)
Inability to give birth	377(88.5)*	49(11.5)	-
Death	390(91.5)*	36(8.5)	-
Miscarriages	343(80.5)*	83(19.5)	-
Overthinking (stress)	314(73.7)*	110(25.8)	2(0.5)

* Correct options

*Multiple responses included

Table 4.3: Knowledge of respondents on prevention of abortion

Knowledge question	Yes (%)	No (%)	No response (%)
Prevention of the consequences is use of contraceptives	342(80.3)*	76(17.8)	8(1.9)
Prevention of the consequences is not having a boyfriend	208(48.8)*	215(50.5)	3(0.7)
Prevention of the consequences is early detection of pregnancy	229(53.8)*	188(44.1)	9(2.1)
Prevention of the consequences is having multiple sexual partners	87(20.4)	334(78.4)*	5(1.2)
Prevention of the consequences is abstinence	341(80)*	76(17.8)	9(2.1)
Prevention of the consequences is having a good sexuality education from parents	379(89.0)*	42(9.9)	5(1.2)

*Correct responses

Figure 4.2: Level of knowledge on abortion of respondents

Mean knowledge score: 46.4 ± 6.9

Minimum Knowledge score = 12

Maximum knowledge score = 60

4.4 Perception of respondents on abortion

a. Results from quantitative method

A higher percentage of the respondents (57.5%) had a good perception of abortion as shown on figure 4.3. In assessing specific perception of respondents as presented on table 4.3, almost all of the (93.2%) agreed that abortion can lead to death, majority (91.3%) attested to the fact that the higher the age of the pregnancy the more risky the abortion, only 13.6% agreed that abortion cannot lead to damage of womb while 78.9% said abortion can lead to having miscarriage later in life. Less than half (43.2%) agreed that abortion safety is guaranteed when done by a medical doctor. 58.9% agreed that abortion can lead to having pregnancy outside the uterus or womb, only 22.3% agreed that abortion can lead to infertility and only 17.1% agreed that abortion can later lead to regret later in life. Almost three-quarter (72.3%) agreed that most people that did abortion later suffers from psychological and emotional trauma, 79.3% agreed that excessive bleeding is one of the common consequences of abortion.

Slightly more than half (56.6%) agreed that consequences of abortion can be prevented, 93.4% said it can be prevented through health education on reproduction/sexual life for women of reproductive age, 94.6%, 81.5%, 89.4%, 84.0% and 17.6% agreed that it can also be prevented through sexual counseling, early treatment of STDs, adequate knowledge on the use of family planning, training for health workers on attitudes and having multiple sexual partners respectively.

In assessing the perception of respondents on the procedures and issues surrounding abortion, less than half (43.3%) agreed that people that do abortion are promiscuous, 24.2% said only those that have multiple sexual partners do abortion, 63.1% agreed that abortion should be done in all cases of unwanted pregnancy while 11.7% agreed that anyone who performs abortion has not killed a person. Less than half (34.7%) agreed that pregnancy that occur due to rape or any form of violence and abuse should not be aborted, 61.5% disagreed that pregnancy that occur due to rape or any form of violence and abuse should not be aborted, 49.5% agreed that most people that did abortion did it under the influence of their friends so they should not be condemned. Less than half (38.7%) agreed that people involved in abortion have done it more than once, 83.1% agreed that no one has no right to terminate a pregnancy, this right only belongs to God, 76.8% disagreed that abortion services should be made

provided for all who desire them while only14.8% agreed that abortion should be promoted as a means to reduce the population.

b. Findings from In-depth interview

When respondents were asked if abortion can cause infertility, all of them said yes. In probing further to know how it causes infertility, majority said it can cause infertility when done by a quack i.e. unprofessional personnel. One of the respondents went further to say infertility can occur when the uterus is punctured in the process, she also mentioned infection to cause infertility i.e. when the personnel use unsterilized instrument. There was also a spiritual aspect that it can cause infertility as one student put it.

It can cause infertility if the person did not kneel down to God, fast and pray for forgiveness of sin. Because doing abortion is the same thing as killing someone.

When asked how abortion can be prevented, a handful of the respondents suggested abstinence and protected sexual intercourse i.e. use of condom. A respondent mentioned that the Doctors performing abortion should be banned and arrested.

Majority of the respondents have heard of family planning methods but the uptake was low as only one of them use pills. Excerpts from the interview of one of the participants stating reasons for non-adoption of any family planning method;

No, I did not do family planning because I have not seen any reason for me to do it, nothing is pursuing me, if I see something pursing me I will do it.

Interviewer- How do you mean nothing is pursing you, please explain

Respondent- What I mean is that if I should get pregnant now and abort it again and I also feel the pain of the abortion. Considering the pain I go through. I wouldn't want to pass through the process again so that will make do family planning

Interviewer- You know they say prevention is better than cure, why did you went to wait till you have another pregnancy before you do family planning

Respondent- On a norms, I don't have time for it and I don't believe in it. In fact I don't have an intention to do it.

Interviewer- Is it that people are saying some things about it that it is bad or what

Respondent- Though people do say it that it do have effect and repercussion but I don't listen to that because I don't have interest in doing it now if I have interest, I will do it.

Many of the respondents agreed that abortion is very common in the society especially on campus among students.

According to Jessica;

It is because most ladies that do have sex regularly, if she said she has never got pregnant before, it is a big lie or else she has removed the one she did not want.

When asked if abortion should be adopted as a method of family planning in Nigeria, most of the respondents categorically said no because of the complications involved thereby terming it risky and dangerous though there was a contrary opinion as presented below;

Jessica;

Haaa, I think abortion should be made as a means to reduce the population in this country. Abortion should be available to anyone wishes to do it. The country economy is poor, abortion should be made available. Unwanted pregnancy could destroy one's future or destroy which can hinder someone from getting to her target goal.

Table 4.4: Knowledge of respondents on prevention and consequences of abortion

Knowledge statement	True (%)	False (%)	No response (%)
Abortion can lead to death	397(93.2) *	19(4.5)	10(2.3)
The higher the age of the pregnancy, the more risky abortion	389(91.3) *	30(7.0)	7(1.6)
Abortion cannot lead to damage of womb	58(13.6) *	367(86.2)	1(0.2)
Abortion can lead to having miscarriages later in life	336(78.9) *	84(19.7)	6(1.4)
Abortion safety is guaranteed when done by a medical doctor	184(43.2) *	235(55.2)	7(1.6)
Abortion can lead to having pregnancy outside the uterus or womb	251(58.9) *	151(35.4)	24(5.6)
Abortion can never lead to infertility	95(22.3)	325(76.3) *	6(1.4)
Abortion cannot lead to regret later in life	73(17.1)	346(81.2) *	7(1.6)
Most people that did abortion later suffers from psychological and emotional trauma	308(72.3) *	116(27.2)	2(0.5)
Excessive bleeding is not one of the common consequences of abortion	83(19.5)	338(79.3) *	5(1.2)
Consequences of abortion can be prevented	241(56.6) *	166(39.0)	19(4.5)
Potential consequences of abortion can be prevented through health education on reproduction/sexual life for women of reproductive age	398(93.4) *	24(5.6)	4(0.9)
Potential consequences of abortion can be prevented through sexual counseling	403(94.6) *	20(4.7)	3(0.7)
Potential consequences of abortion can be prevented through early treatment of sexually transmitted diseases	347(81.5) *	74(17.4)	5(1.2)
Potential consequences of abortion can be prevented through adequate knowledge on the use of family planning	381(89.4) *	42(9.9)	3(0.7)
Potential consequences of abortion can be prevented through training for health workers on attitudes	358(84.0) *	60(14.1)	8(1.9)
Potential consequences of abortion can be prevented through having multiple (more than one) sexual partner	75(17.6)	346(81.2) *	5(1.2)

*Correct responses

Table 4.5: Perception of respondents on procedures of abortion

Perception statement	Agree (%)	Disagree (%)	Undecided (%)
People that do abortion are not promiscuous	185(43.3)*	230(54.0)	11(2.6)
Only those that have multiple sexual partners do abortion	103(24.2)	318(74.6)*	5(1.2)
Abortion should be done in all cases of unwanted pregnancy	269(63.1)*	149(35.0)	8(1.9)
Anyone who commits abortion has not killed a person	50(11.7)	362(85.0)*	14(3.3)
Pregnancy that occur due to rape or any form of violence and abuse should not be aborted	148(34.7)	262(61.5)*	16(3.8)
Most people that did abortion did it under the influence of their friends so they should not be condemned	211(49.5)*	201(47.2)	14(3.3)
Most people involved in abortion have done it more than once	165(38.7)*	243(57.0)	18(4.2)
No one has no right to terminate a pregnancy, this right only belongs to God	354(83.1)*	59(13.8)	13(3.1)
Abortion services should be made provided for all who desire them	78(18.3) *	327(76.8)	21(4.9)
Abortion should be promoted as a means to reduce the population	63(14.8)	357(83.8)*	6(1.4)

* Positive responses

4.5 Sexual characteristics of respondents

The mean age of menarche i.e. start of menstruation was 14.31years with majority starting between 11 and 15years. Most of the respondents had their first boyfriend between the age 16 and 20. Slightly lower than half of the respondents (43.9%) had ever had sex with 19.28years being the mean age of sexual debut among respondents. The mean number of sexual partner was 2 with majority of the respondents having between 1-3 sexual partners. More than half (73.4%) have had any form of sexual education, 50.7% have ever heard of family planning methods and only 17.2% have ever used any of the methods. This is presented on table 4.6

More than half (52.1%) have never been pregnant, and about 13.4% of the respondents has been pregnant more than once.

Table 4.6: Sexual characteristics of respondents

Sexuality variable	Frequency	Percentage (%)
Age at menarche (years); n = 412; mean = 14.31 years		
6-10	7	1.7
11-15	308	74.8
16-20	97	23.5
Age when respondents had first boyfriend (years); n= 336 (78.9%); mean =17.42 years		
11-15	68	20.2
16-20	242	72.0
21-25	26	7.8
Age at first sex(years); n=187 (40.6%); mean=19.28;		
11-15	12	6.9
16-20	117	67.6
21-25	41	23.7
26-30	3	1.7
No. of sexual partners; mean= 2.04		
1-3	175	87.9
4-6	19	9.5
7-10	5	2.5
Ever received any form of sexual education, n= 418		
Yes	307	73.4
No	111	26.6
Ever heard of family planning methods?		
Yes	216	50.7
No	196	46.0
Ever used any family planning method before?		
Yes	72	17.2
No	346	82.8

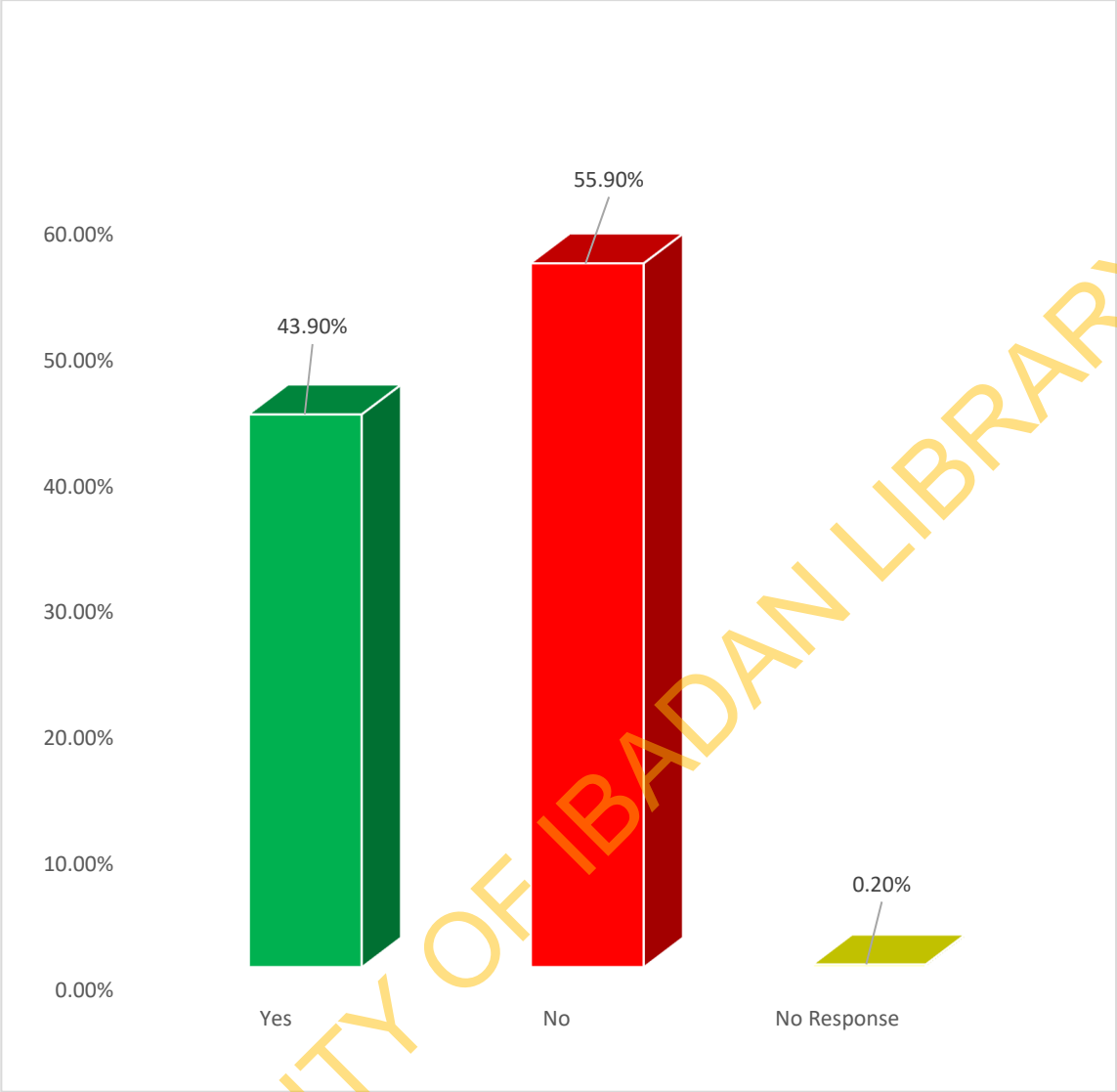

Figure 4.3: Sexual experience

4.6 History of pregnancy among respondents

In reporting the history of pregnancy among respondents, higher percentage of the respondents (86.6%) has never been pregnant before and about 13.4% of the respondents has ever been pregnant before. This is due to the fact that 95.3% of the respondents are single while others are married as shown in table 4.1.

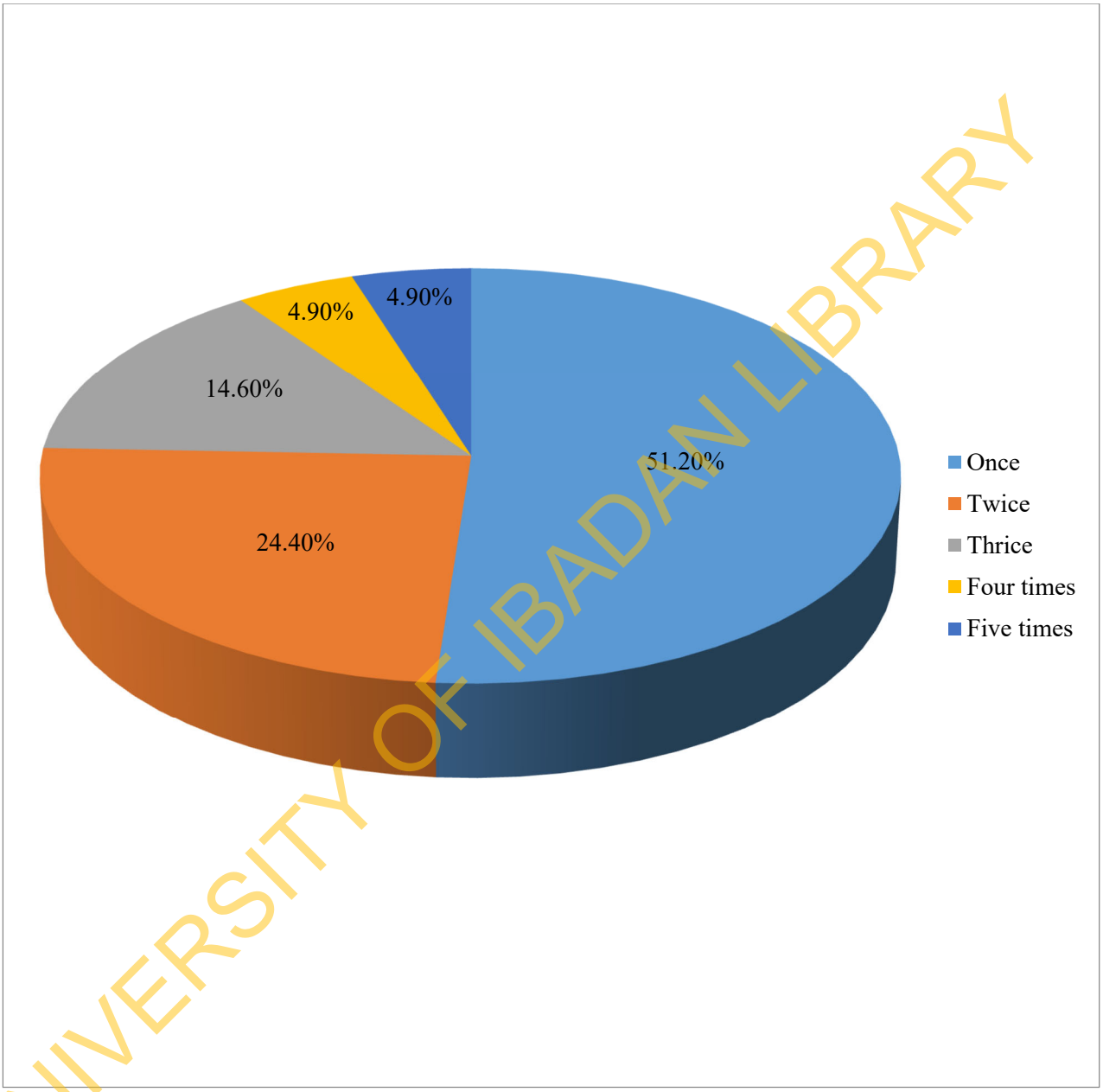

Figure 4.4: Reported frequency of pregnancy

Table 4.7: Reported pregnancy outcomes (N=48)

Pregnancy	Outcome (%)			
	Abortion	**Delivered**	**Miscarriage**	**Total**
First	40(83.33)	14(29.16)	1(2.08)	55
Second	19(39.58)	8(16.66)	0(0.00)	27
Third	11(22.91)	1(2.08)	0(0.00)	12
Fourth	4(8.33)	1(2.08)	1(2.08)	6
Fifth	2(4.16)	0(0.00)	0(0.00)	2
Total	76(158.31)	24(49.98)	2(4.16)	102

***Multiple Response**

4.7 Experience/procedure/outcome of abortion among respondents

a. Results from quantitative method

Figures 4.5 to 4.12 show the experience of abortion among respondents. The prevalence of abortion among respondents was 9.6% with majority (51.2%) having performed abortion once. Majority (73%) aborted the foetus at 2-3months, Majority (55%) of the respondents performed abortion when they were between 16-20 years. Decisions to perform abortion was majorly made by boyfriends (57.5%) and also sponsored by them (52.5%). More than half of the respondents (77.5%) mentioned that abortion was performed by a professional, 47.5% by Doctors and 57.5% in a private hospital. More than half of the respondents (57.5%) experienced complications as outcome of abortion.

b. Findings from In-depth interview

Most of the respondents performed abortion because they were not ready and couldn't keep the pregnancy. Some didn't even know they were pregnant

According to Memuna;

"Because I am not willing to have it. I don't know that it will lead to pregnant because it is my first experience of having sex intercourse and it lead to abortion. it lead to pregnancy aspect in which I am not ready".

The same respondent also gave religion of the spouse as an excuse for performing abortion

Not that even I am ready. The person as in the guy is not .... Is not my type as in is not be tribe based on religion aspect. So he is not a person I really have much confidence on him for my life.

Yes, is not someone I wish to marry. Just we want to take ourselves like boyfriend and girlfriend and later on start harassing me in which it leads to sex.

Another reason given for was to prevent expulsion from school

I was in school of nursing and anyone that was pregnant in school of nursing then will be expelled from the school. Even though I couldn't cope academically then and that is the reason why I am in this school. I only did the abortion once and I've promised my God not to do it again. I am appealing to all ladies out there to stop doing abortion because of our future, it can cause infertility and we will be shouting that the mother-in-law is the one behind our predicament.

Majority of the participants described the procedure as very painful and some were given anesthesia to prevent them from experiencing the pain

According to Anita;

Yes, I regretted it ooo, because it is a very painful and stressful procedure. It is something that could kill someone even that day pain is incomparable. After doing it, the pain still persist (abdominal pain) and that is the reason why some people die in the process.

In probing for any regrets after performing abortion, almost all the respondents expressed no regrets as they were not ready to keep the baby except one that expressed concern on the fact that she had to perform abortion for her first pregnancy and the baby was already three months and the Doctor said the baby was not doing fine.

When respondents were asked if they will carry out abortion again, most of them said no probably because of the pain involved in the procedure but one said she will, if she gets pregnant again and she doesn't want to keep the pregnancy.

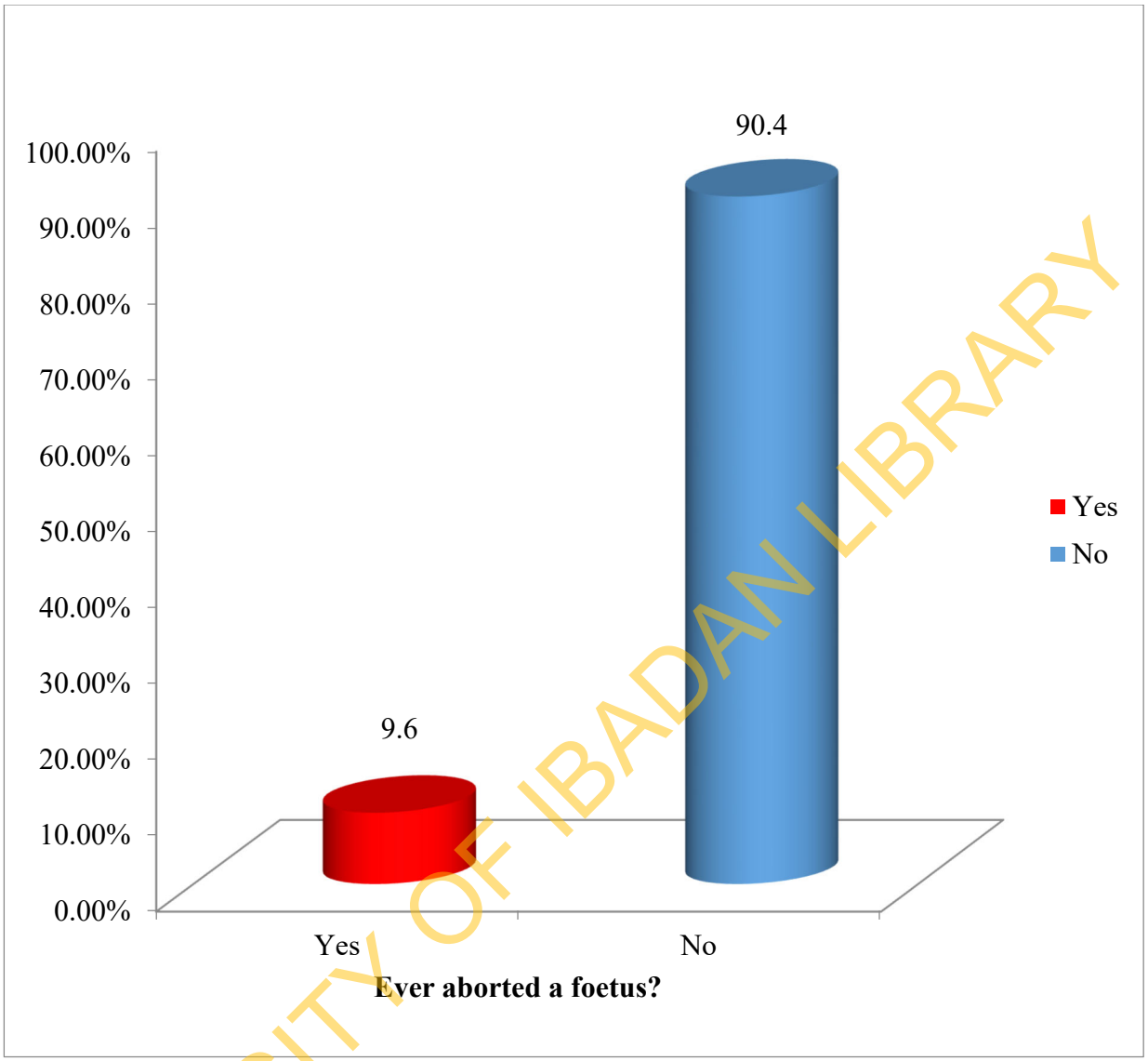

Figure 4.5: Prevalence of abortion

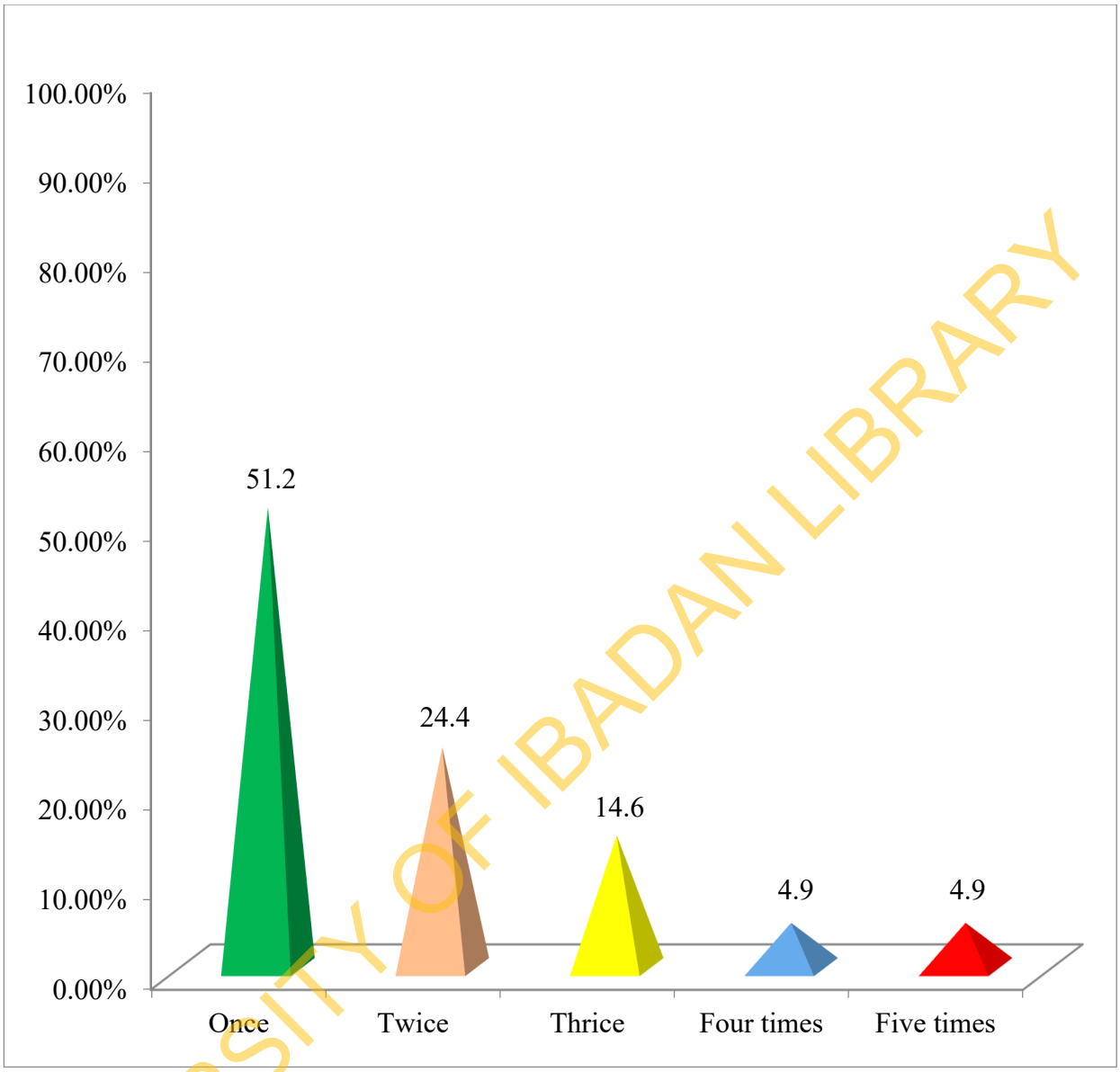

Figure 4.6: Number of times respondents carried out abortion

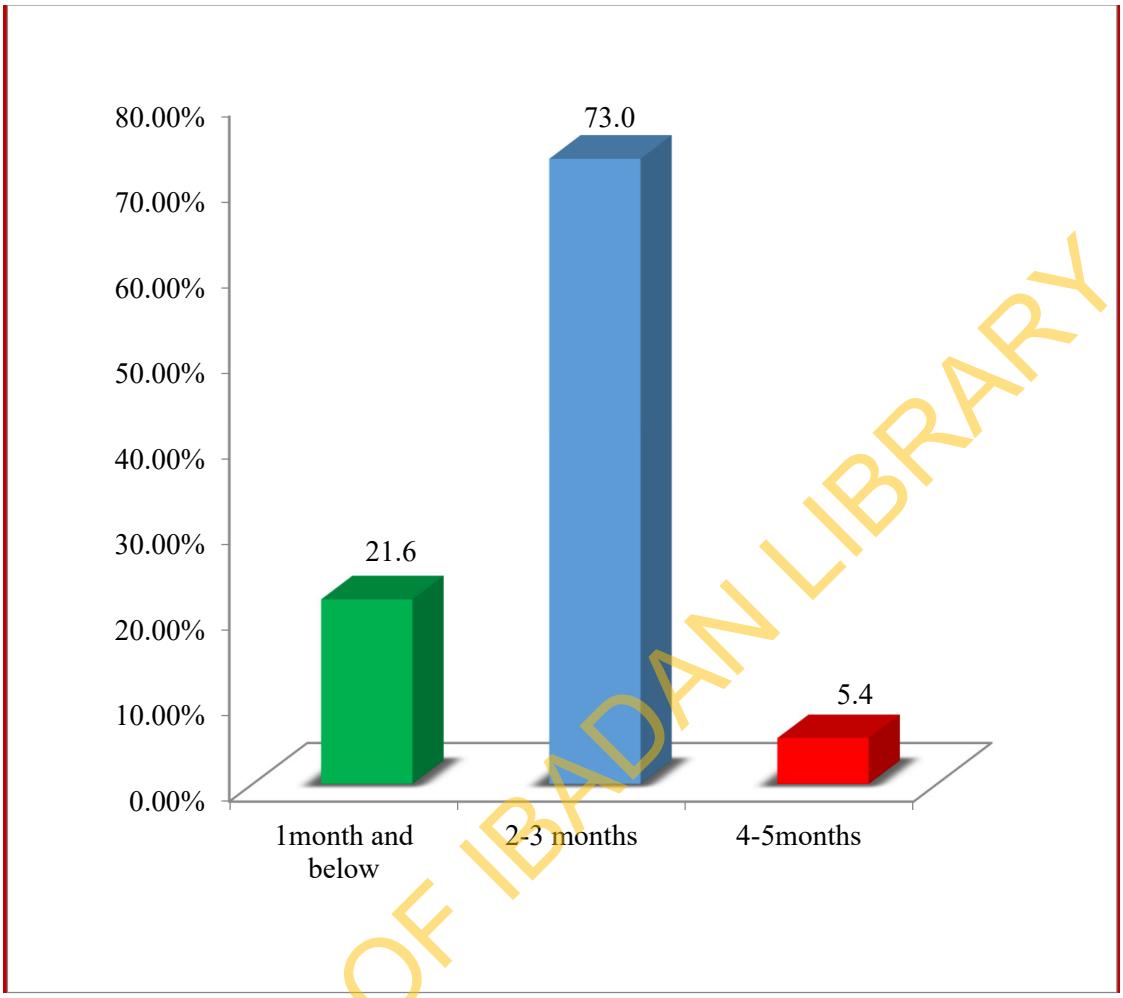

Figure 4.7: Age of foetus at the time of abortion

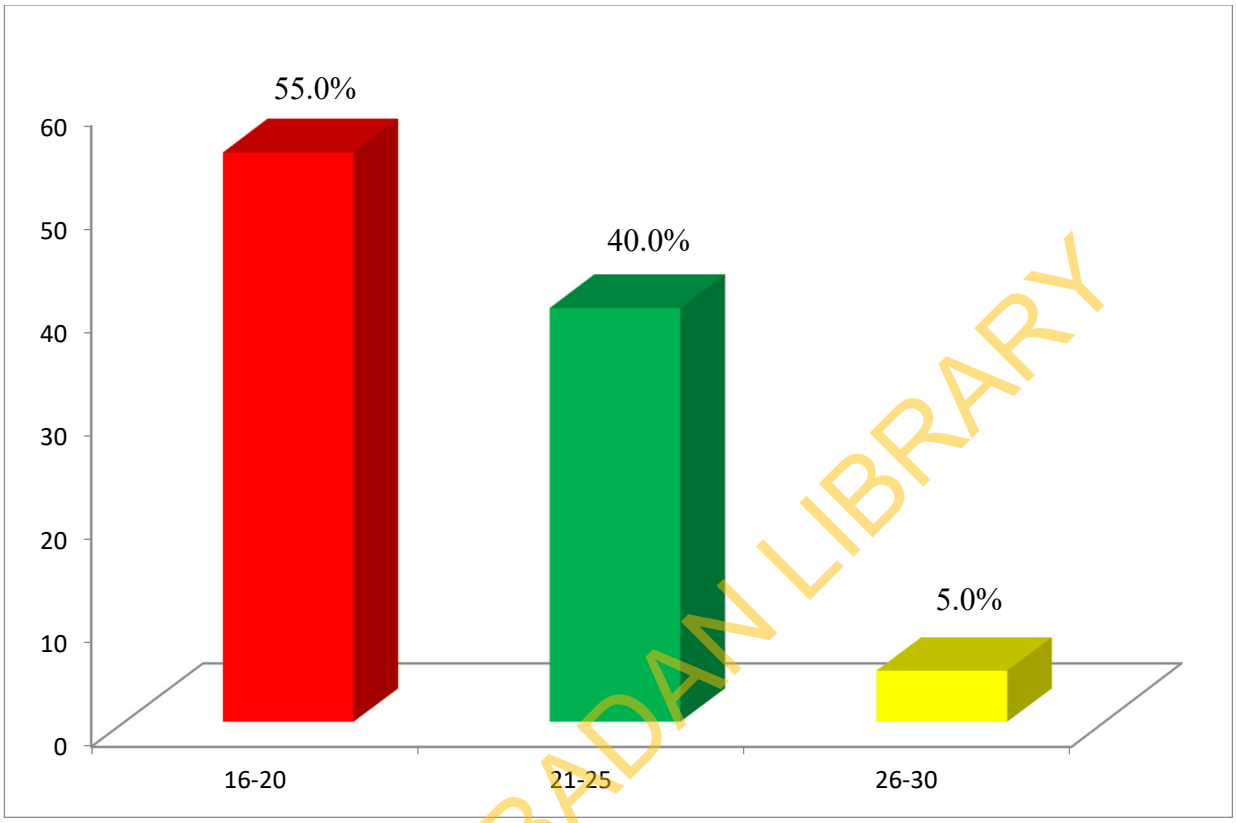

Figure 4.8: Age as at when last abortion was performed

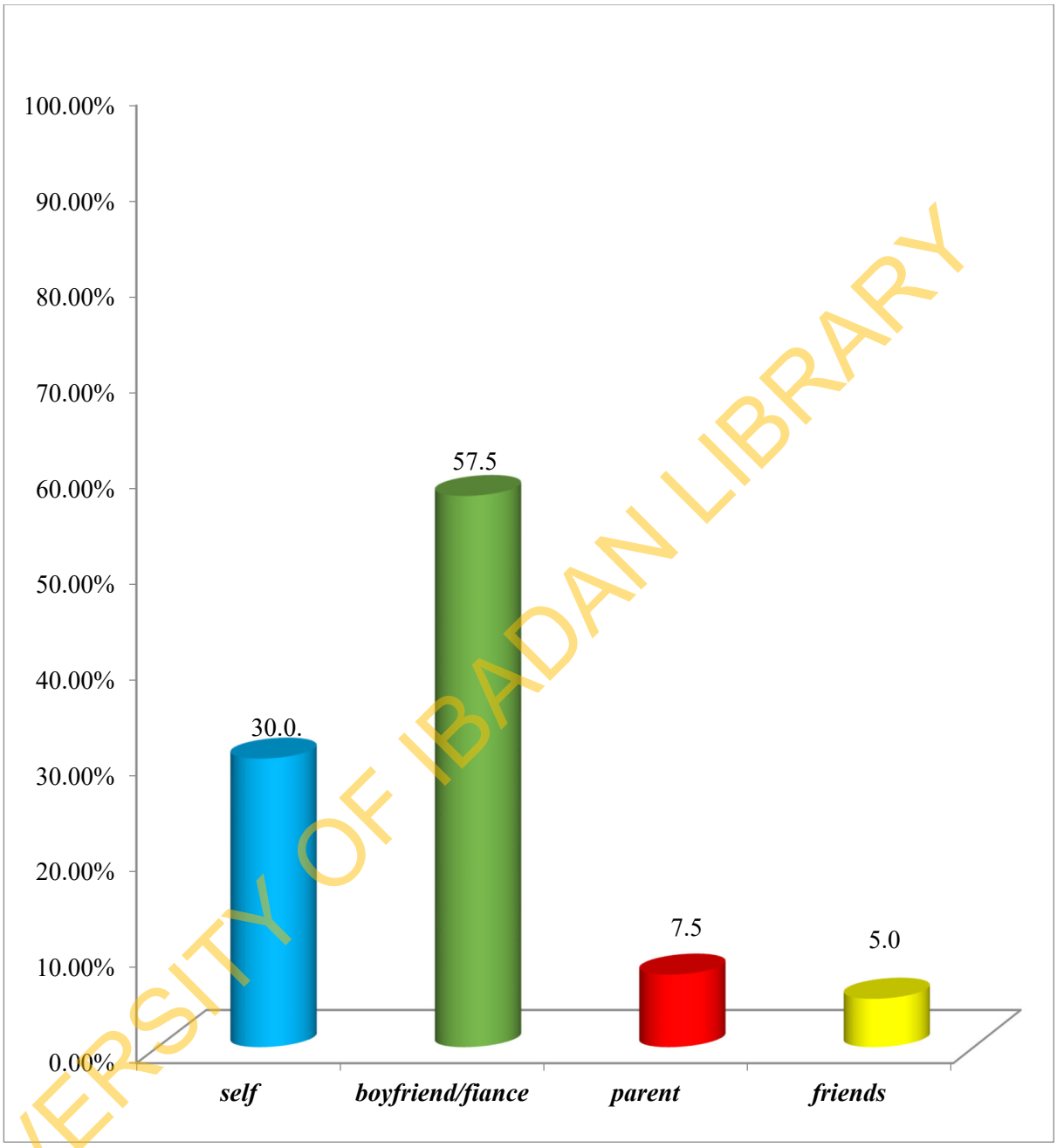

Figure 4.9: Person who paid for abortion services

4.8 Context in which abortion was done

More than half (55.0%) of the respondents said abortion was done in an hygienic environment while 45.0% of the respondents did theirs in a non-hygienic environment. 77.5% of the abortion was done by professionals while 22.5% of the abortion was done by non-professionals. Higher percentage (57.5%) of the respondents had complications after the abortion while 42.5% of the respondents had no complications.

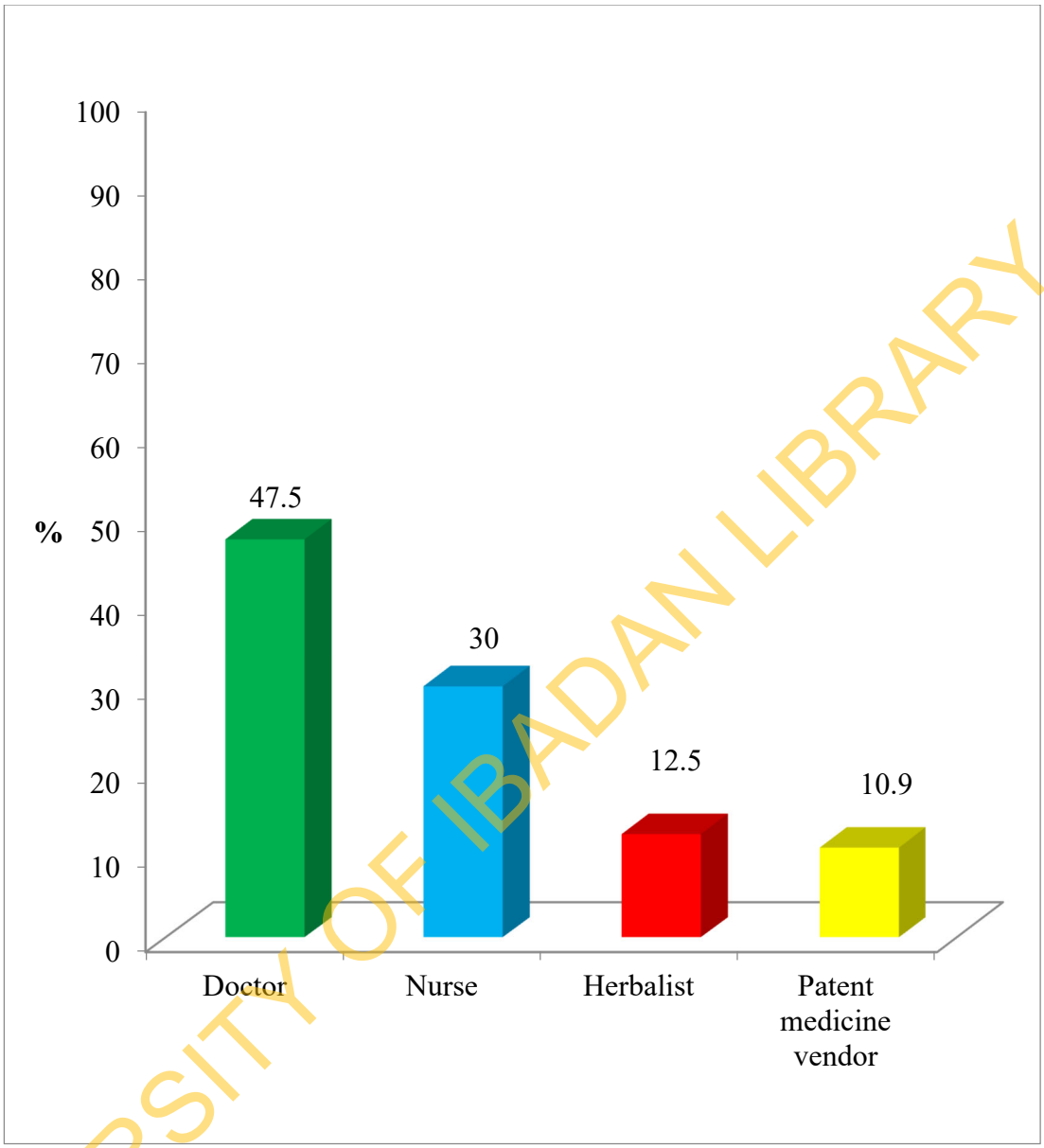

Figure 4.10: Status of persons who performed abortion

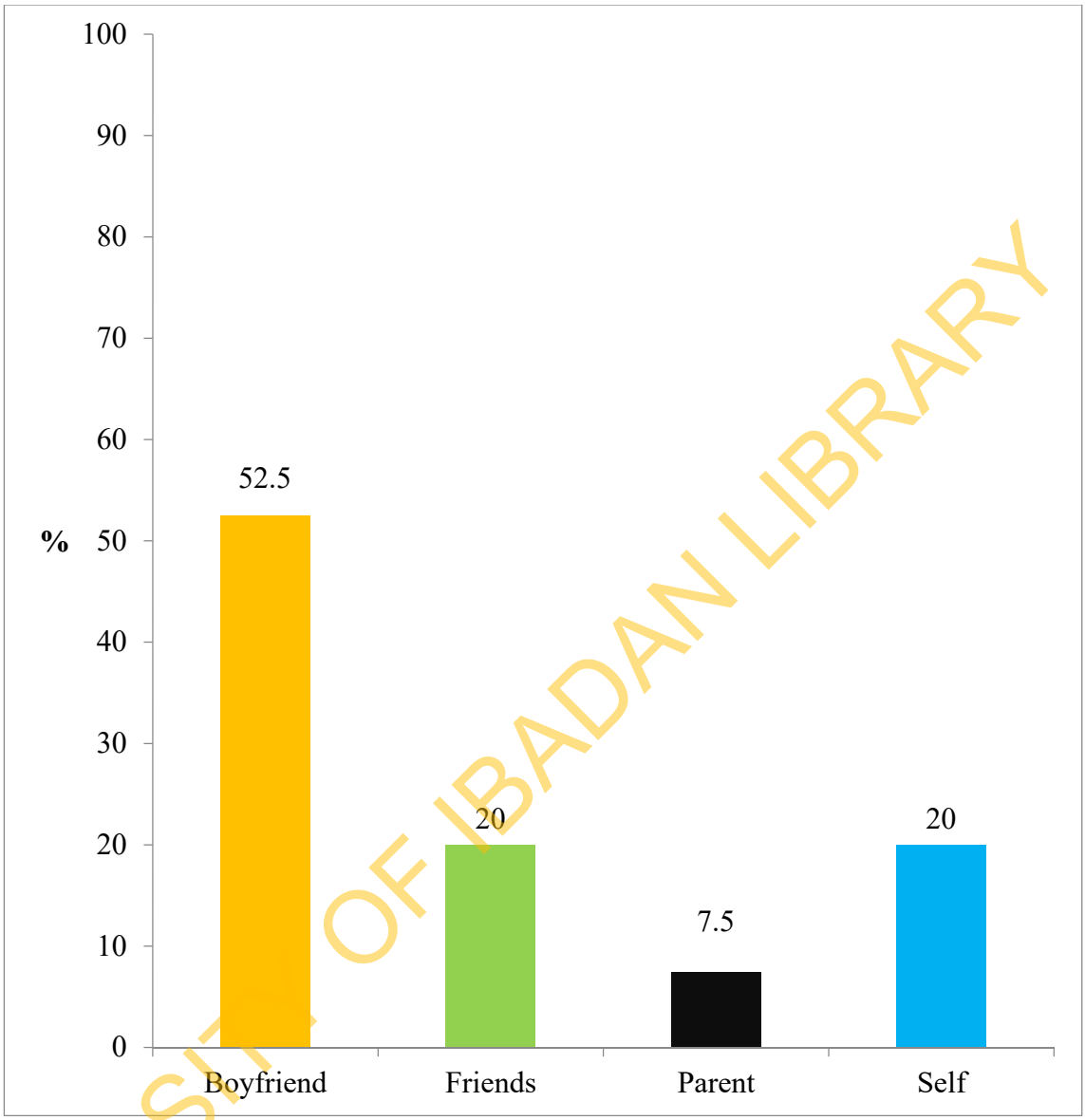

Figure 4.11: Person who made the decision to procure abortion

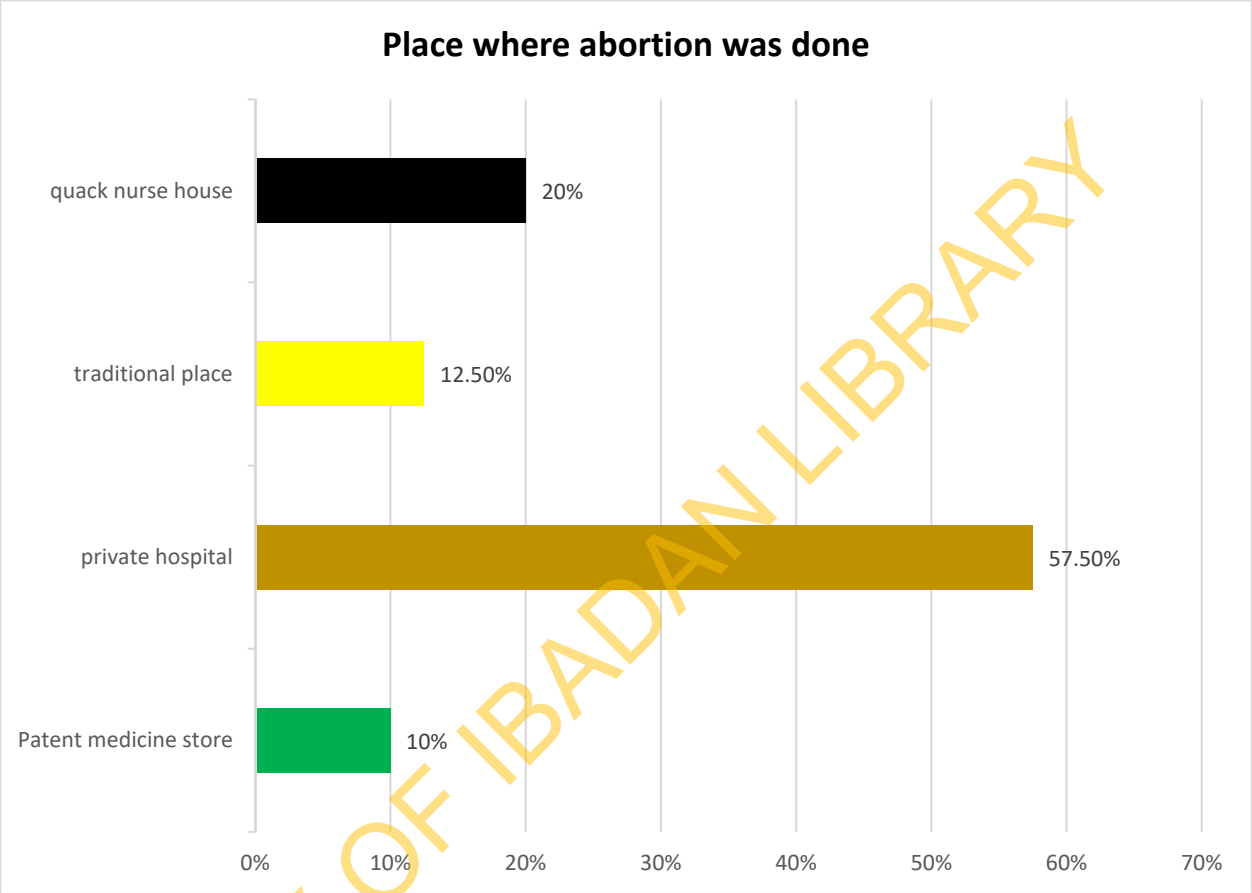

Figure 4.12: Place where abortion was performed

Table 4.8: Summary of In-depth Interview

Name of respondent (Not real)	Age	Age during abortion	Reason for abortion	Method of abortion	Outcome of procedure	Any complication	Sponsor
Cynthia	22	20	To further education	D&C	Painful	Yes, seize of menstruation and bleeding	Boyfriend and self
Salama	23	23	Religious differences	Use of instruments like scissors, string	Painful	None	Family
Memuna		24	Not ready for a child	Use of drug, D&C	Not too painful	Bleeding	Husband
Dorcas	29	18	Dead foetus	Evacuation	Painful	Not able to conceive since then	Mum
Silva	19	18	Not ready for a child		Painful		Boyfriend and self
Jessica	25	25	To further education	D&C	Painful	Abdominal and back pain	Boyfriend
Anita	26	24	To prevent expulsion from school		Painful	Abdominal pain	Self
Anabel	26	25	To continue education	D&C	Painful		

4.9 Test of Hypotheses

Hypothesis I

Ho: There is no association between religion and sexual behavior of respondents.

Conclusion: from table 4.9a, there was no statistically significant association between religion and sexual behavior of respondents as p>0.05. Hence, null hypothesis is not rejected.

Hypothesis II

Ho: There is no association between age of respondent and experience of abortion

Conclusion: As shown on table 4.8, there was no statistically significant association between age of respondents and experience of abortion as p>0.05. Hence, null hypothesis is not rejected.

Hypothesis III

Ho: There is no association between marital status and abortion

Conclusion: There was no statistically significant association between marital status of respondent and abortion status as p> 0.05 as shown on table 4.8. Hence, null hypothesis is not rejected.

Hypothesis IV

Ho: There is no association between age and perception of respondents.

Conclusion: There was no statistically significant association between age and perception of respondents as shown on table 4.10. Hence, null hypothesis is not rejected.

Hypothesis V

Ho: There is no association between knowledge of respondent and their experience of abortion.

Conclusion: There was no statistically significant association between knowledge of respondent and their experience of abortion as shown on table 4.10. Hence, null hypothesis is not rejected.

Hypothesis VI

Ho: There is no association between perception of respondent and their experience of abortion.

Conclusion: There was no statistically significant association between perception of respondent and their experience of abortion as shown on table 4.10. Hence, null hypothesis is not rejected.

Table 4.9a: Relationship between respondents' socio-demographics and sexual activity

Variable	Ever had sex (%)		X^2	P value
	Yes	No		
Marital status				
Single	41.3	58.7	26.652	0.000
Married	95	5		
Engaged	100	0		
Level of study				
ND I	28.1	71.9		
ND II	40.4	59.6		
ND III	50	50	55.476	0.000
HND I	73.7	24.6		
HND II	64.9	35.1		
Religion				
Christianity	41.2	58.4	3.799	0.434
Islam	47.7	52.3		
Traditional	75.0	25.0		
Ethnic group				
Yoruba	43.5	56.2	6.884	0.865
Hausa	75.0	25.0		
Ibo	42.9	57.1		
Others	25.0	75.0		
Age (in years)				
16-20	23.6	76.4	68.513	0.000
21-25	71.6	28.4		
26-30	81	19		

Table 4.9b: Test for factors associated with sexual activity cont'd

Variable	No of sexual partners (%)			$\times^2$	P value
	1-3	4-6	7-10		
Marital status					
Single	87.3	10.5	2.2	2.848	0.584
Married	94.1	0.0	5.9		
Engaged	100.0	0.0	0.0		
Level of study					
ND I	86.3	13.7	0.0		
ND II	87.5	10.7	1.8		
ND III	90.0	10.0	0.0	8.253	0.409
HND I	93.0	4.7	2.3		
HND II	84.6	7.7	7.7		
Age (in years)					
16-20	84.0	14.0	2.0	4.786	0.310
21-25	90.2	7.8	2.0		
26-30	90.6	3.1	6.3		
Age at first sex					
11-15	50.0	16.7	33.3	59.497	0.000
16-20	87.9	12.1	0.0		
21-25	97.6	2.4	0.0		
26-30	100.0	0.0	0.0		

Table 4.10: Demographic characteristics and experience of abortion

Variable	Experience of abortion (%)		$\times^2$	P value
	Yes	No		
Marital status				
Single	9.1	90.9	26.93	0.260
Married	20.0	80.0		
Engaged	0.0	100.0		
Religion				
Christianity	9.0	91.0	7.62	0.022
Islam	9.7	90.3		
Traditional	50.0	50.0		
Faculty				
Applied science	10.4	89.6	0.888	0.828
Business studies	8.8	91.2		
Environmental studies	4.8	95.2		
Engineering	11.1	88.9		
Level of study				
ND I	7.5	92.5	8.820	0.066
ND II	8.8	91.2		
ND III	0.0	100.0		
HND I	19.3	89.7		
HND II	10.5	89.5		
Ethnic group				
Yoruba	8.4	91.6	18.244	0.006
Hausa	50.0	50.0		
Ibo	19.1	89.9		
Others	0.00	100.0		
Age (in years)				
16-20	6.7	93.3	5.704	0.058
21-25	13.3	86.7		
26-30	16.7	83.3		
Level of knowledge				
Poor	0.0	100.0	0.731	0.697
Fair	10.2	89.8		
Good	9.4	90.8		
Level of perception				
Poor	4.5	95.5	17.478	0.000
Good	16.6	83.4		

Table 4.11: Association between age and perception of respondents

Age of respondents	Perception (%)		$\times^2$	p value
	Good	Poor		
16-20	38.8	61.2	4.703	0.095
21-25	42.4	57.6		
26-30	57.1	42.9		

4.10 Regression analysis of the significant association between socio-demographic variables and experience of respondents

From the table below, the binary logistic regression shows that respondents who are Yoruba are 3.552 more likely to have had an abortion than respondents of other ethnic group. Those who had poor perception are 4.408 time more likely to have had abortion.

Table 4.12: Socio-demographic factors and perception associated with abortion experience among respondents

Variable	OR	CI	p value
Marital Status			
Married(ref)	1		
Single	1.863	0.549 – 6.315	0.318
Ethnic Group			
Others(ref)	1		
Yoruba	3.552	1.285 – 9.820	0.015
Religion			
Traditional(ref)	1		
Christianity	5.045	0.460 – 55.301	0.185
Islam	4.327	0.372 – 50.388	0.242
Perception			
Good(ref)	1		
Poor	4.408	2.100 – 9.253	0.000

4.11 Regression analysis for significant associations between socio-demographic variables and sexual activity of respondents

From the table below, respondents who are single are 11.902 times more likely to be sexually active than married respondents and younger age group of twenty (20) years and below are 4.292 times more likely to have ever had sexual intercourse.

Table 4.13: Socio-demography factors associated with sexual experience among respondents

Variable	OR	CI	P value
Marital Status			
Married(ref)	1		
Single	11.902	1.554 – 91.166	0.017
Level of Study			
HND(ref)	1		
ND	1.378	0.827 – 2.294	0.218
Religion			
Traditional(ref)	1		
Christianity	5.222	0.488 – 55.881	0.172
Islam	4.189	0.387 – 45.337	0.238
Age in Years			
16 – 20	4.292	2.618 – 7.034	0.000
21 and above(ref)	1		

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Socio-demographics

The mean age of the respondents was 21.47years, this is similar to a similar study carried out among undergraduate students in Ibadan with a mean age of 21.5 (Cadmus and Owoaje, 2011). This finding also corresponds to previous study by Jegede and Dosunmu (2003) that revealed the age limit for admission into most Nigerian higher institutions as 16 to 17 years which implied that majority of undergraduate students are in their late teens and early twenties. Most of the respondents were single (95.1%) and Yorubas constituted majority of the study participants (92.3%). This could be attributed to the fact that majority are within the young age group and also the quest for higher education had influenced the age of entry into marriage and the study area is located in South-west where Yoruba is the major language thereby justifying the reason why Yoruba are the majority of respondent.

5.2 Knowledge of abortion

From this study, a handful (52.6%) of the respondents had a vast knowledge of the consequences and ways of prevention of abortion. This is comparable to some studies that have moderate level of knowledge among respondents. For example a study conducted in Northern Nigeria observed that most respondents were aware of the dangers associated with criminal abortion (Alhassan et al., 2016). This is higher however than a study carried out in Nepal that observed the level of knowledge of abortion among the women interviewed was low to moderate as only 10% had a high knowledge level of the subject (Khanal et al., 2014). However this is lower than another study in South-west Nigeria also stated mostof the respondents who are undergraduate students (83.3%) had a good knowledge aboutcomplications of abortion (Cadmus and Owoaje, 2011). The higher percentage observed among undergraduate as compared to this present study may be due to variation in the study population as the former are female university students while the respondents in this study are female polytechnic students. The definition of abortion described as the termination of an unwanted pregnancy is also in accordance with the study by Alhassan et al., (2016).

Though there was no statistically significant association between socio-demographic characteristics of respondents and their level of knowledge but level of knowledge was higher among those that were married, those in the faculty of applied and environmental science, those who have ever aborted a foetus, those who have never had sex before compared to their counterparts. This outcome is however slightly different from the same study carried out by Cadmus and Owoaje (2011) where more respondents aged less than 20 years had a good knowledge about abortion and respondents in the first year of study had a good knowledge about complications of abortion. In the study, Knowledge about complications of abortion was higher among those who had ever been pregnant and ever had an abortion (Cadmus and Owoaje, 2011). The higher percentage among those who are married may be because of their age and level of exposure and experience while the higher knowledge among science students may be attributed to their exposure to concepts of abortion in school subjects. Higher knowledge among those that have had abortion before could also be attributed to their experience and exposure.

5.3 Perception of abortion

A higher percentage of the respondents had a good perception on the procedures, causes and prevention of abortion as many tagged it as not good, should be prevented to avoid resulting consequences. This is however expected as the study participants are Nigerians and in African where abortion is frowned at culturallyas it is believed that abortion implied killing someone and those that carryout abortion are stigmatized. This is in line with a study by Jessica (2011). The law governing abortion can also be an influence on the perception as abortion is considered illegal unless the life of the mother or the child is threatened i.e. it is risky to the mother. The good perception was ascertained from the fact that majority of the respondents agreed that abortion can lead to death, infertility, miscarriage, psychological trauma and that safety can only be guaranteed if performed by a professional. This is also supported by that fact that majority suggested health education, counseling, having one sexual partner, adopting and using family planning methods and efficient training of health workers may be used to prevent abortion. A few respondents disagreed with abortion being used as a family planning and population reduction method in Nigeria and that abortion should not be provided to anybody who needs it.

From the study, it was observed that ever being pregnant and ever performed abortion was significantly associated with perception ($p<0.05$) as those that have ever being pregnant or performed abortion had a better perception than their counterparts. The possible reason for this association may be explained by the fact they have experienced the procedure and experienced the side effects and complications hence may consider it as not a too good and pleasant procedure thereby suggesting preventing measures e.g. abstinence as the best method of avoiding pregnancy. A respondent among those that have never performed abortion even mentioned that individual performing abortion should be banned and arrested.

5.4 Sexual behaviour of respondents

Most female undergraduate students in Nigeria are young adults or adolescents who are at that phase of their lives when they start to discover and explore their sexuality behaviour, typified by development of sexual values, the initiation of sexual acts and an upsurge of sex drives, leading to a rather consistent aggression of intense sexual activities (Bamidele, Omotunde and Alabi, 2014). This statement support the prevalence observed in this present study as slightly lower than half of the respondents (43.9%) had ever had sex. This is higher than that observed in a study carried out among undergraduate students in Ibadan of 28.7% (Cadmus and Owoaje, 2011). The difference could be explained by difference in location and level of exposure.

The mean age of first sexual debut was 19.28years with majority having their first sexual activity between 16 and 20 years which is comparable to the study by Cadmus and Owoaje (2011) that observed median age at sexual debut was 19 years and most had their sexual debut between ages 20-24 years. Alhassan *et al*., (2016) also recorded that about 27.3% had their first sexual activity as early as before 15 years. This is however slightly higher than the USAID/WHO (2000) that declared that adolescents throughout the world are sexually active by the age of 19, with girls having the mean age of sexual activity at 15.9 years. This difference may be attributed to a larger sample size and a more generalized study by USAID/WHO.

The mean number of sexual partner was 2 with majority of the respondents having between 1-3 sexual partners. A similar study carried out in Northern Nigeria stated that about 20.6% respondents had changed three or more sex partners within the last two years whereas 53.4%

had been with one sex partner since getting into relationships (excluding married couples), (Alhassan *et al*., 2016). This may because of their age bracket as most of them are young and are still exploring different people in terms of relationship.

About 13.4% of the respondents have ever been pregnant, 29.9% of those sexually active have ever been pregnant. Only 17.2% have ever used any of method of contraception even though 50.75% have heard of family planning. This is comparable with the 24.5% of the sexually active respondents had ever been pregnant (Cadmus and Owoaje, 2011). According to NDHS (2013), only 16% of all women of reproductive age (15–49) were using any contraceptive method as observed in this study. The low rate of contraceptive usage may be explained by the perceived side effects of contraceptives and the misconception about it such as causing infertility. Lack of awareness and knowledge can also be a factor.

5.5 Abortion experience of respondents

The prevalence of abortion among respondents was 9.6% and 71.9% of those who have been pregnant before have performed abortion with majority (51.2%) having performed abortion once. This is slightly lower but comparable to the study by Cadmus and Owoaje (2011) where 90% of the sexually active respondents had terminated the pregnancy and 60.7% having procured abortion only once. Another similar finding was observed in a study in Northern Nigeria that showed that 6.7% of the respondents were ever pregnant and all (100%) ever had induced abortion (Adegboyega *et al.,* 2016). This is similar to the findings by Araoye and Fakeye (1998) in North-Central Nigeria with 5.7% pregnancy rate and 100% abortion prevalence rate among the sexually active females. This is also comparable with studies by Ameh *et al.,* (2009), Kaufmann *et al*., (1998) and Watcharaseranee *et al*., (2006) where ever-pregnant respondents of similar age group were reported to be 8.8%, 8.4%, and 9%. The finding observed in this present study is however higher than that in another study in Northern Nigeria where only about 1.3% of respondents had ever engaged in clandestine abortion in their lives (Alhassan *et al.,* 2016). The difference in the rate of abortion may be attributed to different locations where studies were carried out.

According to Adinma (2011), due to the restrictive law in the country which states that any woman who intend to procure her own miscarriage and unlawfully administers to herself any

poison or noxious substance, or uses any force of any kind, or permits any harmful thing to be administered or used to her, is guilty of a felony, and is liable to be imprisoned for seven years., abortions are not carried out within government health facilities. Hence, 60% of the procedure is being done by Non-physicians and the majority of these are done in the private health facilities or at home by quacks (Adinma, 2011). However, a few get it done secretly in private hospitals and clinics by professional doctors and nurses (Kpolovie and Lale, 2017; Kpolovie and Onoshagbegbe, 2017). This is also in line with the present study as more than half of the respondents (77.5%) mentioned that abortion was performed by a professional, 47.5% by Doctors and 57.5% in a private hospital. This is also supported by a similar study in Kaduna, the study found local Pharmacists (41.3%) and herbalist (28.4%) to be the commonest place where women commit clandestine abortion. Often times, the procedure was done in private establishments (96.4%) (Alhassan *et al.,* 2016).

Majority (55%) of the respondents performed abortion when they were between 16-20 years. Previous studies have shown that 14% of all unsafe abortions in low- and middle-income countries are among women aged 15–19 years (Amazigo *et al.,* 1997). The World Health Organization (2004) has also revealed that the age groups 15–24 years in African region account for more than 50% of the global abortion-related mortalities. Another survey revealed that 53.5 % of those who had ever done clandestine abortion did it before the age of 19. This is because most people within this age group are not ready to carry pregnancy to term or cater for a child because of lack of resources, being unmarried, zeal to pursue education and career or the spouse might be young and not ready to take up such responsibility. Most of the respondents that terminated their pregnancies had the suggestion by their boyfriend and majority were also financially supported by their boyfriends to carry out abortions. This is expected as they are responsible for the pregnancy and may not be ready to father a child during that stage of their life.

Perception was the major contributing factor to termination of pregnancies among respondents ($p< 0.05$) as a higher percentage of those who have terminated pregnancies had better perception. This could be explained as their experience of the consequences have influence their positive perception. Individuals of younger age and the singles are more likely

(had higher percentage) to terminate pregnancy as majority of them still want to pursue their education and career and are not prepared to take responsibilities in catering for a child.

There was no significant relationship between the marital status of the respondents and occurrence of induced abortion. This implies that marital status of the respondent is not a risk factor for the incidence of induced abortion in this population i.e. either married or unmarried, a woman can be involved in induced abortion for varied reasons (Adegboyega *et al.,* 2016). This is similar to a previous study from Ibadan with the report that Nigeria is experiencing demographic transition; the fertility rates are falling; therefore, after a few children, there is higher probability of demand for abortion by married couple who believe that they have had enough children (Awoyemi and Olaniyan, 2014).

5.6 Effect of abortion

More than half of the respondents (55.7%) experienced complications after abortion procedures with seize of menstruation, bleeding, inability to conceive, abdominal and back pain as the side effects experienced. This confirms the state that the basic effects of most criminal abortions is medical complications and eventual death of young women (Biswa *et al.,* 2012: Berhan & Berhan, 2014: Smith, 2013: Baiden *et al.,* 2006). This finding is also similar to that carried out in Northern Nigeria that observed the major post-abortal complications were vaginal bleeding and abdominal pain (Adegboyega *et al.,* 2016). A few respondents reported inability to conceive, vagina discharge, or febrile illness. This is similar to a study from Abakaliki which reported that postabortal septicemia, anemia, peritonitis, hemorrhages, uterine perforation, and postabortal related death as major consequences of induced abortion (Ikeako *et al.,* 2014).

5.7 Conclusion

Despite the widely held view that unplanned pregnancies lead to induced or unsafe abortion. The most common contributing factor for abortion among respondents was not being ready to cater for a child. Other factors like ignorance, poverty and desire to continue career also played key role. There is the need to admit the fact that sex is now an integral part of the society as both married and unmarried; particularly, the youth now practice it.

Though awareness on family planning is high, knowledge and perception of the side effects of abortion is moderately high and a handful of the respondents are sexually active but uptake/utilization of family planning method is low which also have high influence of abortion practices. Public education and awareness creation on the existing abortion laws should be intensified. This will help the female students, NGOs and government institutions to reduce unplanned pregnancies in the country.

5.8 Recommendations

1 There is the need to intensify education on abortion concerning its laws.

2 There is the need for family planning to intensify in the different localities of the country.

3 There should be campaign to reduce unintended pregnancy, which can be achieved through the following:

- Improve knowledge about contraception, unintended pregnancy and reproductive health in general
- Increase access to contraception
- Explicitly address the major roles feelings, attitudes and motivation play in using contraception and avoiding unintended pregnancy
- Develop and evaluate a variety of local programs to reduce unintended pregnancy
- Stimulate research to:

i. develop new contraceptive methods for both men and women

ii. answer important questions about how best to organize contraceptive services

iii. understand more fully the determinants and antecedents of unintended pregnancy

4 Creation and implementation of youth-friendly policies and services in polytechnics regarding sexuality and use of contraceptives should be ensured.

5 Religious leaders should take up more roles in grooming and educating young people on utilization of family planning services.

6 Tertiary institutions should make provisions for facilities that with help young people with their sexuality and should make their services popular to students through creation of awareness as most people are not aware of the available services;

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APPENDIX I

INFORMED CONSENT FORM

Title of Research: Perception and outcome of abortion among female students of Federal polytechnic, Ede, Osun state, Nigeria.

Name and Affiliation of Researcher: This study is being conducted by **SALAU YETUNDE FAUZIYAH,** a postgraduate student of the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Oyo State.

Sponsor of research: The research is self- sponsored.

Purpose of research: The purpose of this study is to investigate the Perception and outcome of abortion among female students of Federal polytechnic, Ede, Osun state, Nigeria.

Procedure of the research, what shall be required of each participant and appropriate total number of participants that would be involved in the research: Multi-stage sampling technique will be applied in selecting 426 study participants among female students of federal polytechnic, Ede, Osun state. The study will adopt both quantitative method using semi-structured, self-administered questionnaire and qualitative method using an In-depth interview guide for data collection. The questionnaire will identify factors influencing the sexual behavior, highlight the factors influencing induced abortion, prevalence of abortion, assess the perception on abortion and potential consequences and identify those that have experienced abortion while the In-depth interview will further explore the experience of abortion and the context which it was done. The study will only require the participant to provide adequate information but an in-depth interview will be conducted immediately on consented individuals who have experienced abortion before.

Expected Duration of research and Participants' involvement: Each research participants is expected to fill the questionnaire within fifteen to twenty minutes of administration and will

be collected back immediately after completion. 10 - 15minutes will be used for in-depth interview. The research work is expected to last for two months.

Risk: The study will not cause any harm, it will not involve any risk as it does not involve use of any invasive material.

Cost to participants: Participation in this research will not have any financial cost but will require only about fifteen - twenty minutes (15 - 20) of participants' time.

Benefit: There is no direct benefit to the participants but will help inform recommendations that will be used in educating the students and public on the importance of contraceptives use to prevent unwanted pregnancies and consequences of induced and unsafe abortion.

Confidentiality: All identifiers will be removed from the questionnaire and confidentiality will be ensured through protection of data collected from participants.

Voluntariness: You participation in this study is entirely voluntary. You have the right to choose to participate in the study or not without any consequence.

Alternatives to Participation: If you choose not to participate in the study, it will not be held against them in any way.

Due Inducement: No payment will be made to any participant for participating in this research. Individual who consent to participate in the study would be appreciated verbally.

Consequences of participants' decision to withdraw from research and procedure for orderly termination of participation: Participants can choose to withdraw from the study any time they wish without reprove. However, any information gathered prior to withdrawal may be used in reports or publication.

What happens to research participants and communities when the research is over?

To ensure proper dissemination of information, the outcome of the study will be pasted in written form on the notice board of each department and faculty in Federal polytechnic, Ede, Osun state after obtaining permission from the appropriate authority.

Any apparent of potential conflict of interest: There is no conflict of interest as pertains to this study

Statement of person obtaining informed consent:

I have fully explained this research to……..…….and have given sufficient information including about risks and benefits to make an informed decision.

DATE: _____ SIGNATURE: _____

NAME:_____

Statement of person giving informed consent: I have been explained to and fully understand the content of the study process. I understand that my participation is voluntary. I know enough about the purpose, methods, risks and benefits of the research study to judge that I want to take part in it. I understand that I may freely stop being part of this study at any time. I have received a copy of this consent form and additional information sheet to keep for myself I hereby agree to participate in answering the questions asked in this questionnaire

DATE: _____ SIGNATURE: _____

NAME:_____

Detailed contact information including contact address, telephone, fax, email and any other contact information of researcher, institution HREC and head of the institution:

This research has been approved by the Ethics Committee of the University of Ibadan and the Chairman of this committee can be contacted at Biode Building, Room 210, 2nd Floor, Institute of Advanced Medical Research and Training, College of Medicine, University of Ibadan, Email: uiuchirc@yahoo.com and uiuchec@gmail.com

In addition, if you have any question about your participation in this research, you can contact the principal investigator,

Name _____**Department** _____

Email _____ **Phone**_____

PLEASE KEEP A COPY OF THIS SIGNED INFORMED CONSENT

APPENDIX II

QUESTIONNAIRE

Serial No…….

PERCEPTION AND OUTCOME OF ABORTION AMONG FEMALE STUDENTS OF FEDERAL POLYTECHNIC, EDE, OSUN STATE, NIGERIA

Greetings to you. My name is SALAU Yetunde. I am a post-graduate student of the department of health promotion and education, faculty of public health, university of Ibadan. I am carrying out a research which involve obtaining information on perception and outcome of abortion among female students of this institution. You are free to choose whether to participate in this work or not but I can assure you that anything discussed or written in the course of filling this questionnaire will remain confidential and will only be used for this research work.

Please note that your name is NOT required in filling this questionnaire but you will be requested to sign to ensure that you are participating in this research. Thank you for your cooperation.

CONSENT: I understand all that has been explained and I agree to participate in this research work.

Signature……. **Date……..**

SECTION A: Demographic Characteristics

(1) Age (in years as at last birthday) _____

(2) Marital status :

1. Single ☐

2. Married ☐
3. Divorced ☐
4. Widow ☐
5. Others (specify) _____

(3) Ethnic group :
1. Yoruba ☐
2. Hausa ☐
3. Ibo ☐
4. Others (specify) _____

(4) Religion:
1. Christianity ☐
2. Islamic ☐
3. Traditional ☐
4. Others (specify) _____

(5) Department of study _____

(6) Faculty _____

(7) Level in school _____

(8) No of children _____

SECTION B: Knowledge on potential consequences of abortion

9. The consequences of abortion are as follows:

S/N	The consequences of abortion are:	YES	NO
9a.	Damage of the uterus or womb		
9b.	Sin against God		
9c.	Excessive bleeding		
9d.	Inability to give birth		
9e.	Death		
9f.	Miscarriages		
9g.	Overthinking (stress)		

10. The above mentioned consequences can be prevented through the following ways:

S/N	Prevention of the above listed consequences are:	YES	NO
10a.	Use of contraceptives		
10b.	Not having a boyfriend		
10c.	Early detection of pregnancy		
10d.	Having multiple sexual partners		
10e.	Abstinence		
10f.	Having a good sexuality education from parents		

Instruction: Please tick (√) appropriate options in the spaces provided

S/N	**QUESTIONS**	**TRUE**	**FALSE**
11.	Abortion can leads to death		
12.	The higher the age of the pregnancy, the more risky abortion is		
13.	Abortion CANNOT lead to damage of womb		
14.	Abortion can lead to having miscarriages later in life		
15.	Abortion safety is guaranteed when done by a medical doctor		
16.	Can abortion lead to having pregnancy outside the uterus or womb later in life		
17.	Abortion can NEVER lead to infertility		
18.	Abortion CANNOT lead to regret later in life		
19.	Most people that did abortion later suffers from psychological and emotional trauma		
20.	Excessive bleeding is NOT one of the common consequences of abortion		

(21). Can consequence of abortion be prevented? Yes ☐ No ☐

The following are ways in which potential consequences of abortion can be prevented

22	Potential consequences of abortion could be prevented through the following means:	Yes	No
22a.	Health education on reproduction / sexual life for women of reproductive age		
22b.	Sexual counseling		
22c.	Early treatment of sexually transmitted diseases		
22d.	Adequate knowledge on the use of family planning methods		
22e.	Training for health workers on attitudes		
22f.	Having multiple (more than one) sexual partner		

SECTION C: Sexual behavior of undergraduate female students.

(23). At what age did you start menstruating? _____

(24). How old are you when you met your first boyfriend?

(25). Have you ever had sex before? Yes ☐ No ☐ **(If NO, skip to question 28).**

(26). At what age did you had your first sexual intercourse? _____

(27). How many sexual partners have you ever had? _____

(28). Did you have any form of sexuality education from your parent before your first menstrual period? Yes ☐ No ☐

SECTION D: Prevalence of abortion experience among undergraduate female student.

(29). Have you ever been pregnant before? Yes ☐ No ☐ (if NO, skip to question 35)

(30).How many times have you been pregnant before? _____

(31) What was the outcome of each of the pregnancies? **Please fill the table below for the response. Tick (√) appropriately**

No of pregnancy	Abortion	Delivered	Miscarriage
First (1) pregnancy			
Second (2) pregnancy			
Third (3) pregnancy			
Fourth (4) pregnancy			
Fifth (5) pregnancy			

(32). Number of previous termination of pregnancy (ies) _____

(33). How old were you when you had your last abortion? _____

(34). How many months was the pregnancy when aborted? _____

(35). Have you ever heard of any Family Planning methods? Yes ☐ No ☐

(36). Have you ever used any contraceptive before? Yes ☐ No ☐

SECTION E: perception of undergraduate female students about abortion.

S/N	What are your opinion about abortion	Agree	Undecided	Disagree
37	People that do abortion are NOT promiscous			
38.	Only those that have multiple sexual partners do abortion			
39.	Abortion should be done in ALL cases of unwanted pregnancy			
40.	Anyone who commits abortion has NOT killed a person			
41.	Pregnancy that occur due to rape or any form of violence and abuse should NOT be aborted			
42.	Most people that did abortion did it under the influence of their friends so they should not be condemned.			
43.	Most people involved in abortion have done it more than once			

44.	No one has no right to terminate a pregnancy, this right only belongs to God.			
45.	Abortion services should be made provided for all who desire them			
46.	Abortion should be promoted as a means to reduce the population			

SECTION F: Context which abortion was done among students?

(47). The environment which the abortion was done was not hygienic Yes ☐ (4☐

Service done by quacks is more affordable and cheap Yes No ☐ ☐

(49). The abortion was done in a hospital by a professional Yes No ☐). The ☐as

complications after the procedure Yes ☐ No ☐

(51). Who performed the procedure? _____

(52). Who made the decision to carry out the procedure? Boyfriend ☐nds ☐

Parent ☐hers, specify _____

(53). Where was the abortion done?

1. Patent medicine store ☐
2. Government hospital ☐
3. Private hospital ☐
4. Herbalist/traditionalist house ☐
5. Quack nurse house ☐

(54). How much does the abortion cost? _____

(55). Who paid for the abortion? Self ☐Boyfriend/Fiancé ☐Parent ☐

Friend(s) ☐Other, specify _____

(56). The quacks are also good at the procedure Yes ☐ No ☐

THANK YOU FOR YOUR TIME AND PARTICIPATION

APPENDIX III

IN-DEPTH INTERVIEW GUIDE

PERCEPTION AND OUTCOME OF ABORTION AMONG FEMALE STUDENTS OF FEDERAL POLYTECHNIC, EDE, OSUN STATE, NIGERIA.

Greeting: - Good day to you.

Introduction: My name is ---------- (First name) and my colleagues are----------.We are from the department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan. We are here to share in your knowledge and experiences about some health issues mostly reproductive health. In this discussion there are no rights or wrong answers. All we are interested in are your opinions on this issue, so you should be relax and be open-minded during this discussion. We appeal to you to allow us use tape recorder so that we will not forget the important things you will tell us and your opinions will be kept confidential and will not be used against you in any way.

Thank you.

Section 1- General Discussion

(1) What did you understand by the word abortion? Explain

(2) Why do women opt for termination of pregnancy? (abortion)

(3) How many times have you ever been pregnant before and what was the outcome of each pregnancy.

(4) How many times have you ever done abortion before?

(5) Why did you abort the pregnancy?

(6) How old was the pregnancy(ies) when you aborted it?

(7) What method was used in aborting the pregnancy(ies)?

(8) What was your experience when you did it? Was it painful? How can you describe it?

(9) Did you later regret having an abortion?

(10) Who influence or encourage you to do it?

(11) Is your boyfriend aware of the pregnancy and did he support the abortion?

(12) How old are you when you did the(se) abortion(s)?

(13) Who performed the procedure on you? Was it an unskilled person, health personnel, your friends, yourself and others?

(14) Where was it done? Hospital, private clinics, at home or any other place

(15) Did you have any post abortion complications? If yes, explain it

(16) How much does the abortion cost and who paid for it?

(17) Can you still commit an abortion?

(18) Did you think abortion should be used as a family planning method in Nigeria?

(19) Did you think abortion can lead to infertility? How?

(20) How can abortion be prevented generally?

APPENDIX IV

INSTITUTE FOR ADVANCED MEDICAL RESEARCH AND TRAINING (IAMRAT)
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UI/UCH EC Registration Number: **NHREC/05/01/2008a**

NOTICE OF FULL APPROVAL AFTER FULL COMMITTEE REVIEW

Re: Experience of Abortion and Perception on its Potential Consequences among female students of Federal Polytechnic Ede, Osun State, Nigeria.

UI/UCH Ethics Committee assigned number: UI/EC/18/0252

Name of Principal Investigator: **Yetunde F. Salau**

Address of Principal Investigator: Department of Health Promotion & Education, College of Medicine, University of Ibadan, Ibadan

Date of receipt of valid application: 20/06/2018

Date of meeting when final determination on ethical approval was made: N/A

This is to inform you that the research described in the submitted protocol, the consent forms, and other participant information materials have been reviewed and *given full approval by the UI/UCH Ethics Committee.*

This approval dates from **03/08/2018 to 02/08/2019.** If there is delay in starting the research, please inform the UI/UCH Ethics Committee so that the dates of approval can be adjusted accordingly. Note that no participant accrual or activity related to this research may be conducted outside of these dates. *All informed consent forms used in this study must carry the* UI/UCH EC *assigned number and duration of* UI/UCH EC *approval of the study.* It is expected that you submit your annual report as well as an annual request for the project renewal to the UI/UCH EC at least four weeks before the expiration of this approval in order to avoid disruption of your research.

The National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the Code including ensuring that all adverse events are reported promptly to the UI/UCH EC. *No changes are permitted in the research without prior approval by the* UI/UCH EC *except in circumstances outlined in the Code. The* UI/UCH EC *reserves the right to conduct compliance visit to your research site without previous notification.*

UI/UCH EC APPROVED COLLEGE OF MEDICINE, U.I.

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