ASSESSMENT OF REPRODUCTIVE HEALTH KNOWLEDGE AMONG STUDENTS IN COLLEGES OF EDUCATION IN NORTH EAST ZONE, NIGERIA

BY

Ibrahim Mohammed MBITSA

DEPARTMENT OF HUMAN KINETICS AND HEALTH EDUCATION,
FACULTY OF EDUCATION,
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APRIL, 2019

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Ibrahim Mohammed MBITSA
NCE (KICOE M/GURI) B.Sc. Ed, M.Ed. (UNIMAID)
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A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES AHMADU BELLO UNIVERSITY, ZARIA, NIGERIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DOCTORATE DEGREE IN HEALTH EDUCATION

**DEPARTMENT OF HUMAN KINETICS AND HEALTH EDUCATION,
FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY,
ZARIA, NIGERIA**

APRIL, 2019

DECLARATION

I declare that the work in this thesis entitled "**Assessment of Reproductive Health Knowledge among Students in Colleges of Education in North East Zone , Nigeria"** has been carried out by me in the Department of Human Kinetics and Health Education, Ahmadu Bello University Zaria under the supervision of Professors V. Dashe, T.N. Ogwu andM.A.Suleiman. The information derived from the literature has been duely acknowledged in the text and a list of references provided. No part of this thesis was previously presented for another degree or diploma at this or any other institution.

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Name of Student	Signature	Date

CERTIFICATION

This thesis entitled “ASSESSMENT OF REPRODUCTIVE HEALTH KNOWLEDGE AMONG STUDENTS IN COLLEGES OF EDUCATION IN NORTH EAST ZONE, NIGERIA by Ibrahim Mohammed MBITSA meets the regulations governing the award of the degree of Doctor of Philosophy in Health Education of the Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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Prof.V. Dashe Date
Chairman, Supervisory Committee

---------- ----------
Prof.T.N.Ogwu Date
Member, Supervisory Committee

---------- ----------
Prof. M.A. Suleiman Date
Member, Supervisory Committee

---------- ----------
Prof. M.A. Suleiman Date

Head of Department

---------- ----------
Prof. Sadiq Z. AbubakarDate
Dean, School of Postgraduate Studies

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DEDICATION

This research work is dedicated to God Almighty Allah and all health educators concerned with ensuring positive reproductive health status of adolescents and youth in the North East Zone, Nigeria.

ABSTRACT

The purpose of this study was to assess knowledge of reproductive health (RH) among students in Colleges of Education in North East Zone,Nigeria. To achieve the purpose of the study, five (5) purposes and five (5) research questions were set. The ex-post facto research design was employed for the study. The total population for the study comprised of 54,042 students in twelve (12) Colleges of Education in the North East Zone of Nigeria. Multi- stage sampling procedures involving simple random sampling stratified random sampling and proportionate sampling techniques were used to draw subjects for the study. A sample of 580 respondents comprising of 341 males and 239 females were drawn for the study.The instrument used for data collection was a researcher developed questionnaire. The questionnaire consistedofsix sections (A- F)covering demographic characteristics and knowledge of reproductive health variables. Out of 580 questionnaires distributed to respondents, 554 (95.5%) were successfully returned and was used for analysis. The datawas analysed using Statistical Package for Social Science (SPSS) IBM version 20. Descriptive statistics of percentages and frequencies was used to analyse demographic characteristics, mean and standard deviation (SD) was used to analyse or answer research questions formulated for the study. One tailed sample t-test was used to analyse research hypotheses 1-4, while Chi-square *x* analysis was used to analyse hypothesis 5 at 0.05 level of significance. The findings of the study revealed that: students of Colleges of Education under study hadsignificant knowledge on safe motherhood (successful maternal and child birth outcomes)P = 0.000 ($p< 0.05$), Knowledge of sexually transmitted infections among students in Colleges of Education in North East Zone was also significant($P = 0.000$) ($p<0.05$). While respondents sources of information on RH knowledge was not significant. The study concluded that knowledge of safe motherhood among students in Colleges of Education in North East Zone of Nigeria was adequate. The study also revealed that knowledge of STIs and Family Planning Methods among students in Colleges of Education in North East Zone of Nigeria was adequate. The result showed that information on reproductive health were mostly obtained from radio 242 (43.7%), doctors 232 (41.9%) and school. While services for reproductive health was mostly obtained from General Hospitals 347 (62.6%) and Clinics 200 (36.1%). It was recommended that students should be encouraged tomaintain (use) their knowledge of safe motherhood to reduce pregnancy related complications through proper sex education lessons, public lectures, workshop or seminars organized by College health department. The study also recommended that respondents' knowledge on sexually transmitted infections should be encouraged and maintained through intensified peer friendly awareness activities to reduce risk of infections among students in Colleges of Education under study.

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ABBREVIATIONS

AIDS - Acquired Immuno Deficiency Virus

CDC - Centre for Disease Control

COCP - Combined Oral Contraceptive Pills

FGC - Female Genital Cutting

FMOH - Federal Ministry of Health

GHEC - Global Health Education Consortium

ICPD - International Conference on Population and Development

IEC - Information Education Communications

PATH - Programme for Appropriate Technology in Health

PMTCT - Prevention of Mother to Child Transmission

RH - Reproductive Health

RTIs - Reproductive Tract Infections

SRH - Sexual and Reproductive Health

STIs - Sexually Transmitted Infections

Operational Definition of Terms

Contraception- refers to respondent's ability to know when to become or delay pregnancy

Family Planning - the act adopted by the individual or couples to regulate pregnancy or spacing between births during reproductive stages.

Reproductive health – refers to the condition of physical, mental and social wellbeing of the individual in matters related to reproductive system, functionsand processes at all stages of life.

Reproductive health knowledge– refers to awareness of condition of physical, mental and social wellbeing of the individual all matters related to reproductive system, functions and processes at all stages of life .

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Human existence cannot continue without reproductive process. It is this natural phenomenon that makes animals, particularly man remains able to reproduce his offspring continuously through generations. Hence, procreation in man is inevitable and is normally faced with a lot of reproductive health challenges. Reproductive health problems are among the current prevailing health issues that are facing youth in most societies, especially in developing communities. Unexpected or unplanned pregnancies and reproductive tract infections (RTIs) posses a major public health challenges in women of reproductive age especially in developing countries (Monjok, Smensny, Ekabua & Essien, 2010). Youths (persons between 15-24 years of age) are the greatest asset that any nation can have because of their potentialities to invest greatly in a country's socio-economic development if they are well nurtured and protected. These individuals are characterized by significant physiological, psychological and social changes that place their lives at high risk particularly on reproductive health matters United State Aids on International Development (UNAIDS 2015).

Programme for Appropriate Technology in Health (PATH) (2011), indicated that the social and economic impact of a healthy and productive youth population is particularly important for developing countries; where young people aged 12 to 24 represent more than 40 percent of the population. Normally, youth is generally a healthy period of life, but too many young lives are lost or compromised due to reproductive health problems including human immunodeficiency virus (HIV) and unwanted pregnancies which often culminate into obstetrical complications or unsafe abortion. Yet young people are usually less informed, less experienced,

and less comfortable accessing reproductive health services than adults (Monjok et al, 2010). This poses a major public health challenges particularly in women of reproductive age in many societies, Nigeria inclusive. National Youth Policy (NYP) (2009) indicated that there are 1.3 billion people that live within the age range of 12 – 24 years of which close to 85% of this number lives in developing countries. Similarly, Guttmacher Institute (2012) estimated that of the 210 million pregnancies that occur annually worldwide, about 80 million (38%), are unplanned and 46 million (22%) end in abortion.

Furthermore, youth age is a dynamic stage in life, as many physical, social, and psychological changes that occur during adulthood occur during this timeframe. It is normal that during youthful age, attitudes are defined, long-term skills are acquired and health behaviors are formed in the individual. However meeting these challenges according to PATH (2011), need strategic actions that encompasses; fostering a safe and supportive environment for positive youth development and reproductive health, empowering youth with knowledge, attitudes, and skills related to healthy sexual and reproductive health behaviors and increasing youth access to and use of sexual and reproductive health services and commodities.

The fundamental importance of reproductive health to the country's wellbeing leaves so much to be desired. Reproductive health according to International Conference on Population and Development (ICPD) (1994) is the state of complete physical, mental and social well-being of the individual and not merely the absence of disease or infirmity in all matters that relate to reproductive system and its functional processes. In the opinion of Roudi-Fahimi and Ashford (2008), reproductive health entailed the constellation of methods and techniques and services that contribute to wellbeing by preventing and solving sexual health problems. World Health Organization (WHO) (2000) reported reproductive health as how social and sexual behaviours

and relationships affect health and create ill health in the individual. Reproductive health is an area that is relevant to both men and women and to persons of all ages across communities. Generally, reproductive health has the following basic components; safe motherhood which reflects successful maternal and child birth outcomes, sexually transmitted infections, family planning and contraceptive services and sexual and gender violence related activities.

In the context of this work, reproductive health refers to the condition of physical, mental and social wellbeing of the individual in matters related to reproductive system, processes and functions at all stages of life. Reproductive health knowledge on the other hand is viewed as individual's awareness of condition of physical, mental and social wellbeing of the individual in matters related to reproductive system, processes and functions at all stages of life. These help youth particularly women to avoid challenges of unplanned births, unsafe abortions, and pregnancy-related disabilities (Women's Health West, 2011). It can also be explained as how social and sexual behavior and relationship affect and create ill health in the individual. This concur with assertion of Awusabo- Asare, Abane and Kumi-Kyereme (2004) that adequate information and services made available to men and women through sex education and reproductive health services including contraceptives accessibility can help them understand their sexuality and protection from unwanted pregnancies, STIs and subsequent risk of infertility.

However, contraception literally means to avoid conception. A contraceptive device refers to methods or techniques used by the individual to prevent unplanned conception, spacing between births and to some extent protection against STIs. It is normally observed that teenage motherhood has been linked to higher incidences of maternal and child morbidity and mortality which affect both health and educational opportunities in females in developing societies. It is believed that use of family planning services is beneficial for men and women's health and

important at meeting human immunodeficiency virus (HIV) prevention goals (WHO, 2012). United Nation International Children Fund (UNICEF) (2015) reported that contraceptives use has been shown to be more cost effective to prevent the birth of HIV positive children among HIV positive women in the general population. According to World Fact Book (2013), Nigeria has a population of over 170 million people and has an annual growth rate of 2.5% with only 10% of women using family planning or modern contraceptives methods. It further observed that the low utilization of family planning services including contraceptive use has resulted in high abortion rate of 25% per 1000 women aged 15-44 years.

National Demographic Health Survey (NDHS) (2013), reported that maternal mortality rate (MMR) in Nigeria amount to 576 per 100,000 live births. However in North East zone of Nigeria, MMR is the highest which stands 1,549/ 100,000 live births in comparison to 165/100,000 recorded (Odujinrin, 2017). This according to the report is relatively due to poor reproductive health information and services and thus contributed to about 10% of global health burden. Additionally the report also added that fertility rate is recorded at 5.5 per woman in 2013. Despite government effort to ensure achievement of millennium development goals (MDGs) over a decade, Nigeria still lags behind other countries in achieving goals 3, 4 and 5 related to maternal and child health targets in 2015. However considering these unmet MDGs, a new and more elaborate developmental strategy has currently been devised by the United Nations (UN) termed as Sustainable Development Goals (SDGs) which is hoped to be achieved by member nations by 2030. Goal three of SDG – Health and wellbeing focuses on adolescents which are crucial to achieving the goal. Population Reference Bureau (2015) stressed that adolescents have least access to health information and services particularly sexual and reproductive health and the risk factor for non communicable diseases (NCD) - tobacco, alcohol

abuse, unhealthy diets and insufficient exercise are behaviours that begins in early adolescent. Reporting their study, Singh, Damrosch and Ashford (2014) observed that about 225 million women in the developing world including Nigeria had an unmet need for modern contraceptive methods. Women with unmet need are defined as those who want to stop or delay child bearing but are not using modern contraceptive methods.

Globally, also most people become sexually active before their 20th birthday and in sub-Saharan Africa, 75% of young women reported having explored their sexuality by the age of 20, (Blum, 2007). However, despite the geographic, economic and cultural diversity around the world, youth and adolescents express similar concern related to their health, education and economic life. However, it is on record that North East Geo-Political Zone of Nigeria has the second highest records of maternal and child health problems (NDHS, 2013), and that young people aged 15 to 24 years in the region have high rates of reproductive health problems which include sexually transmitted infections (STIs), including HIV/AIDS and have unmet needs of family planning services (Luana & Gladys, 2015). NDHS (2013) further reported that Borno and Yobe states in particular performed worst in matters that relate to reproductive health issues. Their report indicated that 59% and 66% of pregnant women did not receive antenatal care respectively. The survey also added that 20% of women in the region have delivered in a health facility and only 8% in Yobe State. Youths in these communities face numerous reproductive health challenges which usually subject the population to life threatening consequences.

Addressing reproductive health needs of young people represents one of the most important commitments this country can make to its future leaders. FMOH (2009) reported the realization of the importance of young people has led to concerted efforts to develop and empower the youth to become healthy and productive Nigerian citizens which would be capable

to contribute to nation's building. Osotimehin (2016) reported the crucial state of health for the youth particularly girls "for adolescent girls who survives sexual violence, who are at risk of HIV or unwanted pregnancy, life saving reproductive health services are as vital as water, food and shelter particularly in an emergency situation; we need to do as much better job of helping the most vulnerable, especially the girl child, the researcher added.

University and College students are consistently faced with social health problem which usually culminates into risky life styles such as unplanned pregnancies and increasing high rate of abortion (FMOH, 2009). These conditions have often subjected them to academic challenges affecting their progress in school. Gama (2008) reported that in few cultures, female must prove her ability to conceive before contracting into marriage life. These circumstances highly influence some females' not to use family planning techniques. Similarly also males want to prove their virility by engaging in sexual act without protection. These subject them to risky reproductive health behaviour and practices.

Generally, adolescent and young adult's sexuality is characterized by low and incorrect information or inconsistent use of family planning methods. The consequences are out of wedlock pregnancies, unsafe abortions, contracting STIs, HIV/AIDS inclusive and school dropouts which are common among female adolescents. It is unfortunate that discussing as well as accessing family planning services and sexual reproductive health information by youth is regarded as a taboo in some African societies including Nigeria (Dixon-Mueller, 2009; WHO, 2002). This in turn leads to less willingness to access and accept reproductive health services and thereby increasing reproductive health problems as well as putting the youth's lives at risk. However, promotion of family planning in developing societies with high birth rates has the potential of reducing poverty and hunger, while at the same time averting 32% of all maternal

deaths and nearly 10% of child mortality (Timothy, Nelson & Tom, 2011). This would contribute substantially to women's empowerment, achievement of universal primary schooling and long-term environmental sustainability. Furthermore, Chinyere, Egodi, Amalu and Meremikwu, (2013), reported that the trend of sexual behaviour among young people has been of great concern to researchers, educators, programme developers and policy makers in government and other social organizations in the country.

Upon these trends, and other related factors therefore, acquiring adequate knowledge on reproductive health issues among adolescents and young adults in schools cannot be over emphasized. Most literature reviewed in this context reiterated the low level of utilization of protective devices in coitus related activities among youth. Therefore this study was set to assess reproductive health knowledge among students in Colleges of Education in North East Zone of Nigeria.

1.2 Statement of the Problem

It has been generally observed that reproductive health challenges are among the current prevailing health problems that affect youth of our time. Normally youths particularly adolescents experiences changes in their physiological, psychological and hormonal characteristics and thus have inadequate knowledge on how to manage these changes. Inadequate knowledge on reproductive health matters such as understanding their body physiology, safe motherhood which entails going through pregnancy and child birth successfully, how to avoid STIs and family planning problems have remain major challenges facing youth across most societies. Their inability to manage these bodily changes exposes youth to risk unprotected heterosexual relationship that often times results in unwanted pregnancies, induced and unsafe

abortion, and prevalence of STIs including HIV/AIDS rates, including risks of sexual and gender related violence becomes common among students. Furthermore incidence of abandoning or throwing away of newly borne babies by teenager mothers on road sides, in toilets, in bushes are increasing at unprecedented rates among female students in our institutions of learning. These challenges pose serious implications on the health, educational achievement, and social wellbeing and to some extent maternal mortality among teenage mothers.

Unprotected heterosexual sex accounts for 80% of the new HIV infections in Nigeria majority among youth aged 15-24 and sex workers (NDHS, 2013). Sanusi, Suleiman and Musa (2014), reported that teenage pregnancy, abortion, sexual abuse, prostitution, spread of STIs/HIV/AIDS leads to school dropout and affect the general school programme in Nigeria. Similarly, Bureau of Labour Statistics (2013) reported that majority of young men and women going to college are being influenced by the social and environmental factors present in that setting which makes them susceptible to behavioural problems that affect their reproductive life. Therefore increasing awareness of students of Colleges of Education on reproductive health information becomes necessary to help them make informed and correct decisions on health matters to ensure safe andhealthy reproductive life. It is against this background that this study was set to assess reproductive health knowledge among students in Colleges of Education in North East Zone, Nigeria.

1.3 Purpose of the Study

The purpose of this study was to assess knowledge of reproductive health among students in Colleges of Education in North East Zone of Nigeria. The specific purposes for this study are to assess:

1. Knowledge of safe motherhood among students in Colleges of Education (COE) in North East Zone of Nigeria
2. Knowledge of sexually transmitted infections (STIs) among students in Colleges of Education in North East Zone of Nigeria
3. Types of family planning methods known by students in Colleges of Education in North East Zone of Nigeria.
4. Knowledge of sexual and gender violence among students in Colleges of Education in North East Zone of Nigeria
5. Source of information on knowledge of reproductive health among students in College of Education in North East Zone of Nigeria.

1.4 Research Questions

The study was guided by the following research questions:-

1. Do students in Colleges of Education have knowledge of safe motherhood in North East Zone of Nigeria?
2. Do students in Colleges of Education have knowledge of sexually transmitted infections in North East Zone of Nigeria?
3. Do students in Colleges of Education have knowledge of types of family planning methods in North East Zone of Nigeria?
4. Do students in Colleges of Education have knowledge of sexual and gender violence in North East Zone of Nigeria?
5. What are the sources of information about reproductive health among students in Colleges of Education in North East Zone of Nigeria.

1.5 Basic Assumptions

The following assumptions are made for the study. It is assumed that:

1. Knowledge of safe motherhood is low among students in Colleges of Education in North East Zone of Nigeria.
2. Knowledge of sexually transmitted infections is low among students in Colleges of Education in North East Zone of Nigeria.
3. Knowledge of types of family planning methods is low among students in Colleges of Education in North East Zone of Nigeria
4. Knowledge of sexually transmitted infectionsis low among students in Colleges of Education in North East Zone of Nigeria
5. Sources of information about reproductive health are not the same among students in Colleges of Education in North East Zone of Nigeria.

1.6 Hypotheses

On the basis of research questions, the following hypotheses were formulated for the purpose of this study.

Major Hypothesis

Students of Colleges of Education in North East Zone of Nigeria do not have significant reproductive health knowledge of safe motherhood, STIs, family planning methods, sexual and gender violence and source of information on reproductive health matters.

Sub – Hypotheses

1. There will be no significant knowledge of safe motherhood among students of Colleges of Education in North East Zone of Nigeria

2. Students of Colleges of Education in North East Zone of Nigeria have no significant knowledge of sexually transmitted infections.
3. Students of Colleges of Education in North East Zone of Nigeria have no significant knowledge of family planning methods
4. Students ofColleges of Education in North East Zone of Nigeria have no significant knowledge of sexual and gender violence
5. There is no significant difference between source of information on knowledge of reproductive health by Students of Colleges of Education in North East Zone, Nigeria

1.7 Significance of the Study

The finding of this study would be significant to the attainment of positive health and wellbeing of the individual in the area of reproductive health. Anonymous (2014) reiterates that ... sound reproductive health knowledge and proper utilization of health care services improve pregnancy outcomes in women during reproductive life.

It is expected that the result of this study would provide valuable information to facilitate understanding of reproductive health among students which may possibly bridge the existing gap between knowledge and utilization of reproductive health services among students in Colleges of Education in North East Zone, Nigeria.

It is further expected that teachers in the formal school settings would utilize the information generated from the study to facilitate methods of instruction on reproductive health to help in meeting the needs of students in our school system.

It is also hoped that the findings of the study would reveal some factors that might be responsible for poor reproductive health knowledge among students in Colleges of Education in North East Zone, Nigeria.

It is hoped that the findings of this study will help stimulate, policy makers, programme planners and service providers to address reproductive health needs and problem of students and those populations at risk in the community through intervention for provision of contraceptive devices and other service delivery.

It is also envisaged that teachers and health educators would use the report as guide to advice and counsel young people on matters that relate to their reproductive health challenges to help them take informed and rational decisions.

1.8 Delimitation of the Study

The purpose of this study was to assess reproductive health knowledge among students in Colleges of Education in North East Geo-political Zone of Nigeria. The study wasspecifically delimited to reproductive health knowledge of safe motherhood, sexually transmitted infections, types of family planning methods, sexual and gender violence and knowledge of sources of information on reproductive health matters among students in Colleges of Education in North East Zone of Nigeria.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

The main focus of this study was to assess knowledge of reproductive health among students in Colleges of Education in North East Zone, Nigeria. The review of related literature considered relevant to the research variables was presented under the following sub-headings:

2.1 Theoretical Framework

2.1.1 Health Belief Model (HBM)

2.2 Concept of Reproductive Health

2.3 Importance of Reproductive Health Knowledge among Students

2.4Components of Reproductive Health

2.4.1 Safe Motherhood

2.4.2 Sexually Transmitted Infections

2.4.3 Family Planning and Contraceptives

2.4.3.1 Family Planning Methods Used by College Students

2.4.3.2 Hormonal Methods``

2.4.3.3 Non Hormonal Methods

2.4.3.4 Traditional or Natural Methods

2.4.3.5 Sterilization

2.4.4 Sexual and Gender Violence

2.4.4.1 Female Genital Cutting

2.4.4.2 Commercial Sex (Prostitution)

2.4.4.3 Human Trafficking

2.5 Sources/Access of Information about Contraceptives among Students

2.5.1 School

2.5.2 Peers

2.5.3 Hospitals and health centres

2.5.4 Print and electronic media

2.5.5 Parents and relations

2.6 Factors Influencing Use of Family Planning /Contraceptives among College Students

2.7 Empirical Studies on Knowledge of Reproductive Health and Contraceptive Use

2.8 Summary

2.1 Theoretical Framework

A theory presents a systematic way of understanding events, behaviors, and/or situations. A theory is a set of interrelated concepts, definitions, and propositions that explain or predict events or situations by specifying relations among variables. However the theoretical framework to which this work will be anchored to is the Health Believe Model (HBM):

The proponents of this model are Hochbaun (1958); Rosenstock(1974); Becker(1974); Sharma and Romas (2012). The HBM was developed to help understand why people did or did not use preventive services offered by public health departments in the 1950s and has evolved to address newer concerns in prevention and detection (Hochbaum, 1958). For example mammography screening, influenza vaccines as well as lifestyle behaviors such as sexual risk behaviors and injury prevention (Champion & Skinner, 2008). The HBM theorizes that people's beliefs about whether they are at risk for a disease or health problem, and their perceptions of the benefits of taking action to avoid it, influence their readiness to take action (Rosenstock, 1974). It

is a cognitive model which posited that behavior is determined by the number of beliefs about a threat to an individual's well-being and the effectiveness and outcome of a particular action or behaviour. The model holds that health behaviour is a function of an individual's socio-demographic characteristics, knowledge and attitudes. According to HBM, a person must hold the following beliefs in order to adopt or change behaviour:

a. Perceived susceptibility to particular health problem for example risk of having induced abortion
b. Perceived severity - individual assessment of seriousness of the condition, treatment of condition and potential consequences of the condition
c. Belief in the effectiveness of a new behavior for example use contraceptive to prevent or of sexually transmitted infections (STIs).
d. Perceived benefits of preventive action for example using health care services or family planning methods/contraceptives can help in avoiding unwanted pregnancy or transmission of STIs/HIV/AIDS infections
e. Barriers to taking actions, for instance, to avoid using protective devices during coitus with multiple partners
f. Cues to action that is, to witness the death or illness of a close partner or friend due to STIs or abortion complications
g. Self-efficacy; this is the perceived capacity to adopt the behavior.

The individual's perceived capacity to adopt the behaviour (their self-efficacy) is a further key component of the model. Finally, the HBM identifies two types of 'cue to action'; internal, which in the health context includes symptoms of ill health, and external, which includes media campaigns or the receipt of other information. These cues affect the perception of

threat and can trigger or maintain behaviour. Nisbet and Gick (2008) summaries the HBM model as follows:

‘In order for behaviour to change, people must feel personally vulnerable to health threat, view the possible consequences as severe, and see that taking action is likely to either prevent or reduce the risk at an acceptable cost with few barriers. In addition, a person must feel competent (have self-efficacy) to execute and maintain the new behaviour. Some trigger, either internal... or external, is required to ensure actual behaviour ensues’.

However when an individual perceives a threat as not serious or themselves as unsusceptible to it, that individual is unlikely to adopt mitigating behaviours. Low benefits and high costs can have the same impact. In this model promoting action to change behavior includes changing individual personal beliefs; individual weigh the benefits against the perceived cost and barrier to change. For change to occur, benefits must outweigh costs. Generally observed by Henry (2012) HBM accords that individual perceptions such as seriousness of a disease, pregnancy benefits and barriers are more likely to affect the preventive actions of using contraception, immunization to prevent specific conditions such as unplanned pregnancy, contracting STIs, and perceived barrier such as difficult access to sexual and reproductive health services.

According to the HBM, asymptomatic people may not follow a prescribed treatment regimen unless they accept that, though they have no symptoms, they do in fact have hypertension (perceived susceptibility). They must understand that hypertension can lead to heart attacks and strokes (perceived severity). Taking prescribed medication or following a recommended medical regimens such as weight loss program will reduce the risks (perceived benefits) without negative side effects or excessive difficulty (perceived barriers). Print

materials, reminder letters, or pill calendars might encourage people to consistently follow their doctors' recommendations (cues to action). For those who have, in the past, had a hard time maintaining weight loss, a behavioral contract might help establish achievable, short-term goals to build confidence (self-efficacy) Glanz & Bishop, 2010).

Relevance of the HBM to the Study

The application of this model to the individual's health attainment is crucial. Since knowledge is the determining factor for any behavioural modification for optimal health attainment, assessing individual awareness on reproductive health is essentially desirable. Particularly this is necessary among college and university undergraduate students because of their vulneralability. Their ability to protect themselves against consequences of ill health would do much to ensure completion of their education challenges with success. The HBM has been applied most often for health concerns that are prevention-related and asymptomatic, such as early cancer detection and hypertension screening, where beliefs are as important as or more important than overt symptoms. Health motivation is its central focus; the HBM is a good fit for addressing problem behaviors that evoke health concerns example, high-risk sexual behavior, abortion outside health care facility and the possibility of contracting HIV and other STIs and reduced risk factors for cardiovascular disease in the individuals.

2.2 Concept of Reproductive Health

Reproductive health (RH) is an important aspect of general health. Reproductive health is not merely absence of disease or disorders of reproductive process, rather it is a condition in which the reproductive process is accomplished in a state of complete physical, mental and

social wellbeing (UNICEF, 2001). This implies that people have the ability to reproduce, that a woman can go through pregnancy and child birth safely, and that reproduction is carried out successfully with successful maternal and child survival outcomes. World Conference on Women (1995) defined reproductive health as, during the whole reproduction process, people should realize sound physical, mental and social adaptability, rather than mere having a disease or discomfort. The conference identified six areas of reproductive health which includes:

a. satisfying and safe sex
b. healthy fertility
c. successful and planned child bearing in one's own wish
d. access to safe and affordable contraceptive measures and
e. access to reproductive health services to secure physical and mental health of both mother and child. .

However, the International Conference on Population and Development Programme of Action (ICPD) 1994 states that reproductive health refers to the state of complete physical, mental, social and emotional state of wellbeing and not the absence of disease or infirmity in all aspects that relate to reproduction and its functions and processes. It implies that people should have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Posited by Roudi- Fahimi and Ashford (2008), reproductive health is the constellation of methods and techniques and services that contributes to wellbeing by preventing and solving sexual health problems. Reproductive health deals with the reproductive system, processes, and functions at all stages of life. It means living well, being healthy and feeling good about life.

The National Reproductive Health Strategic Framework and Plan (2006) defined reproductive health as state of complete physical, mental and social wellbeing and not absence of disease or infirmity in all matters related to the reproductive system and functional process. It is also stated that sexual health as a state of physical, mental, emotional and social wellbeing in relation to sexuality; it is not merely the absence of diseases, dysfunction or infirmity. Sexual health needs a positive and respectful approach to sexuality and sexual relationships and the possibility of having a pleasurable and safe sexual experience that are free of coercion, discrimination and violence. In a nutshell therefore, RH entails conditions and wellbeing in relation to sound reproductive system, processes and functions, and also concerns diseases and disorders that affect the functioning of male and female reproductive systems.

2.3 Importance of Reproductive Health Knowledge among Students

Reproductive health+ is a crucial part of general health and a central feature of human development. It is a reflection of health during childhood, and crucial during adolescence and adulthood, sets the stage for health beyond the reproductive years for both women and men, and affects the health of the next generation (Spielberg, 2007). Reproductive health extends into the years before and beyond the years of reproduction, not just the time of reproduction. It also acknowledges gender roles, and the respect and protection of human rights. It is paramount to emphasize that access to reproductive health care need to be assured for people among communities.

Reproductive health is a universal concern, but is of special importance for women particularly during the reproductive years. Although most reproductive health problems arise during the reproductive years, in old age general health continues to reflect earlier reproductive

life events. Men too have reproductive health concerns and needs, though their general health is affected by reproductive health to a lesser extent than is the case for women (WHO.2015). However, men have particular roles and responsibilities in terms of women's reproductive health because of their decision-making powers in reproductive health matters (Feleke et al, 2008). Importantly also, the rights of men and women to be well informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods for regulation of fertility which are not against the law, and the right of access to appropriate health care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant (ICPD, 1994). Reproductive health includes sexual health, the purpose of which is the enhancement of life and personal relations, and not merely counseling and care related to reproduction and sexually transmitted diseases (ICPD, 1994).

However, discussing reproductive health cannot be complete without understanding sexuality which is among its basic component. Sexuality according to WHO (2015), is defined as a central aspect of being human throughout life that encompasses sex, gender, identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction. Sexuality is experienced and expressed in thoughts, fantacies, desires, beliefs, values, behaviours, practices and relationships. The WHO report further added that in the context of sexual health and wellbeing, it includes creation of enabling environment which promotes and protect the fulfillment of personal goals, in relation to sexual health, while acting responsibly towards others. The programme of sexual health should be based on the core principles of autonomy, wellbeing and fulfillment, promotion and protection of human right and be guided against violation of human

right related to sexuality and reproduction and promoting satisfying sexual relationship (WHO, 2015).

Women in developing countries and economically disadvantaged women in the cities of some industrial nations suffer the highest rates of complications from pregnancy, sexually transmitted diseases, and reproductive cancers. Lack of access to comprehensive reproductive care is the main reason that so many women suffer and die. Most illnesses and deaths from reproductive causes could be prevented or treated with strategies and technologies well within reach of even the poorest countries (WHO, 2015). Men also suffer from reproductive health problems, most notably from STIs. But the number and scope of risks is far greater for women as a result of their body morphological characteristics.

When addressing the sexual and reproductive health needs of young people, we must first identify the possible obstacles they face. In most parts of the world and in Nigeria in particular, more than 90 percent of young people know at least one contraceptive method, but usage rates remain low, especially in rural areas (NDHS, 2013). This is probably due to the lack of adequately available youth-friendly services to orient them on some peculiar related problems, myths about sexuality and reproductive health, lack of knowledge about sexual & reproductive rights as human rights, and gender inequality (Osakinle, Babatunde & Alade, 2013). One of the largest obstacles that young people face today is the lack of health services that work with their priorities and needs. Adult experiences and perspectives are very different from those of young people. For information and services to effectively reach young people, youth-friendly services are needed that encourage youth to be agents of their own social & health welfare (Gonzola, 2012).

In many African countries, Nigeria inclusive, adolescent reproductive health remains a sensitive issue. The problems of HIV/AIDS infections, cases of unintended pregnancies, illegal and unsafe abortions are prevalent among young people especially adolescents and has remain public health problems which need unprecedented intervention. Adolescence stage through young adult is a period of increased risk taking due to sexual experimentation. It makes them susceptible to behavioural problems that particularly relate reproductive health. Sexually active adolescents are in need of safe and effective contraception (Botha, 2010). Furthermore many adolescents do not use effective contraceptive methods, and those who do, are likely to use them in frequently or incorrectly. As a result, they experience pregnancy too early and at risk of unsafe abortion.

During adolescence, young people develop their adult identity, move toward physical and psychological maturity, and become economically independent. It is observed that across most societies, adolescents are not adequately informed about their biology, reproductive health organs, physical growth as well as their normal growth and development issues. It is at this stage Botha (2010) stressed that youth are vulnerable to risks such as unwanted pregnancies, the health risks associated with early pregnancy, unsafe abortions, drugs and tobacco consumption and STIs/HIV related infections. It is essential that adolescents and students know how to make informed choices and must be equipped with adequate knowledge about reproductive health, as well as to develop positive or favorable attitudes so as to adopt safer sexual behaviors. Focusing on adolescent reproductive health is both a challenge and an opportunity for health care providers.

A study by Stenberg, Axelson, Sheehan, Anderson Gulmezoglu & Temmerman, (2014) stressed that investing in family planning is a development ‘best busy’ and a fundamental

element of any long term socio-economic development strategy and key to SDG achievement. WHO (2016) reported that every day, approximately 830 women die from causes related to pregnancy and childbirth? Nearly all—99%— of these maternal deaths occur in low-income countries. More than half of the deaths occur in sub-Saharan Africa, while one-third occurs in South Asia, the report added. In 2012 approximately 85 million pregnancies representing 40% of all pregnancies globally were unintended (Sedgh, Singh & Hussain, 2014).

As observed in many sub Saharan African countries, rapid population growth remains a major challenge. Most adolescents lack basic reproductive health information and services as well as skills in negotiating sexual relationships with partner. The result is that many adolescents are growing up without adequate information, education and services that can promote healthy and responsible reproductive health behaviour. However, contrary to these fears, evidence from Global Health Technical Briefs (2006) around the world shows that access to information and services improve reproductive health conditions of adolescents. Adolescents require special reproductive health care and attention because of the uniqueness of their situations and the problems to which they are exposed.

Generally therefore reproductive health plays an important role in reducing maternal mortality and morbidity which result in the improvement of life expectancy in the population. Across society, reproductive health is one among the leading causes of women's ill health and mortality worldwide (Spielberg, 2007). Because of its significance, reproductive health is stated in human right laws and conventions of the United Nations. These among others are Universal Declaration of Human Right, 1948; Convention on the Elimination of All Forms of Discrimination against Women, 1979 (ICPD, 1994). Other essential human rights are those that permit women to realize their dignity economically, socially, and culturally.

Contraception is one of the major determinants of fertility levels. It uses has been increasing steadily since 1970 and is currently widespread throughout the world. However, progress has been uneven across geographical areas, and great challenges remain in terms of both increasing the level of contraceptive use to satisfy existing needs in certain regions and in terms of making available an adequate variety of contraceptive methods to increase the ability of couples wishing to use contraception to do so in a consistent and efficient manner (Baidoo, 2013). Hence, there is every need for the youth to be equipped adequately with family planning methods or contraceptive use as the case may be. The benefits of family planning according to Umoh and Udo (2014) are enormous which include reduction of maternal and child morbidity and mortality, empowering women by lightening the burden of excessive child bearing, enhancement of environmental sustainability by stabilizing the population of the planet. Other benefits according to Umoh et al (2014) are prevention of unwanted and unplanned pregnancy, reduction of unsafe abortions, and reduction of over-population.

Teenage pregnancy and STIs pandemic represent one of the major challenges facing youth across societies. Its ability to intricately weave its devastating effects across sectors and borders threatens not just our health, but our way of life (Obaid, 2016). The researcher further stated that equipping youth with the information, knowledge and skills to deal with the life challenges and make responsible and appropriate choices and decisions to protect their own reproductive health and lives and those of their partners are essential. The most fundamental challenges in confronting the major infectious disease are convincing the individuals, the families and communities to adopt and maintain healthy behavior. However, this challenge can only be met if everything else, including enabling environment, adequate health services and interventions are available. Galli (1978) opined that health knowledge is a necessary precursor

to more responsible health behavior. Knowledge about reproductive health issues such as safe motherhood or delivery that is free from complication and also knowledge of venereal diseases is very important for the youth.Galli, further added that venereal diseases are infectious diseases that have always plagued humans and are now on the threshold of being pharmaceutically prevented. He further added that without knowledge, the goals of health education in the individual cannot be easily achieved. However the individual's level of knowledge does not always motivate logical behavior (Obaid, 2016). Situational analysis has shown that, although some people know what is most healthful for them, yet their behaviour does not reflect this knowledge, which means it does not necessarily follow that full knowledge will lead to correct behavior.

The most efficient way to restrict the spread of STI in the population is to equip the individual with adequate knowledge on how to prevent its transmission among those for whom the case of reproduction number is very high, such as those in the most active sexual partners (Measham & Bobadilla, 2013). In a related development, World Bank (2014) stated that epidemiological models have shown that even in a generalized AIDS, Ebola and the Lassa fever epidemics as recorded in somecountries in sub-Saharan Africa and Latin America, the strategy of providing adequate information, education and communication (IEC) is the key to lowering prevalence of such diseases in the whole population. Normally, anyone who has unprotected sex with a partner whose STIs/HIV status is not known may be at risk of infection. Establishing safer behavior from the onset of young peoples' sexual lives may be far more effective in altering the course of the epidemic than changing behavior in older groups. This is because young people are more open to new norms and attitudes than their elders. When safe behaviour is established,

prevalence of STIs and pregnancy related complications may be reduced drastically especially among students in institutions of higher learning (Galli, 1978).

Knowledge is the most important tool for maintaining proper health of the individual. With this cognitive component, an individual's health behavior can be positively influenced. People who do not know how to safeguard their health are in a more precarious position than individual who are knowledgeable. When sexually transmitted infections are not controlled among students when they are infected, it shall directly or indirectly affect their demand for education by decreasing their enrolment in school. In some countries, the havoc wreaked by this prevalence is crippling the education system itself endangering both the supply and quality of education (Mafsuura, 2012). Usually the age of teens and the early twenties are periods of sexual experimentation, frequent change of partners, low level of knowledge about contraceptive devices or STIs in general and how to prevent them. Since this practice is spreading rapidly among these age groups, there is need to find out their awareness level in respect of contraceptives and why they use them. There is also increased vulnerability to pelvic inflammatory disease (PID) complications especially for the sexually active females a situation he opined is preventable with adequate knowledge of safe practice using contraceptives.

Fundamentally, the foundation for having people adopt healthy behavior is knowledge. Once the required health services or products are within reasonable reach, what remains central to adopting healthy behavior is the acquisition and application of knowledge in the central complicated context of culture, social norms and a variety of social influence (World Bank 2014). On a general note therefore incidence rates of unwanted pregnancy and sexually transmitted infections are increasing among populace especially the youths and the sexually

active group. There is a growing need for youth to protect themselves against STIs. Among measures to reduce such occurrence of STIs are proper knowledge and the effective and use of contraceptives devices such as condom, pills, spermicides, IUD and cervical cap appropriately as when deemed.

Hahns and Payne (2003) suggest that persons who use family planning/contraceptives methods need to properly understand two different things, theoretical effectiveness and use effectiveness. Theoretical effectiveness is a measure of a contraceptive methods ability to prevent pregnancy when the method is used precisely as directed during every act of intercourse. On the other hand, use effectiveness, refers to the use effectiveness of a method in preventing conception and ST1s. The use effectiveness takes into account factors that lower effectiveness below that based on perfect use. The factors that can lower the effectiveness of both contraceptives techniques are failure to follow proper instructions, illness of the user, forgetfulness, and subconscious desire to experience risks of STI or pregnancy, they further stated. There is also a growing concern that youth especially adolescents may be putting themselves at unnecessary risk of STIs by choosing only oral contraceptive pill (OCP) for prevention of pregnancy while remaining at risk of acquiring STIs through unprotected sex (WHO, 2012). In such circumstance, the problem appears to be with the interplay between the need to prevent pregnancy and the need to protect against STIs. The use of contraceptives as protective device by both male and female remain an important factor in disease prevention. This is further affirmed by report of WHO(2012) who identified the use of male or female condoms to protect against sexually transmitted infectionsand to limit ongoing transmission to their sexual partners especially in the sexually active individuals.

Contraception among youth in Nigeria has been identified as an effective means of combating the problems of unwanted pregnancy and unsafe abortion (Adewole, 2002). It is an effective means of family planning and fertility control and therefore significant in promoting maternal and child health. The barrier methods are also useful in prevention and control of sexually transmitted infections (STIs) including HIV/AIDS. In some developing world like Nigeria, Niger, Cameroun and Uganda, unwanted pregnancy, unsafe induce abortion, high fertility rates; high maternal mortality rates, sexually transmitted infections and HIV/AIDS are very serious reproductive health problems that require urgent attention (Oye-Adeniran, 2006).

Generally contraceptives represent one of the varied issues in family planning programmes. Practices commonly noticed include the use of herbs or plants, prolonging breast feeding and other unscientific practices that are based on culture and beliefs. Contraception is explained in terms of intentional prevention of the fertilization of the human ovum by special devices, drugs and techniques. In its simplest form refers to avoiding or preventing conception in women. Ordinarily in this context it refers to a device used by male or female before sexual intercourse for varied purposes such as pregnancy prevention, child spacing or used against sexually prevented infections.

In their assertion, Bello, Adeoye and Osagbemi (2013) observed that respondents have a number of misconceptions and myths about contraception; about a third of those that are aware of contraception believed that contraception encourages promiscuity and decreases sexual pleasure. This knowledge gap about contraception poses a great risk for the control of STIs including HIV/AIDS, because condom promotion has been seen as one of the standard STI control interventions. Bello et al (2013) further lamented that there is strong evidence to show that male latex condoms reduce transmission of HIV by at least 80%–85%; they are effective

against other STIs and even reduce the risk of unintended pregnancies. Other barrier methods of contraception such as female condom also help in prevention of STIs.

Therefore reproductive health knowledge is fundamental to the social and economic development of communities and nations and is a core of human development. To maintain this there must be increased access to good quality primary health care information and services, including reproductive health services which are crucial for the attainment of sustainable development goals (SDGs): Goal 3, Good and Healthy Living (UN, 2016). The programme should be accessible. Accessibility according to United Nation (UN), report consists of at least five components of service provision namely, availability, affordability, acceptability, appropriateness and quality. All these components are applicable to the key elements of reproductive health care: family planning; maternal and new born care; prevention and management of safe abortion; prevention and management of reproductive tract and sexually transmitted infections (RTI/STIs) and the promotion of healthy sexuality.

2.4 Components of Reproductive Health

Knowledge of reproductive health component is necessary to ensure positive health in the individual. However, knowledge of contraceptive method alone may not be enough even though having knowledge about contraceptives is presumed to be a first step in stimulating the desire for its use. Individuals must be aware of where they can get access to a method. It must be understood that poor knowledge of accessibility could therefore lead to low use of contraceptives and the contrary is true (Adjei, Sarfo, Asiedu & Sarfo, 2014). A more enlightened person may use it but the less enlightened person may doubt its potency and its benefit and may not find it

relevant to use. According to Somnath, Saroj and Neeraj (2011), the components of comprehensive reproductive health care are encompassed within the following eight areas:

a. Structure and functions of male and female reproductive systems

b. Women's health, safe motherhood (including safe and humane management of unwanted pregnancy and abortion), and women's development.

c. Child survival, child health, and child development.

d. Adolescence, sexuality development, adolescence education and adolescent's health care.

e. Effective family planning by ensuring free reproductive choice, gender equality and greater male participation.

f Prevention, detection and management of reproductive tract infections, sexually transmitted diseases (STDs) and AIDS and the cancer of the reproductive system.

g. Sexual health

h. Prevention, and detection and management of genetic and genetico- environmental disorders and reproductive health care of elderly persons.

In a related development, Global Health Education Consortium (GHEC) and collaborating partners (2007) further reported that a comprehensive programme components of reproductive health includes: education and services for prenatal care, safe delivery and post-natal care, especially breast-feeding and infant and women's health care; prevention and treatment of infertility; abortion, as specified in a section which reads.. "In no case should abortion be promoted as a method of family planning. All governments and relevant intergovernmental and non-governmental organizations are urged to strengthen their commitment to women's health, to deal with the health impact of unsafe abortion as a major public health concern and to reduce the recourse to abortion through expanded and improved

family planning services. Prevention of unwanted pregnancies must always be given the highest priority and all attempts should be made to eliminate the need for deliberate abortion. In circumstances in which abortion is not against the law, such abortion should be safe. In all cases, women should have access to quality services for the management of complications arising from abortion. Post-abortion counseling, education and family planning services should be offered promptly, which will also help to avoid repeat abortions;“ and family planning counseling, information, education, communication and services; treatment of reproductive tract infections, sexually transmitted diseases (STD’s) and other reproductive health conditions; information education and counseling on human sexuality, reproductive health and responsible parenthood”. Broadly speaking reproductive health is categorized into four broad components:-

2.4.1. Safe Motherhood

Safe motherhood refers to a situation in which no woman going through the physiological processes of pregnancy and child birth suffers any injury or loses her life or that of the baby. Components and services of safe motherhood according to Pathfinder International (2004) include:

a. Prenatal care including referral of high risk pregnancies
b. Safe delivery under skilled care
c. Management of obstetrics complications of pregnancy including emergency care during labour and peurperium
d. Prenatal, neonatal care and postnatal care
e. Exclusive breastfeeding (4 – 6) months.
f. Immunization: preventive health care especially among children

g. Growth monitoring and control of infection

h. Oral rehydration therapy

Experts in the field of reproductive health asserted that the average woman's fertility peaks is in her early 20's. Strictly from biological perspective therefore, this age range is the best decades for conceiving and carrying a baby for a healthy reproductive woman. As a woman gets older, the ovaries age along with the rest of the body and the quality of eggs (ova) gradually deteriorates (Connie, 2014). That's is why according to the report, a younger woman's egg are less likely than older woman to have genetic abnormalities that causes diseases such as Down's Syndrome and other birth defects or complications. It further reiterates that risk of miscarriage is also lower: it's about 10 percent for women in their 20's, 12 percent for women in their early 30s, and 18 percent for women in their mid to late 30s. Miscarriage risk increases to about 34 percent for women in their early 40s, and 53 percent by age of 45 (Connie, 2014) added.

Pregnancy also known as gravid or gestation is the time when during which one or more offspring develop inside a woman's womb. Pregnancy can occur by sexual intercourse or assisted reproductive technology (Abman, 2011). It usually last for 40 weeks from the last menstrual period (LMP) and end in child birth. Furthermore, symptoms of early pregnancy according to Abman (2011) may include missed periods, tender breasts, nausea and vomiting in some individuals, hunger and frequent urination. Pregnancy and childbirth is a natural phenomenon that happens in the women folk. In some cultures particularly in the Northern part of Nigeria which is mostly dominated in Islam as religion, women marry and begin childbearing during their adolescent years (12 through15yeaars). At this age, female adolescents are at risk of complication and mortality higher than those women in their 20s, especially where medical care is scarce. Girls younger than 18 years of age face two to five times the risk of maternal mortality

than women aged 18-25 (Kayongo, 2013). Risk factors may be attributed to prolonged and obstructed labor, haemorrhage, and shock. Potentially life-threatening pregnancy-related illnesses such as hypertension (high blood pressure) and anemia are also more common among adolescent mothers, especially where malnutrition is endemic as a result of poverty. One in every 10 births worldwide and 1 in 6 births in developing countries is a teenage woman aged 15-19 years (Kayongo, 2013).

Unintended or unplanned pregnancy is, however, a common problem that exists in youth across societies. Centre for Disease Control (CDC) (2016) reported that unintended pregnancy is a pregnancy that is reported to have been either unwanted that occurred when no child or no more children were desired or mistimed pregnancy which occurred earlier than expected or desired. Unintended pregnancy is a core concept that is used to better understand the fertility of population and the unmet need for contraception (birth control) and family planning. This mainly results from not using contraception or inconsistent use of effective contraceptive methods. Generally, CDC (2016) insisted that unintended pregnancy is associated with an increased risk of problems for the mother and the baby. Or mother not in optimal health for child bearing. For example woman with unintended pregnancy could delay prenatal care which may affect the health of the baby. Expectedly therefore, women of reproductive age should adopt the following behaviours to improve their healthy being: - taking folic acid, maintaining healthy diet, regular physical exercise, abstaining from alcohol, and drugs and proper screening and management of chronic and reproductive disorders.

Sedgh, Singh and Hussein (2014) reported that about 213million pregnancies occurred in 2012 of which 190million were in developing world and 23 million were in the developed world. The number of pregnancy in women ages 15-45 years is 133 per 1000 women. In 2013 also,

complications of pregnancy resulted in 293,000 deaths. Common causes of these include maternal bleeding, complication of abortion, high blood pressure of pregnancy, maternal sepsis and obstructed labour (Anomymous, 2014).

Little descriptive knowledge about the experience of unplanned pregnancy for university women exists. Most tertiary education students engage in unprotected sexual activity with different partners. As a result, many of the students experienced unplanned pregnancy and STIs. Makhaza and Ige (2014) showed that women experienced a significant number of long term effects related with the unplanned pregnancy. The most dominant of these effects are feelings of guilt and distress of being stigmatized for their experience. The guilt makes it challenging for them to interact with peers and family. The guilt, shame, fear, and sense of stigma reported are not just individual attributes but a reflection of wider social views about women's responsibility for sexuality and reproduction, the report added. Makhaza et al (2014) further reported that very often, female students in tertiary institutions are at an age of independence and in a social context, they are susceptible to unintended pregnancy, and to the consequences of unsafe abortions. These have been linked to cause devastating social, economic and health consequences upon them.

Unsafe abortion is another problem that relates to safe motherhood. Unsafe abortion is the termination or initiation of termination of pregnancy before the embryo matures or before reaching viability (before 20weeks or <500grams according to WHO, or before 28 weeks of gestation or less than 1kg fetal weight) (Feleke, 2008). The concept of abortion is commonly found among students in school. The abortion may be induced professionally or otherwise. Abortion that is not managed by professional health care personnel usually cause health

complications in the woman such as loss of blood, infection may occur and may even lead to infertility. About one in 10 abortions worldwide occurs among women age 15-19 and each year one million to 4.4 million adolescents in developing countries undergo abortion (WHO, 2010) and most of these procedures are performed under unsafe conditions due to:

a. Lack of access to safe services.
b. Self-induced methods
c. Unskilled or non-medical providers
d. Delay in seeking procedure.

Abortion is more than a medical, ethical or a legal issue. It is above all a human issue, involving women and men as individuals, as couples and as a member of the society. Adolescent unwanted pregnancies often end in abortion. Surveys in developing countries show that up to 60 percent of pregnancies to women below age 18 are mistimed or unwanted. In Canada, Great Britain, New Zealand, and the United States in the late 1980s, more than 50 percent of all abortions occurred in women under 25. Pregnant students in many developing countries often seek abortions to avoid being expelled from school. These incidences also occur similarly among students in tertiary institutions in Nigeria particularly in the North East and North West Zones of Nigeria which are the most highly disadvantaged in terms of accessing adequate health services.

Figure: 1 Percentage of women aged 20-24 who gave birth by age 20, in some regions of the Worldare shown below:

Region	Percentage
China	14%,
Latin American/Caribbean	27-50%;
North Africa/Middle East	13-41%;
Sub-Saharan African	25- 75%,
South Asia	16-66%;
Southeast Asia	21-33%;
United States	22%

United States Health Survey Abortion Statistics (2011).

Induced abortion often represents a greater risk for adolescents than for older women. Adolescents tend to wait longer to get help since they cannot access a provider or because they may not realize that they are pregnant; this risk usually compounded their health conditions. In Nigeria, for example 50-70 percent of mothers hospitalized for complications of induced unsafe abortion are youth under 20 (NDHS, 2013). Some of the complications of induced abortion are infection, hemorrhage, and intestinal perforation, injury to reproductive organs and toxic reactions to drugs. Many women fail to seek treatment for abortion-related complications, leading to countless-and uncounted- deaths outside of health care systems. Unsafe abortion is, however, one of the most easily preventable and treatable causes of maternal death and disability. Furthermore, if these complications are not treated earlier, can results in infertility, psychological trauma or death in the woman. World Health Organization (2014) reported that every day, about 55,000 unsafe abortions take place of which 95% of them occur in developing

countries. Unsafe abortion contributes considerably towards increase of maternal deaths globally. One unsafe abortion takes place for every seven births, the report added.

2.4.1.1 Antenatal Care (ANC)

Antenatal care (ANC) is the care a pregnant woman receives during her pregnancy through a series of consultations with trained health care workers such as midwives, nurses, and sometimes a doctor who specializes in pregnancy and birth (FMOH, 2013). The World Health Organization (2005) has proposed a model of antenatal care that is aimed at providing quality care to women in an efficient, cost- effective way called focused, or goal-directed, antenatal care. This model proposes 4 to 5 focused antenatal visits (fewer than previously recommended) for women not having problems or complications at the outset. World Health Statistics showed that ANC coverage, between 2006 and 2013, was indirectly correlated with maternal mortality ratio (MMR) worldwide. This indicates that countries with low ANC coverage are the countries with very high MMR (Ashir, Doctor, & Afenyadu, 2013; National Population Commission, [Nigeria] and ICF International, 2013).

The importance of ANC services in the outcomes for pregnant women has been well documented (Osungbade, Shaahu & Uchendu, 2011). ANC enhances early identification and management of conditions that could be threatening to the mother and her unborn child. ANC by trained skilled providers screens for infections, treats malaria, reduces the incidence of perinatal illness and death, provides birth preparedness, identifies signs of danger in pregnancy and plans to handle possible delivery complications through timely treatment and referrals (Osungbade, et al, 2011) It also reduces medical problems in pregnancy such as anaemia, hypertension, ectopic

pregnancy, obstructed labour, eclampsia, excessive bleeding and premature labour and delivery (Onoh, Umeora, Agwui, Ezegwui, Ezeonu & Onyebuchi, 2012).

Although attending ANC serves are vital to pregnant women, some barriers impede them from accessing health services. NDHS (2013) showed that the proportion of pregnant women who had not attended any ANC services in Nigeria was 34.9%, also only 60.9% among women of child bearing age (15–49 years) who had a live birth in the five years preceding the survey received ANC from a trained skilled ANC provider (i.e., a doctor, nurse or midwife, or auxiliary nurse or midwife). Only half (51.0%) reported making four or more ANC visits during the pregnancy.

Several studies have identified factors for non use of ANC in Nigeria. The reasons varied significantly with regards to respondents' economic status, educational attainment, residence, geographical locations, age and marital status (Adeniyi, & Erhabor, 2015). Accordingly, the highest non-users of ANC were found among the poor, rural, currently married, and less educated respondents from the Northern part of Nigeria, especially in the North East zone. Significant associations were found between the stated reasons for non-utilization of ANC among the respondents and socio-demographic characteristics. This includes seeking permissions from spouses and partners, beliefs, dispositions and views on quality and attitudes towards the ANC providers, and distances to health facilities (Adeniyi & Erhabor, 2015).

Generally therefore, the goal of antenatal care helps women maintain normal pregnancies through focused assistance and individualized care. It also aims to detect and treat existing conditions or complications, prevent complications and disease, prepare for the birth and be ready for complications and providing health promotion and education activities especially on micronutrient supplementation that include vitamin A, iron, folate, iodine supplements. It also

aims at prevention of disease transmission such as tetanus, HIV, malaria among mothers and their children.

2.4.1.2 Postnatal Care (PNC)

Postnatal care is the services rendered to women and the newborn after delivery. In Nigeria, the use of health care facilities during delivery by pregnant mothers and postnatal utilization of the services is still low and maternal morbidity and mortality remains public health problems (Khan, Wojdyla, Say, Gulmezoglu,& Van Look, 2006). The NDHS (2013) showed that up to 60% of women aged 15-49 who had a live birth in the 5 years preceding the survey receive ANC from skilled provider, but skill attendance at birth remains low at 38%, and only 36% of birth in Nigeria are delivered in a health facility. In Borno State, Northeast Nigeria, up to 58.7% had ANC, 17% delivered in health facility with 22.3% skilled attendance at delivery (NPC & ICF International, 2014).

However postnatal programme are among the weakest of all reproductive and child health programme in the Northeast region. Studies have indicated that factors that prevent women in developing countries from getting PNC were socio demographic, socio economic, cultural, obstetrics and health system factors (WHO, 2007). According to World programme of Action, PNC is regarded as one of the most important maternal health care services which is critical to the health and survival of a mother and her newborn. Asford (2004), reported that lack of postnatal care may result in impairment and disabilities or deaths as well as missed opportunities to promote healthy behaviours affecting women and newborn children,

In the study of Takai, Dlakwa, Bukar, Audu, and Kwayabura (2015), of factors responsible for under utilization of PNC by mothers aged 15-49 in Maiduguri, result showed that only (16.9%) of the 332 respondents attended PNC services within 42 days after delivery. Most

of the mothers (60.9%) lack knowledge about PNC services. A high proportion of participants (69.4%) did not attend ANC clinics, and over 70% of the study population had delivered at home. To this end therefore, adequate knowledge of PNC services should be advocated and intensified among child bearing mothers and acceptable programme that are culturally oriented should be provided to the communities to ensure better, effective and efficient health care delivery.

2.4.2 Sexually Transmitted Infections (STIs) and HIV/AIDS

This is one among the major challenges that affect health of most youth across the globe. A major challenge in addressing the problems of STIs and particularly HIV/AIDS is to advance quality information to prevent the transmission and also to provide quality treatment to those infected. Services provided under this component, according to Sexual and Reproductive Health Guide (2012) includes:

a. Diagnosis of STIs and HIV/AIDS through laboratory testing
b. Compulsory pre-marital testing and voluntary testing
c. Risk assessment of those prone to STIs
d. Information, Education and Communication (IEC) and community awareness creation activities
e. Condom promotion and distribution
f. Prevention of mother to child transmission (PMTCT) which includes pre-pregnancy and antenatal care
g. Antiretroviral drug therapy provided for persons infected with HIV
h. Referral services and

i. Providing counseling services on:
    i. Pre and post HIV testing
    ii. Behavior change
    iii. Condom and negotiation skills
    iv. Client and couple assessment
    v. Preventing STIs and safe sex practices

Generally, adolescent and youth reproductive health is affected by many risk factors which subject them to devastating health abnormalities. The reasons why young people are at risk of RTIs and STIs according to Sexual and Reproductive Health Guide (2012), are attributed to the following:

a. Most young people know very little about STIs/HIV/AIDS even when they are sexually active
b. Many young people engage in sexual relationship with more than one partner
c. Most youth do not protect themselves from being infected during sexual intercourse
d. Even when infected, young people are often reluctant to seek treatment for STIs
e. Some young people especially females exchange sex for money for varying socio-economic reasons and
f. Many young people are coerced into exploitative sexual relationships which they have little control over in their homes, school and work places.

Dixon-Mueller (2009) have indicated that youths who begin early sexual activity are at high risk of having multiple partners, engaging in unprotected sexual activity, and experimenting sex especially under the influence of alcohol and other drugs thereby increasing their risk for unintended pregnancy and sexually transmitted infections (STIs) including human

immunodeficiency virus (HIV/AIDS). This situation constitutes public health problems in almost every society. Relatively, maternal health, poor nutrition and hygiene, poor mental health, persistent behavioral risks, sexual violence and insecurity, new and emerging diseases and reproductive health issues are challenging youths to enjoy reasonable healthy life.

Since the start of the millennium, international declarations and commitments related to HIV have been multiplying gradually but at a lower rate particularly among the impoverished communities. Many highlight the importance of focusing on young people in order to fight the pandemic and positive results are beginning to show (UNICEF, 2011). However, in too many cases, young people have insufficient information and understanding about HIV. They may not be aware of their vulnerability to it or how best to prevent infections. They also often lack access to the means to protect themselves.

Globally, the status of the HIV pandemic is relatively bleak, with a continuous rise in the population of people living with HIV. According to the Joint United Nations Program on HIV/AIDS (UNAIDS & WHO, 2009), approximately 33.4 million people worldwide are living with HIV, of which 31.3 million are adults, 15.7 million are women and 2.1 million are children under the age of 15 years. In a related development (UNICEF, 2011) observed that about 5 million of young people ages 15-24 were estimated to be living with HIV in 2009. While there has been a 12 per cent reduction since 2001 when this figure was 5.7 million, in 2009, young people accounted for 41 per cent of new HIV infections worldwide.

Girls and young women remain far more vulnerable to HIV infection than young men, globally. They account for 60 per cent of all HIV positive young people (UNICEF, 2011). In addition to their innate biological vulnerability, girls are at risk due to social norms that prevent them from refusing sexual advances, negotiating safe sex, denouncing a partner's infidelity,

having sex with - or being married off to - older men, having sex in exchange for money or goods due to poverty, and being abused. Worldwide, gender inequities continue to affect women's decision-making and risk-taking behaviour as well as vulnerability to HIV infection, which is often beyond a woman's individual control. (UNAID &WHO, 2009).

Reports of NDHS (2013) revealed that having multiple sexual partners increases the risk of contracting HIV and other sexually transmitted infections (STIs). A small percentage of women (1%) and 13% of men had two or more sexual partners in the past 12 months. For women, multiple sexual partners were higher among never married and divorced, separated, or widowed women (2% each). Older men age 40-49 (23%) and married men (19%) were most likely having multiple sexual partners in the past year. The survey added that women have an average of 1.5 lifetime sexual partners compared to 4.1 partners for men. Women and men living in South South Zone of Nigeria have more sexual partners than women and men living in other Zones. Divorced, separated, or widowed women and men report the highest number of sexual partners.

Sexually transmitted infections can lead to life-long health problems such as lower abdominal pain, urethral discharge and pelvic inflammatory disease (PID) including infertility. Available data suggest that one-third of STIs infections in developing countries occur among 13-20 year olds, one out of every 20 adolescents contracts STIs. In rural Kenya, for example, 41 percent of women aged 15-24 attending maternal and child health or family planning clinics had STI, compared to about 16 percent of all women of reproductive age (UNICEF, 2011). Young people tend to be at higher risk of contracting STIs, including HIV/AIDS, for several reasons such as unprotected intercourse that is often is unplanned or unwanted. Even when consensual agreement is reached, the partners often do not plan ahead for condom or other contraceptive

use, and inexperienced users are more likely to use methods incorrectly. Furthermore, adolescent girls are at greater risk of infection than older women because of the immaturity of their reproductive system. Other reasons are little knowledge of STIs, failure to seek treatment, multiple partners, and influence of drug and alcohol.

Notably problems of youth in most societies have been neglected or have not been addressed adequately; particularly their reproductive health needs. Their needs have often been misunderstood, unrecognized or underestimated by their adult counterpart. Adequate knowledge on safe motherhood and proper use of protective device during coitus plays a vital role in promoting healthy behavior and preventing risk consequences in the individual's reproductive life. Makhaza and Ige (2014) posited that on several occasion when young people move out of their parents' home, direct control ceases and identification with the peer group increases particularly among students. Parent advices are forgotten and peer pressures takes over. When this happens, risks of untimed pregnancy, induced abortions under unsafe conditions happens and contracting (STIs/HIV/AIDS) becomes common (Bendavid, Avita & Miller, 2011). It is important to create a supportive environment that would positively influence knowledge, attitude, perceptions, practice and behavior of youth and also help in increasing access and use of sexual and reproductive health services available in their environment.

2.4.2.1 HIV / AIDS in Nigeria

Nigeria has the second highest largest epidemics in the world (NACA (2015). An estimate of 60% of new HIV infections in the west and central Africa in 2015 occurred in Nigeria (Awafola & Ogundele, 2016) together with South Africa and Uganda. Despite achieving a 35% reduction in new infections between 2005-2013as reported by UNAIDS (2014),

unprotected heterosexual sex accounts for 80% of the new infections in Nigeria, majority among population of sex workers. HIV prevalence stands at 5.5% in southern part of Nigeria (south-south zone) (NACA, 2015). Accordingly, the report added that about 3.2 million people living with HIV with the adult prevalence of 3.1%. New infection stands at 277,000 with 180,000 AIDS related deaths while 51% represent adults on antiretroviral treatment (NACA, 2015).

Although prevalence of HIV/AIDS is low among adults (3.1%) compared to other Sub Saharan African countries such as South Africa (19.2%) and Zambia (12.9%). About 3.5 million people were living with HIV in 2015 (UNAIDS, 2015). Coupled with this menace, the National HIV/AIDS Strategic Plan 2010-2015 included plans to introduce behavior change communication for key affected individuals and areas. To scale up this plan, peer education alongside social media messages are aimed to reach those population who tend not to present themselves for HIV services (NACA, 20I5).

HIV has spread the world over and has great impact on health welfare, employment, education and other sectors of the economy. It affects all social and ethnic groups across the world. Recently epidemiological data has indicated that HIV remains a public health problem that persistently drains the economic sector having claimed more than 25 million lives over the last three decades (UNAIDS, 2014). The estimated people living with HIV (PLWHIV) by 2014 was approximately 36.9 million and sub Saharan Africa was the most affected region having 25.8 (24.0-28.7) million and 66% of all people with HIV infections living in the region. Of the people living with HIV globally according to UNAIDS (2014), about 9% of them live in Nigeria. The table below show prevalence of HIV in Nigeria and sub Saharan Africa;

Table 1: HIV incidence in Nigeria

Indicator in million or otherwise	Nigeria	Sub-Saharan Africa	Global
Estimated number of people living with HIV/AIDS	3.2	25.8	36.9
Estimated number of children Living with HIV/AIDS	0.4	2.3	2.6
Estimated number of deaths Living with HIV/AIDS	0.21	1.4	2.0
Estimated number of young women (15-24 years) infected with HIV/AIDS	1.3	3.4	0.4
Estimated number of young men (15-24years) infected with HIV/AIDS	0.7	1.4	0.3
Number of people estimated to be receiving Antiretroviral (ART)	0.75	9.1	12.9

Source: UNAIDS 2014 Estimate

2.4.3. Family Planning and Contraceptives

Family planning encompasses the services, policies, information, attitudes, practices, and commodities, including contraceptives, that give women, men, couples, and adolescents the ability to avoid unintended pregnancy and choose whether and/or when to have a child (Marcus, Ellen & Maureen, 2016). It is the means by which individuals or couples regulate or space their child birth so as to achieve a desired number or spacing of children. Family planning is done for various reasons by people who may wish to do so which include promoting health of the mother and the child, socioeconomic factors and family welfare among others. Family planning methods are classified into traditional and modern methods. The traditional methods of family planning

include: Abstinence, Douching, Withdrawal (Coitus interruptus), and Safe method. The modern methods of family planning on the other hand include; Barrier method, Spermcides, Intrauterine Device and Hormonal methods (pills, injectibles and implants) (Pathfinder International, 2004).

Across all the countries studied, most women and men interviewed reported that using family planning and having smaller families resulted in both economic and health benefits. In the study of Mosher and Jones (2010) have asked women why they are not using (or did not use) contraception when it is expected that they should be using contraception, due to their being sexually active and not trying to become pregnant. But these same large, nationally representative survey efforts have not asked similar questions of women who are using contraception, and thus provide limited insights into women's personal reasons for using contraception and their individual-level expectation of benefits.

In documenting the important role of family planning, research has emphasized the links between contraceptive use and later ages at marriage, smaller families, longer birth intervals, and the ability of women and couples to plan when and how many children to bear. Nigeria with a population of over 170 million people has an annual growth rate of 2.5% with only 10% of women using modern contraceptive methods (World Fact Book, 2013). The low utilization of family planning services including contraceptive use has resulted in high abortion rate of 25 per 1000 women aged 15-44 years. In the studies of Utoo and Mutihiron (2010) on knowledge, attitude and practice of family planning methods in Nigeria, it shows that 59.5% used male condoms, 47.0% used oral contraceptives and 27.1% used hormonal injectables in Jos North central Nigeria. Similarly a study in Uyo, South South Nigeria showed that 40.4% used condom, 31% used safe period/calendar method, 18.0% used oral contraceptive, 9.3% used intrauterine contraceptive device, 2.7% used Billing's method, 1.6% used hormonal implants and 2.7% used

emergency contraception (Abasiattai, Etukumana, Utuk & Umoiyoho, 2011). Despite this reports, cases of maternal death is at the increase particularly among women of reproductive age in the North East Zone of Nigeria which has been devastated by Boko Haram (BH) insurgency.

Contraceptives among those who choose to use has outcomes that are in turn linked to improvements in infant, child, and maternal health, as well as to improved social and economic roles for women Institute of Medicine (IOM, 2011). For example, short birth intervals are associated with a variety of poor infant health outcomes, and births that are unintended are associated with delayed prenatal care and lower rates of breastfeeding (Gipson, Koenig & Hindlin, 2008). Economic analyses have found clear associations between the availability and diffusion of oral contraceptives particularly among young women, and increases in U.S. women's education, labor force participation, and average earnings, coupled with a narrowing in the wage gap between women and men.

Every day, approximately 830 women die from causes related to pregnancy and childbirth. Nearly all—99%— of these maternal deaths occur in low-income countries. More than half of the deaths occur in sub-Saharan Africa, while one-third occurs in South Asia (WHO, 2016). In addition, in 2015, 5.9 million children died who were under 5 years of age. The global community generally agrees that family planning prevents maternal deaths by:

a. Reducing the number of times a woman is exposed to the risks of pregnancy(Stove & Rose, 2010).
b. Helping women avoid unintended and closely spaced pregnancies—a study in Bangladesh found that very short pregnancy intervals are linked with 7 times increased risk of induced abortion (Cleland, Conde-Agudelo, Peter & Tsui, 2012).

c. Helping women avoid more than 4 births, or births after 35 years of age(Stove & Rose, 2010).

In addition to reducing fertility (birth per woman) rate, family planning use has direct , positive impact on reducing maternal deaths and preventing mother-to-child-transmission (MTCT) of HIV (Gribble & Haffery, 2008). However t achieve these health benefit, women and couples must have access to wide range of contraceptive methods at all stages of their reproductive lives to allow them to have number of children they want. However use of family planning is influenced by factors such as education, place of residence culture and wealth among users. It has been consistently reported that within a given country, wealthier women are more likely to use modern family planning methods than the poor.The healthiest times for a pregnancy are between the ages of 18 and 34 and at least 24 months after a birth (which ensures about 3 years between births), while avoiding more than 4 births (Markus, Ellen & Maureen, 2016).

The types of family planning methods/contraceptives that are commonly used in the society are of different categories. Contraceptive methods are designed to prevent conception. The devices are either categorized as hormonal and non- hormonal contraceptives or as barrier, non barrier and traditional contraceptives methods. It has to be noted that it is not possible to create an ideal contraceptive method suitable to for all (Muthu, 2005). The usage depends on individual preferences. These categories are:-

1. Hormonal Methods

2. Non Hormonal Methods

3. Natural Methods or Traditional Methods

4. Sterilization

2.4.3.1 Hormonal methods

These are methods of birth control that uses hormones to regulate or stop ovulation or prevent pregnancy. Ovulation is the biological process in which the ovary releases egg making it available for fertilization. Hormones can be introduced into the body through various means example, pills, injections, or transdermal gels. Among these are:

2.4.3.1.1 Progesterone injectable (PI)

This type of contraceptive is given by injection. It is an injection of hormones given to a woman to prevent her ovaries from releasing an egg for some times, usually months. The long lasting injection is called Depo provera (DEPO) given every three months. This injection controls slow release of progestogen into the blood and alters the womb lining and prevents the release of an egg (Health line, 2009). Another type of injectible contraceptive is Noristerat (NETEN) which is given every two months. However Health Line (2009) further reported that this form of contraceptive does not protect against STIs/HIV transmission. Its effectiveness is in pregnancy prevention. It is not suitable for all women particularly for those that have medical conditions and disorders, such as heart and circulatory diseases should be rule out for use.

2.4.3.1.2 Combined oral contraceptive pills (COCP)

These pills are available in different formulas which are all based on combinations of the female hormone, oestrogen and progesterone. The pills is taken daily for complete month. When

taken correctly it is most entirely effective in preventing pregnancy because of the physiological effect that is produced. The pill does these by halting ovulation, preventing the thickening of the endometrium so that it is not prepared to receive a fertilized egg and altering the action of the fallopian tube to prevent passage of sperm or egg through (Geddes & Grosset, 2007). Oral contraceptives are very safe for young women. They have no long-term effect on ovarian function or growth, and no age-related complications or side effects have been recorded. They are very effective at preventing pregnancy when used consistently and correctly. In perfect use, COCs have a pregnancy rate of less than 1 percent, but in typical use, the rate is about 8 percent. Oral contraceptives also provide non-contraceptive health benefits, such as improving acne, regulating menstrual cycles, decreasing menstrual cramps, and protecting against ectopic pregnancy, benign breast disease, ovarian and endometrial cancer, and some forms of pelvic inflammatory disease. Once a woman stops taking the pill, fertility returns quickly, which could be important to young women who want to become pregnant.

Although it does not prevent sexually transmitted infection (STIs) it may help protect against pelvic inflammation, menstrual pains and bleeding. It also helps in lessening the risk of ovarian and endometrial cancer added to uterine fibroid tumors. However in some cases, the pills can produce a range of side effects which include weight gain, breast tenderness, nausea fluid retention, breakthrough bleeding and headaches. Oral contraceptives have become dip most widely used form of contraception in almost every country in the world (Encyclopedia, 2004).

2.4.3.1.3 Progesterone oral pills

This type of oral pills when taken acts locally on cervical mucus and uterine endometrium preventing sperm transport and implantation of the fertilized ovum. Emmanuel,

et.al. (2010) reported that when higher dose is taken, it does inhibit ovulation. It is also taken daily throughout period of the menstrual cycle. Oral contraceptive and hormonal contraceptive are using the same drugs but difference forms of administering. The hormones present are estrogen and or progesterone; these hormones may be taken orally, implanted into the body tissues, injected under the skin, patches or place in the vagina. (WHO, 2004)

2.4.3.1.4 Hormonal implant

Hormonal implant is a method of contraception available to women which consists of implanting minute, plastic rods containing synthetic progesterone (progestogen) beneath the skin through surgery. Usually six (6) rods are implanted in a fan- shaped pattern, just beneath the skin of the inner upper arm. These then slowly release measured dose of progestogen over a period of 5 years. It usually controls slow flow of hormones to prevent ovaries from releasing eggs. However, IUD, diaphragm and condoms are devices that serve dual purposes, in STIs prevention in both male and female and prevention of pregnancy in women(WHO, 2004).

2.4.3.1.5 Contraceptive patch (Transdermal Patch)

This is a thin plastic patch that sticks to the skin and releases hormones through the skin into the blood stream. The patch is placed on the lower abdomen, buttocks, outer arm or upper body. Usually a new patch is replaced or applied every week for three weeks and no patch is used in the fourth week to enable menstruation (Food and Drug Administration Office of Women Health, 2011). The two patches are intended to replace and be a better option for adolescents than pills as they do not require devotion to a daily routine. Teenagers may show a better fulfillment understanding of these methods. (WHO, 2004).

2.4.3.1.6 Contraceptive sponge

Contraceptive sponge is soft disposable spermicides filled of foam sponge. It is usually inserted into the vagina before intercourse commences (Mayer Laboratories inc., 2012). The general activity of the sponge is to blocks sperm from entering the uterus and the spermicides also kill the sperm cells. The sponge should be remembered to be left in place for 6 hours after intercourse and then removed within 30 hours of intercourse.

24.3.1.7 Emergency contraception (EC)

Another important issue in family planning is application of emergency contraception (EC). Emergency contraception is a method of preventing pregnancy that can be taken within 72 hours following risky or unprotected vaginal intercourse or in case of condom failure (Kirkman & Bigrigg, 2002). It is a hormonal pills taken either as a single doze or two dozes usually taken 24 hours apart. These are effective and safe for most of the women. It is estimated that the chance of pregnancy after each unprotected intercourse is about 8 per cent and effective EC can reduce this risk to 2 per cent or less. The women may be exposed to unprotected sexual act under the following circumstances, and the ECs will be useful:

i) Lack of contraceptive or forget to use it during coitus

ii) Breakage or slippage of condom

iii) Missed oral contraceptive pills for more than three days in a row

iv) Expulsion of IUD

v) Failed coitus interruptus (withdrawal)

vi) Victims of forced sexual assault or violence.

It has to be noticed that when EC is taken prior to ovulation, the pills can delay or inhibit ovulation for at least 5 days to allow sperm to become in active (Medline Plus, 2012). They can also cause thickening of cervical mucus and may interfere with sperm function. EC should be taken as soon as possible after semen exposure and should not be used as a regular contraceptive method. Pregnancy can occur if the pills are taken after ovulation or if there is subsequent semen exposure in the same cycle. Noticeably unwanted pregnancy is extremely common especially among high fertile youths. Lack of knowledge about fertility period and the means to regulate it, lack of power to make decisions about one's sexual and reproductive life, lack of access to contraception, and poor quality of available family planning services are some of the many reasons that may subject individuals especially women to this unfortunate situation (Medline Plus, 2012).

However, contraceptives like any other group of drugs have inherent capability to interact with other drugs especially those that induce liver enzyme activity. It must be noted that contraceptive usage demand care, proper guidance and counseling from medical experts. The user has to undergo doctor’s examination and prescription especially in persons using oral and injectable contraceptives (Health Line 2011). This is in order to prevent adverse side effects and complications. This study attempts to understand the knowledge and use of these forms of contraceptives by students in College of Education in the area under study.

2.4.3.2 Non Hormonal family planning methods

Generally the non hormonal contraceptives sometimes referred to as barrier contraceptives serves by preventing sperm cells from reaching the female cervix to avoid uncertain consequences . The devices must be used correctly and consistently for maximum effectiveness. It generally offers protection against STIs including HIV/AIDS (Beksinska & Smith, 2010).

2.4.3.2.1 Condom (male and female)

Condom is a form of physical barrier that prevents sperm from reaching the cervix to fertilize matured egg. Condoms are available for use by both males and females. The male condom is made up of thin, foam -- fitting sheath, (latex) worn on the erect penis during sexual intercourse (Encyclopedia, 2004). It catches the sperm preventing them from going into the uterus. It helps protect againstSTIs and easy to use, it is usually used once and disposed. The female condom on the other hand consists of a thin polyurethane pouch with a ring on each end. The ring at the narrow end is squeezed shut and it is then carefully inserted into the vagina using a finger. This draws most of the condom into the vagina which is correctly in place when the narrow end is beyond the pubic bone. The larger, opening ring remains outside the body at the opening covering the external genital organs. Like the male condom, it must be used for each act of intercourse (Encyclopedia, 2004). Female and male condoms should not be used together. Because of their characteristics they might adhere to each other and cause slippage or displacement. This would therefore affect its effectiveness. The method appears to have about equal number of supporters and detractors. One of the main advantages is that failure is usually obvious, giving time for emergency contraception to be sought, and just as important, the female

condom gives excellent protection against sexually transmitted diseases and infections because it covers the vulva as well as the whole of the vagina (Geddes & Grosset, 2007).

2.4.3.2.2 Diaphragm

The diaphragm is another barrier method of contraception available to women designed to prevent the meeting of sperm and egg. This is a shallow molded cup of thin rubber with a flexible rim. The diaphragm fits inside the woman vagina to cover the cervix, which act as physical barrier preventing sperm from reaching the uterus (Health line. 2009). The device is usually used with spermicidal jelly or cream on either side. It can be inserted well in advance of sexual intercourse and must then be left in place for at least eight hours. It kills any sperm that are able to pass by the diaphragm. However, it use need enough knowledge about its effectiveness. If used correctly, it has a success rate of 85 to 90 percent in STI prevention and can be used more than once (Encyclopedia, 2004).

2.4.3.2.3 Cervical cap

It is a cap – shaped rubber device, more or less circular in shape, which is a barrier method of contraception designed to physically prevent sperm from reaching the eggs. There are three slightly different designs and each comes in a number of different sizes. However the correct size needs to be determined by a health professional and correct instruction to be given to the woman on how to use it properly. This device fits directly onto the cervix where itis held in place by suction rather than by pushing against anatomical structure (Geddes & Grosset, 2007). Cervical cap is smaller than the diaphragm and places deeper than the diaphragm. It needs a health professional to fit it. It is used with a spermicidal supposition (Dickey, 2003); the use

effectiveness of cervical cap appears to be approximately equal to that of diaphragm and its effectiveness is much higher in women who never had children (Hahn & Payne, 2003).

2.4.3.2.4 Intra-utérine devices (IUD)

This is a small flexible device made of plastic inserted into the woman's uterus to prevent pregnancy and STIs when used with condom. IUDs, especially the ones that contain hormones, thickens cervical mucus and thus, makes it difficult for sperm to reach an ovum. Encyclopedia (2004) explained that IUD work either by interfering with the ability of sperm to fertilize an egg or preventing a fertilized egg from implanting in the lining of the uterus.

There are several varieties of IUD but the most commonly used is the CU T380. The device offers several years of protection against pregnancy. The IUD initiates a foreign body reaction causing cellular and biochemical changes in the endometrial and uterine fluids. Muthu (2005) advanced that these changes impair the availability of the gamete and thereby prevent fertilization. The Copper ion alters the nature of mucus in the uterus and may also affect sperm motility and their survival. The progestogen characterized IUDs on the other hand increases the viscosity of the cervical mucus and thereby prevent the entry of sperm into the cervix. The device is inserted in flattened foam via a hollow tube which is passed through the cervix and it opens out once it is in place. Muthu (2005) added that IUD is preferably inserted during menstruation or within 10 days of beginning of menstruation because of its easiness and effectiveness. The thread projects from the IUD through the cervix and into the upper part of the vagina and are used for the eventual removal of the devices. The insertion of this device should be done by trained professional personnel.However use of this device has some prevailing side effects. It may cause heavier and painful menorrhea (bleeding) which may possibly cause

infection to gain access to the womb and upper reproductive organs in women. Also use of IUD is associated with an increased risk of pelvic inflammatory diseases (PID) and slightly risk of ectopic pregnancy particularly in women who has history of STIs. Other medical conditions added to its use include fibroid, endometriosis, anaemia, heart disease, diabetes or any circumstance in which the immune system is suppressed

2.4.3.2.5 Spermicidal

Spermicides are jellies, creams, foams, suppositions, tablets or films that contain a sperm-killing chemical. They are made up of water soluble bases with a spermicidal chemical incorporated in the base. The base material is designed to liquefy at body temperature and distribute the spermicidal component in an even layer over the tissues of the upper virgin. It can be used with or without condom, diaphragm or cervical cap. It can kill some sexually transmitted disease organisms and pregnancy prevention by weakening the sperm, and blocking opening of the uterus to prevent sperm from entering. According to Hahn and Payne (2003), modem spermicides are safe, reasonably effective reversible forms of contraceptives that can be obtained without a physician prescription. When spermicide and condom are used together, they provide a high degree of contraceptive protection and disease prevention.

2.4.3.3 Traditional or natural family planning methods

Several family planning methods pre-date the emergence of modern contraceptives or birth control. Before the advent of condoms and hormone-altering drugs, men and women utilized primitive methods for preventing conception. Although some of these techniques are surprisingly effective, they require diligence and careful planning. Consulting health care provider for more

information about these traditional contraceptive techniques becomes necessary for its effectiveness. Various types of traditional contraceptive methods exist and among which are:-

2.4.3.3.1 Abstinence

The most effective method of contraception is complete abstinence from heterosexual intercourse. As a contraceptive technique, abstinence is ultimately 100 percent effective and offers additional protection against sexually transmitted infections. Although couples using this family planning technique may engage in other forms of sexual contact, most find it challenging to abstain from intercourse entirely. Programmes aimed at unmarried adults and adolescents to delay first sex can have a positive impact in pregnancy prevention and can have other health education and economic benefits too. While this may be an impractical long-term family planning method for married couples, there are examples of periods of prolonged abstinence in certain cultural settings Family health international (www.fhi.org, 2003).

2.4.3.3.2 Withdrawal method (Coitus Interruptus)

This is also known as "pulling out," the withdrawal method is one of the world's oldest family planning techniques. According to MayoClinic.com, withdrawal prevents conception by preventing sperm from entering the vagina. For withdrawal to work effectively, the man must fully withdraw his penis from his partner's vagina before he ejaculates. However, this method is not completely effective; there is high chance that sperm may leak if withdrawal is improperly timed. In some cases, viable sperm may also appear in pre-ejaculatory fluid, leading to an unplanned pregnancy.Although it has been criticized as an ineffective method, withdrawal probably offers a level of contraceptive protection similar to that of barrier methods (Rogow & Howrowitz (1995). Effectiveness depends largely on the man’s ability to withdraw prior to

ejaculation. Most couples who use this method feel skeptical about health and side effects of modern using contraceptive methods.

2.4.3.3.3 Rhythm method

The rhythm method is also known as the calendar method. It is one of the oldest traditional methods that have been practiced by many women across societies. It works by predicting the days in which a woman is most fertile. To use this technique, a woman must chart her menstrual history for several months in order to anticipate the dates in which she is ovulating. Rationally, women using this technique must abstain from unprotected sex on the days during which she is most fertile. A woman makes an estimate of the days she is fertile based on past menstrual cycle length (Abubakar, 2011). She does this with the expectation that the length of her current cycle and thus the time of her fertile phase is most likely to occur. The rhythm method can be somewhat effective, but it requires adequate knowledge to ensure careful record-keeping and diligent adherence to the technique. It is widely reported that among women who do not have regular menstrual flow, this method would not be effective.

2.4.3.3.4 Cervical mucus method

Like the rhythm method, the cervical mucus method of family planning works by predicting the days in which a woman is most fertile. A woman embarks on daily self examination /observation to detect the presence of mucus in the vaginal wall. Under this condition there is no egg present and the sperm cannot survive long to fertilize an egg when released. During ovulation, the consistency of cervical secretions will change to accommodate sperm for possible conception. A woman can determine her level of fertility by consistently

documenting the colour, texture and consistency of her vaginal mucus. Normally menstrual flow in a woman takes few days depending on her morphological composition. It is then followed by a few “dry days” when the vagina seems quite dry. As ovulation approaches, the mucus becomes clear and slippery and stretches without breaking (Abubakar, 2011). The peak of mucus wetness is right before ovulation, after come days of less mucus. Any time the slippery stretchy mucus is noticed, intercourse should be avoided until after it has gone, which usually last to about eight days of each cycle. The cervical mucus method is reliable only if a woman is intimately familiar with her own body and if the couple consistently uses other contraceptive techniques during fertile days.

2.4.3.3.5 Lactation amenorrhea method (LAM) or prolonged breast feeding

This method of family planning (contraception) is where the woman ceases to menstruate so long as she is breastfeeding a baby after delivery. During this period, ovulation is naturally inhibited due to a change that is experienced by the woman in her body physiological characteristics. According to Family Health Incorporated (FHI) (2003), during breastfeeding, sucking by the baby sends natural nerve impulses to the hypothalamus to initially alter normal signal to stimulate the pituitary gland to control hormone secretion. This results in altering the pattern of Luteinizing hormone (LH) to secrete to inhibit ovary from producing ovum (egg). However when the breastfeeding frequency diminishes, chances of ovulation increases which the resultant end would rise the chances of a woman to conceive (www.fhi.org, 2003). One of the intricacies of this method is that the woman must remain amenorrhea from delivery up to about 24 weeks minimum after delivery. If the woman noticed any changes, it is advisable that the

woman should begin to use another form of contraceptives if she wishes to prevent pregnancy (Abubakar, 2011).

2.4.3.3.6 Billings method (body temperature)

This is changes in body temperature is normally observed in women when they ovulate. Their body temperature rises above normal up to the end of the menstrual cycle. A woman that uses this method of contraception must chart their temperature to monitor daily changes. This monitoring must be immediately after waking up early morning and before getting out of bed or before taking any breakfast or liquids. Couples must abstain from unprotected intercourse between the first days of menstruation until after the third day of experiencing elevated temperature. This therefore demands couples to abstain coitus between14 – 21 days of the cycle. If this is maintained, the probability of woman being pregnant is closer to 20% (Medline Plus, 2012).

2.4.3.4 Sterilization

Sterilization is a permanent form of birth control that either prevents a woman from getting pregnant or prevents a man from releasing sperm. A health care provider must perform the sterilization procedure, which usually involve surgery and is irreversible if done. Among them are;

2.4.3.4.1 Tubal Ligation

This is a method that involves surgical procedure that involves tie, cut or sealing of fallopian tubes in a woman. It blocks the pathways between the ovaries and the uterus. The

sperm cannot reach the eggs to fertilize it, neither the egg to reach the uterus (Medline Plus, 2012).

2.4.3.4.2 **Hysterectomy (Female Sterilization)**

This is the type of sterilization that involves the surgical removal of a woman's womb (uterus). The uterus is a place where a baby grows when a woman is pregnant. This method cannot be reversed when the woman desired to become pregnant. Once this has taken place, the woman can no longer conceive throughout the remaining of her life. Sometimes in some cases, the cervix, ovaries and the dual fallopian tubes are removed completely Centre for Disease Control (CDC) (2010). Depending on the type of hysterectomy being performed, the accompanying organs such as fallopian tubes, ovaries and cervix are often removed at same time. It is important for women to be aware that hysterectomy is a major surgery and should not necessary be considered as a first line treatment of gynaecological complications (Women's Health, 2016). It is important according to Women's Health (2016) that the woman must ensure that they make their own decision about whether to have such surgery. Because it involves removal of uterus, it is virtually important that women must realize they will no longer menstruate or be able to conceive after the procedure.

2.4.3.4.3 Vasectomy (Male Sterilization)

This is a surgical procedure that involves cutting, sealing or blocking the vas deferens (the tubes that carry sperm from men's testicles to the penis). It blocks the path between the testis and the urethra in male's reproductive organ (Medline Plus, 2012). The sperm cannot leave the testis and cannot reach woman's egg to fertilize. Because there is no sperm in the semen, the

woman's egg cannot be fertilized. It is a permanent and non reversible contraceptive method (Women's Health, 2016). However it can take as long as 3 months for the procedure to be fully effective. A backup method of contraception is used until tests confirm that there is no sperm in the semen (Michael, 2017). However, vasectomy does not prevent against contracting STIs and also does not affect the erectile condition. The individual may maintain erection process to perform his usual sexual desire satisfactorily. Vasectomy according to Women's Health (2016) have rarely long term effect on individual's health and does not affect hormone production level or sex drive in the concerned individual.

2.4.4 Sexual and Gender Violence

Gender based violence is considered to be any harmful act directed against individual or groups of individual on the basis of gender. This type of violence involves both men and women, in which the woman is usually the target and is derived from unequal power relationship between the two sexes. Gender violence may include sexual violence, battering, feticide harassment and intimidation at school or work, domestic violence, trafficking of girls or women, forced or early marriage and harmful traditional practices. Although men and boys are also targets of gender based violence and sexual violence in conflict situations, the victims of such violence continue to be disproportionally women and girls (United Nations Human Right, 2014). Sexual and gender abuse is among the reproductive health challenges that are common among students who stay on school campuses. Sexual abuse is the infliction of unwanted sexual contact or psychological exploitation of another person's liberty and dignity for one's gratification (Francoeur, 1995). Sexual violence is perpetrated in the context of men's power over women and is primarily perpetrated by men against women and girls (WHO, 2011). Sexual coercion exists along a

continuum, from forcible rape, to non-physical forms of pressure that compel girls and women to engage in sex against their will. The consequence of coercion is that the individual lacks choice and faces severe physical and social consequences if she resists the sexual advances (WHO, 2011). It occurs worldwide especially in school environment that does not have stringent laws that ensures safety of all students to ensure sound academic atmosphere.

Cases of sexual violence may exist in many form of any sexual act, attempt to obtain a sex act, unwanted sexual comments or advances or act 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 (UNHR, 2014). Sexual violence takes multiple forms includes sexual abuse, forced pregnancy, forced sterilization, forced abortion, forced prostitution, trafficking sexual enslavement forced circumcision, castration and forced nudity. However, according to Ugoji (2014) includes sensation seeking and recklessness behavior among youth is thought to be responsible for the surge in accidents, violence, drug abuse and risky sexual behavior noteably during period of adolescence. Risky sexual activity could result in varying problems ranging from unwanted pregnancy, to abortion, to contracting STIs and even death. According to NDHS (2013) seven percent of Nigerian women age 15-49 have ever experienced sexual violence of which 3% have experienced sexual violence in the past 12 months. Women, who are divorced, separated, or widowed are more likely to have ever experienced sexual violence (15%) than women who have never been married (8%) or are currently married (7%). Experience of sexual violence varies by zone, from 16% in North East Zone to 2% in North West Zone.

In the majority of cases, sexual violence is perpetrated by individuals with close personal relations to the woman, either their current husband or partner, former husband or partner, or

current or former boyfriend. Women who have never been married report that the main perpetrators of sexual violence are strangers.

Fig: 2 Experience of Sexual Violence according to Nigeria Geo-political Zone

Percent of women age 15-49 who have ever experienced sexual violence since age 15

Geo-political Zone	Percentage
North East	16%
North West	2%
North Central	10%
South West	5%
South East	8%
South South	10%

Source: (Nigeria Demographic Health Survey, 2013)

However, Newsletter (1998) in a related development reported that the most disheartening side of it is that the perpetrators of these ill practices are not strangers but are mostly relatives, neighbours and acquaintances. Violence during pregnancy can have serious effects on women's physical and mental health as well as serious consequences for her unborn child. Young girls and women are often the victims of such act. The implication is that the younger the girl when she experience sexual intercourse, the higher the chances that the sexual activity is coercive. Peculiar circumstances that place girls at risk for instance are the practice of street hawking and selling at night markets or joints highly exposes girls to exploitative sexual experience. This experience lead to cause devastating health consequences that may affect the

victim throughout life. Victims of sexual violence usual face stigmatization and a feeling of self hatred are experienced. Rape sexual harassment and involuntary prostitution can result in physical trauma, unintended pregnancy, STIs, psychological trauma and increased likelihood of high- risk sexual behavior (NDHS, 2013)

However sexual violence is not limited to young girls or street hawkers, spousal violence also exist. Spousal violence is physical, sexual, or emotional abuse committed by a husband or intimate partner. One in four ever-married women report that they have ever experienced physical, sexual, or emotional violence by their husband/ partner. The most common form of spousal violence is emotional violence, which is most common in South South Zone of Nigeria where 28% of ever- married women report having experienced physical or sexual violence by their husband or partner (NDHS, 2013). Women who are divorced, separated, or widowed are twice more likely to have experienced physical or sexual spousal violence than women who are married or living together (32% versus 15%, respectively). Sexual violence can have multiple physical, psychological and social effects on survivors, their social networks and their communities. The sexual and reproductive health consequences of sexual violence according to WHO (2011), could include sexually transmitted infections, including HIV, unwanted pregnancies, unsafe abortions, gynaecological problems and physical injuries. Other social consequences include stigma and its sequelae – including social exclusion, discrimination, rejection by family and community, and further poverty. Harmful practices and gender issues and abuse are common across societies.

Harmful practices and gender issues according to the National Reproductive Health Policy (NRHP) (2001), is explained in terms of traditional practices that infringe on the rights of reproductive health rights of men, women and young persons in Nigeria. The most common of

these harmful health practices include female genital cutting, forced early marriage, labour and delivery practice, gender based violence and women inheritance among others. The health consequences of such acts may subject victims to haemorrhage, shock infections and long time complications of that may lead to urinary tract infections, sexual dysfunctions, prolonged obstructive labour and vesco-vaginal and recto-vaginal fistula (VVF) that is leaking of urine or faeces through the vagina (NRHP, 2001). Added to these experience also is traumatic stress which may eventually lead to eventual mental health problems in some individuals. Obviously all the above components of reproductive health care may not be organized overnight, but these can be developed in an incremental stage. Many of these are already at various stages of development. Depending on the urgency of the prevailing problems and the availability of resources, some of these components would need further priority attention and emphasis in order to enhance health attainment in the individual.

2.4.4.1 Female genital cutting (FGC)

Female Genital Cutting can be explained as the partial or complete cutting or removing the external female genitalia for non-therapeutic reasons. The practice contributes to many negative health outcomes. It is a deeply rooted traditional practice that has severe reproductive health consequences for girls involved. In addition to the psychological trauma at the time of the cutting, FGC can lead to infection, haemorrhage, and shock in the individual. Uncontrolled bleeding or infection can lead to death of victim within hours or days if care is not taken appropriately. Some forms of FGC can also lead to Dyspareunia (painful intercourse), recurrent pelvic infection, and dystopia. In Nigeria like many other countries, there are a number of attributed factors that influence these practices. These factors include cultural, religious beliefs,

misconception and inadequate information on reproductive health complications. The ICPD (1994) Programme of Action calls FGC a basic human rights violation and urges governments to stop the practice. Other related harmful practices include:

a. Forced early marriage
b. Some puberty initiation rites
c. Labour and delivery practices
d. Wife inheritance and hospitality practice
e. Male child preference to female child

According to NDHS (2013), overall, one-quarter of Nigerian women age 15-49 are circumcised. Older women age 45-49 are more than twice as likely to be circumcised as younger women age 15-49 (36% and 15%, respectively). FGC is most common in South East and South West Zones of Nigeria where nearly half of women are circumcised. FGC is most commonly performed by a traditional circumciser (72%) followed by a nurse/midwife (10%), NDHS (2013) added. Incidence of FGC among girls is most common in North West Zone (27%) and among girls whose mothers are also circumcised (47%). The exercise is commonly performed by a traditional circumciser (84%) which most times takes place in unhygienic instrument and environment which relatively constitute health hazards to victims.

2.4.4.2 Commercial sex (Prostitution)

Another risk factor for reproductive health in the society is prostitution. Prostitution is indulging in sexual activity usually with individuals other than spouse in an exchange for money or other gratifications (UNHR, 2014). Sexual exposure is occurring at ages as young as 9-12 years. Older men misconceive that using young girls as sexual partners would protect them from

STIs/HIV infection. This has been a myth and not reality in its actual sense. In some cultures, young men are expected to have their first sexual encounter with a prostitute. Adolescents, especially young girls, often experience forced sexual intercourse in sub– Saharan Africa, some girls' first sexual experience is with an aged or rich ones who provides clothing, school fees, and books in exchange for sex. This is also common among college girls especially those that are from a poor background to compensate for their education completion. Female sex workers in Nigeria are characteristically poor, marginalized, vulnerable and stigmatized. They lack both education and empowerment. Frequency of sex with multiple partners and a high burden of sex life place them at high risk of HIV infection and other risky behaviors, such as substance abuse (NDHS, 2013).

Surveys have consistently shown a high and rising HIV prevalence among sex workers, who are said to be the major reservoir of HIV infection. Millions of children live and work on the streets in developing countries and many are involved in "survival sex", where they trade sex for food, money, protection or drugs. For example, a survey in Guatemala City found that 40 percent of 143 street children surveyed had their first sexual encounter with someone they did not know; all had exchanged sex for money, all had been sexually abused, and 93 percent had been infected with an STI. In Thailand, an estimated 800,000 prostitutes are under age 20; of those, 200,000 are younger than 14. Some are sold into prostitution by parents to support other family members.

Similarly in Nigeria, cases of women trafficking are common especially in the southern states. This is particularly prevalent in the South East and South South geo-political zones. Parents deliberately send their girl child into prostitution in order to earn for the poorly stricken families. These innocent female folks are sent out for such act some against their will and right. This trend has greater health consequences on the total life of the victim. Incidence of protracted

illnesses that may last for life in the individual may occur. The reproductive life processes can be affected and their image and respect in the society would be lost and sometimes may eventually led to trauma or chaotic experience in the lives of such persons.

2.4.4.3 Human Trafficking

The United Nations (UN) broadly defined human trafficking as the acquisition of people by improper means such as force, fraud or deception with the aim of exploiting them, United Nation Office of Drug and Crime (UNODC) (2015). Sex trafficking occurs when some form of force, fraud or coercion is used to make someone (usually a woman or child), engage in sexual activity without consent (UNDOC, 2015). Force can be physical or sexual abuse or restrictions of someone's movement; fraud can be false promises of a different job in the host country or misrepresentation of the working conditions; and coercion can be threats of harm to the victim or victim's family or friends. Similar to such cases is noticed among Nigerian national that are intercepted by foreign troops on their ways to Europe through Mediterranean countries of Libya, Tunisa and Spain. Victims are occasionally deported back to their countries of origin. The International Labour Organization (ILO) (2012) estimates that there are approximately 21 million victims of human trafficking globally, including 5.5 million children. Sex trafficking is a complex problem because the victims experience physical and psychological harm, the traffickers use physical violence to dominate and control their victims such as starvation, beating, rape. The victims may experience injuries like fractures, concussions, burns, and brain trauma. Relatively, the victims also experience gyneacologic (birth related) health problems that stem from forced commercial sex act. Victims might as a result suffer from sexually transmitted infections, menstrual pain and irregularities, miscarriages, and forced abortions among other

problems. Related to this unfortunate incidence is the abduction of Secondary School Girls in Chibok, Borno State 2014 and Dapchi in Yobe State in 2018.

However the psychological impact of victimization may be more severe than the physical violence (WHO, 2012). Victims, who have been rescued from sexual slavery, typically present with various psychological symptoms and mental illness, including the following:

a. Post-Traumatic Stress Disorder (PTSD)
b. Depression
c. Anxiety
d. Panic disorder
e. Suicidal ideation and substance abuse

Generally, the global community typically group GBV into three categories according to UNFPA (1998).

a. Family Violence: This is the most widespread type of violence against women. This includes any abuse that occurs within the family context where the perpetrator is known to the victim. Common example of this category are spousal beating, marital rape, forced marriage, sexual abuse of a girl by a relative (uncle, father or brother), or verbal abuse and trauma related incidences.
b. Community Violence: this include violence at the hands of a perpetrator unknown to or unrelated to the victim and often comes in the form of rape, sexual harassment forced prostitution or trafficking and public humiliation.
c. State Violence: this category includes violation that are condoned and committed by individuals associated to government. It is often seen in the form of violence at the hands of security agencies such as police, prison guards, refugee camp officials/guards, border

control officials and peace keeping troops including civil defense and voluntary task groups' personnel.

However the consequences of sex trafficking according to Wirth (2014) increases the risk of contracting HIV and other sex related infections. Generally therefore trafficking lead to the proliferation of HIV, because victims being vulnerable and often young/inexperienced individuals cannot protect themselves properly and thus get infected (Wirth, 2014).

2.5 Sources of Information on Family Planning and Contraceptives

Information, education and communication (IEC) activities bring people and family planning programs together. It gives people the information they need to make informed choices about using and continuing to use contraception and about other aspect of reproductive health. Information in family planning activities create awareness, increase knowledge and build public approval of new ideas and practices. Interpersonal communication, whether among family members and friends or between service providers and clients, plays an important role in people's decisions about family planning, helping people decides whether, when, which method, and how to use family planning devices. There is growing acceptance of the fact that adolescents need information on contraceptives use so that they can protect themselves and make informed decisions regarding their reproductive health. Despite this great need for the information some resistant behavior persists. Many people entertain the fear that when people are educated about sexuality, the basic information acquired will lead to irresponsibility and promiscuity. On their part also, youths/adolescents are reluctant to seek information or help from adult either within their family. They feel shy or ignorant about it.

Reproductive health for adolescents is a priority for many sub Saharan African governments and the developing world at large. Rapid population growth remains a concern and birth to adolescents significantly contributes to Africa's overall growth. Most adolescents lack basic reproductive health information and services as well as skills in negotiating sexual relationships. The result is that many adolescents are growing up without information, education and services that can promote healthy and responsible reproductive health behaviour. However contrary to these fears, evidence from a number of studies around the world show that access to information and services improves the reproductive health of adolescents (UNPFA, 2005). A study in Morocco found that unmarried pregnant young girls and women are shunned, rejected by their families and communities and sometimes abused for bearing an illegitimate child (Beamish & Abderazik, 2003) and the children of unwed mothers suffer legal and concomitant socioeconomic consequences.

Teenagers who experience physiological and other challenges often find it very complicated to discuss these experiences with their parents and their siblings. Many parents are not open to talk about sex with their children and children may find it difficult to talk about sex with their parents because parents often construe sex talk as an indication that the children are ready for sex. In need of information therefore, teenagers often seek information from friends or peers. Consequently, wrong information is passed around. Other sources of information to teenagers include books, magazines articles, videos and social media. However, the information obtained from these sources may not all be correct. This increases the chances of teenagers experimenting heterosexual sex and they may virtually end up being pregnant or getting sexually transmitted disease including HIV and AIDS.

Planned Parenthood Federation of Nigeria (PPFN, 2010) reported that 34 out of36 states of' Nigeria indicated that adolescents are very poorly informed about reproductive health related issues especially about use of contraceptive to protect STIs. Related to this problem, youth face some difficulties in obtaining adequate information on contraceptive related issues. Some of these difficulties include lack of awareness about sources of information and services, high cost, legal and information restriction on service particularly confidential services and hostile or judgmental service providers. Information on reproductive health and other health related issues may he obtained from the following agencies:

2.5.1 The School

The school should be the primary information centre for students on any issues that may affect them both positively and negatively. The school should play an active role in providing students with required information on contraceptives, communicable diseases, drug abuse, mental health and nutrition, to mention but few. Providing students in school with information on effective use of contraceptives are essential for them to develop meaningful attitudes toward learning the necessary skills to help them stay uninfected. Relatively Sanusi (2001), observed that there is need for sex education in schools as adolescents in Nigeria are caught up between traditional and the influence of other culture brought about by technological revolution such as urbanization, influence of modern literature, music, video and cable television as these developments have gone a long way *in* reshaping the prevailing sexual code of conduct among our youths. Thus has aided in creating problems in youths like unplanned marriages, unwanted pregnancies, abortion and *its* resultant adverse consequences such as contracting STIs, high rate of divorce cases and sometimes death.

Normally, school provides wide range of knowledge to students on typical issues on reproductive health and family planning programs to students. Proper inculcation of this knowledge would help influence change in behavior and attitudes positively to maintain healthy living. However the use of this knowledge depends to a great extent on individual's private decisions and actions. This usually involves individuals, couples, families and even peer group. Thus the need for accurate information and communication is urgent and must be a continuous process. Sources of information on reproductive health and family planning issues may come from different angles of the schools, particularly during instruction or classroom teaching and social activities program within the communities. These diverse sources make youth increase knowledgeof modem contraceptives, its proper use and where to find services. This would help to counteract myths; dispel rumors and correct misinformation about modern contraceptive and family planning utilization. They also link family planning to other reproductive healthcare among youths (NDHS, 2013). Therefore school is a place where correct information on RH would be imparted to students to help them increase awareness on RH issues.

2.5.2 The Peers

Information on reproductive health issues can be obtained through peer associates. Peers have the power to influence and help maintain positive behavior. Also negative consequences of health behaviors may also be influenced by peers especially who are not mature enough to take responsible health decisions. There are various ways in which group can influence the individuals who belong to them. It is certainly believed that groups exert pressure towards conformity. The degree of pressure depends on the group, its cohesion, and the uniformity of its values. The peer group also acts as another primary source of information about sex. This

information may be incorrect in some instances. Studies showed that peer pressure is often the direct cause of an unplanned pregnancy and drug related behaviorus in youth (Corblin, 2006).

Brenda (2010) found that in a group made up of age-mates there was a great deal of acquiescing to majority opinion even when the majority is known to be wrong. Berenda (2012) further expatiated his study and deduced that about one third of student in a school setting have reported contrary to what they actually observed when they found themselves repeatedly the only member with a divergent opinion. The group members who did not hold to their own "better" judgment even when they differed in the opinion, the majority tend to be more secure as individuals. Those who changed tended to lack confidence, to feel inferior, and to have a greater need to identify with the group. Therefore, peer education may be an indicator of sources of information on safe motherhood, family planning and contraceptives use in STIs/A1Ds prevention or on issues that relate to drugs particularly among adolescent/youth and their families. It is therefore observed that peer relationship can have a great influence on individual's exhibition of sexual behavior.

2.5.3 The Hospitals and Health Centers

These are social service centers that provide essential health services to the communities. It is the responsibility of service providers within these agencies to provide necessary guide and knowledge or information to any person that comes to them for advice and treatment. The centres serve as preventive and curative measures and to some extent rehabilitation against health problems. A consultation of ST1s provides an opportunity for the health worker to discuss and explore with the patient on a one to one basis his/her factors for STIs/HIV and other issues related to prevention and treatment. Frequently these consist of the provision of information about STIs and their prevention, condom use, and partner notification (WHO, 2013).

Counseling is very important because it is an interactive and confidential process in which a care provider helps a patient to reflect on issues associated with STIs and other health problems and to explore possible lines of action (WHO, 2014) to overcome them. There is often a need for skill building and practicing different behavior for the interactive and confidential session to yield good result.

2.5.4 Print and Electronic Media

In Nigeria the print and electronic media has significant role in information dissemination on various problems including reproductive health issues such as adopting measures for family planning, child health, and reproductive attitudes, AIDS and related topics. This is not unmindful of the fact that significant numbers of youth have access to print and media especially internet or social media, radio and television programme in their homes. Longwe, Huisnan and Smits (2012) posited that there is evidence that family planning (FP) messages through media may play an important role in increasing the knowledge of FP methods and through this increased knowledge also their acceptance and use, especially in those areas where the literacy level is low (Saluja, Sharma, Choudhary, Gaur & Pandey, 2011). Several empirical studies have shown that mass media campaigns may lead to behavioral changes and in this way reduce fertility. For example, Cheng (2011) established that in Taiwan mass media and social networks played important roles in disseminating reproductive health and contraceptive knowledge and women transformed this knowledge into behavior that would help to reduce fertility and sexually transmitted infections. This means that knowledge on family planning and contraceptives have the capacity to reduce high rate of fertility among population.

Much research has been done about the influence of the mass media on the peers. Today teenager have better opportunities to view sexual activity on cell phones, magazines, television and the internet more than ever before. Such information is accessible out of the context of the prescribed sexual norms of that society. This kind of information influences the teenager to internalize antisocial sexual behaviour or to experiment with illegal sexual activity, with resultant pregnancy and STIs risks (Makhaza & Ige, 2014). Together with peer pressure, the mass media has a powerful triggering effect on the teenage to indulge in illicit sex behaviour. The media also has an influence on attitudes of young people.

Liman (2006) suggested that among others, the STIs and AIDS campaign should be the responsibility of all and sundry regardless of race, labour, religion, gender or even age differentiation. The mass media should make it a priority policy of its programme agenda to properly inform, educate and enlighten the educated elites as well as the illiterate members of the society. Therefore, the roles of public sector, medical personnel, religious clergymen, institutions, private organizations and opinion leaders should be encouraged to educate the public on the dangers of reckless life particularly in relation to reproductive health issues in general.

2.5.5 Parents and Relations

Ideally parents have the primary role in educating their wards on the general aspects of life including STIs prevention. Aspects of family planning issues that may be inculcated into the character of children by parents may include personal skills, good moral conduct, matters on ST1s/HIV prevention, drug abuse, smoking cigarettes, abstinence from sex until after marriage, society and culture and how they influence behavior, health risk behaviors and how to avoid them, Hence, schools, peers, hospitals, print and electronic media and parents help in information

dissemination on different issues that help an individual to improve his/her total health. Through these agencies, most up to-date relevant information and prevention, and the consequences of life threatening diseases can be highlighted and cautioned

2.6 Factors Influencing Use of Family Planning and Contraceptives among Students

There are a wide variety of factors that might affect people use reproductive health related matters particularly family planning and contraceptives which might be related to individual's perception. These might influence patterns of health care service utilization, continuation and interruption rates, and other sexual and reproductive health choices. Past studies showed that the moderating factors that could influence students' non-utilization of of the above services include demographic factors, such as age, gender and cultural / traditional beliefs and practices (Makhaza and Ige, 2014). Age is a very vital aspect when it comes to the utilization of reproductive health services. However the ages of students could be important in identifying the high risk age groups in order to make concerted efforts to provide such age groups with appropriate health education information and opportunities. Students may not make use of protective device during coitus because they lack enough information or have poor information about the utilization of contraceptive, their benefits and effects. Students' age might influence their decision to engage in sexual intercourse and contraceptive non- utilization.

It is believed that if sexual and relationship education is started at an early age, prior to sexual debut, such knowledge could help both male and female students to delay their first sexual encounters. Female and male students alike need adequate knowledge about contraceptives and STIs before sexual activities commence in order to prevent unplanned

pregnancies and reduce the number of female pregnant students on campus. Thus sex education needs to be considered emphasized. Other related factors are associated to:-

a) Women's socioeconomic status and residence in rural versus urban areas. Women living in poor socioeconomic conditions and women in rural areas still tend to have less knowledge of contraception and less access to contraceptive services, and these factors are associated with lower contraceptive use.

b) Women's education levels. Education has a strong impact on reproductive health matters with particular reference to family planning and contraceptive use among women. Improving women's levels of education is linked to increased contraceptive use. For example current contraceptive prevalence among sexually active women with post- high school qualifications is twice as high as (75%) than among women with no education (38%) (NDHS, 2013). Improving women's levels of education allows them to gain greater information and knowledge on contraception. It also allows them to seek improved employment opportunities, increasing their economic independence which can enable them to have greater control over their sexual and reproductive lives. Higher levels of education and retaining girls in school are also linked to lower levels of teenage pregnancy and HIV.

c) Partner, family and community expectations around fertility. This includes, for example, pressures on teenagers and young women to 'prove their love' through demonstrating their fertility by childbearing; negotiations concerning condom and contraceptive use between partners, and societal and familial expectations for women to have children.

d) Access to family planning services and types of contraceptive methods. Ideally, primary health care providers play a critical part in influencing women's uptake of modern contraceptive services. There is evidence to show that young women in particular may be

discouraged from using contraceptives by disapproving providers. Providers also influence which forms of contraceptives women may use, with evidence that method choice is frequently limited in the public sector by the opinions and practices of primary health care nurses. For some women, contraception use is linked to suitable opening times, for example, for school going youth, or working women.

e) Counseling on health-related side effects of some contraceptive methods. Many women attending health care services services do not obtain sufficient information and counselling on the expected side effects of some contraceptive methods especially injectable contraceptives. Side effects are reported to be the most common reason for discontinued use of contraception. This indicates the need for better counseling of women on the expected common side effects of the methods they choose to use, especially when they first start to use a particular contraceptive method.

2.7 Empirical Studies on Reproductive Health Knowledge

Literature review for this study was done by utilizing online sources and different journal articles on different topics related to knowledge of sexuality and reproductive health component among adolescent and youth as whole. Generally, during adolescence, young people develop their adult identity, move toward physical and psychological maturity, and become economically independent. It was evident from the study of Njau, et.al. (2004) that if adolescents were not well informed about their body biology, reproductive health organ, physical growth as well as their normal growth and development issues, it renders them vulnerable to risks such as unwanted pregnancies, the health risks associated with early pregnancy, unsafe abortions, sexually transmitted infections (STIs), and human immune virus (HIV). It is essential that youth should

know how to make informed choices and must be equipped with adequate knowledge about their reproductive health matters as well as to develop positive or favorable attitudes so as to adopt safer and responsible sexual behaviors. Focusing on adolescent reproductive health is both a challenge and an opportunity for health care providers and thus serves as preventive medicine.

In a study by Kallner, Thuncell, Brynhildsen, Lindeberg and Danielsson, (2015) on contraceptive use and attitudes towards contraception, shows that many Swedish women at risk of unwanted pregnancy do not use contraception in spite of easy access and a system with subsidies for young women. Women believe that contraceptive effectiveness is the most important quality of contraception but knowledge about contraceptive effectiveness is lacking and a high proportion of women using contraception use less effective methods. A large proportion of women have experienced at least one unintended pregnancy. The study proffered that increasing awareness of contraceptive effectiveness and promoting use of available contraceptive methods is a possible way forward in the effort to reduce the rates of unwanted pregnancy and abortion and its related complications

The findings of Christopher, Kathryn, Lydia and Galon (2006), suggested that sexual risk behavior among young people demonstrated that quality of the parent—child relationship, parent—child communication, and peer support represent interacting social systems that are related to sexual risk behavior. Young people, who report higher levels of connectedness with parents have lower rates of unprotected sexual intercourse, engage in sexual intercourse with fewer partners, older at first sexual intercourse and make safer sexual decisions

Stanton, Li X, and Galbraith (2009) conducted study on role of condom (contraceptive) in STD prevention. The study showed that receipt of STI education intervention was associated

with more effective contraceptive use and an understanding of the role of barrier methods in STD prevention. After an ST1 awareness education intervention, more than 80 percent of a longitudinal group of 383 African — American youths from ages 9 — 1 5 years reported using condoms along with oral contraceptives. A study conducted among 93 pregnant student nurses in the Northern Province of South Africa reported that 73.1 percent of these student nurses had no knowledge about contraceptives. None of these respondents could access contraceptives especially emergency contraceptives despite being student nurses (Netshikweta, 2011). Similarly, Traeen, Lewin and Sundet (2010)conducted a study in Norway showed that the majority of adolescent who use contraceptive (pills and condoms) do so for protection against unintended pregnancy but not for protection against STIs. Use of contraceptive pills in the study was wide spread among adolescents frequency of sexual intercourse and few sexual partners. In a study conducted by Diamini and Werve (2009), they affirmed that 930 *(50* %) of the urban teenage population of 1860 studied in Swaziland (South Africa) contracted STD. The reason for this high morbidity may be attributed to ignorance and limited knowledge on reproductive health issues including use of effective contraceptive.

In a study reported by Ehiers and Maja (2010) on knowledge about, attitudes towards and utilization of contraceptive services in South Africa, 50 Adolescent mothers were involved. It was reported that 17 (34%)did not know about contraceptive, while 32 (64%) knew about contraceptives devices. Although 32 respondents knew about contraceptive methods, only 25 (50%) indicated that they used pills, condom and injectibles. Khatiwada, Silwal, Bhadra and Tamang (2013) asserted that use of contraceptives specially condoms varies according to the marital status whether married or unmarried, place of residence urban or rural and level of education in adolescent of Nepal. Early pregnancy and motherhood among teenagers is a

foremost social and health concern which is causing several health problems for both mother and child. Although the knowledge of contraceptives among adolescent and young people is higher, the rate of using contraceptives in practical life is far lesser.

In a study conducted by Meskerem and Warku (2013) to assess utilization of youth reproductive health services and its associated factors among high school students in Bahir Dar town Amra region of Ethiopia. Subjects involved were 818 participants drawn using multi stage sampling techniques. The study revealed that only 32% of youth utilize youth reproductive health services provided. Barriers to utilize the RH services among students were due to inconvenience hours and also about 31% and 28.5% reported fear of being seen by parents or people whom they know. Similarly, students who had reproductive health problems according to the study were 1.54 times more likely to utilize RH services than students who had no RH illness. Majority of the youth were not utilizing reproductive health services. This may be likely due to limited knowledge on matters that relate to safe motherhood, maternal service utilization or poor awareness of contraceptive devices.

Simber; Tehrani and Hashemi (2005) conducted study on reproductive health knowledge, attitudes and practices of uiversity youth in the Islamic Republic of Iran, 1111 students completed a questionnaire with 43 closed questions. The overall mean knowledge score was 54%. Knowledge of males and females, and of married and single students, was similar. Of 664 students that answered questions about reproductive health behaviour, 54 (8%) reported having sexual intercourse before marriage; 16% of males and 0.6% of females; 48% of them had used condoms. The majority of students believed that the risk of AIDS and other sexually transmitted infections was moderate but that youth had a low ability to practice healthy behaviour. The

majority believed in the benefits of reproductive health knowledge for youth but felt that services were inadequate.

In a study by Adjei, Sarfo and Aseidu (2014) to examine the relationship between some selected socio-demographic variables and current contraceptive use among Ghanaian women. The study reported that some of the selected socio-demographic variables such as education level, knowledge of access to contraceptive method, knowledge of method, marital status, fertility preference and ethnicity were found to be statistically significant. However, knowledge of access to contraceptive method was the most important variable. It is recommended that contraceptive providers to sensitize the general public about the general benefits of contraceptive usage. Easy accessible avenues must be created to address complains in order to reduce the unmet needs of women.

In a study by Oye-Adeniran, et al., (2010) in Ilorin, Nigeria, the methods of protection mostly practiced by respondents in the study were condom (69%), the oral contraceptive pills 38%, the IUD (29%) and periodic abstinence (32.9%), with most respondents being able to name at least one method of contraception. Despite the knowledge and awareness shown by the report, instead, high level of sexual debut corresponds with low contraceptive prevalence among female students. United Nation International Children Fund (UNICEF) (2015) reported that contraceptives use has been shown to be more cost effective to prevent the birth of HIV positive children among HIV positive women in the general population. According to World Fact Book (2013), Nigeria has a population of over 170 million people and has an annual growth rate of 2.5% with only 10% of women using family planning or modern contraceptives methods. It further observed that the low utilization of family planning services including contraceptive use has resulted in high abortion rate of 25% per 1000 women aged 15-44 years.

Another important component of reproductive health among mothers of child bearing age 15-49 is their attendance to antenatal and postnatal care. These two levels of care are significant to both the mother and the unborn child during pregnancy and the services mothers receive after delivery. Several studies had indicated that attending ANC services is poor especially among the disadvantaged population. NDHS (2013) showed that the proportion of pregnant women who had not attended any ANC services in Nigeria was 34.9%, also only 60.9% among women of child bearing age (15–49 years) who had a live birth in the five years preceding the survey received ANC from a trained skilled ANC provider (doctor, nurse or midwife, or auxiliary nurse or midwife). Only half (51.0%) reported making four or more ANC visits during the pregnancy.

There are some factors that might be responsible for non use of ANC in Nigeria. The reasons varied significantly with regards to respondents' economic status, educational attainment, residence, geographical locations, age and marital status (Adeniyi& Erhabor, 2015). Accordingly, the highest non-users of ANC were found among the poor, rural, currently married, and less educated respondents from the Northern part of Nigeria, especially in the North East zone. Significant associations were found between the stated reasons for non-utilization of ANC among the respondents and socio-demographic characteristics. This includes seeking permissions from spouses and partners, beliefs, dispositions and views on quality and attitudes towards the ANC providers, and distances to health facilities (Adeniyi & Erhabor, 2015).

Similarly, NDHS (2013), reported that maternal mortality rate (MMR) in Nigeria amount to 576 per 100,000 live births. This according to the report is relatively due to poor reproductive health information and services in Nigeria and thus contributed to about 10% of global health burden. Utoo and Mutihir, (2010) conducted a study on knowledge, attitude and practice of family planning methods in Nigeria. It reveals that 59.5% used male condoms, 47.0% used oral

contraceptives and 27.1% used hormonal injectables in Jos North central Nigeria. Similar study by Abasiatti, Etukumana, Utuk and Umoiyoho, (2011) in Uyo, South South Nigeria showed that 40.4% used condom, 31% used safe period/calendar method, 18.0% used oral contraceptive, 9.3% used intrauterine contraceptive device, 2.7% used Billing's method,1.6% used hormonal implants and 2.7% used emergency contraception. Despite this reports, cases of maternal death is at the increase among women of reproductive age especially in the North East and North West zones of Nigeria.

The problem of teenage pregnancy is considerably worse and similar in almost every society the world over but prominently in developing society. Ilo (2004) designed a study to assess the awareness and practice of safe sex among teenage students in Enugu L.G.A. Enugu State involving 800 secondary school students aged 10 — 19. The result indicate a significant different in the awareness of safe sex practices, knowledge of contraceptives among the study participants. The finding revealed a moderate level of cognition of contraception with a grand mean of 2.57. This agrees with Makhaza and Ige (2014) who observed a higher level of cognition in teenagers especially among those aging 16 years and above. The result also exposes a poor practice of safe sex and contraception with *75* percent having reported sexual intercourse without protection. This situation may have serious implication for health since inadequate knowledge is inimical to practice of safe sex and can lead to devastating health consequence which include unwanted pregnancy, abortion, STIs and PID — Pelvic Inflammatory Disease and maternal death.

Indeed among Nigerian adolescents, there is an obvious gap between students understanding of contraception and sexual behavior. Even though adolescents have knowledge

about contraception, the rate of use of contraception is still very low. This results in premarital sex, unwanted pregnancies and risks of unsafe abortions or contract STIs. In study of the six geo-political zones in Nigeria, Abiodun and Balogun (2009) indicated that the main sources of information about reproductive health issues and contraception in descending order of frequency include friends, siblings, radio, television, newspaper, magazines, school lecture, workshop, seminar, and health workers.

Planned Parental Federation of Nigeria (PPFN), (2010) conducted a field study on the need of Nigerian Youths for reproductive health in selected secondary schools in Kebbi State; among its objectives was to determine the level of knowledge among teenagers regarding reproductive health. Target group for the study were student's aged 12 — 18years and reproductive health educators. Questionnaire and focus group was used. Altogether 320 students took part in the survey among which 138 were males and 172 females. Participants to focus group included 118 senior secondary students and 18 adults involved in reproductive health education. The result revealed that 168 *(52.5%)* knew about reproductive health, while 152 *(47.5%)* had less knowledge about reproductive health issues. The study also show differences in terms of their knowledge of variables such as STIs, contraceptive methods, causes of pregnancy, harms of pre-marital sex. The need for intervention to increase reproductive health awareness especially contraceptive methods was recommended.

In a study to determine the prevalence of family planning and contraceptive use among adolescents in Ilorin, Saka, Saidu, Balogun, Raji, Ijaiya, Saka, Abdul and Yahaya (2012) recorded all female adolescents aged 15-24years who attended the Family Planning Clinic over a 5 year period (2005-2010) at the University of Ilorin Teaching Hospital were reviewed. The

clients' social data and choice of contraception were analysed. There result showed that 188 adolescents out of a total of 6605 women attended the family planning clinic over the stated period. The mean age was 20.2 years. 7.4% of the clients' were unmarried while 92.6% were married. 54.9% chose IUCD, 25% chose OCP, 16.3% chose Depo Provera, 1.6% chose Norplant and 1.1% chose condom and Vaginal peccaries respectively. They concluded that contraceptive needs of adolescents are still largely unmet. They recommended that extra efforts should be put to close the gap of the unmet needs for contraception practice which is one of the most important ways of preventing unwanted pregnancy, subsequent abortion and reduction of maternal morbidity and mortality among the specified population.

In reporting trends and differentials in sexual and reproductive behavior among adolescents and youth age 15-24 in Nepal, Khatiwada et al (2013) drawing on data from successive Nepal Demographic and Health Surveys 2006, and 2011. The findings made clear that major challenges remain both to increase overall levels of health service utilization and to decrease risky behavior among adolescents and youth. In addressing these challenges at the national level, it is also important to reduce large gaps that reflect differences in education, residence, and other personal characteristics. The survey results demonstrate high proportion of adolescents and youth who have not yet married over the years. This trend has consequences for reproductive health. In 2011 more than one-fifth of male adolescents and youth reported in the NDHS that they had sexual intercourse before marriage, compared with less than 1 percent of female adolescents and youth. Among female adolescents and youth, sexual intercourse takes place almost universally within marriage, whereas for one-third of male adolescents, their most recent sexual intercourse was with a person other than a spouse. Overall, this behavior suggests

that unmarried male adolescents and youth today are at higher risk of contracting HIV and other STIs and, as a consequence, and has increasingly puts women at higher health risk behaviors.

Michael (2012) conducted a cross-sectional study on contraceptive methods use among 314 women and 20 service providers in ten wards from ten health facilities. Data were collected using structured and in-depth interview questionnaires. Information gathered included socio-demographic, socio – cultural characteristics, accessibility of contraceptive methods, current use and access to information. The findings reveal that (35) percent of women in stable marital relations reported to be using contraceptive methods. Highest (58%) use of contraceptives was reported among women in formal employment. Factors found to be significantly associated with contraceptive use were: education level, occupation, traditional cultural beliefs, and support from husband/partners and access to information while religion, decision maker on desired number of children in the family were not found to be significantly associated with the use of contraceptive methods. The study therefore concluded that prevalence of contraceptive use among women in stable marital relations is 34.5% than that in the general population of women with the age of 15 -49 years in Kahama district (16%, 2011 district report). Socio-demographic factors like education level and occupation and religion were found to have more influence in use of contraceptive methods among women in stable marital relations.

However in a study conducted by Alli, Maharaj and Vawda (2013) to explore to what extent interpersonal relations form a barrier to young people's access to and satisfaction of reproductive health services. The study draws on data from 200 client exit interviews and four in- depth interviews conducted with university students and university health care staff in Kwazulu-Natal, South Africa. While young people are aware of the importance of utilizing STI, HIV and family planning services, they however experienced barriers in their relationship with

providers. This served as a deterrent to their use of the health facility. Adequate training in interpersonal relations for youth friendly service provision is essential in helping overcome communication problems and enabling providers to interact with young clients at a more personal level.

In another development Sieving, McRee, McMoris, Beckman, Petingell and Bearinger (2013) 'Prime Time' is, a multi-component development intervention program, employing to prevent pregnancy risk behavior among young women aged 13-17 years. The group was randomized to the 'Prime Time' intervention or a control group. The intervention was particularly efficacious in improving the consistent use of condoms and hormonal contraception. Findings suggest that health services grounded in a youth development framework can lead to long-term reductions in sexual risk among vulnerable youth. Relatively, the effectiveness of youth centres in increasing the use of sexual and reproductive health services was studied by Zuurmond, Greay and Ross (2012), considerable consistency across the studies that were systematically reviewed was noted. It found that the uptake of services was generally low despite widespread emphasis on youth centres as a strategy for encouraging young people to attend. The main users of general youth services were young men attending school or college, with a significant proportion older than the target age. In contrast users of the on-site specific sexual and reproductive health services were predominantly young women, with a significant proportion older than the target age group. Uptake of services was generally low. Despite widespread emphasis on youth centres as a strategy for encouraging young people to access the services, results from these studies have not been encouraging, and cost-effectiveness for these purposes is likely to be low.

Sexual and gender abuse is among the reproductive health challenges that are common among students who stay on school campuses. Sexual abuse is the infliction of unwanted sexual contact or psychological exploitation of another person's liberty and dignity for one's gratification (Francoeur, 1995). Sexual violence takes multiple forms includes sexual abuse, forced pregnancy, forced sterilization, forced abortion, forced prostitution, trafficking sexual enslavement forced circumcision, castration and forced nudity. According to NDHS (2013) seven percent of Nigerian women age 15-49 have ever experienced sexual violence of which 3% have experienced sexual violence in the past 12 months. Women, who are divorced, separated, or widowed are more likely to have ever experienced sexual violence (15%) than women who have never been married (8%) or are currently married (7%). Experience of sexual violence varies by zone, from 16% in North East Zone to 2% in North West Zone. Sex trafficking is a complex problem because the victims experience physical and psychological harm, the traffickers use physical violence to dominate and control their victims such as starvation, beating, rape. Victims might as a result suffer from sexually transmitted infections, menstrual pain and irregularities, miscarriages, and forced abortions among other problems.

The literature reviewed here reflects a long-standing perception that young people require a multi-faceted approach to their sexual and reproductive health care. There is no single policy that fits-all when it comes to this very important issue that requires urgent attention and constant review. Young people require a range of responses to a range of issues/problems when it comes to their specific sexual and reproductive health needs. There is no doubt that the use of social media and internet development has contributed to engaging young people, including young men, indulge in sexual debut. Invariably also it has helped in improving their own sexual and reproductive health outcomes. However, there is a dearth of information available through

sources that are not always adequately screened; rarely consistent and very seldom peer-reviewed. Therefore contact with health professional is still a much safer option. What is evident from the literature is that young people need more knowledge and care about the way they are treated especially when they attend a service for sexual and reproductive health. Most of the sexual and reproductive health services that were reviewed had poor uptakes particularly on access of family planning services and how to protect against risky behavior such as contracting STIs among youth. The review also looks at incidences of sexual and gender violence among youth who attends school. Sexual violence leads to devastating health consequence among affected victims. Therefore, in-depth and consistent knowledge on reproductive health component is most necessary and must be encouraged particularly among the adolescents and young adults to remain healthy.

2.8 Summary

This study was set to assess reproductive health knowledge among students in Colleges of Education in North East Zone of Nigeria. Health Belief Model (HBM) was adopted as the theoretical framework for the study. The theory was adopted to demonstrate and explain the importance of knowledge in self protection. Knowledge as it is believed is the determinant of individual behavior to act or express self positively or negatively. The HBM explained the concepts of perceived susceptibility and severity to risk or threat to healthy behavior. The individual also looks at benefits and barriers or the resultant consequences of behaviour in question. The theory stresses the importance of behavior that is intended to be adopted by individual either intrinsically or extrinsically. This cognitive process in learning a behavior is significant. The concept of knowledge of reproductive health among youth generally was also

visited. The components of reproductive health was highlighted which include knowledge of safe motherhood, that is, going through pregnancy and child birth safely, understanding risks factors for STIs/HIV infection, family planning methods / devices and the concept of gender violence. In the review also is the source through which individuals' derived information on knowledge of reproductive health matters was highlighted.

The review of related literature shows that youth who do not guard or protect themselves against indiscriminate sexual intercourse surmount them to devastating health challenges which include risks of STIs or pregnancynot desired or abortion. The review also showed that lack of adequate knowledge on different types of contraceptives methods exposes them to high risk of infections. Another issue highlighted by the review was how to convince individual, families and communities to adopt and maintain healthy behavior especially using preventive measures. The reasons for use of family planning and contraceptive method were also identified. The review showed the use is considerably low and inconsistent by youth who show interest in the use. The uniqueness of the study lies in the fact that itfocused primarilyon knowledge of reproductive health and why use of protective devices among students in Colleges of Education was not encouraging. It is therefore the belief of the researcher that there is a gap that exists in this important category of age group. The study was conceived as a step in filling the knowledge of the gap of the interplay between RH knowledge and utilization of health care services among respondents.It shall therefore provide a framework within which individual's reproductive health behavior pattern could be understood and expressed positively.

Despite government effort to improve policy on health care delivery in Nigeria, the state of the program delivery and research in the field of adolescents and youths health is scarcely

inadequate. Considering that youth are reluctant to seek reproductive health services as they are currently provided, though not adequate, it is important to find ways to offer care in a manner that they perceive it as a more welcoming, comfortable and responsive. Helping youths to develop good habit and make proper decisions that will positively affect their health and their prospects for the future remains a challenge for educators. Despite the many advantages to family planning, millions of women in developing countries, including crisis-affected populations, Nigeria inclusive do not use contraception. This has results in high fertility and mortality rates and incidence of STIs is on the increase. Attributed factors are generally due to lack of adequate knowledge on reproductive health issues. Other contributing factors are the belief in some cultures that women should bear many children, and opposition from partners and other family members. It is therefore believed that ensuring access to health care services that addresses HIV and sexual and reproductive health issues continue to be an important component of the national response to meet the needs of most youth particularly the women folk.

However decisions made during adolescence, particularly regarding sexual and reproductive health matters can have long term impact on the young person and on human development in general. Therefore, if adequate knowledge on reproductive health issues is not provided to youth, challenges that can have serious implications on student's health, education, their welfare and future opportunities towards building inclusive and sustainable healthy societies would be affected.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The purpose of this study was to assess knowledge of reproductive health among students in Colleges of Education in North East Zone of Nigeria. To achieve this purpose, research design, population for the study, sample and sampling techniques, research instrument, validation of the instrument, procedure for data collection and procedure for data analysis were described in this chapter.

3.1 Research Design

The design that was adopted for this study was the Ex-Post Facto (after the fact) research design. The ex-post facto design according to Carlos (2013) is a category of research design in which the investigator starts after the effect has occurred without manipulation of the independent variables. According to Asika (2009), Ex-Post-Facto design is a systematic and empirical inquiry in which the researcher does not have direct control of the independent variables, because their manipulations have already occurred. Concurring with the above assertion, Bello and Ajayi (2000) asserted that ex-post facto design seeks to assess factors that are associated with certain occurrences, outcomes, conditions or types of behavior, by analyzing past events or already existing conditions.

Based on the above reports, therefore, the ex-post facto design was assumed suitable for this study and was adopted to assess the knowledge of reproductive health among students in Colleges of Education in North East Zone of Nigeria.

3.2 Population of the Study

The population for the study comprised of fifty four thousand and forty two (54,042) all students in twelve (12) Colleges of Education in the North East Geo-political Zone of Nigeria that were registered during 2015/2016 academic session(NCCE, 2015).

3.3 Sample and Sampling Techniques

The sampling procedures adopted to draw sample size for this study includes simple random sampling, stratified random sampling and proportionate sampling procedures. There are six states in the North East Geo-political Zone of Nigeria. These states are Adamawa, Bauchi, Borno Gombe, Taraba and Yobe States. There are twelve (12) Colleges of Education in the six states. This total includes both three (3) Federal Colleges of Education and nine (9) State Colleges of Education. Simple random sampling procedure was used to select six (6)Colleges that was used for the study using the following procedure; names of the 12 Colleges of Education were written on separate pieces of paper. Each piece of paper was uniformly folded and put in a box. After vigorous shake to ensure randomization, six Colleges of Education were picked randomly one at a time by a research assistant. This procedure continued until the 6^{th} College was picked. The picked papers were opened and names of the Colleges were recorded and considered for the study. In States that has more than one College of Education, simple random sampling procedure was used to select one College for the study.

In each of the Colleges sampled, stratified sampling techniques was used to select two(2) schools. This is because the colleges are divided into schools based on the courses offered. Each school consisted of different departments. Hence all academic departments in each of the selected schools were listed and assigned numbers. Simple random sampling procedure was used to select two departments from each school using Hat- Draw- Method. Names of

departments were written on piece of paper, folded and were dropped in a hat. The hat was thoroughly mixed to ensure randomization. The researcher then asked one research assistant to pick two pieces of paper one at a time from the Hat. The names of the Departments picked were recorded and used for the study.

Stratified random sampling procedure was also used to select male and female respondents proportionate to their number in the population thus; total number of (male/female)in the selected Colleges divided by total population of the six sampled Colleges, multiplied by sample size. Drawing of sample in each College took place during their General Study (GSE) lectures. Simple random sampling technique was then finally used in administering the questionnaire to the respondents selected for the study. In the opinion of Krejcie and Morgan (1970), for a population of 50,000-75000, a sample size of 382 respondents at 95 percent confidence interval with a margin error of 5 percent is appropriate for this research, (See Appendix IV). It is on the basis of the above authority that the researcher used a sample size of 580 for the study. The researcher decided to increase in the sample size because some respondents may fall out due to some unforeseen circumstances and this may help to tackle level of attrition and to increase tendency for generalization of the research findings. Table 3.1 shows the summary of the sampled population used for the study.

Table 3.1 Summary of Sampled Colleges of Education, Population and Sample Size of Respondents n=580

Sampled Colleges	Population Per College	Male	Female	Sample Size by College Male	Female	Total Sample Per College
Federal College of Education (Tech)Yola	4562	2994	1568	55	29	84
College of Education Azare	8239	4204	4035	77	74	151
Kashim Ibrahim COE M/guri	5831	3287	2544	60	47	107
College of Education Billiri	2551	1643	908	30	17	47
College of Education Zing	5922	3601	2321	66	43	109
Federal College of Education (Tech) Potiskum	4464	3453	1011	63	19	82
Total	**31569**	**19182**	**12387**	**351**	**229**	**580**

Source: National Commission for Colleges of Education (NCCE) Statistical Digest, 2015

Table 3.2Summary of Sampled Schools, Departments and SampleSize ofRespondents n = 580

Sample Colleges	Population	School	Department	Sample Size Per College
Federal College of Education (Tech)Yola	4562	Science	Chemistry	20
			Physics	22
		Vocational Educ.	Agric Educ.	22
			Home Economics	20
College of Education Azare	8239	Arts/Social Sc.	Social studies	40
			Economics	35
		Languages	Hausa	40
			Arabic	36
Kashim Ibrahim COE M/guri	5831	Science	Computer	24
			Mathematics	34
		Primary Educ.	Primary Educ. Studies	24
			Early Child Care Educ.	25
College of Education Biliri	2551	Arts/Social Sc.	Geography	15
			Economics	10
		Science	Mathematics	12
			Chemistry	10
College of Education Zing	5922	Vocational Educ.	Agric Education	25
			Home Economics	25
		Languages	Hausa	30
			English Language	29
Federal College of Education (Tech) Potiskum	4464	Science	Chemistry	21
			Computer	20
		Vocational Educ.	Food Science Tech.	20
			Agric Science Tech	21
Total	**31569**			**580**

Source: National Commission for Colleges of Education (NCCE) Statistical Digest, 2015 and Field Report

Table 3.1 above shows a sample size of five hundred and eighty (580) respondents comprised of three hundred and fifty one (351) males and two hundred and twenty-nine (229) females. The figures were arrived at on the basis of male and female population proportion per Colleges involved in the study. Proportionate sampling procedure gives a higher probability of selection to large units and a lower probability to a selection of lower units in a population.

Table 3.2 above also describes summary of sampled respondents in the Colleges of Education which were stratified based on the schools and the departments selected in each participating Colleges. The method of sampling with probability proportional to size is generally used for the selection of large units such as cities, farms and surveys which employ sub sampling (Cochran, 1953).

3.4 Instrumentation

For the purpose of data collection, a researcher developed questionnaire on reproductive health knowledge (RHK), was used for the study. The instrument was divided into six sections (A-F). Section A sought for the demographic information of the respondents, section B sought for statements on knowledge of safe motherhood, Section C sought for items on knowledge of STIs, Section D sought for items on knowledge of family planning methods and contraceptives, Section E contains items on sexual and gender violence, while section F sought for items on sources of information on reproductive health among respondents. To score the responses made by the respondents, a four point modified Likert scale was used as follows:

Strongly Agree (SA) - 4 points

Agree (A) - 3 points

Disagree (DA) - 2 points

Strongly Disagree (SDA) - 1 point

3.5. Validity of the Instrument

The research instrument used for data collection was a researcher – developed closed ended questionnaire. In order to determine the face and content validity of the research instrument, six (6) professionals vetted the questionnaire. These experts were from the Department of Human Kinetics and Health Education, Department of Community Medicine and Department of Geography Ahmadu Bello University, Zaria. On the basis of their professional criticisms, suggestions and corrections, a clean draft of the instrument was produced and pilot tested.

3.5.1 Pilot Study

To ascertain the reliability of the instrument, a pilot study was conducted using 50 respondents, 25 males and 25 females from College of Education Waka-Biu in Borno State. The College had a population of 5642 (Field Report, 2015). The College was not included in the sampled Colleges of Education that was used for the purpose of data collection. The selection was done during one of their General Education lecture period.To select 25 male respondents, the researcher wrote 50 “Yes” and ‘No’ on piece of paper. Each of the pieces of papers were folded and put in a box. The papers were mixed thoroughly to ensure randomization and the researcher instructed the male respondents to pick one pieces of papers in the box at a time. All those who picked “Yes” were recorded and those who picked “No” did not participated in the pilot study. The same procedure was repeated to select 25 female respondents. Finally the copies of the questionnaire were randomly distributed to 25 male and 25 female respondents respectively to fill by the respondents. The researcher then collected back the questionnaire immediately after filling them.

The coded data was subjected to statistical analysis using the Statistical Package for the Social Sciences (SPSS IMB version 20). Cronbach Alpha was used in line with Tavakol (2011), recommendations for interval scaling for establishing reliability of the instrument and the result showed coefficient of 0.819. Thus the reliability coefficient of 0.819 which was obtained indicated that the instrument was reliable and could be used for the study. This agreed with Field (2006), who stated that a reliability coefficient of an instrument between 0.5 and 1 and infact nearer to one is reliable to be used for a study of this nature.

3.6 Procedure for Data Collection

The collection of data for this study involved the following procedure: A letter of introduction from the Head, Department of Human Kinetics and Health Education was collected by the researcher to seek permission to conduct the study from the selected College authorities. Respondents were consented and solicited for their cooperation to participate in filing the questionnaire. The respondents were further informed that all information provided would be treated with confidentiality and to be used only for the purpose of academic pursuit.

In each of the six (6) sampled Colleges of Education, one research assistant was use. Prior to the commencement of the study, the research assistants were oriented on how to fill the research instrument (questionnaire) correctly. The researcher and the research assistants personally administered the instrument to the respondents in each of the participating Colleges and guided them appropriately. In each of the six Colleges an average of four days was used to collect the data. A period of four weeks duration (28 days) was used to collect and return back the filled instrument. Hence data analysis was based on 554 number of questionnaire that was successfully returned.

3.7 Procedures for Data Analyses

The data collected for the study was analyzed using Statistical Package for Social Sciences (SPSS) IBM version 20 using the following statistical tools:

1) Descriptive statistics of simple frequencies (f) and percentages (%) was used to describe the demographic characteristics of the respondents.

2) Descriptive statistics of mean (M) and standard deviation (SD) was used to answer the stated research questions.

3) The student one sampled t-test was used to answer hypotheses 1- 4, at 0.05 alpha levels of significance, while,

4) Chi-square Analysis was used to analyse research hypothesis 5 at 0.05 alpha levels of significance.

Therefore, a mean score of response which is 2.5 and above was considered positive or acceptable; while any mean score of response below 2.5 was considered negative or not acceptable.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This study was conducted to assess knowledge of reproductive health among students in Colleges of Education in North East Zone of Nigeria. A total of five hundred and eighty (580) copies of questionnaire were administered to respondents out of which 554(95.5%) of the instrument were successfully returned and twenty-six 26(4.5%) were either not returned or wrongly filled and were not included in the analysis. The chapter consisted of the demographic characteristics of the respondents on age range, gender, level of study and marital status. Answers to research questions were described using mean and standard deviation, while the five sub hypotheses formulated were analysed using one tailed sampled t-test and Chi-square analysis. All hypotheses stated were tested at 0.05level of significance. The summary of major findings as well as discussions was also presented in this chapter.

However, decision was based on the mean score of 2.5 on four points modified Likert scale rating in answering the structured research questions.

4.2 Results

Table 4.1: Demographic Characteristics of Respondents (n = 554)

S/No.	Variables	Options	Frequency	Percent (%)
1.	Age Range	18 - 23 years	449	81.0
		24 - 29 years	95	17.1
		30 - 35 years	8	1.4
		36 years and above	2	0.4
		Total	**554**	**100.0**
2.	Gender	Male	331	59.7
		Female	223	40.3
		Total	**554**	**100.0**
3.	Level of Study	NCE I	130	23.5
		NCE II	314	56.7
		NCE III	110	19.9
		Total	**554**	**100.0**
4.	Marital Status	Single	477	86.1
		Married	70	12.6
		Separated	5	0.9
		Divorced	2	0.4
		Total	**554**	**100.0**

Table 4.1 shows that most of respondents 449(81%) were in the age range of 18 - 23 years, age range of 24-29 years were 95(17.1%), age 30-35 years were 8(1.4%), while 2(0.4%) were above 35 years. Males were 331(59.7%) while females were 223(40.3%). Table 4.1 items 3 revealed that majority of the respondents 314(56.7%) were NCE11, 130(23.8%) were NCE 1, while NCE 111 were 110(19.9%). Table 4.2.1 item 4 shows marital status477(86.1%) were single, while the least 2(0.4%) were divorced.

Research Question 1

Do students of College of Education in North East Zone of Nigeria have reproductive health knowledge of safe motherhood?

Table 4.2 Mean Scores of Responses on Reproductive Health Knowledge of Safe Motherhood among College (n=554)

S/No.	Statement	Mean	S. D.
1	Sperm is a reproductive cell found in a male	3.53	0.714
2	The male sperm is produced in the testes	3.18	0.789
3	Ova are the reproductive cells in a female	3.20	0.969
4	The ovum (female egg) is usually produced in the ovary	3.28	0.844
5	Estrogen promotes the development of breast and regulate menstrual cycle in a female	3.01	0.937
6	Testosterone is the sex hormone that regulates sperm production in males	2.90	0.993
7	Testosterone hormone promotes hair growth and muscle development in males	2.70	1.055
8	Follicle stimulating hormone (FSH) is responsible for developing sexual characteristics in females	2.83	1.000
9	Pregnancy may occur when male sperm fertilizes a matured female egg after ovulation	3.28	0.916
10	Females use the same opening to urinate and have sex	2.92	1.007
11	Safe delivery under skilled care promotes mothers health	3.41	0.829
12	Attending antenatal care during pregnancy reduces maternal death	3.14	0.968
13	Poor management of obstetric complications usually leads to maternal morbidity and mortality	2.81	0.978
14	Undernourishment is a risk factor during pregnancy	3.00	1.010
15	Regular menstrual flow is an indicator that pregnancy may occur in a woman	3.15	0.936
16	Believe that a woman can get pregnant at first intercourse	3.10	1.003
17	A woman can get pregnant if she has sexual intercourse during menstruation	2.89	1.051
18	Providing health talks to pregnant mothers during their antenatal and postnatal periods helps to improve their health	3.06	1.014
	Aggregate mean	3.08	0.496

Source, Field Report (Decision mean = 2.5)

Table 4.2 shows mean scores of responses on different aspects of reproductive health onsafe motherhood among respondents. In all the statements assessed on the table above, the mean score of all the variables were above 2.5 which indicate respondents' knowledge in all statements on safe motherhood. Knowledge of how and when pregnancy occur in female, mean score of 3.28 SD 0.916, and attending ante-natal clinic ensure that maternal morbidity and mortality is greatly reduced, mean 3.14 SD 0.968. Table4.1.2 affirmed also knowledge of respondents on preventive measures and how to enhance health status of prospective mothers mean 3.06 SD 1.014.Hence reproductive health knowledge on safe motherhood was positive with mean score aggregate of (3.08) among respondents.

ResearchQuestion2.

Do students of Colleges of Education in North East Zone of Nigeria have reproductive health knowledge of sexually transmitted infections (STIs)?

Table 4.3: Mean Scores of Responses on Reproductive Health Knowledge of STIs among College Students n= (554)

S/No.	Statements	Mean	S. D.
1	Gonorrhea can be transmitted through unprotected sexual intercourse	3.18	1.022
2	Human immunodeficiency Virus (HIV) causes AIDs	3.17	1.037
3	HIV is transmitted through unprotected sexual intercourse	3.27	0.955
4	HIV/AIDs can be transmitted through blood transfusion	3.27	0.929
5	Persons infected with gonorrhea can discharge pus or blood from their genitals	3.04	0.904
6	Painful urination is a sign of sexual infection	3.03	0.947
7	Use of male and female condoms during coitus prevents STIs	3.17	0.954
8	HIV/AIDS can be transmitted from mother to child during breastfeeding	3.20	0.958
9	STIs without treatment can lead to sterility in males or females	3.09	0.897
10	Being faithful to each other as married couples can prevent STIs	3.11	0.997
11	Syphilis can be transmitted through unprotected sexual intercourse	2.93	1.029
12	Know that mosquito bites cannot transmit HIV/AIDs	2.94	1.096
13	I understand that abstinence is the best way to prevent STIs	2.97	1.063
14	I know that HIV/AIDs cannot be cured	2.77	1.066
15	Streptococcal infection is caused by bacteria	2.96	1.025
16	The herpes simplex virus can be transmitted through unprotected sexual intercourse	2.90	1.008
17	Having sexual intercourse with multiple partners may subject individuals to contract STIs	3.10	1.067
18	Voluntary screening tests help individuals know their HIV status	2.90	1.125
Aggregate mean		**3.06**	**0.590**

Table 4.3 shows the students' knowledge of sexually transmitted infections. The result indicates that the respondents were knowledgeable on statements that assessed knowledge of STIs among respondents. The mean score of 3.06: SD (0.590) affirm respondents' knowledge about mode of transmission of HIV through unprotected sexual intercourse with mean 3.27; SD (0.955), and through blood transfusion mean 3.27; SD (9.29). The table also revealed respondents' knowledge on syphilis and herpes simplex viruses can be transmitted through unprotected sexual intercourse, mean 2.93; SD (1.029) and2.90; SD (1.008) respectively. The table generally revealed that respondents were knowledgeable on STIs since mean aggregate score of 3.06; SD (0.590) is higher than the decision mean of 2.5.

Research Question 3

Do students in Colleges of Education in North East Zone of Nigeria have knowledge of family planning methods?

Table 4.4: Mean Scores of Responses on Knowledge of Family Planning among College Students n= (554)

S/No.	Statements	Mean	S. D.
1	Family planning is the ability to achieve the desired family size by couples	3.37	0.852
2	Family planning methods help to provide spaces between births	3.24	0.863
3	Oral contraceptive pill is taken daily for a complete month to prevent conception in a woman	3.04	0.948
4	Intra-uterine device (IUD) method is used to prevent fertilized eggs from implanting in the lining of the uterus	2.98	0.965
5	The male condom is used to prevent sperm from reaching a woman's cervix to prevent pregnancy and STIs	3.12	1.021
6	The female condom is used to prevent conception and STIs	3.13	0.941
7	Injectable contraceptives given for two or three months delay pregnancy in women	3.04	0.939
8	Withdrawal (Coitus interrupts) is a method of family planning that prevents sperm from entering the vagina	2.97	0.914
9	Diaphragm is a barrier contraceptive method designed to prevent the meeting of sperm and ovum (egg)	3.15	0.958
10	Spermicides are creams or jellies that contain sperm killing chemicals and protect against STIs	3.03	0.969
11	Tubal Ligation is the blocking or sealing of pathways between ovaries and uterus (womb)	2.95	0.971
12	Vasectomy is a surgical cutting or blocking of pathways between testes and urethra of the male genital organ	3.03	1.011
13	Use of injectable contraceptive methods increases body weight in some women	3.01	0.991
14	Adopting family planning methods allows females to stay in school and finish their education	3.08	0.989
15	Adopting family planning methods helps mothers to breastfeed their babies well	2.99	1.018
16	Adopting family planning methods helps to improve the health of a nursing mother	3.01	0.976
17	Emergency contraception is taken immediately after unprotected sexual intercourse	3.04	0.955
18	Regular use of family planning devices causes itching and pain in the genitals	2.88	0.947
	Aggregate	**3.06**	**0.634**

Table 4.4 shows knowledge of family planning methods among respondents in Colleges of Education. The respondents knew family planning as ability to achievedesired family size by couples mean 3.37; SD (0.852), providingspaces between births revealed mean 3.24; SD (0.863).

Respondents knowledge of family planning methods revealed that oral contraceptives pills show mean 3.04; SD(0.948), Intra-uterine device mean 2.98; SD (0.965), knowledge of male and female condom mean 3.12; SD (1.021)and mean 3.13; SD (0.941) respectively, while injectable contraceptives shows mean 3.04; SD (0.939).All the statements on family planning methods assessed showed mean aggregate above 2.5. Hence with the aggregate mean score of 3.06; SD (0.634), Table 4.4 therefore affirmed that respondents were knowledgeable on family planning methods.

Research Question 4

Do students of Colleges of Education in North East Zone of Nigeria have knowledge of sexual and gender violence?

Table 4.5: Mean Scores of Responses on knowledge of Sexual and Gender Violence among Students in Colleges of Education n= (554)

S/No.	Statements	Mean	SD.
1	Sexual abuse is the infliction of unwanted sexual contact on the opposite sex	3.22	0.943
2	Rape is compelling an individual to engage in sexual intercourse against his/her will	3.09	0.900
3	Sexual violence can cause severe psychological and emotional consequence on the victim	2.97	0.935
4	Rape can cause severe trauma in victims	2.97	0.992
5	Victims of rape usually experience stigmatization and hatred in life	3.32	0.901
6	Rape can result in an unintended pregnancy in victims	3.04	0.991
7	Sexual violence can subject victims to contracting STIs	2.97	1.025
8	Forced prostitution is a form of sexual violence that compel victims into sex for receiving payment or benefit by a person controlling the victim	2.88	1.037
9	Consequences of sexual violence can result to physical injuries	3.07	1.029
10	Forced inheritance of a widow by a relative is a form of gender violence	2.98	0.989
11	Sexual harassment is a common form of sexual violence	2.95	1.019
Aggregate mean		3.04	0.669

Table 4.5shows respondents' knowledge of sexual and gender violence in Colleges of Education. The respondents' showed knowledge on almost all the statements that was assessed. The table reveals respondents knowledge of rape with mean 3.09; SD (0.900), sexual violence could lead to psychological and emotional consequences, mean 2.97; SD (0.935), can cause severe trauma mean 2.97; SD (0.992), stigmatization and hatred mean 3.32; SD (0.901), untimed or unwanted pregnancy mean 3.04; SD (0.991). The table showed aggregate mean score of 3.04 and a standard deviation of 0.669, which is higher than the decision mean of 2.5. It therefore it is evident that knowledge of gender and sexual violence exist among respondents.

Research Question 5.

What are the sources and centres of information about reproductive health among students of Colleges of Education in North East Zone of Nigeria?

Table 4.6: Respondents Sources and Centres where information on Reproductive Health Services are Obtained (n = 554)

S/No.	Sources and Centres where Reproductive Health information and Services are obtained	Yes		No		
		Freq.	%	Freq.	%	Total
1	Radio	242	43.7	312	56.3	554
2	Television	209	37.7	345	62.3	554
3	Books	167	30.1	387	69.9	554
4	Teachers in School	202	36.5	352	63.5	554
5	Parents	184	33.2	370	66.8	554
6	Relatives	117	21.1	437	78.9	554
7	Peer group	106	19.1	448	80.9	554
8	Doctors	232	41.9	322	58.1	554
9	Social Media	167	30.1	387	69.9	554
10	Bill boards	87	15.7	467	84.3	554
11	Magazines	147	26.5	407	73.5	554
12	Nurses	161	29.1	393	70.9	554
13	General Hospital	347	62.6	207	37.4	554
14	Specialist Hospital	188	33.9	366	66.1	554
15	Clinics	200	36.1	354	63.9	554
16	Dispensary	138	24.9	416	75.1	554
17	Patent Medicine Stores	129	23.3	425	76.7	554
18	Private Clinics	140	25.3	414	74.7	554
19	Pharmacy Stores	106	19.1	488	80.9	554
20	Traditionalist/Herbalist	99	17.9	455	82.1	554

Table 4.6 shows knowledge of sources of information on reproductive health among College students. There were 242(43.7%) respondents who indicated that their major source of information was radio, followed by doctors with 232(41.9%). Those who receive information on reproductive health matters through television were 209(37.7%), and those from school teachers were 202(36.5%), The table also shows centres where reproductive health services are obtained

by respondents in Colleges of Education. Majority of the respondents obtain health services at General Hospitals 347(62.6%), and health clinics 200(36.1%). While the least centre to obtain from was the Traditionalists or Herbalists.

Hypotheses Testing

Hypothesis One: There will be no significant knowledge of safe motherhood among students of Colleges of Education in North East Zone of Nigeria.

Table 4.7: One tailed Sample t-test on Reproductive health Knowledge of Safe Motherhood by Respondents (n =554)

Variable	Mean	SD	Std. Error	T	df	P-value
Safe motherhood	3.08	0.496	0.021	27.359	553	.000
Test mean	2.50	0.000	0.000			

$t\ (\ 553) = 1.96 \leq\ p< 0.05)$

Table 4.7 reveals that the respondents had significant reproductive healthknowledge of safe motherhood as revealed by t-value 27.359 at the 553 degree of freedom (df) at P= 0.000 and P = 0.05 level f significance. This shows that the students have significant reproductive health knowledge of safe motherhood. The null hypothesis which states that students of Colleges of Education in North East Zone of Nigeria do not have significant knowledge of safe motherhood was therefore rejected. This therefore indicates that respondents have adequate reproductive health knowledge of safe motherhood

Hypothesis Two:

There will be no significant knowledge of sexually transmitted infections among students of Colleges of Education in North East Zone of Nigeria.

Table 4.8: One tailed sample t-test on Reproductive Health knowledge of STIs among Respondents (n =554)

Variable	Mean	S D	Std. Error	T	df	P-value
Sexually Transmitted infections	3.06	0.590	0.025	22.163	553	.000
Test mean	2.50	0.000	0.000			

t (553) =1.96≤ P < 0.05)

Table 4.8 reveals that the respondents have significant reproductive health knowledge of sexually transmitted infections as indicated by t-value of 22.168 with df of 553 at significant level of P = 0.05. Hence, the null hypothesis which states that students of Colleges of Education in North East Zone of Nigeria do not have significant reproductive health knowledge of STIs was therefore rejected. This therefore indicates that students in Colleges of Education have knowledge of STIs.

Hypothesis Three:

There will be no significant knowledge of family planning methods among students of Colleges of Education in North East Zone of Nigeria

Table 4.9: One tailed Sample t-test Showing Reproductive HealthKnowledge of Family Planning Methods by Respondents (N=554)

Variable	Mean	S D	Std. Error	t	df	P-value
Family planning	3.06	0.634	.02695	20.749	553	.000
Test mean	2.50	0.000	0.000			

t (553) = 1.96 ≤ P < 0.05)

Table 4.9 affirms reproductive health knowledge of family planning methods by respondents. The table revealed that respondents had significant reproductive health knowledge on family planning as indicated by t-value of 20.749, with df of 553 at the significant level of P = 0.05. This implies that the null hypothesis which states that students of Colleges of Education in North East Zone of Nigeria do not have significant reproductive health knowledge of family planning methods was therefore rejected. This signifies that the students have knowledge of family planning methods.

Hypothesis Four:

There will be no significant knowledge of sexual and gender violence among students of Colleges of Education in North East Zone of Nigeria

Table 4.10: One tailed Sample t-test on Reproductive Health Knowledge of Sexual and Gender Violence by Respondents (n = 554)

Variables	Mean	S D	Std. Error	t	df	P-value
Sexual and gender violence	3.04	0.66896	0.02842	19.128	553	.000
Test mean	2.50	0.000	0.000			

t (553) = 1.96 ≤ P < 0.05)

Table 4.10 reveals the reproductive health knowledge of sexual and gender violence among respondents in Colleges of Education. The table showed significant reproductive health knowledge on sexual and gender violence among respondents as indicated by t-value of 19.128, with df of 553 at the significant level of P = 0.05. With these results, the null hypothesis which states that students of Colleges of Education in North East Zone of Nigeria do not have significant reproductive health knowledge of sexual and gender violence was rejected. Hence

reproductive health knowledge of sexual and gender violence was evident among the respondents.

Hypothesis Five:

There is no significant difference between the sources of information on knowledge of reproductive health by students of Colleges of Education in North East Zone of Nigeria.

Table 4.11: Chi-square Analysis on knowledge of sources of information on reproductive Health matters by students of the College.

Sources of information on knowledge of RH	No		Yes	
	Freq.	%	Freq.	%
Radio	312	4.70	242	3.60
Television	345	5.20	209	3.10
Books	387	5.80	167	2.50
Teachers in school	352	5.30	202	3.00
Parents	370	5.60	184	2.80
Relatives	437	6.60	117	1.80
Peer group	448	6.70	106	1.60
Doctors	322	4.80	232	3.50
Social media	387	5.80	167	2.50
Bill boards	467	7.00	87	1.30
Magazines	407	6.10	147	2.20
Nurses	393	5.90	161	2.40
Pearson Chi-Square = 223.182, DF = 11, P-value = 0.000				

Table 4.11 shows that the respondents differ significantly by their sources of information on reproductive health knowledge as indicated by Chi-square value of 223.182 obtained at 11 degree of freedom (DF),at probability of P 0.000 (P < 0.05). Radio and doctors ranked first and second 242(3.60) and 232(3.50) respectively. The least source of information on knowledge of RH by students was the bill boards. The null hypothesis that states that there is no significant difference between the sources of information on knowledge of reproductive health

by students in the Colleges under study was therefore rejected. This therefore indicates that students differ significantly in their sources of information on knowledge of reproductive health.

Summary of Findings

The analysis of the collected data revealed the following major findings:

i. The finding of this study revealed that students of Colleges of Education in North East Zone of Nigeria have significant reproductive health knowledge of safe motherhood (P = 0.000)

ii. The finding also showed that reproductive health knowledge of sexually transmitted infections among students in Colleges of Education in North East Zone of Nigeria was significant (P = 0.000).

iii. The study further revealed that there was significant reproductive health knowledge of family planning methods among students in Colleges of Education in North East Zone of Nigeria (P = 0.000)

iv. Students in Colleges of Education in North East Zone of Nigeria had significant reproductive health knowledge on sexual and gender violence as revealed by the study (P = 0.000)

v. The finding further showed that students of Colleges of Education in North East Zone of Nigeria differ in their sources of information on knowledge of reproductive health (P = 0.000)

4.3 Discussion

This study assessed the knowledge of reproductive health among students in Colleges of Education within North East Zone of Nigeria. To achieve this, the indices of reproductive health which included safe motherhood, sexually transmitted infections, family planning, sexual and gender violence and knowledge of sources of information on reproductive health and services were assessed. The results are reflected in the discussion below:

Generally, knowledge is a necessary precursor to maintain healthy and responsible health behavior in the individual. The indices of safe motherhood were assessed. Safe motherhood refers to a situation in which no woman going through the physiological processes of pregnancy and child birth suffers any injury or loses her life or that of the baby (Pathfinder, 2004). It is a means of ensuring that all women receive care they need to be safe and healthy throughout pregnancy and child birth. It is generally observed that most maternal deaths could be prevented if women had access to appropriate health care during pregnancy, child birth and immediately afterwards. The results of this study showed that knowledge of safe motherhood was evident among the College respondents. This was in agreement with Ehiers and Maja (2010) on theirstudy on knowledge about, attitude towards and utilization of family planning methods and contraceptive services among College students in South Africa, which reported that most students have good knowledge of safe motherhood and contraceptives. However, this report did not agreed with Odujinrin (2017), who reported that due to low knowledge of most women on reproductive health matters, pregnancy and abortion related complications, Nigeria has the second highest burden of MMR in the world and contribute to about 15% of annual global death. It also contradicts UNAIDS (2016) report that Nigeria recorded 58,000 maternal mortality in

2015. Poor knowledge of safe motherhood practice among women of reproductive age might be one of the lingering factors.

To harness these reports, there is great need for respondents to maintain their knowledge on safe motherhood to enjoy healthy reproductive lives. The is in agreement with Roudi-Fahimi and Ashford (2008), who posited reproductive health is the constellation of methods and techniques and services that contributes to wellbeing by preventing and solving sexual health problems. The assertion is also consistent with Makhaza (2014), who stated that very often, student's particularly female students in tertiary institutions are at an age of independence and in a social context, they are susceptible to unintended pregnancy, and to the consequences of unsafe abortions. Therefore knowledge must be acquired and maintained by the individual. Monjok, Smensny, Ekabua & Essien, (2010)opined that unexpected or unplanned pregnancies and reproductive tract infections (RTIs) posed a major public health challenges in women of reproductive age especially in developing countries.

Pregnancy and childbirth is a natural phenomenon that happens to women in their reproductive stage. In some cultures particularly in the Northern part of Nigeria which is mostly dominated by Islamic religion, women marry and begin childbearing during their adolescent years (12 through15year) (PathFinder, 2004). According to Kayongo (2013), female adolescents at this age are at risk of complications and mortality higher than those women in their 20s, especially where medical care is scarcely available. Girls younger than 18 years of age face two to five times the risk of maternal mortality than women aged 18-25. In their report, Makhaza and Ige (2014) advanced that women experience significant number of long term effects related with unplanned pregnancy. These indicates that knowledge of safe motherhood is important and should be stressed to students especially those in tertiary institutions.

Safe motherhood is ensured through provision adequate antenatal (ANC) and post natal (PNC) services to pregnant women. ANC is the care a pregnant woman receives during her pregnancy through a series of consultations with trained health care workers such as midwives, nurses, and sometimes a gynaecologist who specializes in pregnancy and birth related issues(FMOH, 2013). The importance of ANC as documented by Osungbade, Shaahu and Uchendu, (2011) enhances early identification and management of conditions that could be threatening to the mother and her unborn child. This assertion agrees with Onoh, Umeora, Agwui, Ezegwui, Ezeonu and Onyebuchi (2012), who reported that regular visits to ANC by pregnant mothers reduces medical problems such as anaemia, hypertension, ectopic pregnancy, obstructed labour, eclampsia, excessive bleeding and premature labour and delivery.

Knowledge of safe motherhood is therefore important tool for maintaining proper health condition of the mother and the new born. With this cognitive component, an individual's reproductive health behavior can be positively influenced. However, there are factors that affect the use of ANC by pregnant women in Nigeria among which according to Adeniyi, and Erhabor (2015), were attributed to individual economic status, educational attainment, residence, geographical locations, age and marital status. Concurring with Adeniyi and Erhabor, other factors that contribute to MMR according to Odujinrin (2017), are flawed government, policies, education, culture and religion among other things. The report further states that maternal maternity rate (MMR) in the North East Zone, Nigeria is the highest 1,549/100,000 live births compared to South West Zone with 165/100,000 live births. Accordingly, the highest non-users of ANC were found among the poor, rural, currently married, and less educated respondents from the Northern part of Nigeria, especially in the North East zone. This is in agreement with Takai et al (2015), of factors responsible for under utilization of post natal care (PNC) by

mothers aged 15-49 in Maiduguri. The study revealed only (16.9%) of the 332 respondents attended PNC services within 42 days after delivery. Most of the mothers (60.9%) lack knowledge about PNC services. A high proportion of participants (69.4%) did not attend ANC clinics, and over 70% of the study population had delivered at home. This however contradicts the result of this study which revealed that students of Colleges of Education have significant knowledge of safe motherhood. Knowledge is no doubt a precursor to adopt a responsible behavior. However, the ability to maintain positive health behavior must be encouraged. This may serve as a panacea for ensuring effective and efficient health care delivery among women of reproductive age.

Sexually transmitted infections (STIs) were the next indices of reproductive health knowledge assessed. STIs are diseases that are transmitted from an infected person to another through sexual contacts (semen and vaginal fluid). Generally, STIs are on the increase among youth of our time because of their fertility level. It has been problems that lead to life-long health problems such as lower abdominal pain, urethral discharge and pelvic inflammatory disease (PID) including infertility. However, this study revealed that the respondents had significant knowledge of STIs with mean score of 3.08. They showed awareness on the indices like gonorrhea, syphilis, HIV/AIDS assessed. This agrees with study of Muhammed and Nabila (2017), that majority respondents assessed indicated that they were knowledgeable about infectious diseases that can be transmitted through sexual intercourse. The study further reported that 56(86.15%) had knowledge of symptoms of at least one STIs. The study also concurs with Aang, Wong, Jani and Yunlon (2014) which indicated that respondents showed 92% knowledge of at least one STDs (gonorrhea, syphilis, genital herpes, HIV). About 95% of them also knew of

at least one method of disease transmission, which therefore revealed significant knowledge of STIs among respondents.

However, despite their knowledge on STIs, most of the respondents do not use the knowledge they have to influence their decision on health matters such as seeking treatment if contracted with infectious infections. Dixon-Mueller (2009) opined that youths who begin early sexual activity are at high risk of having multiple partners, engaging in unprotected sexual activity, and experimenting sex especially under the influence of alcohol and other drugs thereby increasing their risk for unintended pregnancy and sexually transmitted infections (STIs) including human immunodeficiency virus (HIV/AIDS). Relatively, reports of NDHS (2013) revealed that having multiple sexual partners increases the risk of contracting HIV and other sexually transmitted infections (STIs). A major challenge in addressing problems of STIs and particularly HIV/AIDS is to advance quality information to prevent the transmission and also to provide quality treatment to those infected.

Reasons why young people are at risk of RTIs and STIs according to Sexual and Reproductive Health Guide (2012), are attributed to factors such as; most young people know very little about STIs/HIV/AIDS even when they are sexually active, many young people engage in sexual relationship with more than one partner, most youth do not protect themselves from being infected during sexual intercourse and even when infected, young people are often reluctant to seek treatment for STIs. When this occur, according to Bendavid, Avita and Miller(2011), risks of untimed pregnancy, induced abortions under unsafe conditions happens and contracting (STIs/HIV/AIDS) becomes common. It is also evident from the report of UNAIDS (2013) estimated number of people living with HIV/AIDS in Nigeria stands at 3.2

million, while young men and women living with HIV/AIDS among youth aged 15-24 were 0.7 million and1.3 million respectively.

However HIV infected adolescents face unique complexities related to the impact of HIV on physical, mental health and normative developmental processes such as school functioning, puberty, growth, peer relationship and sexuality (Vreeman et al, 2015). Unprotected heterosexual sex accounts for 80% of new HIV infections in Nigeria with majority of remaining HIV infections occurring in key affected population such as commercial sex workers (NACA, 2015). An estimated 60% new of STIs /HIV infections in western and central Africa in 2015 occurred in Nigeria UNAIDS (2016), together with South Africa and Uganda. Similarly, approximately 160,000 people died from HIV/AIDS related illnesses in Nigeria in 2016 (UNAIDS, 2017). National data on STIs /HIV in Nigeria according to NACA (2015) suggest that about 4.2%of young people aged 15-24 are living with HIV. Awareness of HIV/STIs prevention is higher among young men than women. However, in the report of NDHS (2013), about 70% of young men aged 15-24 were aware that using condom can reduce risk of HIV transmission compared to 56% of their female peers (NPC, 2013).

The awareness of using condom to reduce risk of disease transmission agrees with the report of this study which revealed that students of College of Education in North East Zone are knowledgeable on sexually transmitted infections. Despite these awareness reports, there is need to put in place strategy to position health sector response to STIs epidemic as critical to the achievement of universal health coverage, one of the key health targets of the sustainable development goals SDGs identified in the 2030 Agenda (WHO, 2016). The strategy need to contribute to radical decline in the new STIs including still births and cervical cancer

Respondents' reproductive health knowledge of family planning was the next indices assessed. Family planning connotes methods of self protection and regulation against reproductive health issues. It encompasses services, policies, information, attitudes, practices, and commodities, including contraceptives commodities given to women, men, couples, and adolescents to avoid unintended pregnancy and among those who choose whether and/or when to have a child (Marcus, Ellen & Maureen, 2016). This study revealed that students in Colleges of Education in the North East Zone, Nigeria have significant knowledge of family planning issues. This concur with the studies of Utoo and Mutihiron (2010) who revealed that 59.5% of the respondents used male condoms, 47.0% used oral contraceptives and 27.1% used hormonal injectables in Jos North central Nigeria. This agreed with study of Abasiatti, Etukumana, Utuk and Umoiyoho (2011) in Uyo, South South Nigeria, reported that 40.4% of the respondents used condom, 31% used safe period/calendar method, 18.0% used oral contraceptive, 9.3% used intrauterine contraceptive device, 2.7% used Billing's method, 1.6% used hormonal implants and 2.7% used emergency contraception.

Based on these results, respondents therefore demonstrated knowledge of family planning which is consistent with this study. In a similar study to determine the prevalence of family planning and contraceptive use among adolescents in Ilorin, Saka, Saidu, Balogun, Raji, Ijaiya, Saka, Abdul and Yahaya (2012), revealed that respondents showed knowledge of family planning concepts. This report is consistent with this study which revealed respondents knowledge on family panning methods. It demonstrated that 54.9% of the respondents choose IUCD, 25% choose OCP, 16.3% choose Depo Provera, 1.6% chose Norplant and 1.1% chose condom and vaginal suppositions respectively. Though they concluded that contraceptive need of adolescents are still largely unmet. Family planning methods among those who choose to use, has outcomes that are

in turn linked to improvements in infant, child, and maternal health, as well as to improved social and economic roles for women (IOM, 2011).

However, practicing family planning is an investment in couple's lives. This concur with study of Stenberg, Axelson, Sheehan, Anderson Gulmezoglu and Temmerman, (2014) which stressed that investing in family planning is a development 'best busy' and a fundamental element of any long term socio-economic development strategy and key to SDG achievement. Accordingly, also Micheal (2012) reveals that 35 percent of women in stable marital relations reported to know contraceptive methods. The report showed that highest (58%) use of family planning/contraceptives was recorded among women in formal employment. Stenberg, et al (2014) further advanced that investing in family planning is a development 'best busy' and a fundamental element of any long term socio-economic development strategy and key to sustainable development goals achievement. This happens when women use the knowledge they have to take appropriate decisions on issues that affect them particularly in relation to social and sexual behavior and relationships.

Knowledge can empower someone to advance his socio-economic pursuits. WHO (2016) reported that every day, approximately 830 women die from causes related to pregnancy and childbirth. Nearly all 99% of these maternal deaths occur in low-income countries. More than half of the deaths occur in sub-Saharan Africa. Hence, there is every need to equip youth with adequate knowledge on family planning and contraceptive use as the case may be. The benefits of family planning according to Umoh and Udo (2014) are enormous which include reduction of maternal and child morbidity and mortality, empowering women by lightening the burden of excessive child bearing and enhancement of environmental sustainability by stabilizing the population of the planet. Other benefits of family planning according to Umoh et al (2014), are

prevention of unwanted and unplanned pregnancy, reduction of unsafe abortions, and reduction of over-population. However factors that were found to be influencing family planning and contraceptive use were also identified to include education level, occupation, traditional cultural beliefs, and support from husband/partners and access to information by couples. While respondents were aware of the importance of utilizing family planning services, Alli, Maharaj & Vawda, (2013) reported that respondents experienced barriers in their relationship with service providers. This deterred respondent's from use of the health facility. Adequate training in interpersonal relations for youth friendly service provision is essential in helping overcome communication problems and enabling providers to interact with young clients at a more personal level.

Reproductive health knowledge on sexual and gender violence was also assessed among respondents. Generally, gender based violence is any harmful act directed against individual or groups of individual on the basis of gender (UNHR, 2014). The study revealed that knowledge of sexual and gender violence among students in Colleges of Education under study was significant. Respondents knew that sexual abuse constitute infliction of unwanted contact on opposite sex. Also known by respondents were the concepts of rape, prostitution, sexual harassment and forced inheritance as form of sexual violence.

Cases of sexual violence may exist in many form of any sexual act, attempt to obtain a sex act, unwanted sexual comments or advances or act 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 (UNHR, 2014). Perpetrators of sexual and gender violence constitutes threat to welfare of victims. This concurs with Osotimehin (2016) who stressed the crucial state of health for the youth particularly for adolescent girls who survives sexual violence, who are at risk of

HIV or unwanted pregnancy; life saving reproductive health services are as vital as water, food and shelter particularly in an emergency situation. According to NDHS (2013), seven percent of Nigerian women age 15-49 have ever experienced sexual violence in their lives. Women, who are divorced, separated, or widowed are more likely to have ever experienced sexual violence (15%) than women who have never been married (8%) or are currently married (7%). In Nigeria, experience of sexual violence varies by zone, from 16% in North East Zone to 2% in North West Zone. It was further reported by Ilo (2012) that an estimate of 21 million victims are trapped in modern day slavery. Of these 14.2 million (68%) were exploited for labour and 4.5 m (22%) were sexually exploited.

Sex trafficking of any kind may subject individual to risks of infections. This agrees with Wirth (2014), report which states that sex trafficking leads to proliferation of HIV because victims, being vulnerable cannot protects themselves properly and thus gets infected. Sexual abuse is among the reproductive health challenges that are common among students who stay on school campuses. The finding is consistent with Sanusi, Suleiman and Musa (2014), who reported that teenage pregnancy, abortion, sexual abuse, prostitution, spread of STIs/HIV/AIDS leads to school dropout and affect the general school programme in Nigeria. Sexual abuse is the infliction of unwanted sexual contact or psychological exploitation of another person's liberty and dignity for one's gratification which are most commonly practiced by men. This concur with WHO (2011), advanced that sexual violence is primarily perpetrated by men against women and girls. Sexual coercion exists along a continuum, from forcible rape, to non-physical forms of pressure that compel girls and women to engage in sex against their will.

The sexual and reproductive health consequences of sexual violence could be enormous to the individual. This concurs with WHO (2011) assertion that sexual violence could cause

multiple problems such as sexually transmitted infections, including HIV, unwanted pregnancies, unsafe abortions, gynaecological problems and physical injuries. Agreeing with WHO's assertion, NDHS, (2013) reported that rape, sexual harassment and involuntary prostitution as the case may be can result in physical trauma, unintended pregnancy, STIs, psychological trauma and increased likelihood of high- risk sexual behavior among the individuals. Also agreeing with aforementioned assertions NRHP (2001), revealed that consequences of sexual violence may subject victims to haemorrhage, shock infections and long time complications of that may lead to urinary tract infections, sexual dysfunctions, prolonged obstructive labour and vesco-vaginal and recto-vaginal fistula (VVF) that is leaking of urine or faeces through the vagina. Generally therefore, the impact of sexual violence or trafficking virtually lead to the proliferation of HIV and other STIs in victims being vulnerable and cannot protect themselves properly and thus get infected (Wirth, 2014).

Knowledge of sources of information on reproductive health matters and services among students was examined. Information in family planning activities create awareness, increase knowledge and build public approval of new ideas and practices. Interpersonal communication, whether among family members and friends or between service providers and clients, plays an important role in people's decisions about family planning, helping people decides whether, when, which method, and how to use family planning devices. The result revealed that respondents differ significantly in their knowledge of sources of information on the reproductive health matters. There was a growing acceptance that youth/ respondents need informed choices on varied reproductive health matters. However, the result of the study shows that information on reproductive health services are mostly obtained from radio 242 (43.7%), doctors 232 (41.9%) followed by television and school instructions 209 (37.7%) and 202 (36.5%) respectively. This

concurs with Abiodun et al (2009) who reported that schools were the main source of information about reproductive health through formal health instructions by teachers. While the least sources where RH information is accessed is the bill board 87 (15.7%).

In relation to students access to services for reproductive health, majority of the respondents asserted that general hospitals has 347 (62.6%), clinics 200 (36.1%) followed by nurses with 161 (29.1%). This however differed with Abiodun, Olu- Abiodun , Ani and Sotunsa (2016) who opined that adolescents prefer health facilities that have positive perception of acceptability, cost and privacy. This therefore accounts for the preference of private hospitals by respondents for services for reproductive health as oppose to preference of General Hospitals, Specialist Hospitals and Clinics reported by this study. However the least services is obtained from traditional herbalist 99 (17.9%) and pharmacy store 106 (19.1%).

This report contradicts Abiodun and Balogun (2009) study in the six geo-political zones in Nigeria, indicated that the main sources of information about reproductive health issues and contraception in descending order of frequency include friends, siblings, radio, television, newspaper, magazines, school lecture, workshop, seminar, and health workers. Planned Parenthood Federation of Nigeria (PPFN, 2010) reported that 34 states out of36 states of' Nigeria indicated that adolescents are very poorly informed about reproductive health related issues especially about use of contraceptive to protect STIs. This agrees with result of this study which showed that knowledge of source of information on reproductive health matters was not significant. Related to this problem, youth face some difficulties in obtaining adequate information on contraceptive related issues. Longwe, Huisnan and Smits (2012) posited that there is evidence that family planning (FP) messages through media may play an important role

in increasing the knowledge of FP methods and through this increased knowledge also their acceptance and use, especially in those areas where the literacy level is low.

Bureau of Labour Statistics (2013) reported that majority of young men and women going to college are being influenced by the social and environmental factors present in that setting which makes them susceptible to behavioural problems that affect their reproductive life. To this end adequate information on RH issues must be provided accurately to influence correct decisions to improve quality life. However using the social media may also facilitate understanding and improving information among those on need particularly among youth. This statement coincides with Cheng (2011), who established that mass media and social networks played important roles in disseminating reproductive health information and women transformed this knowledge into behavior that would help to reduce fertility and sexually transmitted infections in Taiwan. This means that knowledge on family planning and contraceptives have the capacity to reduce high rate of fertility among population.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The main purpose of this study was to assess reproductive health knowledge among students in Colleges of Education in North East Zone of Nigeria. Reproductive health knowledge refers to respondent's awareness of condition of physical, mental and social wellbeing in all matters that relates to reproductive systems, functions and processes during all stages of life. The variables assessed in the study were knowledge of safe motherhood, knowledge of STIs, knowledge of family planning methods, knowledge of sexual and gender violence and knowledge of source of information on reproductive health matters among students in Colleges of Education in North East Zone, Nigeria. The study was guided by five objectives, five research questions and five null hypotheses.

The study was anchored on Health Believe Model (HBM) advanced by (Hochbaun, 1958 & Rosenstock, 1974). The model states that in order for behavior to change, people must feel susceptible to health threat, view the possible consequences as severe and see that taking action is likely to prevent or reduce the risk at acceptable cost with few barriers. According to the model the individual conduct an internal assessment of the net benefit of changing their behavior and then to decide whether to act or not. Several aspect of internal assessment by the individual includes; perceived susceptibility to ill health, perceived severity of ill health, perceived benefit of behavioral change and perceived barriers to taking action. The study involved six Colleges of Education in North East Zone of Nigeria. The ex-post factor survey design was adopted for the study. The population for the study was 54,054 students (NCCE Statistical Digest, 2015). A sample of five hundred and eighty (580) respondents was used for the study.

The respondents were selected using multi-sample stage sampling techniques, (simple random sampling, stratified random sampling and proportionate sampling techniques). A researcher developed questionnaire divided into six sections was used to collect data for this study. The instrument was validated by experts before it was administered. A total of 580 copies of the instrument were administered to respondents out of which 554 copies were successfully returned and were used for the analysis. The data collected was analysed using statistical package for social science (SPSS) IBM version 20. Descriptive statistics of frequency and percentage was used to analyse demographic variables while mean and standard deviation was used to answer research questions. The research hypotheses were analyzed using one tailed sample t-test and chi- square analysisat 0.05 level of significance.

5.2 Conclusion

Based on the findings of this study, the following conclusions were drawn:

The students of Colleges of Education in North East Zone, Nigeria have knowledge of safe motherhood

Students of Colleges of Education in North East zone, Nigeria have knowledge of sexually transmitted infections (STIs).

Students of Colleges of Education in North East zone, Nigeria have knowledge of family planning methods

Students of Colleges of Education in North East zone, Nigeria have knowledge of sexual and gender violence and

Students of Colleges of Education in North East zone, Nigeria differ on their sources of information on knowledge of reproductive health.

5.3 Contributions to Knowledge

The study will contribute to knowledge by:

i. The students' reproductive health knowledge on safe motherhood can influence their behavior for attainment of healthy wellbeing through proper use of health services.

ii. The study would provide valuable information to facilitate understanding of STIs among students in Colleges of Education under study.

iii. The findings would add to the existing literature on family planning methods which will help bridge the existing gap between knowledge and utilization of reproductive health services among students of Colleges of Education.

iv. It is hoped to help address problems of sexual and gender violence to ensure healthy reproductive life and better academic performance among students in Colleges of Education in the area under study

v. It could be used as a guide to counsel students on where to access correct RH information to address possible challenges affecting their lives.

5.4 Recommendations

On the basis of conclusion of this study the following recommendations were made:

i. Students in Colleges of Education should be encouraged to maintain their knowledge of safe motherhood to reduce pregnancy related complications through the teaching of Health Education lessons, public lectures, workshop or seminars organized by College health department.

ii. Respondents' knowledge on sexually transmitted infections should be maintained through intensified peer friendly awareness activities to reduce risk of infections among

students through discussion, drama, debate, guidance and provision of RH commodities to ensure protection and safety.

iii. Students of Colleges of Education should be encouraged to maintain their knowledge of family planning methods by encouraging free discussion of sexuality education with parents and teachers to ensure taking right decisions on reproductive health issues throughout live.

iv. College administration should organise advocacy programmes and provide adequate funds and materials to help disseminate proper RH knowledge on sexual and gender violenceusing notice boards and bill boards to discourage potential perpetrators among College communities.

v. It is also recommended that stake holders, policy makers, programme implementers and teachers design intervention programmes to increase awareness and access to reproductive health information and service to ensure quality reproductive life among students in school.

5.5 Suggestions for Further Studies

Based on conclusion drawn from this study, the following topics are suggested for further study:-

1. Assessment of factors affecting utilization of reproductive health knowledge and services among students in tertiary institutions in Northern states of Nigeria
2. Assessment of Knowledge, attitude and utilization of reproductive health among students in tertiary institutions in Northern states, Nigeria
3. Assessment of sexual and reproductive health knowledge and information-seeking behavior among female students in public secondary schools in Borno State, Nigeria.

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APPENDIX 1
QUESTIONNAIRE ON ASSESSMENT OF REPRODUCTIVE HEALTH KNOWLEDGE (ARHK) AMONG STUDENTS IN COLLEGES OF EDUCATION IN NORTH EAST ZONE OF NIGERIA

Section A: Demographic Characteristics of Respondents
Instruction: Please tick ( ) any of the options which best describes your opinion.

1. Age Range: a) 18- 23years ☐ c) 30- 35 years ☐
   b) 24-29 years ☐ d) 36 years and above ☐

2. Gender:

a) Male. …….. ☐

b) Female ……. ☐

3. Level of Study: NCE 1…… NCE 11…….. NCE 111…….

4. Marital Status: a) Single ☐ c) Separated ☐
   b) Married ☐ d) Divorced ☐

5. Institution Name……

Tick [√] the most appropriate among the options provided using the following key: ☐

SA - Strongly Agree; A - Agree; DA - Disagree; SDA - Strongly Disagree

Section B: Knowledge of Safe Motherhood by College Students

S/No	Statement	SA	A	DA	SDA
6	Sperm is a reproductive cell found in a male				
7	The male sperm is produced in the testes				
8	Ova are the reproductive cells in a female				
9	The ovum (female egg) is usually produced in the ovary				
10	Estrogen promotes the development of breast and regulate menstrual cycle in a female				
11	Testosterone is the sex hormone that regulate sperm production in male				
12	Testosterone hormone promotes hair growth and muscle development in male				
13	Follicle stimulating hormone (FSH) is responsible for developing sexual characteristics in female				

14	Pregnancy may occur when male sperm fertilizes a matured female egg after ovulation				
15	Females use the same opening to urinate and have sex				
16	Safe delivery under skilled care promotes mothers health				
17	Attending antenatal care during pregnancy reduces maternal death				
18	Poor management of obstetric complications usually leads to maternal morbidity and mortality				
19	Undernourishment is a risk factor during pregnancy				
20	Regular menstrual flow is an indicator that pregnancy can occur in a woman				
21	Believe that a woman can get pregnant at first sexual intercourse				
22	A woman can get pregnant if she have sexual intercourse during menstruation				
23	Providing health talks to pregnant mothers during their ante-natal and post natal helps to improve their health				
Section C: Knowledge of Sexually Transmitted Infections (STIs) by College Students					
24	Gonorrhea can be transmitted through unprotected sexual intercourse				
25	Human immunodeficiency virus HIV causes AIDS				
26	HIV is transmitted through unprotected sexual intercourse				
27	HIV/AIDS can be transmitted through blood transfusion				
28	Persons infected with gonorrhea can discharge pus or blood from their genitals				
29	Painful urination is a sign of sexual infection				
30	Use of male and female condom during coitus prevent STIs				
31	HIV/AIDS can be transmitted from mother to child during breast feeding the baby				
32	STIs without treatment may cause sterility in male or female				
33	Being faithful to each other as married couples can prevent STIs				
34	Syphilis can be transmitted through unprotected sexual intercourse				
35	Mosquito bites cannot transmit HIV/AIDS				

36	I understand that abstinence is the best way to prevent STIs				
37	I know that HIV/AIDS cannot be cured				
38	Streptococcal infection is caused by bacteria				
39	The herpes simplex virus can be transmitted through unprotected sexual intercourse				
40	Having sexual intercourse with multiple partners may subject individual to contract STIs				
41	Voluntary screening test helps individual to know his HIV status				

Section D: Knowledge of Family Planning Methods (Contraceptives) by College Students

42	Family planning is the ability to achieve desired family size by couples				
43	Family planning method helps to provide spacing between births				
44	Oral contraceptive pills is taken daily for a complete month to prevent conception in a woman				
45	Intra-uterine device (IUD) method is used to prevent fertilized egg from implanting in the lining of the uterus				
46	The male condom is used to prevent sperm from reaching a woman's cervix to prevent pregnancy and STIs				
47	The female condom is used to prevent conception and STIs				
48	Injectible contraceptives given for two or three months delay pregnancy to occur in a woman				
49	Withdrawal (coitus interruptus) is a method of family planning that prevent sperm from entering the vagina				
50	Diaphragm is a barrier contraceptive method designed to prevent meeting of sperm and ovum(egg)				
51	Spermicides are creams or jellies that contain sperm killing chemicals and protect against STIs				
52	Tubal ligation is the blocking or sealing of pathways between ovaries and uterus (womb).				
53	Vasectomy is the surgical cutting or blocking of pathways between testis and urethra of male genital organ				
54	Use of injectible contraceptives methods increases body weight in some women				
55	Adopting family planning method allows females to stay in school and finish their education				
56	Adopting family planning method help mothers to breastfeed their babies well				
57	Adopting family planning method helps to improve health of a nursing mother				
58	Emergency contraception is taken immediately after un protected sexual intercourse				

59	Regular use of family planning devices causes itches and pain in the genitals				

Section: E Knowledge of Sexuality and Gender Violence among College Students

60	Sexual abuse is the infliction of unwanted sexual contact on opposite sex				
61	Rape is compelling an individual to engage in sexual intercourse against her/his will				
63	Sexual violence can cause severe psychological and emotional consequence on the victim				
64	Rape can cause severe trauma in victim				
65	Victims of rape usually experience stigmatization and hatred in life				
66	Rape can result in an unintended pregnancy in victims				
67	Sexual violence can subject victim to contracting STIs				
68	Forced prostitution is a form of sexual violence that compel victim into sex for receiving of payment or benefit by a person controlling the victim				
69	Consequences of sexual violence can result to physical injuries				
70	Forced inheritance of a widow by a relative is a form of gender violence				
71	Sexual harassment is a common form of sexual violence				

Section F: Sources of Information on Reproductive Health Services among College Students

72. Tick [√] as many as possible the sources of information you access relating to reproductive health services

a) Radio ☐ g) Peer group ☐

b) Television ☐ h) Doctors ☐

c) Books ☐ i) Social media ☐

d) Teachers in school ☐ j) Bill boards ☐

e) Parents ☐ k) Magazines ☐

f) Relatives ☐ l). Nurses ☐

73. Where among these centres do you get services for reproductive health if the need arises?

a) General hospital ☐ f) Private clinics ☐

b) Specialist Hospitals ☐ g) Pharmacy ☐

c) Clinics ☐ h) Traditional/Herbalist ☐

d) Dispensary ☐ i) Health care providers ☐

e) Patent Medicine Stores ☐

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