KNOWLEDGE AND PREVENTION OF THE RISKS OF CONTRACEPTIVES USE AMONG WOMEN IN KWARA STATE, NIGERIA

BY

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A DISSERTATION SUBMITTED TO THE POSTGRADUATE SCHOOL, AHMADU BELLO UNIVERSITY ZARIA, IN PARTIAL FULFILLMENT FOR THE REQUIREMENTS OF THE AWARD OF MASTER IN HEALTH EDUCATION

DEPARTMENT OF PHYSICAL AND HEALTH EDUCATION,

FACULTY OF EDUCATION,

AHMADU BELLO UNIVERSITY,

ZARIA

OCTOBER, 2017

DECLARATION

I declare that this dissertation entitled **"Knowledge and Prevention of the Risks of Contraceptives use among women in Kwara State, Nigeria''** has been carried out in the department of physical and health education. The information derived from the literature has been duly acknowledged in the text and all information acknowledged through references. No part of this dissertation has been presented in any previous application for a higher degree.

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Rasheedat ABDULLAHI Jimoh Date

CERTIFICATION

This dissertation entitled: **"Knowledge and Prevention of the Risks of Contraceptives use among women in Kwara State, Nigeria"** meets the regulations governing the award of degree of Master in Health Education from Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literacy presentation.

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Dean, School of Postgraduate Studies

DEDICATION

This research is dedicated to Almighty Allah and to all women in Kwara State

ACKNOWLEDGEMENTS

The researcher is grateful to Almighty Allah for the courage and strength to carry out this research. She recognizes the positive contributions of these great heroes: Professor (Mrs.) T. N. Ogwu, her Major Supervisor, Dr Umar Musa the second supervisor and Professor A.A Sanusi her external examiner for their constructive criticisms, guidance and suggestions to the success of this work. Her appreciation goes to Professor (Mrs.) M. A. Suleiman and Dr. Abdulkareem Biu for their moral support and advice. She also appreciates the excellent support of all the lecturers in the Department of physical and health education. The researcher gives special thanks to her parents Alhaji Abdulrahman Jimoh And Alhaja Khadijat Jimoh for their spiritual and parental support, Her gratitude's also goes to her Twin sister (Jero) and her husband for their great support, She is also grateful to all her brothers and the entire Jimoh's family. She also recognizes the support of all her good friends and her colleagues in the Department of Physical and Health Education who have in one way or the other contribute to the success of this work. The acknowledgement is incomplete if she did not mentione her beloved husband, Engr. Murtala Abdullah Ayinde for his love and endless support financially and morally all through the years. She salutes the perseverance of her wonderful children and appreciates the great favors of Abduljelil and her other amazing in-laws. May Allah Rahman never leave you all. Amin

ABSTRACT

The purpose of this study was to assess knowledge and prevention of the risks of contraceptives use among women in Kwara State, Nigeria. A Proportional sampling procedure was used for 378 respondents between the ages of 20-44 in the selected Local Government Areas in Kwara State. Questionnaire was used to collect the data in this study and the demographic variables were analyzed using frequency and percentage distribution, statistics of mean and standard deviation. The hypotheses one and two were tested with chi-square statistics. Hypotheses three, four, five and six sought for differences among the age groups and marital status in their knowledge and prevention of contraceptives risks respectively; hence analysis of variance was used to know whether significant differences existed between knowledge and prevention. The result of the findings revealed that knowledge level on the risks of contraceptives among women in Kwara State is high. On the basis of the findings, it was therefore recommended that health talks about prevention of contraceptives risks should be discussed during antenatal and post natal clinics, women should also consider their health status and understand the risk involve in each method to take preventive measures.

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ABBREVIATIONS

WHO: World Health Organization

NDHS: National Demographic Health Survey

UNFPA: United Nation Population Fund

FMOH: Federal Ministry of Health

NAMS: North American Menopause Society

NIH: National Institute of Health

KAP: Knowledge Attitude and Practice

CPR: Contraceptive Prevalence Rate

STIs: Sexually Transmitted Infections

BHRT: Bio Identical Hormone Replacement Therapy

COC: Combined Oral Contraceptives

IUCD: Intrauterine Contraceptive Device

IUD: Intrauterine Devices

IUS: Intrauterine System

COCP: Combine Oral Contraceptive Pill

POCP: Progestogen-Only Contraceptive Pill

HIV: Human Immunodeficiency Virus

CDCP: Centers for Diseases Control and Prevention

VSC: Voluntary Surgical Contraception

BBT: Basal Body Temperature

HPV: Human Papilloma Virus

OPERATIONAL DEFINITION OF TERMS

For the purpose of this study, the following terms were operationally defined:

Contraceptives: A procedure intentionally used to interfere with the process of reproduction in order to prevent pregnancy among women in Kwara State.

Contraceptives Risks: Is an occurrence that can affect the health of women in Kwara State as a result of some methods of contraceptives use.

Knowledge of Contraceptives: What women in Kwara State know about contraceptives use.

Prevention of Contraceptives Risks: Implies a way of avoiding potential risks of contraceptives use among women in Kwara State.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Contraception is concerned about the procedure intentionally used to interfere with the normal sequence of events in the process of reproduction to prevent unwanted pregnancies. Contraceptive use among sexually active women in Nigeria is critical to reduce unwanted pregnancy and unsafe abortion. However, there are potential risks of some serious side effects when you use particular methods of contraception. According to National Health Insurance Scheme (2014), there are lots of contraceptive methods to choose from. Hormonal Contraceptive, Intrauterine Contraceptive, Voluntary surgical Contraceptive, Barrier Contraceptive and Natural Family planning method.

Planned Parenthood Federation of America, (2012) reported that not all contraceptive methods are appropriate for all situations, and the most appropriate method of birth control depends on a woman's overall health, age, frequency of sexual activity, number of sexual partners, desire to have children in the future, and family history of certain diseases. Individuals should consult their health care providers to determine which method of birth control is best for them.

Although all forms of contraception are available to couples where the female partner is still active, certain methods may be more suitable for women of different age group and marital status on medical grounds, while other methods may have no medical advantage but may simply be more convenient or more acceptable. There are available types of family planning and contraceptive methods in Nigeria with their potential risks to help women make an informed decision. Heinemann (2014) reported that uterine perforation is a potentially serious complication of Intrauterine Device (IUD). Voluntary

Surgical Contraception has risks of ectopic pregnancy, client may regret later and success of reversal surgery cannot be guaranteed, there is also risks associated with surgical procedures, risks and side effects of local anesthesia, delayed effectiveness once the procedure has been performed and risk of complications. Another potential risk is failure. Vasectomy is not guaranteed to be 100% effective. Even when the operation is performed perfectly, it is possible in rare cases for sperm to find its way across the void between the two blocked ends of the vas deferens. The situation, called recanalization, is highly unusual but does occur (Snyder, 2015).

American College of Obstetricians and Gynecology (2015) reported that Barrier Birth Control Methods that need spermicides to be effective should only be used if you are at low risk of HIV infection. Frequent use of spermicides can increase the risk of getting HIV from an infected partner. To avoid an increased risk of infection, including toxic shock syndrome, the cervical cap should not be used during your menstrual period and use of a cervical cap, sponge, diaphragm and spermicidal may increase the risk of urinary tract infection. There is also an increased risk of toxic shock syndrome if the diaphragm is left in for more than 24 hours. Most women in Nigeria do not know how effective various forms of contraceptive are, nor are they able to judge the absolute or relative risks of different methods, (Edwards, 2000).

Other serious potential risks that accompany contraceptives are: increased risks of cervical and breast cancer, increased risk of heart attack and stroke, migraines, higher blood pressure, gall bladder disease, benign liver tumors, decreased bone density, yeast overgrowth and infection, increased risk of blood clotting and infertility, yeast infection (Candida) is another major distressing condition brought on by the consumption of contraceptive pills However, stopping the pill means you will have to come up with

alternative methods of family planning, the most common alternatives to contraceptive pills include: condoms, contraceptive sponge, diaphragm, cervical cap, IUD, female condom, spermicidal foam, calendar method, withdrawal method, abstinence and sterilization (Okon, 2013). Anna, (2013) reported that people who use hormonal contraception, such as the contraceptive patch, are at a slightly increased risk of being diagnosed with breast cancer compared with people who do not use hormonal contraception. World Health Organization, (2000) concluded that, women over the age of 35 who suffer from migraines cannot use oral contraceptives because the risks outweigh the benefit. Therefore, due to the above mentioned issues, a research on knowledge and prevention of the risks of contraceptives uses among women in Kwara State became necessary.

1.2 Statement of the problem

Contraceptives risks in Nigeria in the contemporary time have become an issue that casts a gloomy shadow to the entire society especially among women in Kwara State. The researcher witness cases of high blood pressure, urinary tract infection, blood clotting, migrains, gall bladder disease, delay in pregnancy and infertility in women, especially among friends and relatives and all were as a result of contraceptives uses. Today, Nigeria has one of the highest maternal mortality rates in the world and this has largely been attributed to lack of knowledge of contraceptives use to prevent the potential risks (Stover& Rose 2009). Gbolahan, (2008) however, reported that married women in Ilorin, Nigeria, who are in their prime childbearing ages, have contraceptive knowledge and more than 95 percent of all the women believe that too frequent birth could endanger the health of the mother and her children. However, only the women with risks of contraceptive knowledge will be able to take preventive measures. Acquiring knowledge about contraceptives is the best way to prevent potential risk since women are not fully

protected from an unplanned pregnancy and which makes contraceptives necessary until they have reached menopause. Women therefore need knowledge to prevent the risks of contraceptive uses and be able to consider their health status in order to choose an appropriate and suitable contraceptives (Bruce & Rymer, 2009). While Deborah, Ikhena, & Julia (2012), observed that the necessity for contraceptives options for women start as early as 18. Regrettably, the prevalence of potential risk of some contraceptives is related to lack of knowledge to prevent potential risks of contraceptives.

Majority of women in Kwara State are facing some health challenges due to some types of contraceptives or after using it especially if women lack knowledge of choosing the right method that is suitable for their body. Some contraceptives increase the risk of developing blood clots, which can result into stroke. If a woman has high blood pressure, she needs to take this into consideration before using contraceptives. Other serious potential risks that accompany contraceptives are increased risk of cervical and breast cancer, increased risk of heart attack and stroke, migraines, high blood pressure, gall bladder disease, benign liver tumors, decreased bone density, yeast overgrowth and infection, increased risk of blood clotting and infertility. The dangers for use of oral contraceptives in women above age of 35 includes Smoking, Hypertension, History of thromboembolism, or Stroke (Rebecca, Charles &Norris 2012). Inadequate knowledge and lack of relevant information and education on preventive measure is a major barrier to women of reproductive age. Women often are not fully aware of their contraceptive choices.

According to Guttmacher (2008), women may not use contraception consistently because of problem they are facing such as lack of knowledge of their chosen method, infrequent sexual activity, and ambivalence about pregnancy, misperceptions about

pregnancy risk, wrong information from friends and family members and lastly, self medication. Addressing these and other barriers to the use of effective contraception through health talks is key to helping women prevent contraceptives risks (Lee, Parisi, Akers, Borrero, & Schwarz, 2011). Currently, there are several entities that want to include health talks on knowledge and prevention of contraceptive risk, despite that contraceptives are used for child spacing, they also have their own significant risks, such as increase in cardiovascular event especially in older women and smokers, increase in human papillomavirus (HPV) infection , breast cancer and an increase in cervical cancer, which is the second most common cancer worldwide (Harper, Brown, Foster-Rosales & Raine, 2010). Therefore, oral contraceptives fail the most important test of preventive medicine: they increase the risk of disease instead of decreasing it. Based on the above discoveries, the researcher is motivated to conduct a research among others to assess the knowledge and prevention on the risks of contraceptives uses among women in Kwara State.

1.3 Purpose of the study

The purposes of this study are to:-

1. To examine the knowledge of the risks of contraceptives use among women in Kwara State;
2. To investigate the preventive measures of contraceptives uses among women in Kwara State;
3. To evaluate the difference between women of different age groups in their knowledge of the risks of contraceptive use among women in Kwara State;

4. To evaluate the difference between women of different age groups in their preventive measures of the risks of contraceptive use among women in Kwara State;
5. To examine the difference between women of different marital status in their knowledge of the risks of contraceptive use among women in Kwara State;
6. To examine the difference between women of different marital status in their preventive measure of the risks of contraceptive use among women in Kwara State;

1.4 Research Questions

1. Will women have knowledge of the risks of contraceptives use in Kwara State?
2. Will women have knowledge of preventive measures of the risks of contraceptives use in Kwara State?
3. What is the difference between women of different age groups in their knowledge of risks of contraceptive use among women in Kwara State?
4. What is the difference between women of different age groups in their preventive measures of risks of contraceptive use among women in Kwara State?
5. What is the difference between women of different marital status in their knowledge of risks of contraceptive use among women in Kwara State?
6. What is the difference between women of different marital status in the preventive measures of the risks of contraceptive use among women in Kwara State?

1.5 Significance of the Study

The finding of the study will be significant in the following ways:

1. Women in Kwara State will have knowledge on the risks of contraceptives due to regular health talks during antenatal and postnatal clinics.

2. It will help women in Kwara State to understand ways of preventing contraceptives risks after it has been discussed by heath care providers.
3. It will benefit women of different age groups in Kwara State when nongovernmental organizations address the risks involved in contraceptives uses.
4. It will motivate women of different age groups in Kwara State to take preventive measure while using contraceptives after attending health talks by health care providers and nongovernmental organizations.
5. It will allow women of different marital status in Kwara State to gain more knowledge on contraceptives risks through Medias such as radio and televisions.
6. It will encourage women of different marital status in Kwara State to take preventive measure and choose the natural method of contraceptives to prevent all health hazards associated with other artificial contraceptives.

1.6 Basic Assumption

On the basis of available research evidence, the following assumptions were made for the purpose of this study.

1. Knowledge of contraceptives use would help women in Kwara State understand the risks.

2. Prevention of contraceptives risks will become a regular practice among women in Kwara State.
3. Women of different age groups in Kwara State will be more knowledgeable on contraceptives risks.
4. Women of different age groups in Kwara State will take preventive measures while using contraceptives.
5. Women of different marital status in Kwara State will be more knowledgeable on contraceptives risks.
6. Women of different marital status in Kwara State will take preventive measures while using contraceptives.

1.7 Hypotheses

Based on the research questions, the following hypotheses were formulated for the purpose of this study.

1. Women will not significantly have knowledge on the risk of contraceptives use in Kwara State.
2. Women will not significantly take preventive measure of contraceptives risks in Kwara State.
3. Women of different age group will not significantly have knowledge on the risks of contraceptive use in Kwara State.
4. Women of different age group will not significantly take preventive measure on the risks of contraceptive use in Kwara State.
5. Women of different marital status will not significantly have knowledge on the risks of contraceptive use in Kwara State.

6. Women of different marital status will not significantly take preventive measure on the risks of contraceptive use in Kwara State.

1.8 Delimitation of the Study

The study was delimited to the knowledge and prevention of the risk of contraceptives use among women in Kwara State. It was delimited to six local governments in Kwara State. Women between the age groups of 20-44 who uses contraceptives from hospitals in the selected local government Areas served as respondents to this study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Introduction

This study was conducted on "Knowledge and Prevention of the Risks of Contraceptives use among women in Kwara State, Nigeria." In the light of this, this chapter dealt with the review of current literature that is related to the study under the following sub-titles:

- Concept of Contraceptives
- Conceptual frame work
- Application of the Theory to the Study
- Constructs of the Health Belief Model, as Applied to Contraceptive Behavior
- Types of Contraceptives
- Advantages of Contraceptives
- Disadvantages of Contraceptives
- Purpose of Contraceptives
- Knowledge of the risks of contraceptives use
- Prevention of the risks of Contraceptives use

2.1 Concept of Contraceptives

Contraception is the use of various devices, drugs, agents, sexual practices, or surgical procedure used to interfere with the normal sequence of events in the process of reproduction to prevent conception or unwanted pregnancies (Adelaja, 2002).The current trend of contraceptives risks is a major national concern, it is affecting the health and safety of women (Henry, 2011).

The World Health Organization (WHO, 2013) state that contraceptives allow individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births, this is achieved through use of contraceptive methods. A woman's ability to space and limit her pregnancies has a direct impact on her health and well-being as well as on the outcome of each pregnancy. Contraception of one form and another has probably been in existence for as long as human babies have been born, and maybe longer. In the beginning it was rituals and witch doctors and it has slowly developed into more reliable methods (Jamabo, Kpai, Olabanji &Titilayo, 2012).

Caroline (2013), reported that it was the ancient Greeks who first realized that male and female union caused pregnancy and since then many methods have been used with varying degrees of success, a wide range of products have been used as barriers such as lemon juice and essence from mahogany husks, acacia tree and honey, oil of cedar and lead ointment, frankincense and olive oil, salt, cabbage or willow leaves, onion juice, peppermint oil and, soft wool. However, they are often used in conjunction with other methods, particularly the diaphragm and as such prove quite useful. Vaginal douches have been used after intercourse since the 1600s; however, they do not seem to be at all effective (Adelaja, 2002).

In the Middle Ages Serbian women would dip their fingers in the first bath water of the infant; the number of fingers which were dipped in would equal the number of years of sterility, brides in the Baltic Island of Oland touched the cervix with as many fingers as they would like to have children. Other methods used were holding breath at ejaculation, inducing sneezing, weight gain, the use of amulets, the woman jumping backwards seven times, the woman spitting three times in the mouth of a frog, the woman eating bees and the woman remaining passive during intercourse, a wide range of pills and potions were also recommended. Indian women used a combination of seeds, leaves

and roots and quotations such as "one tola of powdered palm leaf and red chalk taken with cold water on the fourth day makes a woman sterile with certainty" are found in ancient literature. The literature of the ancient Hebrews includes a mixture described as, "Alexandrian gum, liquid alum and garden crocus, each in the weight of a denar, are mixed together. Three cups of wine with this medicine are good for gonorrhea, and do not sterilized (Elizabeth, 2002).

Caroline, (2013) reported that abortion is one of the earliest forms of birth control. Obviously the methods were crude and often with fatal results for the mother. Generally though, even as long ago as the tenth century it was only accepted with good reason generally if the mother's health was at risk or the pregnancy had been the result of rape. Tammy, (2011) stated that Egyptians have the first form of female birth control. The Egyptians are given credit for the contraceptive known as the pessaries which were made of sodium carbonate, crocodile dung and honey; the pessaries were made into a “concoction” and placed inside the vagina to kill the sperm. Moving ahead to the more recent history of contraceptives in 1844 the Goodyear man (yes the one who invented tires); Charles Goodyear is also given credit for the invention of reusable male condoms. The condoms were made of rubber. Once the condom was used, it was washed anointed with petroleum jelly and stored in a special wooden box until next time.

In Nigeria, the 2008 National Demographic Health Survey (NDHS) found that only 10% of married women of reproductive age use contraceptives. This is lower than the current Sub-Saharan Africa average of 17%. On a National scale, Contraceptive Prevalence rate was low among teenagers and became fairly constant for the ages within the 20 – 39 range. However, further disaggregation by Zones revealed that apart from the south –south and (to some extent) the North East geopolitical zones, where the highest

Contraceptive Prevalence rate was recorded in the 20 - 24 age group, in all the other geopolitical zones The highest Contraceptive Prevalence rate was recorded in the 30 - 44 age cohort (United Nations Population Fund UNFPA, 2010).

The main reasons for non-use contraceptive were the fear of side effects and medical risks (Population Reports, 1999 & Oyedokun, 2004). Many studies have identified age, residential area, and length of marriage, level of education, number of living or deceased children, gender of living children, prior discussion of family planning, husband's approval, socioeconomic status, and religion as key factors affecting the use of modern contraceptive methods in Asia and some parts of Africa (Osakinle, Babatunde & Alade, 2013). All efforts should be put to meet these needs as contraception is one of the most important ways of preventing unwanted pregnancy, subsequent abortion and its attendant morbidity and mortality (Saka, Saidu, Balogun, Raji, Ijaiya, Saka, Abdul & Yahaya, 2012). In making contraceptive choices, couples balance their sexual lives, their reproductive goals, and each partner's health and safety. The search for a choice that satisfies all three objectives presents significant challenges for women throughout the world. Furthermore, what constitutes an ideal or suitable contraceptive method differs not only among individuals, but also as individuals enter different life phases: A method that works for a sexually active teenager who has had several partners, for example, may not continue to meet her needs as she becomes a monogamous career woman, therefore it is important for women to know about different methods and risks of contraceptives (Henry &Jill, 2002). In most African countries, only a few methods of contraceptives are offered, which makes finding a method that fits a couple's reproductive needs difficult.

Many African countries had low access scores on almost every method. In the 1999 ratings for 88 countries, 73% of countries offered condoms to at least half their

population, 65% of countries offered the pill, 54% offered IUDs, 42% offered female sterilization, and 26% offered male sterilization (Ross, Karen, Elizabeth and Sherrine, 2002). According to NHS Choices (2014), there are lots of contraceptive methods to choose from. Don't be put off if the first type you use isn't quite right – you can try another. Broadly family planning and contraceptive method in Nigeria have been divided into: Hormonal, Intrauterine, Voluntary surgical, Barrier and Natural Family Planning method.

2.2 Conceptual frame work

The Health Belief Model (HBM) is one of the most widely used conceptual frameworks for understanding health behavior, developed in the early 1950s. (Hochbaum, 1958; Rosenstock 1966; Becker, 1974; Sharma & Romas, (2012) stated that the health belief model (HBM) is a cognitive model which posits that behaviour is determined by a number of beliefs about threats to an individual's well-being and the effectiveness and outcomes of particular actions or behaviours, some constructions of the model feature the concept of self-efficacy. (Bandura, 1997) alongside these beliefs about actions, these beliefs are further supplemented by additional stimuli referred to as 'cues to action' which trigger actual adoption of behavior.

The Health Belief Model is a framework for motivating people to take positive health actions that uses the desire to avoid a negative health consequence as the prime motivation. For example, Risks of contraceptives is a negative health consequence, and the desire to prevent the risk can be used to motivate sexually active people into choosing the right method of contraceptives. Similarly, the perceived threat of a heart attack can be used to motivate a person with high blood pressure into exercising more often. It's important to note that avoiding a negative health consequence is a key element of the HBM. For example, a person might increase exercise to look good and feel better, that

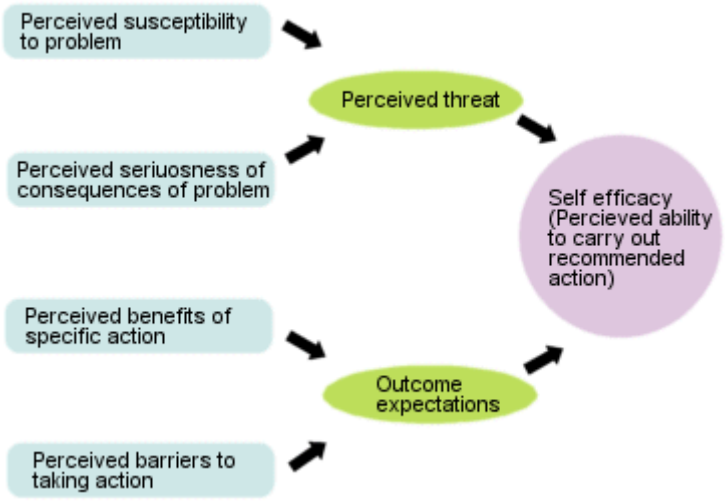
example does not fit the model because the person may not be motivated by a negative health outcome even though the health action of getting more exercise is the same as for the person who wants to avoid a heart attack (Eisen, Zellman & McAlister, 1985). The Health Belief Model HBM can be an effective framework to use when developing health education strategies. A large research study reviewed 46 studies of HBM-based prevention programs. The HBM-based programs focused on a variety of health actions. The Health Belief Model (HBM), a well-tested, comprehensive social cognitive framework by Rosenstock, (1974) was one of the first models used to predict and explain variations in contraceptive behavior among women in the 1970s and 1980s. Yet, the HBM has seldom since been applied in family planning. In a recent review of 14 studies testing theory-based contraceptive behavior interventions, none were found to use the Health Belief Model (Lopez, Tolley, Grimes & Chen-Mok, 2009).

Theory-driven strategies to prevent contraceptives risks are currently needed Lopez, (2009) along with decades of research on unintended pregnancy prevention, knowledge about poor contraceptive behavior has evolved. We are more aware of the complexities of contraceptive behavior, which may support enhanced applications of the HBM to help identify and predict factors that influence successful contraception in current populations and settings. The purpose of this conceptual, integrated review is to examine the suitability of the Health Belief Model (HBM) as a framework for explaining knowledge and prevention of contraceptive risks.

The HBM is a cognitive, interpersonal framework that views humans as rational beings who use a multidimensional approach to decision-making regarding whether to perform a health behavior (Rosenstock, 1974). The model is appropriate for complex preventive and sick-role health behaviors such as contraceptive behavior. Nathanson, (1983) stated that, is dimensions are derived from an established body of social

psychology theory that relies heavily on cognitive factors oriented towards goal attainment.

ELEMENTS OF HEALTH BELIEF MODEL



Source: Adapted from Nutbeam and Harris, 1998

2.3 Application of the theory to the study

Contraceptive behavior, viewed through the HBM, is motivated by an individual's desire to avoid pregnancy and value placed on knowledge of contraceptive risks, and perceived ability to prevent the risk by using a suitable contraceptive method, sufficient motivation must exist to make prevention of contraceptive risk salient and relevant and to support the contraceptive behavior decision-making process. From the theory, the researcher realize that for a change of behavior to take place, individual must feel the reality of been vulnerable to contraceptive risk, the motivation to prevent an unwanted pregnancy would predict contraceptive compliance just as the motivation to prevent contraceptive risks would predict interest of contraceptive knowledge and see that taking action is definitely going to prevent contraceptive risks. Researcher however, observe that women must feel confidence(self-efficacy) to seek knowledge about the possible risk associated with each and every contraceptives, such as risk of hypertension, breast and

cervical cancer, risk of ectopic pregnancy, increased risk of heart attack and stroke, migraines, high blood pressure, gall bladder disease, benign liver tumors, decreased bone density, yeast overgrowth and infection, increased risk of blood clotting and infertility. All this can occur as a result of improper orientation, misinformation about the right method, uncertain decision and inadequate information about the risks and prevention of various contraceptive methods and lack of healthcare provider guide. In addition, women who choose a method in collaboration with their clinician or with information given by the provider are more likely to be free from contraceptive risks. Satisfaction with the healthcare provider and continuity of care is linked with more consistent use of contraceptives; all women require knowledge to prevent contraceptives risks throughout their reproductive years (Lopez, 2009).

Health care providers can use the HBM to understand patients' contraceptive needs, employing constructs of the model to guide patient interviewing. For instance, the health history around a contraceptive initiation visit should focus not only on fertility intentions but also on existing perceptions of method-specific risks and barriers and on psychological, social and reproductive histories that may be relevant to contraceptive method selection. Individual patient characteristics such as fear of an invasive procedure, inability to cover monthly co-pay, difficulty in remembering to take a daily medication, history of tobacco use, or recent pelvic inflammatory disease diagnosis may help rule out some options to determine the most patient-centered method. By obtaining health information from all HBM constructs to present a complete historical picture, providers can help patients initiate the most appropriate contraceptive to facilitate successful use from the outset. Following the HBM-guided health history, health care professionals can structure contraceptive education and counseling sessions by the framework to ensure comprehensiveness of approach and content. For instance, information on not only the

different types of contraceptives but of contraception risks and preventions, efficacy, proper use, mechanisms of action, and resources, as operational zed by different HBM constructs, can increase patients' contraceptive knowledge and prevention of risks. The HBM also offers a comprehensive approach to long-term patient contraceptive management plans. The framework can provide ongoing structure for providers to reassess patients' contraceptive behavior patterns and their dynamic developmental, cognitive and physical health needs within complex socioeconomic, environmental and reproductive contexts. For example, as an adolescent transition to college, adopts a new schedule, obtains a job, and initiates a relationship, a long-acting reversible method like the intrauterine device IUD might be more complementary to her situation than a method previously relied upon like condoms. By considering all of these factors through the holistic model, health providers can help patients continue to choose the most appropriate and relevant contraceptive behavior and method to prevent contraceptive risks (Bandura, 1997).

2.4 Constructs of the Health Belief Model, as Applied to Contraceptive Behavior

Perceived Threat

Perceived threat (susceptibility and seriousness) of an unwanted pregnancy and its sequelae (i.e. birth, abortion, parenthood) provides the incentive to use contraception. This construct considers personal feelings of the seriousness of becoming pregnant, based upon subjective assessment of medical and social consequences of pregnancy and childbearing. This construct may include factors like fear of body changes or pregnancy complications, or worry of quitting school or losing a job due to increased child-rearing responsibility, which can impact the likelihood of contraceptive use. Brucker, Martin, Bearman, (2004) for example, an analysis of data from the National Longitudinal Study

of Adolescent Health found that the 14% of teens with ambivalent attitudes about the risk and seriousness of becoming pregnant had reduced odds of using contraception consistently. In another similar study of 4869 high school students' girls with pro-pregnancy versus anti-pregnancy attitudes (such as positive perceptions of consequences like social embarrassment, increased stress and parenthood responsibilities) were at increased risk for becoming pregnant within one year (Jaccard, Dodge & Dittus, 2003).

Perceived Barriers

Perceived barriers are risks and negative consequences of using contraception. This dimension includes factors such as perceived risks and complication of contraception (i.e. ectopic pregnancy, infections, hypertension and decrease bone density),physiological risks of contraceptives (i.e. blood clots, cancer and venous thromboembolism), inconvenience (i.e. having to remember to take a daily pill or apply a condom during intercourse) (Bryden & Fletcher, 2001). Having to obtain a prescription for contraceptive refills or requiring a medical procedure for intrauterine device (IUD) insertion), all of these potential contraceptive risks have been found to inhibit contraceptive use (Westhoff, Heartwell & Edwards, 2007).

Perceived Benefits

Perceived benefits relate to the perceived effectiveness, feasibility and other advantages of using a contraceptive method rightly. Through a cost-benefit analysis, the perceived ratio of a contraceptive's benefits to its barriers helps determine the preferred and specific contraceptive action and method. For instance, in a study of 154 nulliparous women presenting for an IUD, despite the discomfort, inconvenience, and up-front costs of insertion procedures noted by the women, they chose to use an IUD because of its high contraceptive efficacy, long-term convenience and low hormonal risks (Wiebe, Trouton

& Dicus, 2010). This construct may also include non-contraceptive, health promoting benefits of a method (i.e. protection against ovarian cancer, uterine cancer, and anemia, improvement of menstrual symptoms and acne) Indeed, increased knowledge on prevention of contraceptive risks have been shown to increase and improved (Hatcher, Trussell & Stewart, 2004).

Cues to Action

Cues to action are internal and external stimuli that trigger a consciousness of the perceived contraceptive risk, women receive reminder cues for action in the form of incentives (such as a key chain that says, "Contraceptive risks are real!") or reminder messages (such as posters that say, "75% of women suffer from contraceptive risk.Are you one of them? Find out now"). Threat and facilitate consideration of using a safe contraception to prevent the risk. This may include contraceptive communication from the media, (internal stimuli) or and worry from a sexual partner or counseling by a health care provider (external stimuli) (Kaunitz, 1999). Women who resumed menses in the immediate post-partum period adopted a contraceptive method, on average, within one month (Kerns, Westhoff, Morroni & Murphy, 2003).

2.5 Types of contraceptives and their risks

Hormonal Contraceptive Methods

The introduction of the first hormonal contraceptive was one of the most important events of the twentieth century for women. The availability of Oral Contraceptives (OCs) provided women with greater control over their reproductive lives. As of oral contraceptives usage steadily increased, so did concern over health risks associated with their use. In the four decades since the first of oral contraceptives, women seeking contraception have benefited from the development of non-oral hormonal

delivery systems, including injectables, intrauterine devices, implants, a vaginal ring, and a contraceptive patch. Women and men have long tried many methods to prevent pregnancy prior to modern method of birth control; women relied on withdrawer or periodic abstinence (Kirsten, 2013). It is hoped that this expanding menu of choices affords women opportunities to find methods better suited to their individual needs, clinicians should continually evaluate their patients' hormonal contraceptive needs, and provide adequate counseling so that every woman is afforded the opportunity to achieve contraceptive success reported by (Department of Obstetrics and Gynecology, USA, 2005).

Hormonal contraception is a birth control methods that act on the endocrine system. Almost all methods are composed of steroid hormones, although in India one selective estrogen receptor modulator is marketed as a contraceptive. The original hormonal method—the combined oral contraceptive pill was first marketed as a contraceptive in 1960 Susan & Terri (2009). In the ensuing decades many other delivery methods have been developed, although the oral and injectable methods are by far the most popular. Altogether, 18% of the world's contraceptive users rely on hormonal methods (Jones, 2011). Hormonal contraception is highly effective: when taken on the prescribed schedule, users of steroid hormone methods experience pregnancy rates of less than 1% per year. Perfect-use pregnancy rates for most hormonal contraceptives are usually around the 0.3% rate or less. National Prescribing Service (2009), reported that currently available methods can only be used by women; the development of a male hormonal contraceptive is an active research area. There are two main types of hormonal contraceptive formulations: combined methods which contain both an estrogen and a progestin, and progestogen-only methods which contain only progesterone or one of its

synthetic analogues (progestins). Combined methods work by suppressing ovulation and thickening cervical mucus; while progestogen-only methods reduce the frequency of ovulation, most of them rely more heavily on changes in cervical mucus, the incidence of certain side effects is different for the different formulations: for example, breakthrough bleeding is much more common with progestogen-only methods (Terri, 2009).

Certain serious complications occasionally caused by estrogen-containing contraceptives are not believed to be caused by progestogen-only formulations: deep vein thrombosis is one example of this. (America Society of Health-System Pharmacists 2015), state that the following hormonal methods of family planning and contraception are commonly available in Nigeria: Combined oral contraceptives pill (COCP) is a Progestin only and hormone releasing intrauterine systems, it is often just called the pill because it contains oestrogen and progestogen and works mainly by stopping egg production (ovulation), it is a very popular different brands that suit different people, some of the advantages is that it is very effective and taking the combined oral contraceptive pill may improve any menopausal symptoms that you may have, There is also some evidence that taking the combined oral contraceptive pill when you are aged over 40 years may increase the density of your bones, this means your bones are stronger and may be less likely to fracture when you have gone through the menopause, some disadvantages is that there is a small risk of serious problems (such as thrombosis) and it can't be used by women with certain medical conditions, the combined oral contraceptive pill can safely be taken by women over the age of 40 with no other medical problems. However, it should not be taken by a smoker and women with history of stroke or heart disease, or overweight (Tim, 2014).

Hormonal Contraceptive patch: The contraceptive patch is a transdermal patch applied to the skin that releases synthetic estrogen and progestin hormones to prevent pregnancy; it is a combined hormone form of contraception essentially the same type of contraception as the combined oral contraceptive pill (COCP) but it is used in a patch form (Darren, 2016). The contraceptive patch is stuck on to the skin so that the two hormones are continuously delivered to the body, it is very effective and easy to use and Periods are often lighter, less painful and more regular. Some disadvantages are, some women have skin irritation. Despite its discreet design, some women still feel that the contraceptive patch can be seen. The patch can safely be used by women over the age of 40 with no other medical problems. However, it should not be used for women over 35 years and a smoker, or for women over 40 years and with cardiovascular disease, or a history of a stroke or migraine reported by Trussell, (2007).

Risks of Contraceptive patch: The patch slightly increases your chance of developing a blood clot, which can block a vein (venous thrombosis) or an artery (arterial thrombosis, which may lead to a heart attack or stroke), if you have had a blood clot before, do not use the patch, risk of blood clots is higher during the first year of using the patch and the risk is also higher if: you smoke, very overweigh, immobile, severe varicose vein or a close family member had a venous thrombosis before they were 45 years old (Hatcher, 2011). Hormonal Contraception, such as the contraceptive patch, is at a slightly increased risk of being diagnosed with breast and cervical cancer compared with people who do not use hormonal contraception, the risk of venous thrombosis is greatest during the first year that women use the patch and if they smoke, overweight, immobile for a long period of time or use a wheelchair, or a member of their immediate family had venous thrombosis before they were 45 years old, the risk of arterial

thrombosis is also serious if women Smoke, diabetic, hypertensive, very overweight, have migraines with aura or a member of their immediate family had a heart attack or stroke before they were 45 years old (NHS choices, 2014).

Depo-Provera Contraceptive injections: contain a progestogen hormone which slowly releases into the body. 2-60 in 1,000 women using the injection for one year become pregnant, this means that it is almost as effective as sterilization. It works by preventing egg production (ovulation) and also has similar actions as the POCP, an injection is needed every 8-12 weeks, some advantages is that, it is very effective and women don't have to remember to take pills and some disadvantages is about periods not been regular (but often lighter or stop altogether), some women have side-effects and the injection cannot be undone, so if side-effects occur, they may persist for longer than 8-12 weeks, the injection is safe if you have had a stroke, heart attack or suffered with a clot in the past and there is no increased risk of developing breast cancer if you use the contraceptive injection (Mcnamee, Bateson& Pearson, 2016). Long-term use of progestogen-only injection can be associated with a reduction in the strength (density) of your bones. However, this returns to normal after stopping the injection and the contraceptive injection is usually stopped when you reach the age of 50 years and another method of contraception should then be used, the most widely available injectable contraceptive is depot medroxyprogesterone acetate (Depo-Provera), this injectable progestogen acts by inhibiting ovulation, and a single 150 mg dose administered intramuscularly produces pharmacological concentrations of progestogen which persist for 3–4 months (Haines & Ludicke, 2012).

Risks of contraceptives injection (Depo-Provera): In 2004, the Food and Drug Administration approved a "black box" Warning regarding use of Depo-Provera and loss

of bone mineral density, based on clinical data showing a significant loss of Birth, Marriage and Death among women using Depo-Provera. Ample research evidence suggests that the effects of Depo-Provera on bone health may be less concerning that originally believed, in a year of typical use, an estimated three out of hundred women using Depo-Provera will get pregnant. But the risk of pregnancy is much lower in women who return every 12 weeks for their injections. Depo-Provera was highly effective in initial studies. However, it's a newer medication, so current research may not reflect pregnancy rates in typical use. Delay in returning to fertility**.** After stopping Depo-Provera, it may be ten months or more before women begin ovulating again. If they want to become pregnant in the next one year or so, depo-Provera might not be the right birth control method for them. Depo-Provera doesn't protect against sexually transmitted infections in fact, some studies suggest that hormonal contraceptives such as Depo-Provera may increase a woman's risk of chlamydia and HIV. It isn't known whether this association is due to the hormone or behavioral issues related to the use of reliable contraception reported by (Pharmacia & Upjohn, 2014).

Hormonal Contraceptive implant (Nexplanon) : The Faculty of Sexual and Reproductive Health care (2010), reported that contraceptive implant is a small device placed under the skin, it contains a progestogen hormone which slowly releases into the body. 1 woman in 2,000 using the implant for a year will become pregnant, this means it is as effective as sterilization and it works in a similar way to the contraceptive injection, it involves a small minor operation using local anesthetic, each one lasts three years and women don’t have to remember to take pills but periods may become irregular (but often lighter or stop altogether), some women develop side-effects but these tend to settle after the first few months, the implant can be removed if the side-effects do not settle and it

does not suit you but the implant is safe if you have had a stroke, heart attack or suffered with a clot in the past, the implant can be continued until you reach the age of 55 years, after which time you will no longer need to use contraception. The sustained-release levonorgestrel contraceptive implant (Norplant) consists of six Silastic implants, each of which contains 36 mg levonorgestrel, a newer preparation consists of two rods containing a total of 70 mg levonorgestrel (Norplant-2), and these are easier to insert and to remove than the older implant. They act by inhibiting ovulation and are highly effective, with lowest expected as well as typical failure rates of 0.2% in the first year (Haines &Ludicke, 2012).

Risks of contraceptive implant: Darney (2014), reported that there may be problems with insertion and removal, implant may not be placed in your arm at all, due to a failed insertion and if this happens, women may become pregnant but location and removal of the implant may be difficult or impossible because that is not where it should be, special procedures including surgery in the hospital may be needed to remove the implant, if the implant is not removed, then the effects of nexplanon will continue for a longer period of time, in rare cases, implants have been found in the pulmonary artery (a blood vessel in the lung), if the implant cannot be found in the arm, health professional may use x-rays or other imaging methods on the chest if the implant is located in the chest, surgery may be needed and scar tissues may form around the implant making difficult to remove, the implant may come out by itself and one may become pregnant if the implant comes out by itself and the need for surgery in the hospital to remove the implant will be required and if women become pregnant while using nexplanon, they have a slightly higher chance that the pregnancy will be ectopic (occurring outside the

womb) than do women who do not use birth control, unusual vaginal bleeding or lower stomach (abdominal) pain may be a sign of ectopic pregnancy.

Ectopic pregnancy is a medical emergency that often requires surgery, it can cause serious internal bleeding, infertility, and even death. Ovarian cysts: may develop on the ovaries and usually go away without treatment but sometimes surgery is needed to remove them (Trussell, 2007). It is not known whether nexplanon use changes a woman's risk for breast cancer. If you have breast cancer now, or have had it in the past, do not use nexplanon because some breast cancers are sensitive to hormones. Serious blood clots: nexplanon may increase your chance of serious blood clots, especially if women have other risk factors such as smoking. It is possible to die from a problem caused by a blood clot, such as a heart attack or a stroke. Some examples of serious blood clots are blood clots in the Legs (deep vein thrombosis), Lungs (pulmonary embolism), Brain (stroke), Heart (heart attack) and Eyes (total or partial blindness). The vaginal ring: is a method of hormonal birth control. It is also known by its brand name, Nuva Ring. According to Patricia (2014), the Food and Drug Administration (FDA) in 2001 approved the vaginal ring for use. Nuva Ring is a small, flexible ring that is inserted into the vagina to prevent pregnancy, it is made out of plastic and contains the synthetic hormones estrogen and progestin, the ring is about two inches in diameter and it is left in for three weeks at a time, the vaginal ring is one of the highly effective methods with approximately nine in one hundred women becoming Pregnant in one year's typical use, the vaginal ring prevents pregnancy by continuously releasing hormones which are absorbed into the bloodstream.

These hormones estrogen and progestin prevent ovulation with no egg release pregnancy cannot occur, estrogen and progestin also thicken the cervical mucus, which

prevents sperm from passing through, the vaginal ring works in the same way as monophasic birth control pills, these are combined hormonal contraceptives where the same dose is taken throughout your cycle. However, guidance from The Faculty of Sexual and Reproductive Healthcare (FSRH,) (2014) differs slightly, advising that the ring will protect against pregnancy straight away if you start it up to day five of your menstrual cycle, this is because a study found that ovulation was suppressed in women who started using the vaginal ring on day five of their cycle.

According to (Merck& Dohme 2015), the use of a Combine Hormone Contraceptives, like Nuva Ring, is associated with an increased risks of several serious side effects, including blood clots, stroke, or heart attack and the risk of getting blood clots may be greater with the type of progestin in NuvaRing than with some other progestins in certain low-dose birth control pills, the risk of blood clots is highest when you first start using Combine Hormone Contraceptives and when you restart the same or different Combine Hormone Contraceptives after not using it for a month or more, a very small number of women may develop venous thrombosis, arterial thrombosis, heart attack or stroke, if you have ever had thrombosis, you should not use the vaginal ring and the risk of venous thrombosis is greatest during the first year that women use the vaginal ring especially if they smoke, very overweight, immobile for a long period of time or use a wheelchair, or a member of their immediate family had a venous thrombosis before they were 45 years old. There appears to be a slightly higher risk of venous thrombosis in vaginal ring users compared to those using some combined pills, the risk of arterial thrombosis is greatest if women smoke, diabetic, hypertensive, very overweight, have migraines with aura, or a member of their immediate family had a heart attack or stroke before they were 45 years old. Research suggests that users of the ring appear to have a

small increased risk of being diagnosed with breast and cervical cancer compared to non-users of hormonal contraception, which reduces with time after stopping the ring (Merck& Dohme ,2015).

Intrauterine Contraceptive Devices

According to Association of Reproductive Health Professionals (2014), intrauterine contraception (IUC), also referred to as an intrauterine device (IUD) or intrauterine system (IUS), is a long-acting reversible contraceptive method that involves the placement of a small T-shaped device inside the uterus. IUCs use either non-hormonal ingredients or progestin to prevent fertilization; they are a good contraceptive choice for women who cannot use estrogen, intrauterine device IUDs have one of the highest satisfaction and continuation rates among patients. According to Faculty of Sexual and Reproductive Healthcare (2007), a hormone-releasing intrauterine device called an intrauterine system (IUS) is a plastic device that contains a progestogen hormone. NHS Choices (2014), reported that an intrauterine device (IUD or coil) is a small contraceptive device, often 'T'-shaped, often containing either copper or levonorgestrel, which is inserted into the uterus, they are one form of long-acting reversible contraception which are the most effective types of reversible birth control IUCD is a contraceptive method in which a flexible device is inserted into the through the virginal into the uterine cavity by a trained service provider, it is a safe highly effective and long lasting type of contraceptive method. There are two broad categories of intrauterine contraceptive devices (iucds): Copper-based iucds and Hormone-releasing devices. Iucds is a plastic and copper device which is put into the womb (uterus), it lasts five or more years and it works mainly by stopping the egg and sperm from meeting, it may also prevent the fertilized egg from attaching to the lining of the uterus.

Family Planning Association, (2016) reported that, the IUS has two threads at one end which hang through the opening at the entrance of your uterus (the cervix) into the top of your vagina, there are two types of IUS – Jaydess and Mirena. In this information, the two different types are named where relevant, the general term intrauterine system IUS is used to refer to both types, Jaydess is smaller than Mirena and has a lower dose of progestogen, it works for up to three years. Mirena works for up to five years if a woman has aged 45 or older when Mirena is fitted, it can be left in until the menopause and no method of contraception stirs quite as much heated discussion and debate as the IUD. The reasons the IUD has this distinction are simple: People's opinions have been shaped by a body of seemingly discrepant (and sometimes mythical) evidence and the issues this evidence addresses are fundamental. How IUD prevent pregnancy and the exposure to sexually transmitted bacteria modify that relationship, clinical research conducted over the past 30 years provides clues to help resolve these important issues, yet the debates over the IUD's safety and mechanism of action continue to rage, and misperceptions abound. Some people, for example, believe that because the IUD rests in the uterus, it might be aborting early pregnancies.

Other reasons that PID and infertility that appear any time during or after use of an IUD are sure to have been caused by the invasive procedure. Still others believe that the IUD (like other foreign objects) lowers the body's natural defenses and facilitates the development of PID and infertility among women exposed to sexually transmitted bacteria (American Journal of Obstetrics and Gynecology, 1997). Research that generates results counter to these assumptions has to be flawless, unchallengeable and repeated to have any lasting impact. Although the most recent research has shown these assumptions to be unwarranted, the controversy continues (NHS Choices, 2014).

Risks of using an intrauterine device (IUD) include: Menstrual problems, the copper IUD may increase menstrual bleeding or cramps, women may also experience spotting between periods, the hormonal IUD may reduce menstrual cramps and bleeding. About 2 to 10 out of 100 IUDs are pushed out (expelled) from the uterus into the vagina during the first year, this usually happens in the first few months of use (Dean, 2014). Expulsion is more likely when the IUD is inserted right after childbirth or in a woman who has not carried a pregnancy. When an IUD has been expelled, women are no longer protected against pregnancy, complications caused by an intrauterine system IUS are rare and usually happen in the first six months after it has been fitted. These include: Damage to the womb: In rare cases (less than one in 1,000 insertions) an intrauterine system IUS can perforate (make a hole in) the womb or neck of the womb (cervix) when it is put in. This can cause pain in the lower abdomen, but doesn't usually cause any other symptoms. If the doctor or nurse fitting your IUS is experienced, the risk of perforation is extremely low. If perforation occurs, women may need surgery to remove the IUS. Contact your GP straight away if you feel a lot of pain after having an IUS fitted, Perforations should be treated immediately, Pelvic infections may occur in the first 20 days after the IUS has been inserted.

The risk of infection from an intrauterine system IUS is extremely small (fewer than one in 100 women who are at low risk of STIs will get an infection). A clinician will usually recommend an internal examination before fitting an IUS to be sure that there are no existing infections but occasionally, the IUS is rejected (expelled) by the womb or it can move (this is called displacement). This is not common and is more likely to happen soon after it has been fitted and there's a small increased risk of ectopic pregnancy if a

woman becomes pregnant while using an intrauterine system. (American Journal of Obstetrics and Gynecology, 1997).

Voluntary Surgical Contraception

Messia and William, (2014) reported that, Voluntary surgical contraception (VSC) is a permanent family planning method which involves female sterilization or male sterilization. In women, the process is called fallopian tube ligation or tuballigation, and involves mechanically blocking the fallopian tubes by cutting them to prevent the sperm from reaching the egg. Voluntary surgical contraception includes female and male sterilization procedures that are intended to provide permanent contraception. As such, special care must be taken to assure that every client who chooses this method does so voluntarily and is fully informed about the permanence of this method and the availability of alternative, long-acting, highly effective methods: Tubal ligation and Vasectomy. Sterilization is the most common form of contraception in the United States when female and male usage is combined. However, usage varies across demographic categories such as gender, age, education, etc. According to the Centers for Disease Control and Prevention, (2011) 16.7% of women aged 15–44 used female sterilization as a method of contraception in 2006-2008 while 6.1% of their partners used male sterilization, minority women were more likely to use female sterilization than their white counterparts.

The European Journal of Contraception and Reproductive Health Care (2011), reported that the proportion of women using female sterilization was highest for black women (22%), followed by Hispanic women (20%) and white women (15%). Reverse sterilization trends by race occurred for the male partners of the women: 8% of male partners of white women used male sterilization, but it dropped to 3% of the partners of Hispanic women and only 1% of the partners of black women. White women were more

likely to rely on male sterilization and the pill. While use of the pill declined with age, the report found that female sterilization increased with age. Correspondingly, female sterilization was the leading method among currently and formerly married women; the pill was the leading method among cohabiting and never married women. 59% of women with three or more children used female sterilization. Thus, women who do not intend to have more children primarily rely on this method of contraception in contrast with women who only aim to space or delay their next birth.

Regarding education, less-educated women aged 22-44 years were much more likely to rely on female sterilization than those with more education." For example, female sterilization was used among 55% of women who had not completed high school compared with 16% of women who had graduated from college (Vital and Health Statistics, 2010). Because national surveys of contraceptive methods have generally relied on the input of women, information about male sterilization is not as widespread. A survey using data from the 2002 National Survey of Family Growth found similar trends to those reported for female sterilization by the Centers for Disease Control and Prevention in 2006-2008. Among men aged 15–44 years, vasectomy prevalence was highest in older men and those with 2 or more biological children, men with less education were more likely to report female sterilization in their partner, in contrast to female sterilization trends, vasectomy was associated with white males and those who had ever visited a family planning clinic Several factors can explain the different findings between female and male sterilization trends in the United States. Women are more likely to receive reproductive health services. "Additionally, overall use of contraception is associated with higher socioeconomic status, but for women, use of contraceptive tubal sterilization has been found to be related to lower socioeconomic status and lack of health

insurance." This finding could be related to Medicaid-funded sterilizations in the postpartum period that are not available to men (National Survey of Family Growth, 2010). Understanding the physical effects of sterilization is important because it is a common method of contraception among women who had interval tubal sterilization, studies have shown a null or positive effect on female sexual interest and pleasure. The American College of Obstetricians and Gynecologists, (2002) reported that similar results were discovered for men who had vasectomies. National Library of Medicine, (2012) stated that vasectomy can take as long as 3 months for the procedure to be fully effective as with any surgical procedure, infection, swelling, or prolonged pain can occur, careful following of aftercare instructions reduces these risks significantly.

Johns, (2002) reported that tubal sterilizations result to serious problems in less than 1 out of 1000 women. Tubal sterilization is an effective procedure, but pregnancy can still occur in about 1 out of 200 women. Some potential risks of tubal sterilization include "bleeding from a skin incision or inside the abdomen, infection, damage to other organs inside the abdomen, side effects from anesthesia, ectopic pregnancy (an egg that becomes fertilized outside the uterus), [and] incomplete closing of a fallopian tube that results in pregnancy. Potential risks of vasectomies include "pain continuing long after surgery, bleeding and bruising, a (usually mild) inflammatory reaction to sperm that spill during surgery called sperm granuloma, and infection." Additionally, the vas deferens, the part of the male anatomy that transports sperm, may grow back together, which could result in unintended pregnancy (Johns, 2002). Sterilization is the most commonly used of all methods of contraception (Parker-Mauldin and Segal, 1998). In the USA, approximately 15% of couples choose tubal sterilization and 12% vasectomy (Kaunitz, Illions, Jones and Sang, 1995). In the UK, over 40% of couples choose sterilization when

the female partner is over 40 years of age (Guillebaud, 1992). Both tubal sterilization and vasectomy are safe and effective methods of contraception and are suitable options for couples who have completed their family. Tubal sterilization has been reported to have a lowest expected failure rate of 0.2% during the first year and a typical failure rate of 0.4% (Trussell, Hatcher & Cates, 1990).

Female sterilization risks and complications: is a small risk of damage to other organs during the procedure, particularly the womb and bowel, but this is rare. The procedure will be performed by a very experienced gynecologists and the centre has robust procedures in place to deal with any emergency that may arise. There is always a risk of ectopic pregnancy, but the relative risk increases very slightly following sterilization. The signs are very similar to those of a normal pregnancy, such as a missed period or sickness, but accompanied by pain similar to that associated with appendicitis. It is therefore vitally important to see a doctor immediately if you suspect you may be pregnant. The incidence of infection is, fortunately, very rare. However it is always a possibility after any surgery, so should women suspect that their wound is infected, it is advisable to go for treatment. An infection is easily treatable, but does require prompt medical attention. There are also risks associated with administration of a general anaesthetic (these apply to all procedures under general anaesthetic).Unlike condoms, female sterilisation offers no protection against sexually transmitted infections such as chlamydia and HIV (NHS Choices, 2015).

Barrier contraceptive methods

National Institutes of Health, (2012) reported that barrier method of contraceptive is designed to prevent sperm from entering the uterus, barrier methods are removable and may be an option for women who cannot use hormonal methods of contraception. Male

condoms is a thin sheath that covers the penis to collect sperm and prevent it from entering the woman's body, male condoms are generally made of latex or polyurethane, but a natural alternative is lambskin (made from the intestinal membrane of lambs). Latex or polyurethane condoms reduce the risk of spreading sexually transmitted diseases (STDs). Lambskin condoms do not prevent STDs, male condoms are disposable after a single use. Female condoms are thin, flexible plastic pouches and a portion of the condom is inserted into a woman's vagina before intercourse to prevent sperm from entering the uterus, the female condom also reduces the risk of STDs and female condoms are disposed of after a single use.

Diaphragms**:** Each diaphragm is a shallow, flexible cup made of latex or soft rubber that is inserted into the vagina before intercourse, blocking sperm from entering the uterus. Spermicidal cream or jelly should be used with a diaphragm. The diaphragm should remain in place for 6 to 8 hours after intercourse to prevent pregnancy, but it should be removed within 24 hours. Traditional latex diaphragms must be the correct size to work properly, and a health care provider can determine the proper fit. A diaphragm should be replaced after 1 or 2 years. Women also need to be measured again for a diaphragm after giving birth, having pelvic surgery, or gaining or losing more than 15 pounds. (Allen, 2004) reported that the diaphragms, such as the Silcs diaphragm, are designed to fit most women and do not require fitting by a health care provider, the Silcs diaphragm is currently in clinical trials for approval by the U.S. Food and Drug Administration (FDA), (2012).

Cervical caps: These are similar to diaphragms, but smaller, more rigid, and less noticeable. The cervical cap is a thin silicone cup that is inserted into the vagina before intercourse to block sperm from entering the uterus. As with a diaphragm, the cervical

cap should be used with spermicidal cream or jelly. The cap must remain in place for 6 to 8 hours after intercourse to prevent pregnancy, but it should be removed within 48 hours. Cervical caps come in different sizes, and a health care provider determines the proper fit Food and Drug Administration, (2012) reported that, with proper care, a cervical cap can be used for 2 years before replacement.

Contraceptive sponges: These are soft, disposable, spermicide-filled foam sponges. One is inserted into the vagina before intercourse. The sponge blocks sperm from entering the uterus, and the spermicide also kills the sperm cells. The sponge should be left in place for at least 6 hours after intercourse and then removed within 30 hours after intercourse. Currently, the Today Vaginal Contraceptive Sponge is the only sponge approved by the FDA.

Spermicides**:** A spermicide destroys sperm. A spermicide can be used alone or in combination with a diaphragm or cervical cap. The most common spermicidal agent is a chemical called nonoxynol-9. It is available in several concentrations and forms, including foam, jelly, cream, suppository, and film. A spermicide should be inserted into the vagina close to the uterus no more than 30 minutes prior to intercourse and left in place 6 to 8 hours after intercourse to prevent pregnancy.

Risks of barrier contraceptive methods: National Institutes of Health, (2012) reported that the male condom is a fine rubber or plastic sheath, worn on an erect penis. It catches sperm, stopping it reaching the egg. There is also a female condom which sits in the vagina. Currently, there is only one brand of female condom available in the UK, called Femidom and if used correctly and consistently, female condoms are 95% effective. This means that five out of 100 women using female condoms as contraception will become

pregnant in a year. Condom is drug-free alternative and can protect you from sexually transmissible infections - no other method of contraception can. Though they can be used with short notice, unlike the Pill which requires forward planning and consistent use. Condoms have a five to 10 per cent failure rate and also its own potential risks. A condom can tear when it is too tight or fall off when it is too loose. If this should happen while you are having intercourse, use emergency contraception. If you are worried about exposure to a sexually transmitted infection (STI), get tested. The diaphragm and cervical cap- are barrier methods, placed inside the vagina to cover the entrance to the uterus. A diaphragm is a shallow dome of thin rubber and is held in place by the pelvic muscles. A cap is a firm, cup-shaped device which fits over the cervix by suction.

The diaphragm and cap stop sperm reaching the uterus and prevent pregnancy, you leave the product inside for six hours or longer after sex so the sperm die without reaching their target, it is more effective if used with a spermicide cream/gel. Spermicidal kill or disable sperm so that the sperm cannot cause a pregnancy, these offer a drug-free alternative and can be used with short notice, unlike the Pill which requires forward planning and consistent use. But it is not as reliable as some other methods and is difficult to measure, putting it in and taking it out can increase your risk of having a urinary tract infection, if 100 women used a diaphragm as their regular method of contraception for a year, between 4 and 20 would have an unexpected pregnancy, but there are potential risks when using a diaphragm with spermicide, it may increase your risk of urinary tract infections. Leaving a diaphragm or cervical cap in for longer than 24 hours increases your chances of getting toxic shock syndrome and some women are allergic to nonoxynol-9, which is the active ingredient in most spermicides, they can develop sores in the vagina or on the penis, which make it more likely that HIV can be transmitted from an infected

partner during sex and Spermicides do not prevent the transmission of STDs and may cause allergic reactions or vaginitis (American College of Obstetricians and Gynecologists, 2011)

Natural Method:

NHS Choices, (2014) reported that Natural Family Planning is a method that teaches women at what time during the month they can have sex without contraception and with a reduced risk of pregnancy, the method is sometimes called fertility awareness and it works by plotting the times of the month when they're fertile and when they're not. Women learn how to record fertility signals, such as their body temperature and cervical secretions (fluids or mucus), to identify when it's safer to have sex. Natural family planning is more effective when more than one fertility signal is monitored, women can't learn natural family planning from a book, it has to be learned from a specialist teacher or health educator, if the instructions are properly followed, natural family planning methods can be up to 99% effective, depending on what methods are used, this means that one woman in 100 who use natural family planning will get pregnant in one year, it will be less effective if it's not used according to the instructions – estimates suggest that it may only be around 75% effective and women can use it to plan when they get pregnant. Though they have to keep a daily record of their fertility signals, such as their temperature and the fluids coming from their cervix – it takes three to six menstrual (monthly) cycles to learn the method, their fertility signals can be affected by factors such as illness, stress and travel and if they want to have sex during the time when they might get pregnant, they need to use a condom, diaphragm or cap, by using condoms as well as natural family planning, they'll help to protect them self against sexually transmitted infections (STIs). The aim of natural family planning is to prevent unwanted pregnancy

by avoiding sex, or using barrier methods of contraception, during the woman's fertile time. Natural Family Planning involves using your body's signs and symptoms to assess if you're currently fertile and likely to get pregnant if you have sex. It is important that you are taught natural family planning by a suitably qualified teacher (NHS Choices, 2014).

Joseph, (2016) stated that it is called natural because it does not involve use of drug or device it is purely natural the following are the available natural family planning methods: Withdrawal, (coitus interrupters), Safe period (rhythm method), Breastfeeding amenorrhea method, Cervical mucus membrane, basal body temperature and Symto thermal method, natural method involve being able to predict your fertile time - effective if done correctly, it requires commitment and regular checking of fertility indicators such as body temperature and cervical secretions, this is less likely to be an effective method around the time of menopause if your periods have become irregular and unpredictable. The advantage is that there are no side-effects or medical risks but they may not be as reliable as other methods and fertility awareness needs proper instruction and takes 3-6 menstrual cycles to learn properly because it involves tracking changes in the amount and texture of vaginal discharge, which reflect rising levels of estrogen in the body, for the first few days after your period, there is often no discharge, but there will be a cloudy, tacky mucus as estrogen starts to rise, when the discharge starts to increase in volume and becomes clear and stringy, ovulation is near and return to the tacky, cloudy mucus or no discharge which means that ovulation has passed (Joseph, 2016).

Lactational Amenorrhea Method (LAM) is used by a woman who has just given birth and is exclusively breastfeeding. This method is highly effective for the first six months after childbirth, provided the woman breastfeeds the baby at least every four hours during the day and every six hours through the night, and that her menstrual period

has not yet returned. After six months fertility may return at any time. In the Temperature Method a woman takes her waking temperature to identify a rise in temperature indicating ovulation has passed. Elevated waking temperature for three days in a row is considered confirmation of the post- ovulatory less fertile phase. Rhythm (Calendar) Method is a much less effective natural birth control method. It predicts a woman's fertile days using calculations based on the length of past cycles and not daily observations of fertility signs as used by FAM/NFP. The Standard Days Method/Cycle Bead System is a variation of the Rhythm Method. These are the least effective natural birth control methods and are not generally recommended. In this contraceptive method, the man withdraws his penis from a woman's vagina before ejaculation.

Both partners must be in agreement on this method, and must be prepared to deal with an unplanned pregnancy, which can occur in 1 out of 5 users. Abstinence is a fancy word for choosing not to do something. A person can choose to abstain at any point in their life, even if they haven't abstained in the past. Sexual Abstinence can mean choosing to abstain from different levels of sexual activity. Avoidance of vaginal intercourse is very effective for preventing unwanted pregnancy and still allows a couple to be involved in other forms of sexual expression. However, if a secondary goal is to avoid sexually transmitted infection, then oral-genital sex and other activities that expose the partner to pre-ejaculatory fluid, semen, cervical-vaginal secretions or blood must be avoided unless the partner is known to be free of any possible infectious agents. (The Society of Obstetricians and Gynecologists of Canada, 2012).

2.6 Advantages of Contraceptives

Contraceptive use slows population growth, this is important because overpopulation puts pressure on the environment, the economy and services such as education and health,

contraception can be used to plan when women and couples have children and how many children they have. This includes choosing when they want to begin having children, how far apart they want their children to be and when they want to stop having children and this is everybody's right under the United Nations Declaration of Human Rights. Delaying or spacing babies allows women and men to follow education and career goals that may be interrupted by having children. This empowers people and increases their ability to earn more with fewer children, families and also able to invest more in each child (Allais, 2013).

Girls and young women are especially at risk of problems in pregnancy. Contraception allows them to put off having children until their bodies are fully able to support a pregnancy. It can also prevent pregnancy for older women who face pregnancy-related risks, contraceptive use reduces the need for abortion by preventing unwanted pregnancies, it reduces cases of unsafe abortion which is one of the leading causes of maternal death worldwide, and by using contraception young women can prevent unwanted pregnancies that can have negative impacts on their relationships and ambitions as early pregnancy can also cause health problems for the baby, and babies born by teenage women are likely to be underweight before and at birth and are at higher risk of neonatal mortality (dying within 28 days of birth) (Charlton, 2014). Pregnancies that are too close together or poorly timed can contribute to high infant mortality rates – that is, the rate of babies that die within their first year of life but contraceptive use lets women plan their pregnancies so they can make sure the baby is getting the best care before and after birth (Schindler, 2013).

Contraceptives cause menstrual cycles to occur regularly and predictably. This is especially helpful for women with periods that come too often or too infrequently, it can

also offer significant relief to women with painful menstrual cramps (dysmenorrhea) it also reduce the amount of blood flow during the period, as less blood loss is helpful in preventing anemia (Brusca, 2010). The risk of developing ovarian cysts is greatly reduced for birth control pills users because they help prevent ovulation. An ovarian cyst is a fluid - filled growth that can develop in the ovary during ovulation (the release of an egg from an ovary). Birth control pills provide some protection against pelvic inflammatory disease (PID). Pelvic inflammatory disease is a serious bacterial infection of the fallopian tubes and uterus that can result in severe pain and potentially, infertility. Birth control pills can improve inflammatory and non-inflammatory acne (Lopez, 2012).

For moderate to severe acne, which other medications can't cure, birth control pills may be prescribed. The hormones in the pill can help stop acne from forming. Women who have endometriosis tend to have less pelvic pain and fewer other symptoms when they are on the Pill. Birth control pills won't cure endometriosis but it may stop the disease from progressing. The pills are the first-choice treatment for controlling endometriosis growth and pain. This is because birth control hormones are the hormone therapy that is least likely to cause bad side effects. 70 - 90% of patients see improvement in the symptoms of fibrocystic breast conditions with use of oral contraceptives and women with excessive facial or body hair may notice an improvement while taking the Pill, because androgens and testosterone are suppressed by oral contraceptives (Orio, Muscogiuri& Giallauria, 2016).

High androgen levels can cause darkening of facial and body hair, especially on the chin, chest, and abdomen. It also work primarily by suppressing ovulation, they effectively prevent ectopic pregnancy as well as normal pregnancy. This makes the pills an excellent contraceptive choice for women who are at particular risk for ectopic

pregnancy, a potentially life-threatening condition. Several studies show that by regulating hormones, the pill can help prevent osteoporosis, a gradual weakening of the bones. However, the results of different studies are conflicting (Corson, 2003).

2.7 Disadvantages of Contraceptives use

About 40% of women who take birth-control pills will have side effects of one kind or another during the first three months of use, the vast majority of women have only minor transient undesired effects and some side effects are uncommon but may be dangerous, studies have demonstrated that cigarette smoking considerably increases the risk of heart attack in women age 35 years or older, that's why the pills are generally not prescribed to women in this age group who smoke, moreover women who take oral contraceptive and have a history of migraines (particularly migraines with aura) have an increased risk of stroke compared to nonusers with a history of migraine (Allais, 2008). Birth control pills containing levonorgestrel and 30 mg of estrogen are the safest form of hormonal contraception with regard to risk of myocardial infarction or ischemic stroke (Roach, 2015).

Women taking birth control pills usually have a small increase in both systolic and diastolic blood pressure, although readings usually remain within the normal range, blood pressure should be closely monitored for several months after a woman starts taking oral contraceptives, and followed yearly thereafter. Women who use birth control pills are at a slightly increased risk of having a blood clot in the legs or lungs, studies consistently show that the risk of venous thromboembolism (VTE) is two to six times higher in oral contraceptive users than in nonusers but the risk of blood clots is higher in women with clotting disorders or who have previously had a deep venous thrombosis or pulmonary embolism and other risk factors include obesity (Sugiura, Kobayashi& Ojima, 2015).

Older age, having several family members who've had blood clots before old age, air travel, and having to lie or sit for a prolonged period, as you might after major surgery. The highest risk of venous thromboembolism carry the pills containing newer progestogens -- desogestrel and cyproterone (Vinogradova, Coupland& Hippisley-Cos, 2015). Headaches may start in women who have not previously had headaches, or can get worse in those who do. Depression (sometimes severe), irritability and other mood changes may occur (Poromaa & Segebladh, 2012)**.** This side effect usually goes away after the first few months of use or can be prevented by taking the pill with a meal. Your breasts may become tender or may get larger.

Breast tenderness is relatively common during the first month of contraceptives and uncommon thereafter, spotting or bleeding between menstrual periods is very common in the first cycle of pills or if pills are missed or taken late. Women may experience a decreased interest in sex, decreased ability to achieve orgasms, and increased pain during sexual intercourse (Battaglia, 2012). Some women report slight weight gain. Weight gain is often caused by fluid retention or estrogen-induced fat deposits in the thighs, hips, and breasts. Weight gain may also be related to a reduction in physical activity or increased intake of food. In some women the androgenic effects from the progestins in their oral contraceptives can increase their appetite. Darkening of the skin on the upper lip, cheeks, forehead, or under the eyes (chloasma). This may slowly fade after you stop taking the pills, but in most cases, it is permanent. Women who use oral contraceptives experience a significant increase in gingival inflammation and are more likely to have periodontitis (Brusca, 2010). Birth control pills may not be as effective if you are taking certain medications. Some antibiotics, antifungals, anticonvulsants, herbs like St. John's Wort, can change the amount of the contraceptive

hormones absorbed by the stomach and the metabolism of these hormones, some women should not take pills if they have specific health conditions, including some types of diabetes, liver disease, cardiovascular disease, women with risk factors for heart disease, such as those with high blood pressure or who are obese, are also at higher risk when on the pill and basically birth control pill does not offer any protection against sexually transmitted infections and you must remember to take the pills at the same time every day, pills must be taken every day, even if a woman does not have intercourse that day.

Taking oral contraceptives for more than 3 years significantly increases the risk of glaucoma (American Academy of Ophthalmology, 2013). Taking oral contraceptives contributes to nutrient deficiencies, including vitamins B2, B6, B12, and C; folic acid (Shere, 2015). magnesium, selenium, and zinc (Palmery, Saraceno, Vaiarelli& Carlomagno, 2013). Long-term use of oral contraceptives during reproductive age may be a risk factor for developing diabetes after menopause (Kim, Jeon & Lee 2016). Progestogen-only contraceptives may worsen the results of the glucose tolerance test (Charlton, Rich-Edwards, Colditz, Missmer, Rosner, Hankinson, Speizer & Michels, 2014).

2.8 Purpose of Contraceptives

The purpose of birth control remains the same. Contraception allows women to prevent pregnancy, the use of contraception helps women to determine how many children she may want to have as well as the timing of her pregnancies since most contraceptives are made for women (with the exception of condoms and a vasectomy), it is very common for women to use contraception based on where they are in their lives. Women who choose not to use any contraception and who are sexually active for one year have an 85% chance of becoming pregnant sometime during that year, variables such

as age and frequency of sex could affect this number and the use of contraception can significantly lower women chances of becoming pregnant and some types of birth control can even lower women risk of contracting a sexually transmitted infection; People choose to use contraception for many reasons, choosing the birth control method that is right is a personal decision and should be an informed one, this means that women should do their research and compare their contraceptives options before they start to use contraception, when women choose a method that she's comfortable with, she'll be more likely to use it (Barnett & Stein, 1998).

There is no "right" reason to use contraception, even though the purpose of contraceptives is to prevent pregnancy, many women choose to use contraception because of certain health advantages. For example, some hormonal birth control methods may help regulate women period, reduce acne, and lower endometriosis-related pain. If the purpose of contraceptives is to prevent women from becoming pregnant, then the use of contraception has far-reaching implications. In fact, using contraception to prevent pregnancy can allow women to have a career, either by being able to get a job or keep one to better financially support themselves and finish their education, take better care of themselves or their family to have more stability and control over their lives (by waiting for the best time to become pregnant) (Goldin, 2002). We are all individuals, and we have our own unique needs. If a woman feel that having a baby right now would get in the way of her goals or is something she's not ready for, then the use of contraception may be very important to her, it is very common for women to use contraception, so they can put off having children until their lives are more stable, established, and financially-secure, the quality of women relationship with their partner (or not having a reliable partner) can also impact their decision to use contraception, women may choose one birth control method

over another depending on where she is in her life. For example, woman may want a more effective method, people use contraception for their own, individual reasons -- reasons that take into account the purpose of contraceptives specifically in life as well as sexual, moral/religious, reproductive, and financial needs (Katz, 2002).

San Diego (2003), reported that every month a woman's body begins the process that can potentially lead to pregnancy. An egg (ovum) matures, the mucus that is secreted by the cervix (a cylindrical-shaped organ at the lower end of the uterus) changes to be more inviting to sperm, and the lining of the uterus grows in preparation for receiving a fertilized egg. According to Peacock, (2000) any woman who wants to prevent pregnancy must use a reliable form of contraceptives. Birth control (contraception) is designed to interfere with the normal process and prevent the pregnancy that could result. There are different kinds of contraceptives that act at different points in the process, from ovulation through fertilization to implantation, each method has its own side effects and risks and some methods are more reliable than others (whitney, 2003).

2.9 Knowledge of Risks of Contraceptives use

According to Okon (2013), a large number of women take contraceptive or birth control pills to avoid unwanted pregnancy. But only few have the knowledge of the serious potential risk of these drugs. Women should know that most birth control pills contain high levels of estrogen which causes the body to undergo some physical and emotional changes and this will continue for as long as the patient stays on the pills. The changes occur as the body responds to synthetic estrogen. Among these changes are larger breasts, weight gain or loss, acne, slight nausea, emotional sensitivity before menstruation, mood swings, while the period lasts, irregular bleeding or spotting, tender breasts and decreased libido. Alice & Park, (2015) reported that the serious health risks

that accompany contraceptives are, increased risk of cervical and breast cancer, increased risk of heart attack and stroke, migraines, higher blood pressure, gall bladder disease, benign liver tumors, decreased bone density, yeast overgrowth and infection, increased risk of blood clotting and infertility, Yeast infection (Candida) is another major distressing condition brought on by the consumption of contraceptive pills, the pills actually destroy the good bacteria in the body making the woman more susceptible to yeast growth, lower immunity and infection.

Adelaja, (2002), stated that good bacteria in the intestine aids digestion and protect the body against diseases however, stopping the pill means you will have to come up with alternative methods of family planning, the most common alternatives to contraceptive pills include: condoms, contraceptive sponge, diaphragm, cervical cap, intrauterine device (IUD, female condom, spermicidal foam, calendar method, withdrawal method, abstinence and sterilization. According to Alice & park (2015), the female condom is a clever device which can be inserted up to eight hours before sex and can be used with any lubricant unlike the male condom which cannot be used with oil-based lotions; female condoms require a lot of lubricants. Guttmacher, (2012) stated that each year only half of the women at risk for unintended pregnancy are adequately protected through consistent and correct use of contraceptives. Twenty-seven percent of women are at elevated risk for unintended pregnancy because they use their contraceptive method inconsistently or incorrectly. An additional fifteen percent are at high risk because of gaps in contraceptive use caused by difficulty in using or accessing methods, infrequent sexual activity, or misperceptions of risk for pregnancy. Notably, these gaps often coincide with important life events, such as beginning or ending a relationship,

changing a job, or a experiencing a personal crisis. Another eight percent of women who are at risk for unintended pregnancy use no contraceptive method (Rose, 2002).

Becker (2013), reported that, almost half of the women were unaware that pregnancy is more dangerous than contraception; the overall risk of death for young healthy nonsmokers using oral contraceptives (OC) is two hundred and forty times lower than the risk of death from pregnancy-related complications. Edwards (2000), reported that The risk of developing potentially deadly blood clots in pregnancy is five times greater than the risk of blood clots from oral contraceptives, women highest risk of blood clots is during the immediate post-partum period, **i**nadequate knowledge and lack of accurate, relevant information and education on preventive measures is a major barrier to women of reproductive age. Women often are not fully aware of their contraceptive choices option Spies, Askelson, Gelman & Losch (2010), found that 79% of women were aware of the intrauterine device (IUD), while two other surveys revealed that only about 50% realized the intrauterine device (IUD was a contraceptive.

According to Guttmacher (2008), women may not use contraception consistently because of lack of knowledge of their chosen method, infrequent sexual activity, and ambivalence about pregnancy, or misperceptions about pregnancy risk. Addressing these and other barriers to the use of effective contraception through health talks is the way to helping women prevent contraceptives risks. Women who have knowledge of different methods and their risks are more likely to use contraception and choose a method that has been explained by their clinician (Lee, Parisi, Akers, Borrero,& Schwarz, 2011). Harper, Brown, Foster-Rosales & Raine, (2010) reported that, satisfaction with the healthcare provider and continuity of care is linked with more consistent use of oral contraceptives, all women require knowledge through individualized counseling on the risks of

contraceptive options and of pregnancy throughout their reproductive years as their needs may change over time. A woman's health status may change; if so, use of some contraceptive methods may change the traditional risk-benefit profile (Bonnema, McNamara, &Spencer, 2010). Contraception provides control over pregnancy timing and avoidance of unintended pregnancy, in selecting a contraceptive method; individuals weigh factors such as efficacy, prevention of sexually transmitted infections, side effects, convenience, and non contraceptive benefits (Adelaja, 2002).

Akers, (2011) reported that Contraceptive knowledge in primary care may reduce the risks of contraceptives risks, contraceptives knowledge provides education, dispels misinformation, facilitates selection of a method that will be successful for the individual, and encourages patient involvement in healthcare decisions and life goals, discussing contraception brings the clinician and patient together to create a tailored care plan that meets the individual's reproductive needs over a lifetime.. A survey of women who were prescribed the vaginal ring, transdermal patch, oral contraceptive, or injectable contraception at family planning clinics revealed that 10% were unaware that their birth control method used hormones. Harper, Brown, Foster-Rosales & Raine, (2010) stated that only 50% of women using the ring or the patch knew their method did not prevent pregnancy by blocking sperm like a condom, some women were skeptical about the efficacy of the ring, believing that it "does not look as if it would work."Two-thirds were concerned the ring could get lost in their body, a major misperception about the pill is that it leads to weight gain, (Harper, Brown, Foster-Rosales & Raine, 2010).

Another survey found 50% of women believe male condoms are 99% effective in preventing pregnancy—instead of the 85% efficacy reported by Centers for Disease Control and Prevention, (CDCP) (2010). Schrager & Hoffmann, (2008) state that another

survey revealed that more than 50% of women were not sure the intrauterine device was safe, many women believed it increases the risk of ectopic pregnancy, cancer, or a sexually transmitted infection. Research carried out by Frost, Lindberg and Finer (2012), found that Knowledge about contraceptive methods is a strong predictor of use among young adults in a 2012 study among women aged 20–44, for each correct response on a contraceptive knowledge and preventive scale, women's odds of currently using a hormonal or long-acting reversible method increased by 17%, and their odds of using no method decreased by 17%. Daniels, Mosher & Jones, (2012) assert that more than 99% of women aged 15–44 who have ever had sexual intercourse know about contraception and have used at least one contraceptive method.

2.10 Prevention of the risks of contraceptives

Prevention is the backbone of any medical system, women of different age group and different marital status must understand the potential risk of each of the contraceptive and have confidence that the measures physicians are recommending are going to be beneficial for their health, oral contraceptives increase rates of cardiovascular morbidity and mortality, as well as increasing the rates of breast and cervical cancers, women need complete informed consent on all of the possible risks of contraceptives; complete personal and family histories need to be ascertained by health care providers to ensure that adverse events do not occur. When women are choosing oral contraceptives, they should not be misled or confused into believing that what they are taking is "good for them" and has similar beneficial effects to other evidence-based preventive measures. Long-term use of oral contraceptives (OCs) has been linked to increased blood coagulation, with its increased risk of cardiovascular problems. Their long-term use also has been linked to altered immune and inflammatory factors, suggesting an increased risk of chronic immune disorders with an inflammatory component, including cancer, this

report reviews these various risks and also discussed two natural food extracts, one showing anticoagulant effects and the other exhibiting certain anti-inflammatory and immune-modulatory effects (Gina, 2012). Understanding the risk of contraceptive commodities is an important aspect of preventing contraceptives risks. Findings from the 2003, Nigeria Demographic and Health Survey have previously showed that the private sector was the most frequently reported source and counseling of contraceptive supply, providing contraception to two and a half times as many women as the public sector, this information and knowledge would be useful to prevent the risks of contraceptives. The sources of contraceptive commodities cannot only limit the number of available methods. They can also affect the kind of information clients receive on the methods chosen. Incorrect information leads to unsatisfactory usage and unable to prevent the risks, which can ultimately result to problem as a result of contraceptive uses (Nigeria Demographic and Health Survey, 2003).

Abma, (2004) reported that a majority of women will have sex by age 18 which means they are at risk for unintended pregnancy and sexually transmitted infections (STIs), knowledge about contraception and other sexual health issues can prevent these risks and, for these reasons, it is important to understand where women acquire this type of knowledge. The Nigeria 2001-2002 National Survey of Adolescents revealed that main sources of sexual health information were school, friends and parents (Henry, 2003). Specifically, three-quarters of 15-17 year olds indicated that they had learned “a lot” or “some” about relationships and sexual health (presumably including contraception) from sex education classes (77%), friends (76%) and from parents (75%). Other common sources of sexual health information were media (70%, including television shows, movies, magazines and the internet), romantic partners (50%) and healthcare providers (51%). One-third (34%) indicated that siblings were also a source of sexual health

information. Other national survey data show that while schools remain a dominant source, formal school-based instruction about birth control declined from 81% of 15-19 year old males and 87% of females in 1995 to 66% of males and 70% of females in 2002, (Lindberg, & Santelli, 2006).

Another study using national survey data found that one-half of adolescent females and one-third of adolescent males have talked to a parent about birth control (Abma, 2004). Over the last decade, exposure to the internet has increased at an almost exponential pace, and it is possible that the web is helping to fill the sexual health information gap, the overwhelming majority of teens (93%) are users of the internet, including approximately three-quarters who have a high speed connection at home (Zhao, 2009). Studies have found that approximately one in four young adults have used the internet to find information about sex (Borzekowski, Rickert & Rideout, 2001). At least one study found that adolescents identified the internet as their most common source of information about birth control and sex, though friends and parents were identified as more valuable sources but most studies only provide a partial picture. First, teens draw on multiple sources of information in their everyday lives, and most research of where women acquire sexual health information has focused on one or two potential sources commonly parents, school and friends (Guilamo-Ramos, 2006 &Lindberg, 2000)

Moreover, many studies are rather broad in their questioning, measuring women exposure to information about "relationships and sex" or "birth control and sex," which can incorporate a range of topics. Finally, most studies of where women acquire information about contraception have little to say about the context in which the information was provided. For example, if some students attend classes where teachers only discuss the shortcomings of contraceptive methods, this is a qualitatively different type of information than one where both the pros and cons of various methods are

presented.; (Jaccard, 2000). Borzekowski & Rickert, (2001) reported that the purpose of this exploratory study is to provide a more nuanced understanding of contraceptive risks from a wide range of sources including school, parents and other family members, friends, romantic partners, health care providers, religious groups, the media (including television, movies, and magazines) and the internet to be able to work towards preventing contraceptives risks. Primary care physicians often prescribe contraceptives to women of reproductive age with morbidities. Novel delivery systems (e.g., contraceptive patch, contraceptive ring, single-rod implantable device) may change traditional risk and benefit profiles in women with morbidities. Effective contraceptive use requires an understanding of a woman's preferences and medical history, as well as the risks, benefits, adverse effects, and contraindications of each method to be able to prevent contraceptives risks.

Non contraceptive benefits of combined hormonal contraceptives, such as oral contraceptive pills, include regulated menses, decreased dysmenorrhea, and diminished premenstrual dysphoric disorder. Progestin-only contraceptives are recommended for women with contraindications to estrogen. Depo-Provera, a long-acting injectable contraceptive, may be preferred in women with sickle cell disease because it reduces the frequency of painful crises. Because of the interaction between antiepileptics and oral contraceptive pills, Depo-Provera may also be considered in women with epilepsy. Implanon, the single-rod implantable contraceptive device, may reduce symptoms of dysmenorrhea. Mirena, the levonorgestrelcontaining intrauterine contraceptive system, is an option for women with menorrhagia, endometriosis, or chronic pelvic pain (Rachael, Megan &Abby, 2010).

The American College of Obstetricians and Gynecologists (ACOG), (2006) published guidelines for the use of hormonal contraceptives and prevention of contraceptives risks in women with morbidity Since its publication, new contraceptive

products have been approved by the U.S. Food and Drug Administration, and new data about the risks of the contraceptive patch (Ortho Evra) and the long-acting injectable progestin, depot medroxyprogesterone acetate (Depo-Provera), have emerged. Although women of reproductive age with morbidities may prefer, or be more appropriate for, non pharmacologic family planning options, such as fertility awareness-based methods or barrier contraceptives, this article focuses on the prescription of hormonal contraceptives. Understanding the indications, benefits, and risks of these products, as well as patient preferences, will help physicians match patients with the contraceptive method best for them (Centers for Disease Control and Prevention 2010). Combined hormonal contraceptives are generally safe in healthy women older than 35 years who do not smoke, provided that there are no other contraindications (Petri, Kim & Kalunian, 2005). Rachael, Megan & Abby (2010) also reported that Oral contraceptive pills may be used safely in women with a range of medical conditions, including well-controlled hypertension, uncomplicated diabetes mellitus, depression, and uncomplicated valvular heart disease. However, women older than 35 years who smoke should avoid oral contraceptive pills. Contraceptives containing estrogen, which can increase thrombotic risk, should be avoided in women with a history of venous thromboembolism, stroke, cardiovascular disease, or peripheral vascular diseases. Many risks of combined hormonal contraceptives, such asvenous thromboembolism VTE and, less commonly, myocardial infarction or stroke, are related to the effects of estrogen on the cardiovascular system.

These risks are increased in women older than 35 years who smoke. Oral contraceptives OCPs have been shown to elevate systolic and diastolic blood pressures by about 8 and 6 mm Hg, respectively (Cardoso, Polónia, Santos, Silva-Carvalho & Ferreira 2007). Caution should be used in women with elevated blood pressures, especially those older than 35 years. Guidelines from the World Health Organization, (2010) and

American College of Obstetricians and Gynecologists, (2010) suggest that the risks of Oral Contraceptives outweigh the benefits in patients with poorly controlled hypertension. American College of Obstetricians and Gynecologists (ACOG) (2006), recommends that the use of Oral Contraceptives in women with diabetes be limited to women younger than 35 years who do not smoke; are otherwise healthy; and show no evidence of hypertension, nephropathy, retinopathy, or other vascular disease. Obesity can complicate the choice of contraceptives for several reasons. For example, data suggest that certain oral contraceptive and the contraceptive patch may have limited effectiveness in women who are obese (Holt, Scholes, Wicklund, Cushing-Haugen & Daling 2005). Additionally, obesity is an independent risk factor for cardiovascular disease and venous thromboembolism, and exposure to excess estrogen in these women may further increase their risk (Zieman, Guillebaud, Weisberg, Shangold, Fisher& Creasy 2002). WHO, (2010) considers the benefits of Oral Contraceptives in this population to be greater than the harms. Although American College of Obstetricians and Gynecologists (ACOG) (2006) suggests that a progestin-only method may be safer.

According to Westhoff (2005), weight has not been shown to change the effectiveness of the contraceptive ring or extended-cycle Oral Contraceptives. Anderson, (2004) stated that if the decision is made to prescribe Oral Contraceptives to a patient who is obese, the physician should assess for comorbidities that would preclude her from using Oral Contraceptives, such as severe hypertension or uncontrolled diabetes. Oral Contraceptives can increase the risk of venous thromboembolism VTE in all users; risk is especially high in women with a history of venous thromboembolism, women with antiphospholipid antibodies, or women who are undergoing major surgery with an anticipated period of prolonged immobilization. According to World Health Organization WHO (2010), the risk of venous thromboembolism may also be higher in women who

use Oral Contraceptives that contain specific third-generation progestins, such as desogestrel and gestodene and kemmeren Algra & Grobbee, (2001) reported that, there have been conflicting data about an increased risk of venous thromboembolismin women who use the contraceptive patch; the risk may be slightly increased or equivalent to the risk of venous thromboembolism in women who use Oral Contraceptives. Jick, Kaye& Russmann, (2006) stated that, although there are no recommendations to alter prescribing habits at this time, these risks should be balanced with the risk of pregnancy and pregnancy-related complications.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

The purpose of this study was to assess the knowledge and prevention of the risk of contraceptive use among women in Kwara State. The research design, population,

sample and sampling techniques, research instrument, validation of instrument, administration of instrument and statistical techniques were described in this chapter

3.1 Research design

In this study, the researcher adopted Expost-Facto Research design, the information required to assess the knowledge and prevention of contraceptive use among women in Kwara State was already available with the respondents, and there will be no manipulation of information by the respondents. According to Kerlinger (2000), the Expost-Facto Research design does not in any way control an independent variables.

3.2 Population of the study

The population of women in Kwara State consists of one million, one hundred and seventy one thousand, five hundred and seventy (1,171,570). (National Population Commission, 2006).

3.3 Sample and Sampling Techniques

For the purpose of this study, the sampling technique used was proportional sampling techniques. The 16 Local Governments Area in Kwara State has been stratified into three senatorial districts namely, Kwara South, Kwara North and Kwara Central. In this technique, 2 local governments from each of the senatorial zones in Kwara State was selected and used for this study. In all a total of six hospitals were selected from the Local Governments used for the study. To select hospitals from each stratum, a proportional sampling technique was adopted to select University Of Ilorin Teaching hospital, Ola-olu hospital ilorin, General hospital Lafiagi, General hospital Patigi, General hospital Share and General hospital Offa. This selection was done on the basis of population of women in each local government. The six selected local government in Kwara State have population of 180,926 Women who were between the ages of 20-44 according to (NPC),

(2006). Richard (2005) reported that the larger the population size, the smaller the percentage of the population required to get a representative sample and generally, when population is beyond 5000 the population size is almost irrelevant and a sample size of 120 may be adequate. Therefore, 378 samples were used for this study. (78 in Ilorin east), (86 in ilorin south), (74 respondents was sampled in edu), (35 in pategi), (73 in Ifelodun), and (32 in offa). This gives a total of three hundred and seventy eight samples. Reason for disparity was based on 10% of the population of women between ages of 20-44 years from the selected LGA.

Table 3.1 Distribution of LGA in each Senatorial Zone based on the population of women from each Local Government as well as the number of questionnaire that was distributed.

S/N	Senatorial Zones	Local Government Area in Kwara State.	Selected LGA in Kwara State	Women between ages of 20-44	Sampled Questionnaire
1	Kwara Central	Asa,Ilorin east, Ilorin,south, Ilorin west,	Ilorin east Ilorin south	37,392 40,985	78 86
2	Kwara North	Baruten, Edu, Kaiyaman, Moro, Patigi	Edu Patigi	35,388 16,730	74 35
3	Kwara South	Ekiti, Ifelodun, Irepodun, Isin, Offa, Oke-ero, Oyun,	Ifelodun Offa	34,913 15,518	73 32
	Total			180,926	378

Table 3.2: Distribution of questionnaire in each hospital under the selected Local Governments in Kwara State

S/N	Names of Selected LGA in Kwara State	Names of hospital Selected for the Questionnaire	Number of questionnaire distributed.
	Ilorin east	University of Ilorin Teaching hospital	78

	Ilorin south	Olo-olu hospital	86
	Edu	General hospital Lafiagi	74
	Patigi	General hospital Lafiagi	35
	Ifelodun	General hospital share	73
	Offa	General hospital Offa	32
Total			378

3.4 Instrument for the Data Collection

The purpose of the study was to investigate the knowledge and prevention of the risk of contraceptive use among women in Kwara State; A questionnaire titled "knowledge and prevention of the risk of contraceptive use among women in Kwara State" was used for this study. The questionnaire was structured in to three sections; section A contained four statements on demographic information of the respondents. Section B contains eight statements on knowledge of the risk of contraceptives, while section C contained eight statements on prevention of the risk of contraceptives use among women in Kwara State. The questionnaire response model was structured into five point likert rating scale:

Key to the options:

Strongly Agree - SA- (5 points)

Agree - A- (4 points)

Undecided - UN- (3 points)

Disagree - D- (2 points)

Strongly Disagree - SD- (1point)

3.5 Validation of the Instrument

To guarantee the face content validity of the instrument, jurors from the Department of Physical and Health Education and Nursing sciences vetted the questionnaire. Their corrections and contributions were incorporated into the final copy of the questionnaire.

3.6 Procedure for Data Collection

In this study, a total of 378 copies of questionnaire were administered to the women attending antenatal and post natal clinic in the hospitals from the selected local government. The distribution of copies of the questionnaire was based on 10% of the total number of women between 20-44 years in each LGA. The table 3.2 shows the distribution of women in each hospital. The research assistants were trained on method of data procedure and collection. Moreover, the research assistants assisted those who cannot read and write. The questionnaire was distributed by the researcher and three research assistants to some of the women present at antenatal and post natal clinic one after the other, they were guided and persuaded to cooperate and was retrieved as soon as the respondents were through with them.

3.7 Procedure for Data Analyses

The following statistical analyses were used to achieve the purpose of the study.

a) The demographic variables were analyzed using frequency and percentage distribution statistics of means and standard deviation. Research Hypotheses were tested using analysis of variance statistics for differences

among the grouping variable in each case. Hypotheses one and two were tested with the chi square. Sub hypotheses three, four, five and six were tested with the One way analysis of variance for differences among age groups and marital status respectively. All hypotheses tested at 0.05 alpha.

CHAPTER FOUR

DISCUSSION OF RESULTS

4.0 Introduction

The study was conducted on "knowledge and prevention of the risks of contraceptives used among women in Kwara State, Nigeria". A total of 400 respondents were used for the study. The research questions were provided with answers. The statistical package IBM version 23 was used for the analysis of the data coded from the retrieved instrument.

4.1 Analysis of Results

The analysis were presented in sections, section one presents the Personal Data of Respondents in frequencies, section two provided answers to the research questions, and the third section tested the hypotheses. The hypotheses one and two were tested with the chi square. Hypotheses three, four, five and six were tested with the One way analysis of variance for differences among age groups and marital status respectively. All hypotheses tested at 0.05 alpha level of significance. Summary of major findings was also included in this chapter

Table 4.1: Personal Data of Respondents in frequencies and percentages

Age group	Frequency	Percentage
20-24	81	21.4
25-29	134	35.4
30-34	112	29.6
35-39	44	11.6
40-44	07	1.9
Total	378	100.0

Marital status	Frequency	Percentage
Single	71	18.8
Married	273	72.2
Separated	23	6.1
Divorced	11	2.9
Total	378	100.0

Level of Education	Frequency	Percentage
Primary school	62	16.4
Secondary school	36	9.5
Tertiary institution	256	67.7
no formal education	24	6.3
Total	378	100.0

Occupation	Frequency	Percentage
civil servant	192	50.8
Private worker	125	33.1
Business	36	9.5
house wife	25	6.6
Total	378	100.0

The table 4.1 shows the distribution of respondents on their different age groups. Age groups of 20-24 years, 25-29 years, 30-34 years, 35-39 years and 40-44 years had 81 or 21.4%, 134 or 35.4%, 112 or 29.6%, 44 or 11.6% and 7 or 1.9% respectively. This shows that women between age 25-29, 30-34 representing 35.4% and 29.6% in Kwara State had knowledge of contraceptives use and its risk prevention. Majority of the respondents representing 72.2% are married, 18.8 % are single, and 6.1% are separated while 2.9% are divorced. The table above further shows that married women in Kwara State had the highest representation with 273 frequency representing 72%. This revealed that married women in Kwara State are more aware and had knowledge of contraceptives use and its risk prevention compare to single, separated and divorced.

On respondents' level of education, 62 representing 16.4% possess primary education, 36 representing 9.5% possess secondary education, 256 representing 67.7% possess tertiary education while 24 representing 6.3% possess no formal education. This revealed that women in Kwara State who had Tertiary Education are more knowledgeable about contraceptive use and its risk prevention.

The occupation of the respondents shows that 192 representing 50.8% are civil servants, 125 representing 33.1% are private workers, 36 representing 9.5% are business women while 25 representing 6.6% are house wives. Therefore majority of the respondents are either civil servants or business women. This revealed that majority of the civil servants in Kwara State are more knowledgeable about contraceptive use and its risk prevention.

4.2 Answering of Research Questions

Research Question One: Will women have knowledge of the risks of contraceptives use in Kwara State?

Table 4.2: Mean scores of respondents on knowledge of the risks of contraceptives

S/NO	Items	Response Categories					MEAN	STD.DEV
		SA	**A**	**UD**	**D**	**SD**		
1	One of the risk of contraceptives use is cervical cancer	59	156	25	68	70	3.17	1.39
2	There is an increase risk of cervical cancer in women with human-papillomavirus infection if they use oral contraceptives for longer than five years.	161	168	7	30	12	4.15	1.01
3	High blood pressure is one of the main risk factors for arterial disease, and the combination of high blood pressure and combine pill should be avoided	106	223	12	37	0	4.05	0.83
4	Oral contraceptives are known to increase the risk of high blood pressure for women who smoke.	153	187	7	19	12	4.19	0.93
5	Contraceptive use is a significant risk factor for acquiring urinary tract infection, with the barrier method.	147	160	33	32	6	4.08	0.97
6	Diaphragm spermicide may cause reaction or infection in users with latex allergy	75	177	69	310	26	3.65	1.09
7	Depo-Provera contraceptives is not intended for a woman who want to be pregnant any time soon	76	107	32	101	62	3.09	1.41
8	Certain (IUDs), intrauterine devices can cause pelvic inflammatory disease (PID), which could lead to infertility	115	149	25	75	14	3.73	1.19
	Cumulative mean						***3.76***	

Decision mean = 3.000

The table 4.2 shows the knowledge level of the risks of contraceptives use among women in Kwara State. Most are of the belief that cervical cancer is one the risks of contraceptive use, this attracted the highest mean response of 4.19 with details showing that while 153 were on strong agreement, 187 were in agreement, 7 were undecided as against 19 that disagreed and the rest 12 in strong disagreement. They were also of the view that Women who smoke should avoid the use of oral contraceptives as this view had the second highest mean response of 4.15 with details showing that 161 were in strong agreement while 168 were in agreement, 7 that were undecided as against 30 that disagreed and the rest 12 in strong disagreement.

In summary, the knowledge level of the risks of contraceptives use among women in Kwara State is high. This is because the cumulative mean responses of 3.76 in this regard are higher than the standard mean of 3.00. Moreover, most are of the belief that Barrier method of contraceptive can increase the risks infection.

Research Question Two: Will women have preventive measure of the risks of contraceptive use in Kwara State?

Table 4.3: Mean scores of respondents on the preventive measure of the risks of contraceptives

S/No	Items	Response Categories					Mean	STD.DEV
		SA	A	UD	D	SD		
1	Awareness of various risks of contraceptives is the backbone of preventing risks of cervical cancer.	76	185	24	74	19	3.60	1.15
2	Getting tested for human papillomavirus infection before using oral contraceptives is a way of preventing risks of cervical cancer.	130	211	31	6	0	4.23	0.66
3	Combination of high blood pressure and combine pill should be avoided to prevent risks of high blood pressure	142	125	38	55	18	3.84	1.21
4	Women older than 35 years who smokes should rather choose natural contraceptive and avoid oral contraceptive pills for prevention of risks	110	206	19	31	12	3.98	0.97
5	Health talks about risks of barrier method of contraceptives will prevent women from risk of acquiring urinary tract infection.	185	143	30	7	13	4.27	0.93
6	Contributions of the media on risks of diaphragm spermicide will guide women with latex allergy from getting infections or reactions.	192	143	31	6	6	4.35	0.82
7	To prevent risk of infertility, I understand that Depo-Provera contraceptives is not intended for a woman who want to be pregnant any time soon	79	181	58	48	12	3.71	1.03
8	Women should avoid intrauterine devices which caused pelvic inflammatory disease (PID), in other to prevent risks of infertility	151	148	43	30	6	4.08	0.98
	Cumulative mean						***4.00***	

Decision mean = 3.000

The prevention of the risks of contraceptive use among women in Kwara State as stated in the table 4.3 shows that Contributions of the media can help women towards preventing contraceptives risks has the highest mean of 4.35 as details showed that 192 were in strong agreement, 143 were in agreement, 31 were undecided, 6 disagreed while 6 were in strong disagreement.

In the same vein they believe that health talks given during antenatal helped them to acquire information on how to prevent risks of urinary tract infections as 185 were in strong agreement, 143 were in agreement, 30 were undecided, 7 disagreed while 13 were in strong disagreement.

In summary, on prevention of the risks of contraceptives use among women in Kwara State, their main sources of information includes Contributions by the media (including television, movies, magazines) and the internet can help women towards preventing contraceptives risks and Health talks given during antenatal helped them to acquire information on how to prevent risks of contraceptives

Research Question three: What is the difference between women of different age group in their knowledge of the risks of contraceptive use among women in Kwara State?

Table 4.4: Descriptive mean statistics difference between women of different age group in their knowledge of the risks of contraceptive use among women in Kwara State.

Women of different Age group	n	Mean	Std. Deviation	Std. Error
20-24	81	31.0864	3.91854	.43539
25-29	134	29.7239	4.91796	.42485
30-34	112	29.8571	3.59894	.34007
35-39	44	31.6818	5.14792	.77608
40-44	7	21.0000	.00000	.00000
Total	378	30.1217	4.55337	.23420

The descriptive statistics showed that the computed mean knowledge of contraceptives among the women from different age groups are 31.0864, 29.7239, 29.8571, 31.6818 and 21.0000 by age groups of 20-24 years, 25-29 years, 30-34 years, 35-39 years and 40-41 years respectively. Therefore ages 35-39 years had the highest knowledge followed by ages 20-24 years.

Research Question Four: What is the difference between women of different age group in the preventive measures of the risks of contraceptive use among women in Kwara State?

Table 4.5: Descriptive statistics on difference between women of different age group in the preventive measures of the risks of contraceptive use among women in Kwara State

Women of different Age group	n	Mean	Std. Deviation	Std. Error
20-24	81	31.0123	4.11854	.45762
25-29	134	31.4627	4.00123	.34565
30-34	112	32.9732	2.72942	.25791
35-39	44	32.2955	3.31016	.49903
40-44	7	39.0000	.00000	.00000
Total	378	32.0503	3.76852	.19383

The descriptive statistics showed that the computed mean preventive measures of contraceptives among the women from different age groups are31.0123, 31.4627, 32.9732, 32.2955 and 39.000 by age groups of 20-24 years, 25-29 years, 30-34 years, 35-39 years and 40-41 years respectively. Therefore ages 40-44 years had the highest knowledge followed by ages 30-34 years.

Research Question Five: What is the difference between women of different marital status in their knowledge of the risks of contraceptive use among women in Kwara State?

Table 4.6: Descriptive statistics on difference between women of different marital status in their knowledge of the risks of contraceptive use among women in Kwara State

Women of different Marital Status	n	Mean	Std. Deviation	Std. Error
Single	71	31.0423	4.92352	.58431
Married	273	29.9304	4.45718	.26976
Separated	23	29.6087	3.98565	.83106
Divorced	11	30.0000	5.38516	1.62369
Total	378	30.1217	4.55337	.23420

The descriptive statistics above showed the between women of different marital status in their knowledge of contraceptive use among women in Kwara State. Their mean knowledge on the basis of marital status are 31.0423, 29.9304, 29.6087 and 30.0000 by single, married, separated and divorced women respectively. Their means are very close irrespective of their marital status as far as their knowledge of contraceptive use among women in Kwara State.

Research Question Six: What is the difference between women of different marital status in the preventive measures of the risks of contraceptive use among women in Kwara State?

Table 4.7: Descriptive statistics on: Analysis of variance (ANOVA) statistics on difference between women of different marital status in the preventive measures of the risks of contraceptive use among women in Kwara State

Women of different Marital Status	n	Mean	Std. Deviation	Std. Error
Single	71	33.0704	3.31802	.39378
Married	273	31.7729	3.83095	.23186
Separated	23	32.1304	4.01479	.83714
Divorced	11	32.1818	3.76346	1.13473
Total	378	32.0503	3.76852	.19383

The descriptive statistics above showed the between women of different marital status in their Preventive measures of contraceptive use among women in Kwara State. Their mean preventive measures on the basis of marital status are 33.0704, 31.7729, 32.1304 and 32.1818 by single, married, separated and divorced women respectively. Their means are very close irrespective of their marital status as far as their preventive measures of contraceptive use among women in Kwara State

4.3 Hypotheses Testing

Sub Hypothesis One: Women will not significantly have Knowledge on the risks of contraceptives use in Kwara State.

Table 4.8: Chi square statistics on knowledge on the use of contraceptives among women in Kwara State

Variable	Total SA	Total A	Total UD	Total D	Total SD	X^2 calculated	X^2 critical	df	p
knowledge on the use of contraceptives	102	152	24	77	23	880.520	**41.337**	28	0.00

X^2 calculated > X^2 critical, p calculated < 0.05, at df 28

Results of the Chi square statistics above revealed the existence of significant knowledge level on the use of contraceptives among women in Kwara State, this is because the calculated chi square value of 880.520 is found to be higher than the 41.337 chi square critical value at df 28, just as the calculated p value of 0.000 was found to be lower than the 0.05 alpha level of significance. The table also showed that the computed total sum of strongly agree, Agree, Undecided, Disagree and strongly disagree on the knowledge level of the use of contraceptives were 102, 152, 24, 77 and 23 respectively. Consequently the null hypothesis which stated that women will not significantly have Knowledge on the risks of contraceptives use in Kwara State was hereby rejected.

Sub Hypothesis Two: Women will not significantly take Preventive measure of contraceptives risks in Kwara State.

Table 4.9: Chi square statistics on prevention of contraceptives risks on the knowledge possessed by women on contraceptives use in Kwara State

Variable	Total SA	Total A	Total UD	Total D	Total SD	X^2 calculated	X^2 critical	Df	P
prevention of contraceptives risks on the knowledge possessed by women	133	168	34	32	11	341.155	41.337	28	0.00

X^2 calculated > X^2 critical, p calculated < 0.05, at df 28

Results of the chi square statistics above revealed the existence of significant preventive measures of contraceptive risks on the knowledge possessed by women on contraceptives use in Kwara State. This was because the calculated chi square value of 341.155 was found to be higher than the 41.337 chi square critical value at df 28, just as the calculated p value of 0.000 was found to be lower than the 0.05 alpha level of significance. The table also showed that the computed total sum of strongly agree, Agree, Undecided, Disagree and strongly disagree on knowledge of the use of contraceptives were 133, 168, 34, 32 and 11 respectively. Consequently the null hypothesis which stated that women will not significantly take Preventive measure of contraceptives risks in Kwara State was hereby rejected because the calculated chi square value of 341.155 was found to be higher than the 41.337 chi square critical value at df 28.

Sub Hypothesis Three: This null hypothesis state that women of different age group will not significantly have Knowledge on the risks of contraceptives use in Kwara State.

Table 4.10 (A): Analysis of variance statistics on difference between women of different age group in their knowledge of the risks of contraceptive use among women in Kwara State

Knowledge_of_Risk_of_contraceptive_Use

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	793.964	4	198.491	10.543	.000
Within Groups	7022.438	373	18.827		
Total	7816.402	377			

Result of Analysis of variance statistics showed that significant differences exist between women of different age group in their knowledge of the risk of contraceptive use among women in Kwara State. Reason being that the ANOVA calculated p value of 0.000 is lower than the 0.05 alpha level and the computed F ratio value of 10.543 is above the F critical value of 2.60. The null hypothesis was hereby rejected.

Table 4.10 (B): Descriptive mean statistics difference between women of different age group in their knowledge of the risks of contraceptive use among women in Kwara State

Women of different Age group	n	Mean	Std. Deviation	Std. Error
20-24	81	31.0864	3.91854	.43539
25-29	134	29.7239	4.91796	.42485
30-34	112	29.8571	3.59894	.34007
35-39	44	31.6818	5.14792	.77608
40-44	7	21.0000	.00000	.00000
Total	378	30.1217	4.55337	.23420

The descriptive statistics showed that the computed mean knowledge of the risks of contraceptives use among the women from different age groups are 31.0864, 29.7239, 29.8571, 31.6818 and 21.0000 by age groups of 20-24 years, 25-29 years, 30-34 years, 35-39 years and 40-41 years respectively. Therefore ages 35-39 years had the highest knowledge followed by ages 20-24 years.

Table 4.10 (C): Scheffe post hoc multiple mean comparison test on difference between women of different age group in their knowledge of the risks of contraceptive use among women in Kwara State

Knowledge_of_Risk_of_Contraceptives Use

Scheffe

Age	n	Subset for alpha = 0.05	
		1	2
40-44	7	21.0000	
25-29	134		29.7239
30-34	112		29.8571
20-24	81		31.0864
35-39	44		31.6818
Sig.		1.000	.624

The Post Hoc comparison using the Scheffe homogenous subset showed the knowledge of contraceptives among the women from different age groups. Ages 40-44 years had the least knowledge placed in the lower subset 11 while the rest ages had the same level but higher knowledge placed in the higher subset 2.

Hypothesis Four: This null hypothesis state that women of different age group will not significantly take preventive measures on the risks of contraceptives use in Kwara State.

Table 4.11 (A): Analysis of variance statistics on difference between women of different age group in their preventive measures of the risks of contraceptive use among women in Kwara State

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	569.665	4	142.416	11.103	.000
Within Groups	4784.380	373	12.827		
Total	5354.045	377			

Result of the Analysis of variance (ANOVA) showed that significant differences exist between women of different age group in the preventive measures of the risks of contraceptive use among women in Kwara State

Reason being that the ANOVA calculated p value of 0.000 is lower than the 0.05 alpha levels and the computed F ratio value of 11.103 is above the F critical value of 2.60. The null hypothesis was hereby rejected.

Table 4.11 (B): Descriptive statistics on difference between women of different age group in the preventive measures of the risks of contraceptive use among women in Kwara State

Women of different Age group	n	Mean	Std. Deviation	Std. Error
20-24	81	31.0123	4.11854	.45762
25-29	134	31.4627	4.00123	.34565
30-34	112	32.9732	2.72942	.25791
35-39	44	32.2955	3.31016	.49903
40-44	7	39.0000	.00000	.00000
Total	378	32.0503	3.76852	.19383

The descriptive statistics showed that the computed mean preventive measures of contraceptives among the women from different age groups are31.0123, 31.4627, 32.9732, 32.2955 and 39.000 by age groups of 20-24 years, 25-29 years, 30-34 years, 35-39 years and 40-41 years respectively. Therefore ages 40-44 years had the highest knowledge followed by ages 30-34 years.

Table 4.11 (C): Schffe post hoc multiple comparison test on difference between women of different age group in their preventive measures of the risks of contraceptive use among women in Kwara State

Age	n	Subset for alpha = 0.05	
		1	2
20-24	81	31.0123	
25-29	134	31.4627	
35-39	44	32.2955	
30-34	112	32.9732	
40-44	7		39.0000
Sig.		.427	1.000

The Post Hoc comparison using the scheffe homogenous subset showed the preventive ,measures highest preventive measure placed in the higher subset 2 while the rest ages mean preventive measures were placed in lower subset 1

Hypothesis Five: This null hypothesis state that women of different marital status will not significantly have Knowledge on the risks of contraceptives use in Kwara State.

Table 4.12 (A): Analysis of variance on difference between women of different marital status in their knowledge of the risks of contraceptive use among women in Kwara State.

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	76.373	3	25.458	1.230	.299
Within Groups	7740.029	374	20.695		
Total	7816.402	377			

The result of the Analysis of Variance statistics above showed that there is no significant difference between women of different marital status in their knowledge of the risks of contraceptive use among women in Kwara State. This is because the calculated p value of 0.299 is above the 0.05 alpha level of significance as the computed F ratio value of 1.230 is below the 2.60 F critical value. Hence the null hypothesis is thus accepted and retained,

Table 4.12 (B): Descriptive statistics on difference between women of different marital status in their knowledge of the risks of contraceptive use among women in kwara sta

Women of different Age group	n	Mean	Std. Deviation	Std. Error
Single	71	31.0423	4.92352	.58431
Married	273	29.9304	4.45718	.26976
Separated	23	29.6087	3.98565	.83106
Divorced	11	30.0000	5.38516	1.62369
Total	378	30.1217	4.55337	.23420

The descriptive statistics above showed the between women of different marital status in their knowledge of the risks of contraceptive use among women in Kwara State. Their mean knowledge on the basis of marital status is 31.0423, 29.9304, 29.6087 and 30.0000 by single, married, separated and divorced women respectively. Their means are very close irrespective of their marital status as far as their knowledge of contraceptive use among women in Kwara State

Table 4.12 (C): Scheffe post hoc comparison test on difference between women of different marital status in their knowledge of contraceptive use among women in Kwara State

Knowledge_of_Risk_of_contraceptive_Use

Scheffe

Women of different Marital Status	n	Subset for alpha = 0.05
		1
Separated	23	29.6087
Married	273	29.9304
Divorced	11	30.0000
Single	71	31.0423
Sig.		.728

The scheffe post hoc test showed that the means of all the women from different marital status were put in the same subset. This indicate that their mean knowledge on the basis of their marital status is the same

Hypothesis Six: This null hypothesis state that women of different marital status will not significantly take preventive measures on the risks of contraceptives use in Kwara State.

Table 41.3 (A): Analysis of variance (ANOVA) statistics on difference between women of different marital status in their knowledge of the risks of contraceptive use among women in Kwara State.

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	95.233	3	31.744	2.258	.081
Within Groups	5258.812	374	14.061		
Total	5354.045	377			

The result above showed that there is no significant difference between women of different marital status in their knowledge of the risks of contraceptive use among women in Kwara State. This is because the calculated p value of 0.081 is above the 0.05 alpha level of significance as the computed F ratio value of 2.258 is below the 2.60 F critical value. Hence the null hypothesis is thus accepted and retained,

Table 4.13 (B): Descriptive statistics on: Analysis of variance (ANOVA) statistics on difference between women of different marital status in their prevention of the risks of contraceptive use among women in Kwara State.

Women of different Marital Status	n	Mean	Std. Deviation	Std. Error
Single	71	33.0704	3.31802	.39378
Married	273	31.7729	3.83095	.23186
Separated	23	32.1304	4.01479	.83714
Divorced	11	32.1818	3.76346	1.13473
Total	378	32.0503	3.76852	.19383

The descriptive statistics above showed the between women of different marital status in their Preventive measures of the risks of contraceptive use among women in Kwara State. Their mean preventive measures on the basis of marital status are 33.0704, 31.7729, 32.1304 and 32.1818 by single, married, separated and divorced women respectively. Their means are very close irrespective of their marital status as far as their preventive measures of contraceptive use among women in Kwara State

Table 4.13 (C): Schffe post hoc means comparison test on: Analysis of variance (ANOVA) statistics on difference between women of different marital status in their preventive measures of contraceptive use among women in Kwara State.

4.4 Discussion on Findings

The study found answers to research questions and the research hypotheses after been tested, details of which are discussed in this section.

The result of hypothesis one revealed that knowledge level on the use of contraceptives among women in Kwara State is significant. The implication of this outcome is that some contraceptives have risks of cervical cancer, high blood pressure, infection and infertility. This study is in line with Okon (2013), who reveal that a large number of women take contraceptives or birth control pills to avoid unwanted pregnancy but only few of women are aware of the serious potential risk of these drugs. Women who have knowledge of different methods and their risks are more likely to use contraception and choose a method that has been explained by their clinician (Lee, Parisi, Akers, Borrero,& Schwarz, 2011) in addition, women who choose a method in collaboration with their clinician or with information given by the provider are more willing to try newer methods. Guttmacher (2008) concurred that women may not use contraception consistently because of lack of knowledge of their chosen method, infrequent sexual activity, and ambivalence about pregnancy, or misperceptions about pregnancy risk. Addressing these and other barriers to the use of effective contraception through health talks is the way to helping women prevent contraceptives risks.

The outcome of hypothesis two reveal that preventive measures of contraceptives risks on the knowledge possessed by women on contraceptives use is significant. The respondents believe that awareness of risks of cervical cancer, high blood pressure, infections and infertility is the backbone of getting rid of any contraceptive risks. However, contribution of the media such as television, movies, magazines and the internet can help women towards preventing contraceptive risks. This finding agree with Gina (2012), that women need complete informed consent on all of the possible risks of contraceptives; complete personal and family histories need to be ascertained by health care providers to ensure that adverse events do not occur. Women should not be misled or

confused into believing that what they are taking is “good for them” and has similar beneficial effects to other evidence-based preventive measures Findings from the 2003, Nigeria Demographic and Health Survey stated that understanding the sources of contraceptive commodities is an important aspect of preventing contraceptives risks.

According to the outcome of hypothesis three most of the respondents fall between the ages of 20-44 years. This was simply because most of the women in reproductive age were between 15-49 years. This was consisted with the research carried out by Frost, Lindberg and Finer (2012), they found that Knowledge about contraceptive methods is a strong predictor of use among young adults: In a 2012 study among women aged 20–44, for each correct response on a contraceptive knowledge and preventive scale, women’s odds of currently using a hormonal or long-acting reversible method increased by 17%, and their odds of using no method decreased by 17%. Daniels, Mosher and Jones (2012), assert that more than 99% of women aged 15–44 who have ever had sexual intercourse know about contraception and have used at least one contraceptive method.

The research hypothesis three and four reveals that there was no significant difference between women of different age group in their knowledge and preventive measure of the risk of contraceptives which implies a uniformity of level of opinion concerning their knowledge and preventive measures of the risks of contraceptive uses.

The research hypothesis five and six also reveals that there was no significant difference between women of different marital status in their knowledge preventive measure of the risk of contraceptives which implies a uniformity of level of opinion concerning their knowledge and preventive measure of the risks of contraceptive uses. (Daniels, Mosher &Jones, 2013) agree that Four of every five sexually experienced women have used contraceptives, while (National Health Statistics, 2012) reported that

some 62% of all women of reproductive age, married or not are currently using a contraceptive method.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents summary, conclusion, recommendations and suggestion for further studies

5.1 Summary

The purpose of this study was to investigate the knowledge and prevention of the risk of contraceptive use among women in Kwara State, Nigeria. To effectively investigate this, a structured close ended questionnaire was used to obtain information on statement on level of knowledge and preventive measure on contraceptive risks.

Difference between women of different age group in their knowledge and preventive measure and difference between women of different marital status in their knowledge and preventive measure of the risk of contraceptive use. The tested instrument was then administered to 387 respondents in Kwara State using proportional sampling procedure. The Personal data of the respondents were presented using frequency and percentage distribution statistics of means and standard deviation, while inferential statistics of chi-square and t-test at 0.05 alpha level of significance were used for hypotheses testing and one way analysis of variance (ANOVA) was used to established the level of significance in all the tested hypotheses.

5.1.1 Summary of Major Findings

The followings are the summary of the major findings of the study

1. Knowledge of contraceptives risks among women in Kwara State is significant high index level of 3.76.

2. Preventive measure of contraceptives risks exist on the knowledge possessed by women on contraceptives use in Kwara State is significantly high index level of 4.00.
3. There is no significant difference between women of different age groups in their knowledge of the risks of contraceptive use among women in Kwara State.
4. There is no significant difference between women of different age groups in their preventive measure of the risks of contraceptive use among women in Kwara State.
5. There is no significant difference between women of different marital status in their knowledge on the risks of contraceptive use among women in Kwara State.
6. There is no significant difference between women of different marital status in their knowledge and preventive measure on the risks of contraceptive use among women in Kwara State. The descriptive statistics showed that their mean opinion in their knowledge and prevention of the risks of contraceptive use among women in Kwara State on account of their marital status are 64.1127, 61.7033, 61.7391 and 62.1818 by marital status of single, married, separated and divorced respectively. These means are very close implying a uniformity of level of opinion concerning their knowledge and prevention of the risks of contraceptive use among women in kwara on the basis of their different marital status.

5.2 Conclusions

Based on the results of the findings in this study, the following conclusions were made:

1. Women are knowledgeable about the risks of contraceptives
2. There is existence of preventive measure of contraceptives risks on the knowledge possessed by women on contraceptives use in Kwara State.

3. There is general uniformity in the mean regarding their knowledge of the risks of contraceptive use among women of different age groups in Kwara State.
4. There is general uniformity in the mean regarding the preventive measures of the risks of contraceptive use among women of different age groups in Kwara State.
5. There is uniformity of level in the opinion concerning their knowledge on the risks of contraceptive use among women of different marital status in Kwara State
6. There is uniformity of level in the opinion concerning the preventive measure on the risks of contraceptive use among women of different marital status in Kwara State,

5.3 Contribution to knowledge

This study assessed the knowledge and prevention of contraceptive risks among women in Kwara State, Nigeria. On the basis of the findings of this study, the following contributions to knowledge are made:

1. More health talks should be included during antennal and post-natal clinics.
2. Women will find out about preventive measure of contraceptives risks
3. Due to level of awareness among women of different age groups and different marital status in Kwara State, they will be more knowledgeable and be able to choose effective, uncomplicated contraceptives to prevent the risks of contraception.

5.4 Recommendations

As a result of this analysis of the data in this study, the under mentioned are the recommendations

1. Regular health talks about knowledge of contraceptives risks should be discussed by health care providers with women attending antenatal and post natal clinics and be freely discussed within couples in Kwara State.
2. Regular health talks about preventive measure on contraceptives risks should also be discussed by health care providers with women attending antenatal and post natal clinics in Kwara State.
3. The awareness level on knowledge of contraceptives among women of different age group is very low; it is therefore recommended that nongovernmental organizations be used to address these issues.
4. Preventive measures of contraceptives use among women of different age group are very low; it is therefore recommended that health care providers and nongovernmental organizations be used to address these issues.
5. The media especially the electronic media such as radio and television should carry more news on knowledge of contraceptives risks among women of different marital status.
6. There should be legislation on the use of contraceptives to prevent the potential risks among women of different marital status so that the use is not shrouded in secrecy and the natural method of avoidance on contraceptive is still very popular among women and should be encouraged as this has the singular effort at preventing all the health hazards associated with other artificial contraceptives.

5.5 Suggestions for further studies

This study is by no means exhaustive therefore further studies could be carried out on the effect of culture, socio economic characteristics on the use and knowledge of contraceptives among women in North West zone of the country

5.6 Limitation of the study

The main limitation of this study was fear of letting out information that are considered to be personal by the respondents, but the researcher along side with other three research assistants assured them that their information are safe and gave them courage to cooperate with the researcher in filling the questionnaire accordingly.

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APPENDICES

QUESTIONNAIRE ON KNOWLEDGE AND PREVENTION OF THE RISKS OF CONTRACEPTIVES USES AMONG WOMEN IN KWARA STATE, NIGERIA

INSTRUCTIONS:

SECTION A. Personal Data of Respondents

Please tick (√) the statement that best fit you

1. Age Range
   a) 20-24 [ ]
   b) 25-29 [ ]
   c) 30-34 [ ]
   d) 35-39 [ ]
   e) 40-44 [ ]
2. Marital Status
   a) Single [ ]
   b) Married [ ]
   c) Separated [ ]
   d) Divorce [ ]
3. Level of Education.
   a) Primary School [ ]
   b) Secondary School [ ]
   c) Tertiary Institution [ ]
   d) Non Formal Education [ ]
4. Occupation
   a) Civil servant [ ]

b) private worker [ ]

c) Business [ ]

d) House wife [ ]

Key to the options:

Strongly Agree - SA (5 points)

Agree - A (4 points)

Undecided - UD (3 points)

Disagree - D (2 points)

Strongly Disagree - SD (1 point)

SECTION B: Knowledge of Risks of Contraceptive use among women in Kwara State

SN	Statement	SA	A	UD	D	SD
1	One of the risk of contraceptives use is cervical cancer					
2	There is an increase risk of cervical cancer in women with human papillomavirus infection if they use oral contraceptives for longer than five years.					
3	High blood pressure is one of the main risk factors for arterial disease, and the combination of high blood pressure and combine pill should be avoided					
4	Oral contraceptives are known to increase the risk of high blood pressure for women who smoke.					
5	Contraceptive use is a significant risk factor for acquiring urinary tract infection, with the barrier method.					
6	Diaphragm spermicide may cause reaction or infection in users with latex allergy					
7	Depo-Provera contraceptives is not intended for a woman who want to be pregnant any time soon					
8	Certain (IUDs), intrauterine devices can cause pelvic inflammatory disease (PID), which could lead to infertility					

SECTION C: Prevention of the risks of contraceptives use among women in Kwara State.

Please tick as many as the sources of your information

S/N	Statement	SA	A	UD	D	SD
1	Awareness of various risks of contraceptives is the backbone of preventing risks of cervical cancer.					
2	Getting tested for human papillomavirus infection before using oral contraceptives is a way of preventing risks of cervical cancer.					
3	Combination of high blood pressure and combine pill should be avoided to prevent risks of high blood pressure					
4	Women older than 35 years who smoke should rather choose natural contraceptive and avoid oral contraceptive pills for prevention of risks					
5	Health talks about risks of barrier method of contraceptives will prevent women from risk of acquiring urinary tract infection.					
6	Contributions of the media on risks of diaphragm spermicide will guide women with latex allergy from getting infections or reactions.					
7	To prevent risk of infertility, I understand that Depo-Provera contraceptives is not intended for a woman who want to be pregnant any time soon					
8	Women should avoid intrauterine devices which caused pelvic inflammatory disease (PID), in other to prevent risks of infertility					

Appendix A: Chi square table for determining critical values at 0.05

	α =0.995	**0.99**	**0.975**	**0.95**	**0.9**	**0.1**	**0.05**	**0.025**	**0.01**	**0.005**
df =1	---	---	0.001	0.004	0.016	2.706	3.841	5.024	6.635	7.879
2	0.01	0.02	0.051	0.103	0.211	4.605	5.991	7.378	9.21	10.597
3	0.072	0.115	0.216	0.352	0.584	6.251	7.815	9.348	11.345	12.838
4	0.207	0.297	0.484	0.711	1.064	7.779	9.488	11.143	13.277	14.86
5	0.412	0.554	0.831	1.145	1.61	9.236	11.07	12.833	15.086	16.75
6	0.676	0.872	1.237	1.635	2.204	10.645	12.592	14.449	16.812	18.548
7	0.989	1.239	1.69	2.167	2.833	12.017	14.067	16.013	18.475	20.278
8	1.344	1.646	2.18	2.733	3.49	13.362	15.507	17.535	20.09	21.955
9	1.735	2.088	2.7	3.325	4.168	14.684	16.919	19.023	21.666	23.589
10	2.156	2.558	3.247	3.94	4.865	15.987	18.307	20.483	23.209	25.188
11	2.603	3.053	3.816	4.575	5.578	17.275	19.675	21.92	24.725	26.757
12	3.074	3.571	4.404	5.226	6.304	18.549	21.026	23.337	26.217	28.3
13	3.565	4.107	5.009	5.892	7.042	19.812	22.362	24.736	27.688	29.819
14	4.075	4.66	5.629	6.571	7.79	21.064	23.685	26.119	29.141	31.319
15	4.601	5.229	6.262	7.261	8.547	22.307	24.996	27.488	30.578	32.801
16	5.142	5.812	6.908	7.962	9.312	23.542	26.296	28.845	32	34.267
17	5.697	6.408	7.564	8.672	10.085	24.769	27.587	30.191	33.409	35.718
18	6.265	7.015	8.231	9.39	10.865	25.989	28.869	31.526	34.805	37.156
19	6.844	7.633	8.907	10.117	11.651	27.204	30.144	32.852	36.191	38.582
20	7.434	8.26	9.591	10.851	12.443	28.412	31.41	34.17	37.566	39.997
21	8.034	8.897	10.283	11.591	13.24	29.615	32.671	35.479	38.932	41.401
22	8.643	9.542	10.982	12.338	14.041	30.813	33.924	36.781	40.289	42.796
23	9.26	10.196	11.689	13.091	14.848	32.007	35.172	38.076	41.638	44.181
24	9.886	10.856	12.401	13.848	15.659	33.196	36.415	39.364	42.98	45.559
25	10.52	11.524	13.12	14.611	16.473	34.382	37.652	40.646	44.314	46.928
26	11.16	12.198	13.844	15.379	17.292	35.563	38.885	41.923	45.642	48.29
27	11.808	12.879	14.573	16.151	18.114	36.741	40.113	43.195	46.963	49.645
28	12.461	13.565	15.308	16.928	18.939	37.916	41.337	44.461	48.278	50.993
29	13.121	14.256	16.047	17.708	19.768	39.087	42.557	45.722	49.588	52.336
30	13.787	14.953	16.791	18.493	20.599	40.256	43.773	46.979	50.892	53.672
40	20.707	22.164	24.433	26.509	29.051	51.805	55.758	59.342	63.691	66.766
50	27.991	29.707	32.357	34.764	37.689	63.167	67.505	71.42	76.154	79.49
60	35.534	37.485	40.482	43.188	46.459	74.397	79.082	83.298	88.379	91.952
70	43.275	45.442	48.758	51.739	55.329	85.527	90.531	95.023	100.425	104.215
80	51.172	53.54	57.153	60.391	64.278	96.578	101.879	106.629	112.329	116.321
90	59.196	61.754	65.647	69.126	73.291	107.565	113.145	118.136	124.116	128.299
100	67.328	70.065	74.222	77.929	82.358	118.498	124.342	129.561	135.807	140.169

Appendix B SUB HYPO 1

Worksheet size: 100000 cells

Chi-Square Test

Expected counts are printed below observed counts

SA	A	UD	D	SD	Total	
1	59	156	25	68	70	378
	102.08	151.86	24.03	76.90	23.12	
2	161	168	7	30	12	378
	102.08	151.86	24.03	76.90	23.12	
3	106	223	12	37	0	378
	102.08	151.86	24.03	76.90	23.12	
4	153	187	7	19	12	378
	102.08	151.86	24.03	76.90	23.12	
5	147	160	33	32	6	378
	102.08	151.86	24.03	76.90	23.12	
6	75	177	69	310	26	657
	177.43	263.95	41.77	133.67	40.18	
7	76	107	32	101	62	378
	102.08	151.86	24.03	76.90	23.12	
8	115	149	25	75	14	378
	102.08	151.86	24.03	76.90	23.12	
Total	892	1327	210	672	202	3303

```
Chi-Sq = 18.182 +  0.113 +  0.039 +  1.031 + 95.081 +
         34.006 +  1.715 + 12.072 + 28.607 +  5.346 +
          0.150 + 33.322 +  6.025 + 20.706 + 23.117 +
         25.398 +  8.129 + 12.072 + 43.599 +  5.346 +
         19.765 +  0.436 +  3.346 + 26.220 + 12.674 +
         59.131 + 28.645 + 17.749 +232.615 +  5.004 +
          6.664 + 13.254 +  2.641 +  7.549 + 65.401 +
          1.635 +  0.054 +  0.039 +  0.047 +  3.596 =  880.520
DF = 28, P-Value = 0.000
```

Appendix C Sub hypo 2

Chi-Square Test

Expected counts are printed below observed counts

SA	A	UD	D	SD	Total	
1	76	185	24	74	19	378
	133.12	167.75	34.25	32.12	10.75	
2	130	211	31	6	0	378
	133.12	167.75	34.25	32.12	10.75	
3	142	125	38	55	18	378
	133.12	167.75	34.25	32.12	10.75	
4	110	206	19	31	12	378
	133.12	167.75	34.25	32.12	10.75	
5	185	143	30	7	13	378
	133.12	167.75	34.25	32.12	10.75	
6	192	143	31	6	6	378
	133.12	167.75	34.25	32.12	10.75	
7	79	181	58	48	12	378
	133.12	167.75	34.25	32.12	10.75	
8	151	148	43	30	6	378
	133.12	167.75	34.25	32.12	10.75	
Total	1065	1342	274	257	86	3024

```
Chi-Sq = 24.513 +  1.774 +  3.068 + 54.584 +  6.331 +
          0.073 + 11.151 +  0.308 + 21.246 + 10.750 +
          0.592 + 10.895 +  0.411 + 16.288 +  4.890 +
          4.017 +  8.722 +  6.790 +  0.039 +  0.145 +
         20.214 +  3.652 +  0.527 + 19.650 +  0.471 +
         26.038 +  3.652 +  0.308 + 21.246 +  2.099 +
         22.006 +  1.047 + 16.469 +  7.845 +  0.145 +
          2.400 +  2.325 +  2.235 +  0.141 +  2.099 =  341.155
DF = 28, P-Value = 0.000
```

```
CORRELATIONS

/VARIABLES=Knowledge_of_Risk_of_contraceptive_UsePrevention_of_the_Risks
_of_Contraceptive
  /PRINT=TWOTAIL NOSIG
  /STATISTICS DESCRIPTIVES
  /MISSING=PAIRWISE.
```