



**UTILIZATION OF CONTRACEPTIVE METHODS AMONG
SECONDARY SCHOOL FEMALE ADOLESCENTS AT A SELECTED
SECONDARY SCHOOL IN RWAMAGANA DISTRICT, RWANDA**

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by

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In the College of Medicine and Health Sciences

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DECLARATION

I, NGERAGEZE Innocent, do hereby declare that this dissertation is the result of my own work and has not previously been submitted for any other degree at the University of Rwanda or any other institution.

Name: NGERAGEZE Innocent

Signature

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I wish to express my thanks to the Lord for the life he has given me and the guidance I get in all what I do in my daily living.

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I strongly give thanks to my parents and all relatives for all done since my birth.

ABSTRACT

Introduction: adolescent pregnancy has been a global health concern especially in developing countries. Early marriage and adolescent pregnancy is a public health concern in some of the countries in the region where more than a quarter (27%) of adolescent (10-19 years old) deaths in the world (1.3 million) occurred in the South-East Asia Region of WHO owing to early marriage and adolescent pregnancy. In Rwanda, adolescent pregnancy is as high as 7.3%. This study aimed to assess the utilization of contraception among high school female adolescent at a selected secondary school in Rwamagana district.

Methods: a non-experimental, descriptive cross-sectional study design was used in this study. A total population sampling technique was used to recruit study respondents. Data were collected from 117 adolescent girls from a selected secondary school of Rwamagana community and analysis was done using SPSS Version 23. Results from univariate and bivariate analysis are presented in tables and figures in Microsoft Office Word.

Results: The majority of the respondents had heard about methods of contraception (88%) however, contraceptive use was as low as 39% among sexually active high school female adolescents. Factors like education, (OR=1.542, P=0.038) parents approval of contraception (OR=0.342, P= 0.023), discussing the use of contraception with others (OR=0.342, P= 0.014) and avoiding pregnancy (OR=2.343, P=0.002) were significant predictors of contraceptive use among female adolescent students. Major reasons why adolescents do not use contraception include lack of knowledge (47.9%), fear of contraceptive side effects (47%), the attitude of teachers (45.8%), religious beliefs (44.4%) and attitude of contraceptive providers (42.7%) were also revealed by the study participants.

Conclusion: despite high knowledge of contraceptives (88%), the study showed that the utilization of contraceptives among sexually active high school female adolescent is still low (39%). There is a need to enhance sex education, youth-friendly health services, and research to improve female high school adolescent use of contraception and provide better services to them in general.

Key words: contraceptive methods, adolescent, contraceptive utilization

LIST OF SYMBOLS AND ABBREVIATIONS

%: Percent

A-SRH: Adolescent-Sexual and Reproductive Health

CMHS: College of Medicine and Health Sciences

HIV: Human Immunodeficiency Virus

LMIC: Low and Middle-Income Countries

MOH: Ministry of Health

NISR: National Institute of Statistics of Rwanda

RDHS: Rwanda Demographic and Health Survey

SPSS: Statistical Package for Social Sciences

SRH: Sexual and reproductive health

STI: Sexually transmitted infection

TDHS: Tanzania Demographic and Health Survey

U.S: United States

UDHS: Uganda Demographic and Health Survey

UNFPA: United Nations Population Fund

UNICEF: United Nations Children's Emergency Fund

UR: University of Rwanda

WHO: World Health Organization

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DEDICATION

This study is dedicated to Almighty God for guiding me throughout the period of conducting it. This study is also dedicated to my family for guidance, and an invaluable effort invested throughout my study journey. My friends for advice.

CHAPTER ONE: INTRODUCTION

1.1. INTRODUCTION

Using contraception has many health benefits such as stopping unintended pregnancies, safeguarding birth spacing at optimum, reducing the death of mothers and children and ameliorating the livelihood of ladies and their offsprings in general (Ajayi, Adeniyi and Akpan, 2018).

Twenty-one million female adolescents become pregnant in low and middle income states; almost half (49%) are unplanned (WHO, 2016). Around 23 million female adolescent have an unmet need for modern contraception and are at risk of unplanned pregnancy; In addition, 777 000 female adolescent delivered babies in the developing region (WHO, 2016). Early and unintended pregnancy among adolescent girls is influenced by contextual factors at the individual, interpersonal, community and societal levels. It is also associated with adverse health, educational, social and economic outcomes that may impose a substantial burden on the economies and health systems of developing countries (WHO, 2016).

Health policies in most of the countries include attention to adolescent health with emphasis on adolescent sexual and reproductive health. Adolescent contraception and pregnancy prevention is one of the health priorities in the 21st century because more than 16 million give birth annually and additional 5 million have abortions and 50% of these births happen in Sub Saharan Africa (WHO, 2014a).

In Rwanda, effort has been made to promote adolescent health by preventing unintended pregnancies through different programs in response to the increment of adolescents becoming pregnant (NISR, MOH and ICF International, 2015) whereby around 7, 3 % of adolescent give births annually (RDHS, 2015).

This study assessed the knowledge of adolescent on contraception, use of contraceptives among adolescent, factor enabling contraceptive use, and barriers to the use of contraception among female adolescent at a selected high school in Rwamagana district.

1.2. BACKGROUND OF THE STUDY

Approximately 1.2 billion globally are adolescents where they make a fifth of the world's population (WHO, 2016a). Eighty percent (80%) of the adolescent live in developing countries thus making a big percentage of the population (WHO, 2016a). In the South-East Asia Region, maternal mortality ranks second among causes of death in 15 to 19-year-old girls. Early marriage and adolescent pregnancy are a public health problem in some of the countries in the Region (WHO, 2014b) and more than a quarter (27%) of adolescent(10-19 years age) deaths in the world (1.3 million) occurred in the South-East Asia Region of WHO (WHO, 2014b). The exact burden of pregnancy among single adolescent is unknown (WHO, 2015a). To compare, the lowest adolescent mortality rates are in high-income countries: 31 per 100,000 (WHO, 2015a). There are about 350 million adolescent in the South-East Asia Region of WHO that constitute 15% (Sri Lanka) to 26% (Timor-Leste) of the population across the eleven Member States of the region.

Recent studies revealed that about 70,000 adolescent in developing countries die annually of causes related to pregnancy and childbirth which makes adolescent pregnancy a public health concern globally (Omedi, 2014). When a girl becomes pregnant or has a child, her health, education, earning potential and her entire future may be in jeopardy, trapping her in a lifetime of poverty, exclusion, and powerlessness (Omedi, 2014). The impact on a young mother is often passed down to her child, who starts life at a disadvantage, perpetuating an intergenerational cycle of marginalization, exclusion, and poverty. Another health impact comprises risks of maternal death, illness, and disability, including obstetric fistula, complications of unsafe abortion, sexually transmitted infections, including HIV, and health risks to infants (Omedi, 2014).

In Nigeria, adolescents initiate sex early and have various sexual experiences with diverse reasons for their sexual behavior reasons being a pleasure; love and peer pressure especially for those in school. Forceful sex and transactional sex was the major reason for those out of school. Multiple and concurrent sexual partners were reported more among out of school females and the major outcomes of adolescent sexual behavior for both in school and out of school adolescents are unintended pregnancy, unsafe abortion and STI/HIV (Awazzi, 2016). The recommendations based on the findings from this study claimed a need to provide both in school and out of school counseling and Sexual and reproductive health (SRH) services for adolescent, searching the local methods of

abortion for better understanding as well as training Health Care Providers on Adolescent Sexual and Reproductive Health in Nigeria (Awazzi, 2016).

Recent research suggests that, relative to adults, there is a lower contraceptive prevalence among adolescent which put them at increased risk of unwanted pregnancies, STIs and HIV (Vargas et al., 2019). In addition, there are indications that adolescents sexual behavior worldwide and sexual activities done before marriage are usually unintended, rare and irregular, this predisposes the young people to undesirable gestation and STIs (Vargas et al., 2019). Unplanned adolescent pregnancy is associated with unsafe abortion a cause of 13% of global maternal mortality (Vargas et al., 2019). It's more dangerous for adolescents as they tend to seek abortion later in pregnancy and this service can be performed on demand in hospitals, outpatient departments, and private practice for those whose pregnancies have not exceeded 12 weeks; however, abortions are not paid by the government health system (Kirchengast, 2016). Meeting the contraceptive needs of these adolescents could prevent this problem.

Involving parents would be crucial in preventing adolescent pregnancy and preventing other adolescent risk behaviors but there is a controversy about how much families would contribute for adolescent sexual decision making (Silk and Romero, 2014). The argument is that parents should be a part of adolescent' decision making around sexual behaviors and health care and requiring parents involvement could deter youth participation in risky behaviors (Silk and Romero, 2014). However, this logic fails adolescents in three ways. First, parental notification may serve as a barrier to adolescents' access to health services given that most families struggle with talking openly about sexuality. Second, many argue that it is a natural part of adolescent development for youth to become independent from their parents and communicate with them less. Finally, this presents adolescents confronting challenging situations, for example, living in unstable or abusive families or needing to access contraception, STI and other services, with either being forced into having conversations under difficult family circumstances or unable to receive the care they need (Silk and Romero, 2014).

In Rwanda, the situation is not different. Rwanda Demographic and Health Survey (RDHS) 2014-2015 showed that 7.3 % of young women between age 15 and age 19 have already begun childbearing (RDHS, 2015). This was corroborated by the National Institute of Statistics of Rwanda (NISR, 2015) which documented that 7 % of young

women between age 15 and age 19 at the national level have already begun childbearing. Moreover, a study done in Rwanda showed that many adolescents acquired pregnancies at eleven years and beyond where the majority (above 30 %) conceived at their ages of seventeen though a tiny proportion (0.5%) stated to have conceived at the ages of 11 years (Sekanyange, 2016).

The contraceptive utilization rate has been explored among single sexually active females between 15–29 year old where it is approximately 37.9% (Basinga et al., 2012). RDHS 2014-2015 revealed that the utilization of contraception among 15-19 year old is 35% and are more likely to use non-permanent methods of contraception such as injectables and pills (RDHS, 2015).

Although there are some studies done on adolescent contraceptive utilization, little is known about the in school adolescent utilization of contraceptives in Rwanda. Therefore, this study assessed the contraceptive utilization among the adolescentage high school girls in the Rwamagana district.

1.3. PROBLEM STATEMENT

Despite the effort that the government of Rwanda has made such as the availability of free contraceptive methods to adolescent such as condoms, pills, injection and implants, enhancing community awareness of the significance of early pregnancy prevention, providing information, counseling, and creating referral systems with other health facilities and the community to increase follow-up of adolescentage clients and preventing forced sex in response to the increment of the number of adolescent who get unwanted pregnancies whereby the percentage of adolescent who get pregnant is estimated at 7.3%, the utilization of contraceptive methods by sexually active female adolescent is still as low as 35% (RDHS, 2015). The evidence, therefore, is overwhelming that the Sexual and Reproductive Health of the adolescents is important to Rwanda's development. It is a public health priority that demands public health interventions. Studies highlight a number of consequences of unsafe sex such as unintended pregnancy, STIs including HIV/AIDS, servical cancers, complications of unsafe abortion, fistula, school dropouts, disability maternal death and health risks to infant.

A lack of youth-friendly facilities, including characteristics related to the provider, health facility and program design, religion, and cultural background represent major obstacles hindering young people from accessing SRH services.

As far as literature search is concerned, there are limited studies on the use of contraception among high school adolescent in Rwamagana district. This study, therefore, aims to assess the contraceptive utilization among adolescent high school girls in the aforementioned district.

1.4. OBJECTIVES

1.4.1. PURPOSE OF THE STUDY

To assess the utilization of contraceptives among high school female adolescent at a selected secondary school in Rwamagana district.

1.4.2. SPECIFIC OBJECTIVES

- To assess the knowledge of female adolescent about contraceptive methods at a selected high school in Rwamagana district.
- To identify the level of contraceptive methods uses among high school female adolescent at a selected secondary school in Rwamagana District.
- To determine the enabling factors for the use of contraceptives in high school female adolescent at a selected high school in Rwamagana district.
- To identify the barriers to the use of contraceptive methods in high school female adolescent at a selected high school in Rwamagana District.
- To determine the association of enabling factors and the level of use of contraceptives in high school adolescent at a selected secondary school in Rwamagana district.

1.4.3. RESEARCH QUESTIONS

- Do female adolescents at a selected secondary school in Rwamagana district know contraceptive methods?
- Do female adolescent at a selected secondary school in Rwamagana district use contraceptives?
- What are the enabling factors to the use of contraception amongst high school female adolescents at a selected secondary school in Rwamagana district?
- What are the barriers to the use of contraceptive methods among secondary school female adolescents at a selected high school in Rwamagana district?

- What is the association of enabling factors and the use of contraception among secondary school female adolescents at a selected secondary school in Rwamagana district?

1.5. SIGNIFICANCE OF THE STUDY

Secondary school and Ministry of health

The recommendations from this study may inform both the secondary school where this study was conducted and the Rwanda Ministry of Health about what is to be done to better high school adolescent health.

Community and other Policy Makers

The results from this study may inform nurse leaders and policymakers on future review and revision of policies and practices regarding adolescents' reproductive health, sexuality and family life measures that might enhance the use of contraceptives by adolescents by removing possible barriers thus mitigate the burden of unintended pregnancies. Findings will also be shared with the teachers and parents of Rwamagana Community and therefore contribute to developing SRH programs that will work towards empowering the girl child as unplanned pregnancies are the leading causes of school dropouts among the girl child population in Rwanda.

Nursing Research

This study on the utilization of contraceptives among secondary school adolescents may provide a basis for further bigger researches which may be conducted on adolescent related subjects as well as validate the effectiveness of evidence-based protocols.

Nursing Practice

Findings may aid nurses and other practitioners to be aware of the level of adolescent utilization of contraceptives and challenges they face which might be a baseline to improving the adolescent reproductive health services.

Nursing Education

The results of this study may offer an additional source of nursing information that may be used by nursing staff and nursing students in order to help extend their knowledge on the level of adolescent use of contraceptives and factors influencing this use henceforth it may close the conceptual gaps in adolescent's utilization of contraceptives. It may also be used to inform the curriculum innovations of the School of Nursing and Midwifery, especially for adolescent reproductive health chapter.

1.6. OPERATIONAL DEFINITIONS

Adolescent: According to World Health Organization 'Adolescent' is a person in the age between 10-19 years (WHO, 2018b). In this study, adolescent refers to a girl who is between 12 and 19 years old.

The early adolescent: is a person between 10 and 14 years of age (Curtis, 2015) while the **late adolescent:** is a person between 15 and 19 years of age (Curtis, 2015).

In this study, the researcher has used adolescent to mean the the female person between 12 and 19 years. Adolescent and teenager are used interchangeably.

Contraception: Methods or devices used by childbearing to delay gestation, space children or stop childbearing (United Nation, Department of Economic and Social Affairs, 2015). In this study, the concept “contraception” applies to the female adolescents.

Contraceptive methods: are products and approaches that are used to avoid conception (Hubacher and Trussell, 2015). In this study, contraceptive methods are products and devices that an female adolescent is allowed to use to prevent pregnancy.

Contraceptive utilization: is defined as having ever used or currently using at least one method of contraception regardless of the type of the method used (WHO, 2018c). In this study, contraceptive utilization is having ever used or currently using the contraceptive method by a female adolescent

1.7. SUBDIVISION OF THE STUDY

This dissertation is subdivided into 6 chapters.

Chapter 1: Introduction

Chapter 2: literature review

Chapter 3: Methodology

Chapter 4: Results

Chapter 5: Discussion

Chapter 6: conclusion and recommendations.

CONCLUSION TO CHAPTER ONE

This section shows the background of the study, the statement of the problem, the goal of the study and it also demonstrations the objectives of the study, research questions, and the significance of the study. This guides the researcher on the scope of the research by clarifying the objectives the research needs to achieve referring to the background of the

research problems. From the background information; it is evident that the adolescent pregnancy is a major problem and there is a gap regarding contraceptive use among female adolescent; thus the aim of this study was to assess the utilization of contraceptives among female high school adolescent at a selected high school in Rwamaga district.

CHAP II: LITERATURE REVIEW

2.0. INTRODUCTION

This research was carried out referring to what is known about the use of contraception among high school female adolescents; this warranted the researcher to read and conceptualize the existing writings before doing a research. In the view of Polit and Beck (2014), a literature review aids the researcher to recognize what is known and not known about the study topic; it also leads the researcher to identify the methodology to use and to interpret the results of the new study (Polit and Beck, 2014). This chapter reviews the literature related to the utilization of contraceptive methods among female high school adolescent.

2.1. THEORETICAL LITERATURE

2.1.1 DEFINITION OF AN ADOLESCENT

The concept adolescent is defined as one whose age is between 10 and 19 years (Ajah, et al., 2015) Adolescence stage is critical in the growth of a human being characterized by peer pressure, confusion, exuberance, and experimentation mainly with sex, drugs, and alcohol (Ajah, et al., 2015) and reproductive health at this level is critical owing to expansive sexual activities which make them vulnerable to sexually transmitted diseases, undesirable pregnancies, unsafe abortion and death. Many people take adolescence as a turbulent life stage due to its many changes and adolescent psychological challenges associated with peer relationships, self-identity, and exploration of possible sexual relationships with the opposite sex (Ajah, et al., 2015).

According to Aishath, (2016) adolescence is also a time to acquire and grow knowledge and skills to learn how to control emotions and relate with others and acquire the characteristics and abilities important for enjoying adolescent years and assuming adult roles (Aishath, 2016). However, it is distressing to see how little knowledge the majority of the adolescent population on SRH and the use of contraceptives. This opens up this adolescent group to risks such as engaging in unsafe sexual activities, STIs, unwanted pregnancies, abortions, infanticides, and sexual abuse. To protect this vulnerable group, it is therefore critical to educate them on sexual and reproductive health (SRH) plus contraceptive utilization on a formal level (Aishath, 2016).

2.1.2 CONTRACEPTION FOR ADOLESCENTS

Contraceptive methods are classified as hormonal or non-hormonal methods and include condoms, pills, sterilization, injections, intra-uterine devices, spermicidal and implants. The main contraceptive choices for adolescent are condoms supported by hormonal contraceptive methods, however; hormonal contraceptive methods should be used in married couples (Dehlendorf, Krajewski and Borrero, 2014).

To prevent unintended adolescentage conception warrants: the usage of contraceptive methods, a good family planning method, capability to get the contraceptive technique, and skill to utilize it. Any failure to get the above-mentioned opportunities will fail the contraception (Dehlendorf, Krajewski and Borrero, 2014). “Sexual health for adolescents is based on; recognizing their sexual rights, sex education, and counseling, and excellent confidential services” (Dehlendorf, Krajewski and Borrero, 2014).

Unintended pregnancy is serious adolescent morbidity, and use of effective contraception is one of the pillars of adolescent pregnancy prevention. Each year, approximately 750 000 adolescent girls become pregnant, and 82% of these pregnancies are unplanned. More than half of these pregnancies (59%) end in births, 14% end in miscarriages, and 27% end in abortion (Ott et al., 2014). From 1990 to the early 2000s, adolescent pregnancy rates declined markedly, and 86% of this decline was attributable to increased consistent contraceptive use (the remainder was attributed to delay of sexual activity). By 20 years of age, 18% of young women will have given birth, and this number is largely unchanged from 2002 (Ott et al., 2014).

The contraception most frequently used by adolescents is the condom (96%) followed by withdrawal method (57%) (Ott et al., 2014). Amongst hormonal contraceptive methods, familiarity with oral combined contraceptives is the most common (56%), followed by depot provera (20%), the transdermal patch (10%), and the vaginal ring (5%). Above 13% of teenagers have ever used emergency contraceptives and 15% have ever used abstinence periodically (Ott et al., 2014).

A study done in Ghana to assess contraceptive use among adolescents revealed that Knowledge of at least one contraceptive method was high (88.9%) among adolescents of

both sexes (Boamah et al., 2014). The author claimed that Knowledge of male condoms was highest (84.0%), and it was the most common contraceptive method used (82.0%). The use of other methods such as pills (7.9%), injection (0.9%), and foam (0.3%), amongst others, was low (Boamah et al., 2014).

2.2. EMPIRICAL LITERATURE

2.2.1 KNOWLEDGE OF ADOLESCENT TOWARDS CONTRACEPTION

It is crucial to assess the the level of female adolescent's ability to make an informed decision about contraception, and know the source of the method as a Criterion to getting and utilizing a method. In 13 countries of Africa, the percentage of female adolescents who know where to get a contraceptive method was moderate (40–60%). In 3 countries, less than a 3rd of female adolescents know where to get methods; the lowest percentage (18%) was found in the Democratic Republic of Congo. The highest percentages were found in Rwanda (85%), Namibia (79%), Swaziland (79%), Malawi (73%) and Uganda (71%) (Woog et al., 2015).

In 1/3 of Asian countries, located in Southern and Southeast Asia, the percentage of female adolescents who knew where to get a contraceptive mehod was above 70%. The percentage of use were very low in 3 countries: Azerbaijan (15%), Tajikistan (15%) and Kyrgyzstan (18%). For the rest of countries, levels were moderate (Woog et al., 2015). The percentage of female adolescents who knew where to get contraceptives was big in many of Latin America and the Caribbean, reaching 91% in Peru. Moderate levels were found in Bolivia (44%), Brazil (57%) and Guyana (63%) (Woog et al., 2015).

A study conducted by Tchokossa on Knowledge and Use of Contraceptives among Female Adolescents in Selected Senior Secondary Schools in Ife Central Local Government of Osun, State, Nigeria, revealed that the majority (61.5%) of participants had adequate knowledge about contraceptives (Tchokossa and Adeyemi, 2018).

Similar study conducted in Zimbabwe about high school female adolescents' knowledge, attitudes and practices on contraceptives use revealed that Knowledge about modern contraception seems to be universal among adolescents where the majority of respondents, 98%, stated that they had ever heard about modern methods of contraception and Condoms seemed to be the most known method of family planning among

adolescents whereby of the 98% respondents who had ever heard about modern methods of family planning, 84% had heard about condoms, 11% about pills, 2% about implants and 3% about injectables. The study also demonstrated the interest of noting that respondents displayed profound ignorance about female and male sterilization and also IUD (Moyo and Rusinga, 2017). On the other hand 49% knowledge of contraceptives by high school female adolescents was documented in the Central region of Sudan according to Hagan and Buxton, (2014).

In their article talking about dating and Sexual Relationships, Wildsmith et al., (2017) revealed that traditional media, such as television is among the things where adolescents use more time along with new media, such as social networking sites, than engaging in any other activity. Therefore mass media could be among the greatest reason why female high school adolescent know about contraceptives.

2.2.2 KNOWLEDGE OF ADOLESCENT ON CONTRACEPTIVE BENEFITS

Knowledge of high school female adolescent about contraceptive benefits was explored where overall, nearly a quarter (23.6 %) reported that modern contraceptive services and commodities serve in pregnancy prevention, (24.4 %) mentioned that contraception reduces pregnancy-related morbidity and mortality, (20.1 %) revealed that contraception reduces the risk of contracting some cancers that may invade the reproductive system, and may be useful in the management of many menstrual related signs and symptoms and disorders; However, (21.3 %) revealed that it is wrong to use contraceptives (Nsubuga et al., 2016).

In the view of Agyemang et al., (2019) in their study exploring the knowledge of contraceptive benefits about high school female adolescent, 190 (95.0%) participants who could tell how they understood contraceptives and were also able to mention at least a method of contraceptive known and their benefits. Most of them (50.0%) deem it appropriate that contraceptive prevent unintended pregnancies as compared to minority of them (5.0%) who did not have any idea about contraceptive methods and their benefits. It was noted that condom as a method of contraceptive was known by the majority of the respondents (30%), followed by injectable (25.0%) whilst a few (5.0%) knew about IUD. Moreover, 39% of the respondents stated prevention of unintended pregnancy as a benefit

of contraceptive whilst 15.0% said contraceptives help to plan the number of children (Agyemang et al., 2019).

Findings from a study to assess female students' knowledge of Contraceptives showed that respondents had little knowledge of contraception; the main roles of contraception were; ability to prevent STIs, abortions, undesirable pregnancy and psychological trauma (Appiah-Agyekum and Kayi, 2015).

2.2.3 KNOWLEDGE OF ADOLESCENT ON CONTRACEPTIVE USE

The research done on knowledge on contraceptive use revealed that among 70 % who had ever engaged in sexual intercourse, Overall half (51.2 %) of the female students Knew how to use contraceptives , with slight increments in the proportions across the year of study and condom and pills being the mostly mentioned (Nsubuga et al., 2016).

According to Agyemang et al., (2019), an overwhelming majority of the female high school adolescent (82.0%) did not know how to use contraceptives. Also, among the respondents who use contraceptives, a significant proportion of them (33.3%) use condoms with 11.1% of respondents using pills, however the proper utilization of these methods was not granted.

2.2.4 KNOWLEDGE OF ADOLESCENT ON CONTRACEPTIVE SIDE EFFECTS

In the study about knowledge of adolescent on contraceptive side effects, out of the 164 respondents who do not use any type of contraceptives, majority (53.66%) stated that they knew about contraceptive side effects and this accounted for their non-usage whilst 3.66% attributed their non-usage to inconvenience associated with contraceptive use (Agyemang et al., 2019).

The knowledge about contraceptive side effects was also explored in a research which revealed that, participants who reported the good knowledge of contraceptive side effects formed the majority (58.0%) (Agyemang et al., 2019). Majority of respondents (67.0%) agreed that contraception causes intermenstrual spotting and breakthrough vaginal bleeding; as high as 63% of the respondents revealed that contraceptives cause headaches and migraine; More than half of the respondents (77.0%) believe that consuming contraceptive services is good but it causes some side effects such as nausea which may

discourage their use in the majority of adolescent Wildsmith et al., (2017). An overwhelming majority (80.0%) stated that free contraceptives will motivate people to use it and ignore some side effects including weight gain. Again, majority of respondents (54.0%) agree that adolescent fear of side effects if they use contraceptives may be a discouragement as far as missing period and decreased libido are concerned, whilst 18.0% disagree to that assertion (Wildsmith et al., 2017).

Findings from a study to assess female students' knowledge of Contraceptives revealed that respondents did not know enough about contraception; the main side effects revealed by most of the respondents who chose potential utilization of pills, undesired effects of contraception were mainly condoms than other contraceptives (Appiah-Agyekum and Kayi, 2015).

2.2.5 KNOWLEDGE OF ADOLESCENTS ON CONTRACEPTIVES TYPES

Findings about the Knowledge of contraceptive and sexual reproductive health revealed that the most commonly known modern methods were pills (86.7 %) and male condoms (88.4 %), followed by injectables (50.3 %), IUDs (35 %) and implants (26.7 %), female condom (22.1 %) (Nsubuga, et al., 2016).

Findings from a study to assess female students' knowledge of Contraceptives revealed that respondents did not know enough about contraception; out of the many modern and traditional contraceptive methods, the male and female condoms were the main contraceptive types (Appiah-Agyekum and Kayi, 2015). In Europe the pill is the most method of contraception known by female adolescent in secondary schools (21,9%), but this continent has also a high number of adolescent who know the implants (7,8%); The male condom (16,7%) and the IUD (11,3%) are quite popular as well; Other popular methods are the Pill (15%) and the injection (9,6%). In Oceania, the pill is the most known method (21,6%), although the region differs a lot in prevalence rate and used methods (Schaapveld & Ineke, 2018).

GLOBAL BURDEN OF ADOLESCENT PREGNANCIES

Each year, approximately 16 million girls aged 15 to 19 years and 2.5 million girls under 16 years give birth each year in developing regions (WHO, 2018a). Complications during

pregnancy and childbirth are the leading cause of death for 15 to 19-year-old girls globally. Some 3.9 million girls aged 15 to 19 years undergo unsafe abortions; Adolescent mothers (age 10 to 19 years) face higher risks of eclampsia, puerperal endometritis, and systemic infections than women aged 20 to 24 years (WHO, 2018a). Many single adolescents worldwide are engaging themselves in sexuality at young, incited by the mass media exhibition and performance of sex as exciting and free from risk (Wildsmith et al., 2017).

In the United States, the most recent survey of adolescent sexual behavior indicates that nearly 50% of youth are sexually active. Among sexually active youth, 7.1% initiated sexual intercourse before 13 years of age (i.e., early adolescence), 14.9% had sexual intercourse with four or more partners, and over one third (38.5%) had not used a condom during their last sexual intercourse (Deborah et al., 2017). Sexual behaviors such as early sexual initiation, unprotected intercourse, and sex with multiple partners put youth at risk for a range of negative consequences, such as unplanned pregnancy and sexually transmitted infections (STIs), including the human immunodeficiency virus (HIV) (Deborah et al., 2017).

In many developing countries the situation is not different. Girls under 15 years are estimated around 2 million of the 7.3 million childbirths to adolescent less than 18 years each year (Williamson, 2015). Around 19% of young females in low and middle-income states conceive earlier than 18 years (Williamson, 2015). In sub-Saharan Africa, for example, 28% of women give birth by 18 years. It is expected that the concentration of adolescent girls aged 10 to 17 will also change significantly, with the largest increase occurring in sub-Saharan Africa, where adolescent pregnancy is most common, and the rate of contraceptive use the lowest in the world. The number of adolescent girls there will rise markedly, by 51 %, from 75 million in 2010 to 113 million in 2030, and from 18 percent to 26 percent of the adolescent girl population in developing societies (UNFPA, 2016) (UNFPA, 2016). If current trends in sub-Saharan Africa continue, the number of adolescent below 15 years who produce offsprings is likely to increase from 2 million to around 3 million in 2030 (UNICEF, 2018) and approximately 1 in every 4 adolescent girls will live in sub-Saharan Africa (UNFPA, 2016).

Over 200 million women worldwide have no access to modern and effective contraceptives (Williamson, 2015). In developed and developing nations alike, adolescent

pregnancy is of growing public health importance with approximately 11% of global births occurring in girls aged 15 to 19 years, and about 95% of these births occur in low and middle countries (LMICs) (Sama et al., 2017). The regional burden in LMICs is more in sub-Saharan Africa (SSA), where it is estimated that about half of the women gave birth before the age of 20 years, with a resultant high pregnancy-related morbidity and mortality (Sama et al., 2017). In the developing countries, the lack of access to contraceptives results in 76 million unplanned pregnancies each year. Judgmental attitudes of healthcare providers and community about sexual activity abound, especially for those out of a marriage and sexually active girls and women discourage adolescent from seeking reproductive health care (Morris and Rushwan, 2015). In some regions, accepted practices of early marriage and childbearing, age differences between partners, and societal pressure prohibiting the use of contraceptive methods may also exist. Lastly, Poor ASRH can be further confounded by conflict, migration, urbanization, and lack of schooling (Morris and Rushwan, 2015). Contraceptive services need to be “youth-friendly” in order to encourage adolescent to seek reproductive health care (Hofman et al., 2016).

Adolescent frequently abort undesirable gestations through secret induced abortions, which may cause parental complications, including death. In 2008, it was found that The about 3.2 million female adolescents in low and middle income countries experienced unsafe abortion at an annual rate of of 16 unsafe abortions per 1000 adolescents (Woog et al., 2015). Among adolescents it is estimated that the unsafe abortion rate is 26 per 1,000 adolescents between 15–19 years in Africa, 9 per 1,000 in Asia and 25 per 1,000 in Latin America and the Caribbean (Woog et al., 2015). Additionally, proof on abortion amongst adolescents is obtainable in DHS reports from nine low income and middle income countries: Armenia, Azerbaijan, Cameroon, Congo, Gabon, Ghana, Haiti, Kyrgyz Republic, and Tajikistan. The percentage of female adolescent who stated ever having had an abortion was 0.2% in Armenia, 0.4% in Azerbaijan, 2% in Cameroon, 7% in Congo, 5% in Gabon, 3% in Ghana, 1% in Haiti, 0% in Kyrgyz Republic and 0.2% in Tajikistan (Woog et al., 2015). In East Africa, one in five maternal deaths is due to insecure abortion and a large percentage of these deaths are due to unintended pregnancies, in Uganda for example 8% of maternal deaths were due to unsafe abortion (Gutmacher Institute, 2017a)

Though contraception can prevent these abortions, modern contraceptive use remains low among sexually active adolescents in developing countries (Lloyd, 2015). For example, recent studies reveal that contraception use was low amongst married adolescents in all regions of Africa. In more than 2/3 of the countries in Africa, contraceptive use was lower than 20% (Woog *et al.*, 2015). The percentages were uppermost by far in Swaziland (43%), Namibia (39%) and Zimbabwe (35%). Levels were mainly low (less than 5%) in 9 countries, many of which are in Western Africa (Woog *et al.*, 2015).

In Africa, adolescents account for 23% of the total population (UNICEF, 2018). Sub-Saharan Africa has the greatest proportion of adolescent girls who have begun childbearing (UNICEF, 2018). To identify factors influencing adolescent pregnancies in sub-Saharan Africa, Yakubu and Salisu (2018) revealed the following: First, Socio-cultural, environmental and Economic factors (Peer influence, unwanted sexual advances from adult males, coercive sexual relations, unequal gender power relations, poverty, religion, early marriage, lack of parental counseling and guidance, parental neglect, absence of affordable or free education, lack of comprehensive sexuality education, non-use of contraceptives, males responsibility to buy condoms, early sexual debut and inappropriate forms of recreation). Second, Individual factors (excessive use of alcohol, substance abuse, educational status, low self-esteem, and inability to resist sexual temptation, curiosity, and cell phone usage). Finally, Health service-related factors (cost of contraceptives, Inadequate and unskilled health workers, long waiting time and lack of privacy at clinics, lack of comprehensive sexuality education, misconceptions about contraceptives, and non-friendly adolescent reproductive services,) as influencing adolescent pregnancies in Sub-Saharan Africa (Yakubu and Salisu, 2018).

In the East of Africa, the engagement in sexual activities at an early age is a challenge for example in Uganda according to Uganda Demographic and Health Survey (UDHS) 2017 report, 25% of adolescents age 15-19 in Uganda have begun childbearing (UDHS, 2017). This situation is congruent with the one in Tanzania where the Demographic and Health Survey in Tanzania (TDHS) 2015 report revealed the percentage of adolescent who had a child or who were pregnant was as high as 27% (TDHS, 2015).

2.2.1. CURRENT USE OF CONTRACEPTIVES AMONG ADOLESCENTS

Early marriage among girls (below 18 years age) is common in some countries in South-East Asia Region where the proportion of currently married adolescents aged 15-19 years is 46% in Bangladesh, 27% in India and 32% in Nepal. While early pregnancy is commonly associated with early marriage, the proportion of married adolescents aged 15-19 years who have already begun childbearing is 58% in Bangladesh, 35% in India and 30% in Nepal (WHO, 2016c). The use rate of modern contraceptives is lower and the unmet needs for contraception among adolescent married girls are higher among married adolescent girls in comparison to married women between 20-24 years age (WHO, 2016). These contribute to a significant prevalence of adolescent pregnancy. For unmarried adolescents access to contraception is a much bigger concern because of policy and cultural constraints (WHO, 2016).

Utilization of contraceptive methods contraceptive pills, patches, IUDs, injectables, implants, male or female condoms, diaphragms, spermicides or sterilization is the most effective way of preventing unwanted pregnancies. There was great variation in modern contraceptive use among married adolescents across and within sub-regions of Asia. Overall, proportions ranged from 0% in Armenia, where all married 15–19-year-old women currently using a method reported traditional method use, to 52% in Mongolia. In only two countries other than Mongolia did the proportions reach above 40%: Indonesia (48%) and Bangladesh (42%) (Woog et al., 2015). In Latin America and the Caribbean, the proportion of married adolescents using modern contraceptives ranged from 24% in Haiti to 67% in Cuba (Woog et al., 2015).

In around 1/2 of the countries for which data are available, no more than 30% of sexually active unmarried female adolescent were currently using a modern method. In a few countries in each African sub-region, proportions were between 35% and 50%; the highest percentage was in Namibia (69%). Levels of use among unmarried adolescents were substantially and consistently higher in Latin America and the Caribbean, ranging from 26% in Haiti to 83% in Cuba. Levels were fairly low in Asia: With the exception of Kazakhstan (70%), they ranged from 2% in Indonesia (where the law prohibits providing contraceptives to unmarried women) to 33% in Mongolia (Woog et al., 2015).

2.2.2. FACTORS INFLUENCING ADOLESCENT USE OF CONTRACEPTION

Causes of non-usage of contraceptives amongst adolescents comprise; inaccessibility to contraceptive services, age of the first sexual intercourse, having a sexual partner , individual or spiritual beliefs, insufficient knowledge about the dangers of pregnancy following unprotected sex, low decision-making skills regarding to sexual relationships and contraceptive usage, incest, and rape (Blumoff, Makino and Mandy, 2014)

Recent years have been marked by increased social change that makes information about sexual reproductive health readily available through mass media; this information may make engagement in sexual activities seem okay hence leading to increased adolescent pregnancy (Landry,Turner and Wood, 2017). This shows a gap between having information and the truth in engaging in sexual relationships among adolescent. This study was corroborated by Brown and his colleagues in their study conducted to provide information about the attitudes of adolescent girls towards unplanned pregnancies, abortion services (Brown et al., 2015).

In Nepal, as in other Asian countries, the issue of sexuality still remains a taboo. Despite this, there are increasing numbers of sexual activities reported among Nepalese adolescents (Morris and Rushwan, 2015). A study conducted to know the attitude towards premarital sex and unwanted pregnancy of adolescent students revealed that among the total respondents, 32.4% mentioned premarital sex is appropriate and 25% had premarital sex. 33.3% of the total respondent's peers were taking alcohol, 37.7% had a smoking habit and 8.3% had drug dependency (Morris and Rushwan, 2015).

Findings from Ochako and colleagues 2015 revealed that contraceptives usage in adolescent girls was hindered by lack of access to contraceptive services, fear of undesired effects and spiritual beliefs (Ochako et al., 2015). The biggest fear was that a particular method would cause infertility. Many fears were based on myths and misconceptions. Young women learn about both true side effects and myths from their social networks (Ochako et al., 2015). Around 50% of the adolescent are embarrassed to use contraceptive methods, 49% were scared of parental response should their contraception usage be discovered and 43% did not trust contraception. Adolescent' attitudes of embarrassment, fear of parental condemnation and distrust in the efficacy of

contraceptives all pose possible obstacles to adolescent's utilization of contraceptives to avoid unintended pregnancies.

Numerous studies claim adolescent age to be among the factors influencing adolescent use of contraception for example a research conducted by Lawrence and Philbin on sexual initiation, contraceptive use, and pregnancy among US Adolescents aged 10 to 19 showed that utilization of contraceptives and sexual initiation increased with the adolescent's age (Lawrence , Jesse and Philbin, 2017; Layu, et al.,2018; Maharjan, Rishal and Svanemyr, 2019) . Sexual activity is and has long been rare among those 12 and younger; most is nonconsensual. By contrast, older adolescents (aged 17–19) are sexually active. Approximately 30% of those aged 15 to 16 have had sex. Pregnancy rates among the youngest adolescents are exceedingly low, for example, ~1 per 10 000 girls aged 12. Contraceptive uptake among girls as young as 15 is similar to that of their older counterparts, whereas girls who start having sex at 14 or younger are less likely to have used a method at first sex and take longer to begin using contraception (Lawrence , Jesse and Philbin, 2017). This study came to the conclusion that Sexual activity and pregnancy are rare among the youngest adolescents, whose behavior represents a different public health concern than the broader issue of pregnancies to older adolescents. Health professionals can improve outcomes for adolescent by recognizing the higher likelihood of nonconsensual sex among younger adolescents and by teaching and making contraceptive methods available to adolescent patients before they become sexually active.

A study conducted to determine the prevalence and correlates of contraceptive use among female adolescents in Ghana revealed that 58.8 % of the female adolescents were aged 18 to 19 while 41.2 % were aged 15 to 17. The prevalence of contraceptive use was higher among female adolescents aged 18 to 19 (31.4 %) than female adolescents aged 15 to 17 (9.2 %). Also, 68.3 % had secondary or higher education, 23.3 % had primary education and 8.4 % had no formal education (Nyarko, 2015). Therefore female adolescent contraceptive use was significantly determined by age of adolescent.

Adolescent level of perception of the pregnancy outcomes may influence their contraceptive utilization. During their growth, adolescent continually analyze their environment testing boundaries for possible matters. This can lead to risk-taking behavior. They may, for instance, recognize the risk of pregnancy as low, and may then

consume an unsuccessful contraceptive option or none at all, or use a technique wrongly (Lawrence , Jesse and Philbin, 2017).

Researches revealed that adolescent usually participate in accidental, sporadic sexual acts. As a result, they don't use contraceptives during the first sexual act. If adolescent do not think they are exposed to pregnancy and have the attitude "it won't happen to me", then they are less likely to make any choice at all concerning contraceptive method (Susan et al., 2017). Several adolescent seek information on contraceptives merely after a pregnancy worry. Adolescents seek contraceptive services for both pregnancy prevention and the prevention of sexually transmitted infections (STIs). When they first become sexually active, adolescents tend to rely on condoms, withdrawal, and informal ovulation-timing methods (e.g., having sex when they think it is a safe time of the month). As they become more sexually active, they tend to transition to hormonal methods of contraception, which requires formal engagement with a health service provider (Jaccard, Ph and Levitz, 2016). They are less likely to have the enthusiasm and ability to consume a contraceptive method appropriately.

Religion shapes adolescents' perception and behavior in most of life decisions. Some female adolescents attributed to not using contraception as a result of their religious beliefs and customs that don't permit them to utilize contraception. Religion in Uganda plays a very vital role in the decision of the people since the country is built on religious. People perceive religious teachings of great importance and in most cases these teachings are against Contraceptive Utilization (Nakirijja, 2018).

Access to information by adolescent may influence contraceptive use. Unintended pregnancies amongst adolescent happen in spite of the best of contraceptive targets. The effectiveness of adolescent pregnancy avoidance programs remains below preferred levels (Susan et al., 2017). Adolescent' success in avoiding pregnancy often relies on having access to contraceptive information, techniques, and facilities.

Adolescents frequently lack essential information on contraceptive options, and the little information they might have is often inappropriate; most get the information from their peers. In South Africa, 23% of adolescent pregnancy is due to girls wanting to verify their fecundity. This perception encourages adolescents to engage in unprotected sexual

intercourse and avoid using contraceptives so as to prove their fertility (Esantsi et al., 2015).

A study of model sex education programs revealed that though a different programs were fairly effective at raising adolescent's information of contraceptives, they did have great influence on their behavior. The association between what teenagers know and how they behave is perhaps the most relevant issue (WHO, 2015b). WHO case studies show that adolescents do not consistently and correctly use contraceptives at sexual debut, especially females. There is a large gap between knowledge, ever use and consistent contraceptive use, particularly with reference to condoms and the pill. In spite of the high level of awareness of the condom, there is little indication of its consistent and regular use (WHO, 2015b).

Absence of sex education in school, at home or in youth centers predisposes adolescents to incorrect or deficient information about contraception (UNICEF/UNFPA, 2018). The topic of sexual intercourse is taboo even in most American households. Few schools in America have adequate sex education programs. As a result, most adolescents first learn about sex from their misinformed and misguided peer (Guttmacher Institute, 2017b).

Most adolescent girls are forced to drop out of school or are expelled by the school administration upon becoming pregnant. Evidence shows that a lack of community involvement can be a barrier to adolescent' access to both Contraception info and facilities (Esantsi et al., 2015).

Contraceptive education aims to provide clients the basic information they need to make informed decisions about their use of contraception and to effectively use the contraceptive methods they have selected. The importance of contraceptive education can be seen in the impact of knowledge on the selection and correct and consistent use of contraception. Many female school adolescents indicate that contraceptive effectiveness is one of the most important considerations when selecting a method (Karen et al., 2016). Consistent with this priority, better knowledge of contraceptive effectiveness is associated with increased adoption rates for long-acting reversible contraceptives (LARCs), which have extremely low failure rates, even with typical use. Conversely, inadequate knowledge of contraception is associated with incorrect perceptions of the risks and side

effects of contraceptive use, incorrect or inconsistent use, and method discontinuation. However, despite the importance of education, gaps in contraceptive knowledge have been documented frequently (Karen et al., 2016).

At the community level, access to contraception may be hindered by norms, mores, attitudes, and beliefs that adolescents should not be sexually active and that they consequently do not need contraceptive usage (Williamson, 2015). The dilemma is between tradition requiring adolescents to have many children, and their right to use contraceptives in order to delay childbirth until they have finished their education or become economically autonomous to take care of their children (Woods, et al., 2016).

Social expectations include attitudes towards marriage and fertility, including, in some societies, child marriage, particularly for girls, and in others, proof of fertility before unions are formalized (Williamson, 2015). Social views of family planning have a great impact on adolescent, for instance, the perception that contraceptives should only be utilized by a man and woman in a monogamous relationship who want to allow spacing in childbirths. Others consider that exposure to contraception info encourages females to promiscuity. These social attitudes may prevent adolescents from looking for such info before they get married (Guttmacher Institute, 2017b)

In the study to investigate perceptions that influence contraceptive use among adolescents 15-19 years old Kinaro, (2014) showed that the main perceptions associated with contraceptive use are parental approval, opinion of adolescents, ability to get a method for self and discussion with a sexual partner. He further claimed that results show that teachers lack adequate skills while parents feel inadequate to teach sexuality issues. Despite the fact that the family and school are critical socialization institutions, teachers and parents focus on discouraging the use of contraceptives with more adolescents using contraceptives getting sexuality information from other sources and this poses a significant challenge for policies and programs (Kinaro, 2014).

2.2.3. ECONOMIC FACTORS, SOCIAL, AND CONSEQUENCES

Adolescent economically dependent on their parents and this contributes to the poor or none at all use of contraception. This is because some contraceptives are expensive. Adolescents might miss work or school attendance in order to get to reproductive health centers. Similarly, the money charged by clinics for both consultation and provision of

contraceptive methods impedes adolescent's use of contraceptive methods. In a study done by World Bank, whenever a girl is powerful enough to delay pregnancy, she is enabled to spend more time in school and finally land a well-paid job or grab other income generating opportunities (Esantsi et al., 2015).

Adolescent pregnancy can also have negative social and economic effects on girls, their families, and communities. Unmarried pregnant adolescents may face stigma or rejection by parents and peers and threats of violence (WHO, 2018a). Similarly, girls who become pregnant before age 18 are more likely to experience violence within marriage or a partnership (WHO, 2018a, P1). With regards to education, school-leaving can be a choice when a girl perceives pregnancy to be a better option in her circumstances than continuing education, or can be a direct cause of pregnancy or early marriage. An estimated 5% to 33% of girls ages 15 to 24 years who drop out of school in some countries do so because of early pregnancy or marriage (WHO, 2018a).

Based on their subsequent lower education attainment, may have fewer skills and opportunities for employment, often perpetuating cycles of poverty: child marriage reduces future earnings of girls by an estimated 9% (WHO, 2018a). Nationally, this can also have an economic cost, with countries losing out on the annual income that young women would have earned over their lifetimes, if they had not had early pregnancies (WHO, 2018a).

2.3. THEORETICAL AND CONCEPTUAL FRAMEWORKS

The conceptual framework is based on the theory of reasoned action and literature review. The theory of reasoned action postulates that behavior is influenced by several factors among them, one's belief about the outcome of an action, one's assessment that a particular behavior is desired by significant others and a motivation to comply with the views of the significant others (Ajzen and Fishbein, 1980) In the social environment there are several factors that would be considered as significant others, for example, peers, parents, religion, culture, knowledge/available information and economic factors.

According to this theory, adolescents would have to believe that utilization of contraception would fight against undesirable pregnancies and sexually transmitted infections and that the significant others would not want them to get unplanned pregnancies and sexually transmitted infections. Complying with the significant others

would mean that adolescents would take action or not take action. Taking the action to prevent pregnancy would influence adolescent's utilization of a contraceptive method. With this theory in mind, the literature review revealed that contraceptive utilization among adolescents is influenced by socio-demographic variables such as age at sexual debut, economic variables, knowledge on contraceptives, perceived susceptibility to pregnancy and perceived severity of pregnancy outcomes among the adolescents as independent variables which will either promote or hinder contraceptive utilization.

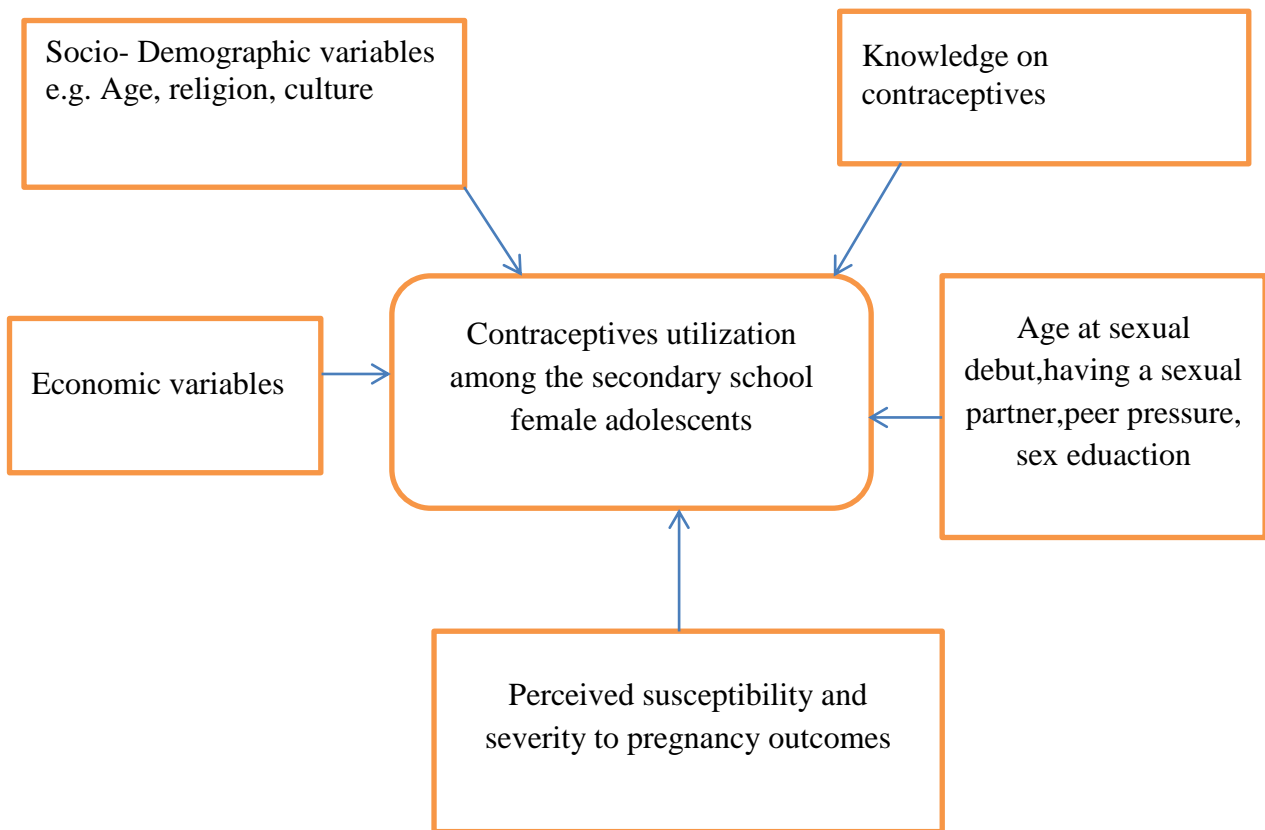


Figure 1 Conceptual framework Adopted from (Ajzen and Fishbein, 1980)

CONCLUSION TO CHAPTER TWO

In this chapter, the researcher discussed different findings from different researchers who studied about contraceptive uptake, factors influencing utilization of contraceptives by adolescents and barriers to the utilization of contraception by adolescents mainly focusing on schools girls. In general, this review of studies has revealed that the usage of contraceptive methods among female adolescents is still low in developing nations despite the persisting challenge of adolescent pregnancy. Some factors influence utilization such as age, sex exchange for money, culture, parental support, and control,

etc. The most evident barriers to the utilization of contraceptives are inadequate information, cultural belief, economic factors, etc.

CHAPTER 3: METHODOLOGY

3.0 INTRODUCTION

In this chapter, the researcher presents the research methods and principles that were used during the study. It consists of a description of the study area, study design, study population, and study sample and sampling strategy, research instrument, data collection procedure, data analysis, problem and limitations of the study and ethical considerations.

3.1 STUDY APPROACH

The quantitative research approach was used during this study to collect quantitative data. A quantitative approach is described as a formal, rigorous, objective, systematic process for generating information about the world. It is conducted to describe the new situation, events, and concepts in the world (Burns and Grove, 2014).

3.2 STUDY DESIGN

A study design is defined as an general blueprint to get knowledge through an approach that answers research questions (Wright et al., 2016). A design use to be well organized in quantitative research, with close control over extraneous variables (Polit and Beck, 2014). In addition, the research design determines how participants are recruited and involved in the study, the process for the study, including the timing of any activity and when the study was completed (Wright et al., 2016). This study used a non-experimental descriptive design means that the study was designed to explore and describe a phenomenon in the real-life situation; it provides knowledge about a particular field within the study and provides a picture on how a situation naturally happens. And it is a cross-sectional study as it does not examine the sequence of a phenomenon within time or compares groups; the data is collected at a particular point in time (Burns and Grove, 2014). The researcher collected data from the study setting once in order to assess the utilization of contraceptive methods among high school adolescent at a particular time. Moreover, cross-sectional studies are more practical.

3.3 STUDY SETTING

This study was conducted at a selected secondary school in Rwamagana district. Rwamagana is a district in Eastern Province, Rwanda. Its capital is Kigabiro city, which is also the provincial capital. Rwamagana lies approximately 50 km from Kigali, on the newly renovated road leading east towards Tanzania. It is composed of 14 Sectors, 82 cells and 474 villages with a population of 310,238 (Provisional population and survey results 2012) on a surface area of 691.6 km². Rwamagana district is bordered by Ngoma and Bugesera districts in the south, Gatsibo and Gicumbi district in the North, Kayonza district in the East, Gasabo and Kicukiro districts in the West. NISR Provisional Population and Housing Census 2012 results revealed that Rwamagana district population is currently 310,238 people. Family planning is at 44.5%; Fertility rate at 4.6%, the mean number of children per reproductive woman is 5.1%. It has 48 secondary schools with 337 classrooms, 13,893 students. The selected secondary school for this study is public. This school has had a pregnancy scandal where it was reported that 26 female adolescent students were found to be pregnant. In addition, owing to time and financial constraints the researcher could not easily do a proportional sample of sites; therefore the researcher chose to do a purposive sampling of the aforementioned public secondary school in Rwamagana district.

3.4 STUDY POPULATION

A population is an entire group of individuals, substances or objects that meet inclusion criteria set by the researcher (Asiamah, Mensah & Oteng-Abayie, 2017). The target population of this study included all female adolescent aged between 12 and 19 years who were studying at the selected secondary school during the study period. There are 48 secondary schools in Rwamagana district. The researcher chose one school, where the target population was 117 female adolescent. The accessible populations are reached after taking out all individuals of the target population who will or may not participate or who cannot be accessed at the study period. It is the final group of participants from which data is collected by surveying either all its members or a sample drawn from it. It represents the sampling frame if the intention is to draw a sample from it (Asiamah, Mensah & Oteng-Abayie, 2017) The accessible population of this study was all adolescent girls between 12 and 19 years who were available on the days of data collection.

3.4.1 Inclusion criteria

All female adolescent who assented and whose parents consented to participate in the study. The researcher included ladies because they assumed to have more information about female contraception than boys and they are the ones who undergo more consequences of unwanted pregnancies as well.

3.4.2 Exclusion criteria

All female adolescents who were unwilling to participate in the study

All female adolescents who were unavailable at the time of data collection

All female adolescents less than 12 years

3.5 SAMPLE AND SAMPLING STRATEGY

3.5.1 STUDY SAMPLE SIZE

The study sample is a subset of the population element (Polit and Beck, 2014). The sample size is the number of participants selected from the target population. The study sample included all registered 117 female adolescent at the selected high school in Rwamagana district.

3.5.2 SAMPLING STRATEGY

A total population sampling technique was used to select study participants. It is a type of purposive sampling technique that involves examining the entire population that has a particular set of characteristics (Taherdoost, 2016). The researcher reached the school compound and went directly to the administration office. In the office there was a notice board containing the number of students, their years of study and sex. In collaboration with the school administration, the researcher selected the number of female students and then looked at the school registries by classes to check their ages. The researcher then picked the female students between 12 and 19 years and counted them. Thereafter, the school administrator called each class responsible teacher to help the researcher verify if the selected students attend class in order to match the number of students selected in the registries and the number of students who attend class activities. After that exercise, the researcher thanked the school administration and teachers and communicated them the first day of data collection then assured the school administration that he would be communicating them other data collection days depending of his availability because the research time was coinciding with other school activities of the researcher.

3.6 RESEARCH INSTRUMENT

3.6.1 INSTRUMENT

A structured data collection approach was used in this study using a self-administered questionnaire containing closed-ended questions. The researcher adapted two instruments, one from Wanjiru, (2012) another from Abdul-razak, (2016) by making revisions of their contents to develop the structured questionnaire and collaborated with the supervisor to refine it before the data collection took place. The questionnaire was designed in English and it was later translated into the local language, Kinyarwanda, to ensure better understanding for adolescents who had challenges with understanding English. The questionnaire has 5 sections: **section A** contains demographic information. **Section B** concerns the knowledge of contraceptives. **Section C** concerns contraceptive utilization, **section D** concerns factors enabling contraceptive utilization, and **section E** concerns the barriers to the use of contraceptive methods.

3.6.2 INSTRUMENT RELIABILITY AND VALIDITY

3.6.2.1.RELIABILITY

Reliability is the degree of consistency or accuracy with which an instrument measures an attribute (Polit and Beck, 2014). In this study, the reliability was controlled by administering the questionnaire to 10 female adolescents satisfying the inclusion criteria for piloting to ensure the usefulness of the questionnaire. The researcher then calculated the internal consistency reliability coefficient known as the Cronbach alpha coefficient and the instrument was declared reliable because it was equal to 0.8. The reliability of the above mentioned instruments in the previous studies, where this was adapted from, were documented though did not specify the Cronbach alpha coefficient.

3.6.2.2.VALIDITY

The validity of a research tool refers to the extent to which a tool really measures what it intends to measure (Polit and Beck, 2014). The face validity was ensured by having some of the pediatric nurses in the clinical areas read through the questionnaire and some adolescent of another secondary school. The Face validity involves the expert looking at the items in the questionnaire and agreeing that the test is a valid measure of the concept which is being measured just on the face of it (Bolarinwa, 2015).

Content validity refers to the extent to which an instrument is made of appropriate items for the concept to be measured (Polit and Beck, 2014). Within this study, content validity

was ensured by having expert check items in the data collection tool against the study objectives and concepts in the conceptual framework to ascertain whether they measured all elements to be investigated.

Table 1 content validity

Ojectives	Conceptual framework	Items in the questionnaire
To assess the knowledge of female adolescents about contraceptive methods	Knowledge on contraceptives	10,11,12,13,14,15
To identify the level of contraceptive methods uses among high school female adolescent	Contraceptive utilization	16,17, 18, 19, 20, 21, 22, 23,24
To determine the enabling factors for the utilization of contraceptives in high school female adolescent	Age at sexual debut, perceived susceptibility and severity to pregnancy outcomes, having a sexual partner, peer pressure, sex education	25,26,27,28,29.30,31, 32,33,34
To identify the barriers to the use of contraceptive methods in high school female adolescent	Religion, culture, economic variables	35

3.7 ETHICAL CONSIDERATION

Grove and colleagues recommend that a research that is done ethically must protect rights of study participants, obtain informed consents from the study participants, get approval from the Institutional Review Board after submitting a research proposal and balance benefits and risks in a study (Asiamah, Mensah & Oteng-Abayie, 2017). The researcher submitted a research proposal to the UR-CMHS Institutional Review Board to get ethical clearance. The ethical clearance was submitted to the Rwamagana district and to the selected secondary school administration, where the study was conducted, to get permission letter.

The researcher gave clear explanations to the participants regarding all about the study including the purpose of the study and risk-benefit to participate in this study. The participants were assured of the right to self-determination, explained that the study is part of the academic requirements and that data would be for research purposes only and would be kept confidential. The participants were informed that it is voluntary to participate in the study with the rights to withdraw or withhold information at any time without any punishment.

Those who were interested in being part of the study were identified and were given assent forms to sign. Signed parent/guardian informed consents were obtained for female adolescents to participate in the study. The participants' anonymity and confidentiality were ensured by assigning codes to the participants and using those codes instead of their names on the questionnaire. Completed questionnaires were kept in a locked cupboard of researcher's room and the data in soft copy were kept in a computer that is protected by a password known only by the investigator and the supervisor. The private information was not disclosed to anyone else. All participants were treated fairly and equally. Fairness and equality were ensured by having participants take a seat in the private area and each participant was given a chance to participate in the study because the sample was too small to make a selection. Each participant was given an oral explanation of the study and a sheet providing an explanation about research. The researcher gave a room for the participants to ask whatever they want to ask about the study and provide a suitable response to their queries.

3.8 DATA COLLECTION PROCEDURE

After authorization from both parties, the researcher trained two assistants, from the concerned secondary school, focusing on rapport creation, assurance of privacy and confidentiality, the meaning of the items and the correct ticking of responses provided. Attention was also given to skip patterns used in the questionnaire. The researcher requested the school administration to organize a meeting with the students and parents/guardians on the day of giving students' academic reports to facilitate the investigators explain them about the purpose, objectives, benefits and inclusion criteria to the study.

Consent for the parents/guardians to allow female adolescents to participate in the study was administered by the investigators and requested them to read them meticulously, ask for clarifications and then sign. Investigators explained the study in Kinyarwanda and in English to those who better understand English than Kinyarwanda. The purpose of the study, its significance, and methods to be used were also shared. For students whose parents were not available, the researcher made a list of them and gave them consent forms to take to their parents at home. The researcher sensitized participants and explained more about the importance of research and how to proceed before giving them the questionnaires. Researchers delivered questionnaires to adolescents who were eligible for the study. The participants were allowed sufficient time to complete the

questionnaires. Finally, the investigators checked the questionnaires for completeness and then thanked the participants for their participation. The data were collected during a 10 day period of time with the researcher collecting the data himself.

3.9 DATA ANALYSIS

Data were entered, categorized and analyzed by SPSS version 23. Descriptive statistics were used to analyze the frequencies, distributions, and percentages. Descriptive categories including age, gender, economic status, religion, etc. Bivariate analysis was used to test the association between independent variables and the utilization of contraceptive methods among adolescent. Multivariate analysis was used to assess the strength of the association between dependent and independent variables by computing Odd Ratio. The results were presented in tables and pie charts and the treatment of the text was done using Microsoft Office Word.

3.10 DATA MANAGEMENT

All filled questionnaires were kept confidential in a locked cupboard in the researcher's room for their safety. Data on the computer are protected by a password to only be viewed by the researcher and research supervisor. Results from the study were reported to the supervisor and staff from the Masters of Science in the Nursing program. The dissertation is to be submitted to the Directorate of Postgraduate studies at UR-CMHS with a copy to the School of Nursing and Midwifery. The publication of study findings will be done in scientific journals.

3.11 DATA DISSEMINATION

The findings from this study will be disseminated to different stakeholders that may have positive influence referring to the recommendations made. The findings will also be published in scientific journals and the selected schools of the study will be given a copy.

3.12 PROBLEMS AND LIMITATIONS OF THE STUDY

While carrying out this study, the researcher encountered some limitations and challenges that hindered the smooth running of the survey. First, the inability to generalize the findings to all adolescent in Rwanda secondary schools. This study had to be done within the academic period; I mean it had to be finished before the end of this MSN program. Therefore, the researcher selected limited settings and as a result, the sample size was too small to generalize to all adolescent. Second, this research was not funded and these financial constraints contributed to the difficulty of running the study.

To overcome the above mentioned limitations, the researcher did the following: First, the researcher had to work day and night in order to finish it in the allotted time period. At the end, the researcher recommended bigger reaseraches to be generalized to all female high school adolescent in Rwanda. Second, the researcher used remunerations from the work to compensate the financial constrainsts faced in the study.

CHAPTER 4: PRESENTATION OF RESULTS

4.1 INTRODUCTION

The data were collected from 117 participants whose age was between 12 and 19 years and were seen at the selected secondary school of Rwamagana community. Data, as collected, have been presented in 5 sections being sociodemographic information, knowledge of participants about contraceptive methods, contraceptive utilization, factors enabling the contraceptive use and barriers to the use of contraceptives.

4.2 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

Table 2 Socio-demographic characteristics of participants

Variables	Frequency (n)	Percent (%)
Age of participants		
Under 14	18	15.4
Between 14-16	52	44.4
Between 17-19	47	40.2
Year of study of participant		
Year 1	27	23.1
Year 2	50	42.7
Year 3	40	34.2
Marital status of participants		
Single	105	89.7
Co-habiting	12	10.3
Education/participants' mother/guardian		
Primary	35	29.9
Secondary	57	48.7
University	16	13.7
Vocational training	9	7.7
None	0	0.00
Education/participants' father/guardian		
Primary	32	27.4
Secondary	49	41.9
University	27	23.1
Vocational training	5	4.3
None	4	3.4
Who live with participants		
Parents	105	89.7
Partner	12	10.3
Occupation mother/guardian		
Formal	29	24.8
Informal	88	75.2
Occupation father/guardian		
Formal	33	28.2
Informal	84	71.8

The results showed that a large number 52 (44.4%) was between 14-16 years old. The majority 50(42.7%) was in year two. Among them 105(89.7% are single. Education/participants ‘mother/guardian was assessed, and the majority 57(48.7) completed secondary school. Education/participants ‘father/guardian was also assessed and a large number 49(41.9) completed secondary school. A large number of 105(89.7%) lives with parents. The majority of Mother/guardian 88(75.2%) reported that the occupation is informal, and the majority of fathers/guardians 84 (71.8) %) reported that the occupation is informal.

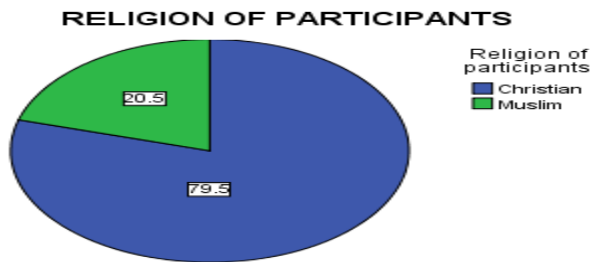


Figure 2 Religion of study participants
The results showed that the majority of participants 93 (79.7%) are Christians.

4.3 KNOWLEDGE OF CONTRACEPTIVES LEVEL OF KNOWLEDGE OF CONTRACEPTIVES

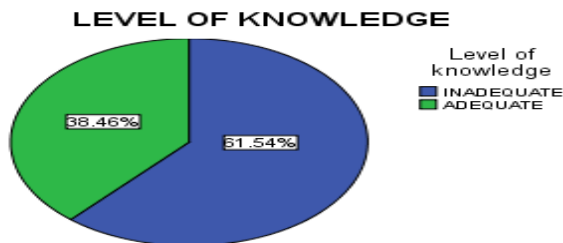


Figure 3 Participants' level of Knowledge
To assess the level of knowledge, the correct answer was scored 1 and the wrong answer was given 0. A total of 13 points was taken as maximum. Those who got 7 and above (38.48%) had adequate knowledge and those who got below 7 (61.54%) had inadequate knowledge.

Table 3 Knowledge of participants on contraceptives

Variables	Frequency (n)	Percent (%)
Heard of contraception		
Yes	103	88
No	14	12.
Knows what contraception is		
Yes	87	84.5
No	4	3.9
Don't know	12	11.7
Knows specific contraception		
Pills	67	67.7
Condoms	95	92.2
Injection	67	65.
Implants	65	63.1
Intrauterine devices	35	34
Diaphragm	8	7.8
Lactation amenorrhea method	8	6.8
Vasectomy	23	22.3
Tubal ligation	23	22.3
Knows a place for contraception		
Yes	70	68
No	33	32
Contraception is a woman's business		
Yes	47	40.2
No	53	45.3
I don't know	17	14.3
Contraceptives become promiscuous		
Yes	82	70.1
No	35	29.9

When assessing knowledge of participants on contraceptives, a large number (88.0%) reported that it heard of contraception. The majority (84.5%) knows what contraception is, Condoms was reported as specific contraception known by a big number (92.2%) of participants. A large number of (68.0%) knows a place where to get contraception. When asked if contraception is a woman's business the majority (45.3%) said no, and a large number (70.1%) said that women who use contraceptives may become promiscuous

4.4 CONTRACEPTIVE UTILIZATION

Table 4 Contraceptive use among female adolescents

Variables	Frequency (n)	Percent (%)
Use of contraceptive at 1st sex		
Yes	23	39
No	36	61
Reasons for using contraceptives		
To avoid pregnancy	81	69.2
To prevent STIs	74	63.2
To delay childbirth	28	23.9
Who should use contraceptives		
Married couples only	26	22.2
All sexually active persons	73	62.4
Adults only	13	11.1
Unmarried couples only	5	4.3
Use of contraception at 1st sex		
Yes	34	57.6
No	25	42.4
Decision maker on the last method used		
Myself	11	32.4
Partner	18	52.9
Friend	3	8.8
Parents	2	5.9
Ability to get contraception by self		
Yes	30	50.8
No	29	49.2
Parent/guardian approve contraception		
Would object	81	69.2
Would not object	36	30.8
Thinks it is wise to use contraceptives		
Yes	90	76.9
No	27	23.1
Discuss about contraceptives		
Yes	22	18.8
No	95	81.2

Contraceptive utilization was reported in this study. The majority 36(61.0%) didn't use any of contraceptives at 1st sex. The main reason for using contraception was to avoid pregnancy 81(69.2%). When asked who should use contraception, the majority 73(62.4%) said all sexually active persons should, the majority 34 (57.6%) used contraception at last sex and over half 18 (52.9%) said that the partner decided on the last method used. A large number 30 (50.8%) is able to get contraception by self. Regarding parent/guardian approval of contraception, the majority 81(69.2%) reported that their parents/guardians would object. A large number of 90(76.9%) thinks it is wise to use contraceptives. The majority 95(81.2%) does not discuss/communicate about contraceptives with anyone

LEVEL OF CONTRACEPTIVE USE

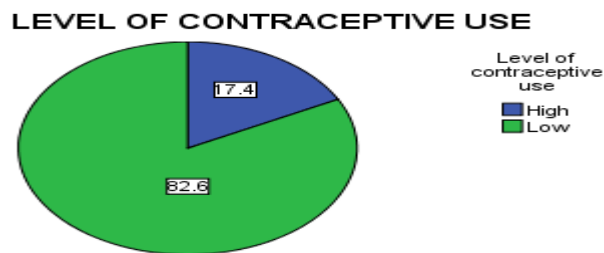


Figure 4 Level of contraceptive use

The researcher computed the frequency of contraceptive use among the participants. The results in the pie chart above revealed that 17.39% of sexually active participants used contraceptives at high level, this is to mean that they used contraceptive everytime while 82.61% used contraceptives at low level, meaning that they used contraceptive once a while.

4.5 FACTORS ENABLING CONTRACEPTIVE USE

Table 5 Factors enabling contraceptive use

Variables	Frequency (n)	Percent (%)
Ever had sex		
Yes	59	50.4
No	58	49.6
Age at first sexual encounter		
below 14	7	11.9
14-16	32	54.2
17-19	20	33.9
Currently has a sexual partner		
Yes	42	35.9
No	75	64.1
Feel pressure for unprotected sex		
Yes	53	45.3
No	64	54.7
Source of pressure		
Friends	16	66.7
Partner	8	33.3
Ever sought RHS from the hospital		
Yes	49	41.9
No	68	58.1
Ever faced discrimination for RHS	29	59.2
Yes	20	40.8
No		
Using contraceptives is harmful		
Yes	47	40.2
No	70	59.8
Sex education influence contraception		
Yes	91	78.4
No	25	21.6
Got education on sex in school		
Yes	90	76.9
No	27	23.1

The results showed that a half 59(50.4%) had sex, over half 32(54.2%) the age at first sexual encounter was between 14-16. The majority 75(64.1%) doesn't have a sexual partner (boyfriend). Over half 64(54.7%) do not feel pressure from others to have unprotected sexual intercourse. The majority 16(66.7%) said that the source of pressure was friends. Over half 68(58.1%) did not seek RHS from the hospital. The majority 29(59.2%) faced discrimination in the hospital when seeking RHS. The majority 70(59.8%) doesn't think that using contraceptives is harmful, A large number 91(78.4%) doesn't think that sex education can influence contraceptive use or non-use and the majority 90(76.9%) got an education on sex in school

4.6 BARRIERS TO THE USE OF CONTRACEPTIVES

Table 6 Barriers to the Use of Contraceptives

Variables	Frequency (n)	Percent (%)
Religious beliefs	52	44.4
Distance to the acquisition	40	34.2
The attitude of providers	50	42.7
The attitude of our teachers	49	45.8
Partner opposed to using	35	29.9
Relatives opposed to using	11	9.4
Fear of side effects	55	47.0
Lack of knowledge	56	47.9
Infrequent sex	16	13.7
Hard to get preferred methods	28	23.9
Too costly	23	19.7
Counseling received	21	17.9
Cultural or traditional beliefs	45	38.5

Lack of knowledge 56(47.9%), fear of Side effects 55(47%), Attitude of our teachers 49(45.8%), religious beliefs 52 (44.4%), Attitude of contraceptive providers 50(42.7%), Cultural or traditional beliefs 45(38.5%) and distance to acquisition of contraceptives 40(34.2%) were the main reasons why female adolescents of selected high school of Rwamagana do not use contraceptives. Other reasons include partner opposed to using contraceptives 35 (29.9%), hard to get preferred methods 28(23.9%), contraceptives being too costly 23 (19.7%), infrequent sex 16(13.7%) and family members opposed to using contraceptives 11(9.4%).

4.7 RESULTS OF ASSOCIATIONS BETWEEN VARIABLES

4.8.1. Socio-Demographic Variables Associated With Use of Contraception

Table 7 contraceptive use by Socio-demographic variables following bivariate analysis

Variables	Use of contraception		Chi-square value	P value
	Yes	No		
Age of participants				
Under 14	5 (35.7%)	9 (64.3%)	0.751	0.687
Between 14-16	10 (25.6%)	29 (74.4%)		
Between 17-19	12 (33.3%)	24 (66.7%)		
Year of study				
Year 1	4 (28.6%)	10 (71.4%)	17.700	0.000
Year 2	0 (0.00%)	15 (100%)		
Year 3	19 (63.3%)	11 (36.7%)		
Religion				
Christian	17 (24.6%)	52 (75.4%)	7.719	0.030
Muslim	10 (50%)	10 (50%)		
Marital status				
Single	26 (32.5%)	54 (67.5%)	1.751	0.186
Co-habiting	1 (11.1%)	8 (88.9%)		
Mother's education				
Primary	0 (0.00%)	11 (100%)	15.023	0.002
Secondary	14 (42.4%)	19 (57.6%)		
University	4 (40%)	6 (60%)		
Vocational training	5 (100%)	0 (0.00%)		
Father's education				
Primary	0 (0.00%)	12 (100%)	22.07	0.000
Secondary	7 (33.3%)	14 (66.7%)		
University	7 (41.2%)	10 (58.8%)		
Vocational training	5 (100%)	0 (0.00%)		
None	4 (100%)	0 (0.00%)		
Live with participant				
Parents	23 (45.1%)	28 (54.9%)	5.913	0.015
Partner	0 (0.00%)	8 (100%)		
Mother's occupation				
Formal	6 (23.1%)	20 (76.9%)	0.916	0.339
Informal	21 (33.3%)	42 (66.7%)		
Father's occupation				
Formal	7 (23.3%)	23 (76.7%)	1.050	0.305
Informal	20 (33.9%)	39 (66.1%)		

To assess the utilization of contraceptive methods among high school female adolescents, the study looked at the demographic factors that were associated with the use of contraceptives. In Bivariate analysis year of study ($p=0.000$), religion of participants ($p=0.030$), Level of education of participants' mother/guardian ($p=0.002$), level of education of participants 'father/guardian (0.000), who live with participants ($p=0.015$) were statistically associated with the use of contraceptives ($P.value < 0.05$).

4.8.2. Knowledge of contraception associated with use of contraceptives

Table 8 Knowledge of contraception and use of contraceptives

Variables	Use of contraception		Chisquare	P value
	Yes	No		
Heard of contraception				
Yes	23 (38.3%)	37(61.7%)	7.276	0.007
No	0 (100%)	13 (100%)		
Can define contraception				
Yes	23 (47.9%)	25 (52.1%)	8.638	0.013
No	0 (0.00%)	4 (100%)		
Don't know	0 (0.00%)	7 (100%)		
Knows a specific method				
Pills	23 (51.1%)	22 (48.9%)	11.727	0.001
Yes	0 (0.00%)	14 (100%)		
No				
Condoms	23 (100%)	35 (60%)	0.650	0.0420
Yes	0 (0.00%)	1 (100%)		
No				
Injection	23 (51.1%)	22 (48.9%)	11.727	0.001
Yes	0 (0.00%)	14 (38.9%)		
No				
Implants	18 (41.9%)	25 (58.1%)	0.552	0.458
Yes	5 (31.2%)	11 (68.8%)		
No				
Intrauterine devices	15 (100%)	0 (0.00%)	31.482	0.000
Yes	8 (18.2%)	36 (81.8%)		
No				
Diaphragm	1 (100%)	0 (0.00%)	1.592	0.207
Yes	22 (37.9%)	36 (100%)		
No				
Tubal ligation				
Yes	8 (53.3%)	29 (65.9%)	1.741	0.187
No	15 (34.1%)	7 (46.7%)		
Knows a place for contraceptive				
Yes	18 (50%)	18 (50%)	4.712	0.030
No	5 (21.7%)	18 (78.3%)		
Contraceptive is a woman's business				
Yes	15 (45.5%)	18 (54.5%)	10.975	0.004
No	12 (30.8%)	27 (69.2%)		
I don't know	0 (0.00%)	17 (100%)		
Method users become romiscuous				
Yes	21 (33.3%)	42 (66.7%)	0.916	0.339
No	6 (23.1%)	20 (76.9%)		

Ever heard of contraception (p=0.007), knowing what contraception is (p=0.013), knowing specific method of modern contraception, contraception being a woman's business (p=0.004) were associated with the use of contraceptive (P.value<0.05).

4.8.3. Contraceptive utilization

Table 9 Contraceptive use among female adolescent

Variables	Use of contraception		Chi-square value	P value
	Yes	No		
Reasons for using				
To avoid pregnancy				
Yes	12 (25%)	36 (75%)	21.163	0.000
No	11 (00%)	0 (0.00%)		
To prevent STIs				
Yes	9 (52.6.3%)	7 (43.8%)	8.361	0.004
No	14 (32.6%)	29 (67.4%)		
To delay childbirth				
Yes	10 (40%)	15 (60%)	2.752	0.097
No	17 (26.6%)	47 (73.4%)		
Who should use the method				
Married couples only	3 (17.6%)	14 (82.4%)	9.981	0.019
All sexually active	13 (54.2%)	11 (45.8%)		
Adults only	7(53.8%)	6 (46.2%)		
Unmarried couples only	(0.00%)	5 (100%)		
Used Method at last sex				
Yes	23 (67.6%)	11 (32.4%)	27.717	0.000
No	0 (0.00%)	25 (100%)		
Decision maker at last sex				
Myself	9 (81.8%)	2 (18.2%)	3.170	0.366
Partner	10 (55.6%)	8 (44.4%)		
Friend	2 (66.7%)	1 (33.3%)		
Parents	2 (100%)	0 (0.00%)		
Can get method by self				
Yes	14 (46.7%)	16 (53.3%)	0.836	0.361
No	9 (34.6%)	17 (65.4%)		
Parent approval				
Would object	17 (32.7%)	35 (67.3%)	7.292	0.007
Would not object	6 (87.5%)	1 (14.3%)		
Wise to use contraception				
Yes	20 (37.7%)	33 (62.3%)	0.341	0.559
No	3 (50%)	3 (50%)		
Discuss contraceptives				
Yes	1 (10.5%)	17 (89.5%)	4.486	0.034
No	25 (25.7%)	45 (64.3%)		

The results of bivariate analysis showed that the association between, reasons for using contraceptives sex; prevent pregnancy (p=0.000); prevent STI (P=0.004), who should use contraceptives (P=0.019), use of contraception at last sex (p=0.000), parents approval of contraception (p= 0.007), participants' discussion with others about contraceptives (p=0.034), are statistically associated with the use of contraception (P.value<0.05).

4.8.4. Factors enabling contraceptive use

Table 10 Factors enabling contraceptive use

Variables	Use of contraception		Chi-square value	P value
	Yes	No		
Ever had sex				
Yes	23 (39%)	36 (61%)	6.191	0.013
No	4 (13.3%)	26(86.7%)		
Age at first sex				
Under 14	0 (.00%)	7 (100%)	8.472	0.014
14-16	11 (34.4%)	21(65.6%)		
17-19	12 (60%)	8 (40%)		
Have asexual partner				
Yes	13 (40.6%)	19(59.4%)	3.197	0.074
No	14 (24.6%)	43(75.4%)		
Feel pressure for sex				
Yes	5 (71.4%)	2 (28.6%)	0.131	0.717
No	11 (78.6%)	3 (21.4%)		
Source of pressure				
Friends	5 (62.5%)	3 (37.5%)	1.547	0.214
Partner	3 (100%)	0 (0.00)		
Ever sought RHS				
Yes	16 (55.2%)	13(44.8%)	6.284	0.012
No	7 (23.3%)	23(76.7%)		
Faced discrimination for RHS				
Yes	11 (52.4%)	36 (61%)	0.240	0.624
No	5 (62.5 %)	26(86.7%)		
Using contraceptives is harmful				
Yes	13 (39.4%)	20(60.6%)	3.734	0.053
No	14 (25%)	42 (75%)		
Sex education influence method				
Yes	23 (32.4%)	48(67.6%)	2.036	0.154
No	3 (17.6%)	14(82.4%)		
Got education on sex in school				
Yes	18 (24.3%)	56(75.7%)	1.433	0.031
No	9 (60%)	6 (40%)		

Results of Bivariate analysis showed that the association between ever had sex (p=0.013), age at first sexual encounter (p=0.014), feel pressure to have unprotected sex (p=0.015), ever sought RHS from the hospital (p=0.012), got education on sex in school (p=0.031) and the use of contraception was statistically significant (P.value<0.05)

4.8.5. Barriers to the use of contraceptive

Table 11 Barriers to the use of contraceptives

Variables	Use of contraception		Chi-square value	P value
	Yes	No		
Religious beliefs				
Yes	16 (53.3%)	14 (46.7%)	5.284	0.022
No	7 (24.1%)	22 (75%)		
Distance to acquisition				
Yes	13 (48.1%)	14 (51.9%)	1.758	0.185
No	10 (31.2%)	22 (68.8%)		
Attitude of providers				
Yes	13 (54.2%)	11 (45.8%)	3.921	0.048
No	10 (28.6%)	25 (71.4%)		
Attitude of teachers				
Yes	16 (50%)	16 (50%)	3.568	0.059
No	7 (25.9%)	20 (74.1 %)		
Partner opposed to using				
Yes	3 (11.5%)	23 (88.5%)	14.720	0.000
No	20 (60.6%)	13 (39.4%)		
Relatives opposed to using				
Yes	0 (0.00%)	8 (100%)	5.913	0.015
No	23 (45.1%)	28 (54.9%)		
Fear of Side effects				
Yes	12 (60%)	8 (40%)	5.619	0.018
No	11 (28.2%)	28 (71.8%)		
Lack of knowledge				
Yes	9 (42.9%)	12 (57.1%)	0.206	0.650
No	14 (36.8%)	24 (63.2%)		
Infrequent sex				
Yes	4 (100%)	4 (100%)	6.716	0.10
No	21 (27.6)	21 (27.6)		
Hard to get methods				
Yes	0 (0.00%)	7 (100%)	5.074	0.024
No	23 (44.2%)	29 (55.8%)		
Counseling received				
Yes	7 (63.6%)	4 (36.4%)	3.455	0.063
No	16 (33.3%)	32 (66.7%)		
Cultural/traditional beliefs				
Yes	12 (48%)	13 (52.0%)	1.483	0.223
No	11 (32.4%)	23 (67.6%)		

The results of Bivariate analysis showed that religious beliefs (p=0.022), attitude of contraceptive providers (p=0.048), partner opposed to using contraception (p=0.000), family members opposed to using contraception (p=0.015), fear of side effects (p=0.018),

hard to get preferred method (p=0.024) were statistically associated with the use of contraception (P.value<0.05)

4.8 MULTIPLE LOGISTIC REGRESSIONS OF VARIABLES AFFECTING THE USE OF CONTRACEPTION

Table 12 Results from multiple logistic regressions of variables

Variables	OR	95%CI	P value
Year of study			
Year 1(Ref)			
Year 2	1.111	0.977-1.786	0.093
Year 3	1.542	1.123-2.086	0.038
Religion of participants			
Christian(Ref)			
Muslim	1.061	0.762-1.336	0.158
Mother's education			
Primary (Ref)			
Secondary	1.374	0.998-1.585	0.091
University	1.438	1.113-1.613	0.061
Vocational training	1.211	0.831-1.583	0.073
Father's education			
Primary(Ref)			
Secondary	0.964	0.634-1.381	0.431
University	0.948	0.741-1.141	0.313
Vocational training	0.712	0.422-1.313	0.624
Live with participants			
Parents(Ref)	1.246	0.943-1.564	0.123
Partner	0.376	0.123-0.954	0.131
Ever had sex			
Yes(Ref)	1.162	9.011-	1.506 0.184
No	0.544	0.221-0.923	0.094
Age at first sex			
Under 14(Ref)			
14-16	1.013	0.778-1.432	0.111
17-19	1.386	0.994-1.501	0.182
Feelpressure for unprotected sex			
Yes (Ref)			
No	1.123	0.713-1.486	0.243
Ever sought RHS			
Yes (Ref)			
No	1.123	0.713-1.486	0.243
Heard of contraception			
Yes (Ref)			
No	0.535	0.475-0.924	0.144

Table 12 (continued)

Variables	OR	95%CI	P value
Knows what contraception is			
Yes (Ref)			
No	1.122	0.854-1.532	0.321
Knows place to get a method			
Yes (Ref)			
No	0.553	0.211-0.704	0.065
Knows specific method			
Yes (Ref)			
No	0.432	0.122-0.734	0.023
woman's business			
Yes (Ref)			
No	0.653	0.212-0.986	0.047
Parent approval of method			
Would object(Ref)			
Would not object	0.342	0.122-0.945	0.023
Discuss contraceptives			
Yes (Ref)			
No	0.342	0.122-0.945	0.023
Reason for contraception			
To avoid pregnancy	0.365	0.123-0.876	0.014
No (Ref)			
Yes			
To prevent STIs			
Yes (Ref)	2.343	1.453-5.143	0.002
No			
Who should use the method			
Married couples only (Ref)			
All sexually active persons	1.211	0.865-1.654	0.231
Adults only	0.932	0.675-1.567	0.421
Unmarried couples only	1.134	0.789-1.453	0.311

Variables which show significant associations with the dependent variable were recruited to multiple logistic regressions to identify their independent effects to the use of contraceptive (table 14). Those who are in year 3 are more than one time more likely to use contraceptive methods than those who are in years 1(OR=1.542, P=0.038, 95% CI=1.123-2.086). Participants who did not hear contraception had a 46.5% reduction in the odds of using contraceptive relative to those who heard contraception (OR=0.535, P=0.031, 95% CI=0.121-0.865). Participants who don't know a place in the community to get modern contraceptive a 56.8% reduction in the odds of using contraceptive relative to those who know a place in the community to get modern contraceptive (OR=0.432, P= 0.023, 95% CI=0.122-0.734). Participant who don't know a specific method of modern contraception had a 34.7% reduction in the odds of using contraceptive relative to those

who know a specific method of modern contraception (OR=0.653, P= 0.047, 95% CI=0.212-0.986). Participants who reported that their parents would not object had a 65.8% reduction in the odds of using contraceptive relative to those whose parent would object (OR=0.342, P= 0.023, 95% CI=0.122-0.945). Participants who do not discuss the use of contraception had a 63.5% reduction in the odds of using contraceptive relative to those who discuss the use of it (OR=0.342, P= 0.014, 95% CI=0.123-0.876). Participants who reported that they use contraception to avoid pregnancy were more than two times more likely use contraception than those who didn't report that reason (OR=2.343, P=0.002, 95% CI=1.453-5.143). Those who reported that partner didn't oppose to using it are more than two times more likely to use contraception than those whose partner did not oppose to use it (OR=2.532, P=0.031, 95% CI=1.213-49.87). Participants who did not report fear of side effects were two times more likely to use contraception than those who did not report it (OR=2.112,P=0.022,95%CI=1.121-6.311). Participants who did not report that it is not hard to get preferred methods were more than one time more likely to use contraception than those who did not report it (OR=1.768,P=0.042,95%CI=1.342-4.053).

SUMMARY OF THE FINDINGS

The results of this study suggested that while the knowledge of contraceptive were generally high (88.0%) the rate of contraceptive use was very low (39%). The commonly known contraceptive methods include condoms (92.2%), pills (67.7%), injection (65%) and implants (63.1%).

This study also revealed that over half of the participants had had sex before (50.4%) in their ages between 14 to 16. Among them, only 39% used contraception while 61% never used any contraceptive method. The reasons for not using contraceptives included Lack of knowledge of specific contraceptive methods (47.9%), fear of Side effects (47%), Attitude of our teachers (45.8%), religious beliefs (44.4%), attitude of contraceptive providers (42.7%), Cultural or traditional beliefs (38.5%) and distance to acquisition of contraceptives (34.2%). Finally, Year of education, knowing about contraception, parent's approval, discussing contraception with others, avoiding pregnancy were shown to encourage contraceptive use in this this study.

CHAPTER FIVE: DISCUSSION

5.0 INTRODUCTION

This section discusses the results generated from the study. It endeavors to bring into light the relevancy of the results to the objectives of the study. This study aimed to assess the use of contraception among high school female adolescent at a selected high school in Rwamagana district. It specifically sought to document the female adolescents' knowledge surrounding contraceptives as well as their consistent contraceptive use. It also looked at the factors enabling female high school adolescents for the utilization of contraceptive methods, identified the barriers to the use of contraceptive methods in high school female adolescents and determined the relationship between associated factors and the level of utilization of contraceptive methods among high school female adolescent at a selected secondary school in Rwamagana district.

5.1. SOCIODEMOGRAPHIC DATA

The results of this study revealed that a large number of participants (44.4%) was between 14-16 years old. However, there is no relation between age and the use of contraception in this study ($p=0.687$). This finding disagrees with the research conducted by Lawrence and Philbin on sexual initiation, contraceptive use, and pregnancy among US adolescents aged 10 to 19 which showed that utilization of contraceptives and sexual initiation increased with the adolescent's age (Lawrence , Jesse and Philbin, 2017). The same study claimed that contraceptive uptake among girls as young as 15 is similar to that of their older counterparts, whereas girls who start having sex at 14 or younger are less likely to have used a method at first sex and take longer to begin using contraception (Lawrence , Jesse and Philbin, 2017). In a cross-sectional study, the prevalence of contraceptive use was higher among female adolescents aged 18 to 19 (31.4 %) than female adolescents aged 15 to 17 (9.2 %). Also, 68.3 % had secondary education (Nyarko, 2015).

Regarding the religion, the study showed that the majority of the respondents were Christians (79.7 %) which showed a significant association with the use of contraceptive methods following a bivariate analysis ($p=0.030$). This finding was supported by a mixed method study conducted in Uganda, religion in Uganda plays a very vital role in the decision of the people since the country is built on religious background. People perceive

religious teachings of great importance and in most cases, these teachings are against contraceptive utilization (Nakirijja, 2018).

In view of the participant's marital status, the findings of this study demonstrated that a big number (89.7%) of the respondents was single though there was no association with the use of contraception ($p=0.186$). The respondents also revealed that the fathers/guardians' occupation (71.8%) was informal which is not associated with participants' use of contraception ($p=0.339$) and mothers/guardians occupation (75.2%) was informal which is also not associated with participants' use of contraception. Finally, the majority of the respondents (89.7%) live with parents and this has demonstrated an association with the participants' use of contraception ($p=0.015$). These findings agree with the research undertaken in Ghana about the factors contributing to the non-use of modern contraceptive methods among adolescents in the Sunyani Municipality (Abdulrazak, 2016). Other demographic characteristics including participants' years of study, level of education of parents/guardians are discussed below in the section (5.4) of factors enabling the use of contraception.

5.2 KNOWLEDGE OF CONTRACEPTIVES

The findings from this study indicate most of the study participants (88.0%) reported that they heard of contraception and the main sources of information is the mass media (68%) school teacher (66%), family members (56%), peers (47.6%) and health workers (43.7%). A similar study was carried in Nigeria by Tchokossa and Adeyemi, (2018,p4) shows that the majority (61.5%) of participants had adequate knowledge about contraceptives. On this same regard Moyo and Rusinga, (2017) in a study in Zimbabwe reported that Knowledge about modern contraception seems to be universal among high school female adolescents where the majority of respondents, 98%, stated that they had ever heard about modern methods of contraception and Condoms seemed to be the most known method of family planning among whereby of the 98% respondents who had ever heard about modern methods of family planning, 84% had heard about condoms, 11% about pills, 2% about implants and 3% about injectables. On the other hand, 49% knowledge of contraceptives by high school female adolescents was documented in the Central region of Sudan (Hagan and Buxton, 2014).

The level of knowledge as reported in this study could be as a result of health and sex education as inculcated into the secondary school curriculum as 76.9% claimed that they got sex education in school. Also one could attribute this knowledge to media, teachers, family members, peers, and health workers as 68%, 66%, 56%, 47%, and 43.7% respectively claim these as their sources of information about contraceptives. Corroborating with this, Wildsmith *et al.*, (2017) revealed that adolescents spend more time using traditional media, such as television, and new media, such as social networking sites, than engaging in any other activity. Thus, media have the potential to shape the beliefs and behaviors of adolescents, including those about dating, sex, and contraceptives (Wildsmith *et al.*, 2017).

5.3 CONTRACEPTIVE UTILIZATION

Among the female high school adolescents who participated in this study, more than a half (50.4%) ever had sex before and only 39% of them reported to have used contraceptive at their first sexual intercourse. A similar finding is consistent with the WHO, (2012) literature which says that the use rate of modern contraceptives is lower and the unmet needs for contraception adolescent girls in comparison to married women between 20-24 years age (WHO, 2016, P4). The study also claimed that the low level of contraceptives among this age group contributes to a significant prevalence of adolescent pregnancy. Adolescents' access to contraception is a much bigger concern especially unmarried one, because of policy and cultural constraints (WHO, 2016).

Another study revealed that the levels of use among senior high school female adolescents were substantially and consistently higher in Latin America and the Caribbean, ranging from 26% in some regions of Haiti to 83% in some regions of Cuba (Woog *et al.*, 2015). It also claimed that the levels were fairly low in Asia: With the exception of Kazakhstan (70%), they ranged from 2% in Indonesia (where the law prohibits providing contraceptives to unmarried women) to 33% in Mongolia (Woog *et al.*, 2015).

Chhabra and Singh (2016) reported no one who has used a contraceptive during first intercourse in their study. In a similar vein, Susan *et al.*, (2017) revealed that adolescent usually participate in accidental, sporadic sexual acts. As a result, they don't use contraceptives during the first sexual act. When they first become sexually active,

adolescents tend to rely on condoms, withdrawal, and informal ovulation-timing methods (e.g., having sex when they think it is a safe time of the month). As they become more sexually active, they tend to transition to hormonal methods of contraception, which requires formal engagement with a health service provider (Jaccard and Levitz, 2013). They are less likely to have the enthusiasm and ability to consume a contraceptive method appropriately.

5.4 FACTORS ENABLING THE USE OF CONTRACEPTIVES

5.4.1 Education

Results of this study present the influence of education on contraceptive utilization. The study participants who study in year 3 are more likely to use contraceptives compared to year 1 (OR=1.542, P=0.038, 95% CI=1.123-2.086). This means that the use of contraception increases as the level of education increases. This is probably because as the level of education grows, female adolescents are more likely to be abreast of the available contraceptives and are more likely to appreciate the positive impacts contraceptives have on their lives. In addition, the level of education of participants' mother/guardian is also associated with the use of contraception (OR= 1.211, P=0.073, 95% CI=0.831-1.583). This is probably because educated mothers/guardians are more likely to be abreast of the available contraceptives and are more likely to appreciate the positive impacts contraceptives have on their lives, therefore encourage their sexually active children to use modern contraceptives.

These results tally with the information documented by Guttmacher Institute which revealed that low or absence of sex education in school, at home or in youth centers predisposes adolescents to incorrect or deficient information about contraception. Unfortunately, the topic of sexual intercourse is taboo even in most countries for example in American households; few schools in America have adequate sex education programs. As a result, most adolescents first learn about sex from their misinformed and misguided peer (Guttmacher Institute, 2017b).

To corroborate this study, Karen *et al.*,(2016) revealed that contraceptive education aims to provide clients the basic information they need to make informed decisions about their use of contraception and to effectively use the contraceptive methods they have selected. He also claimed that the importance of contraceptive education can be seen in the impact

of knowledge on the selection and correct and consistent use of contraception. Many female school adolescents indicate that contraceptive effectiveness is one of the most important considerations when selecting a method (Karen et al., 2016). Conversely, inadequate knowledge of contraception is associated with incorrect perceptions of the risks and side effects of contraceptive use, incorrect or inconsistent use, and method discontinuation. However, despite the importance of education, gaps in contraceptive knowledge have been documented frequently (Karen et al., 2016)

However, a study of model sex education programs found that while a variety of programs were quite effective at increasing adolescent's level of knowledge of contraception, they had little impact on their behavior (WHO, 2015B). The relationship between what adolescents know and how they behave is perhaps the most salient issue (Woods, e WHO case studies show that adolescents do not consistently and correctly use contraceptives at sexual debut, especially females. There is a large gap between knowledge, ever use and consistent contraceptive use, particularly with reference to condoms and the pill. In spite of the high level of awareness of the condom, there is little indication of its consistent and regular use (WHO, 2017).

5.4.2 Knowledge of Contraception

This study establishes that having heard about contraception (OR=0.535, P= 0.031, 95% CI=0.121-0.865), knowing a place in the community to get modern contraceptive (OR=0.432, P= 0.023, 95% CI=0.122-0.734) are significantly associated with the use of contraception.

These results disagree with a study in Nigeria that revealed that over 60% of participants have heard of at least one method but only 4.7% of sexually active female students practice contraceptives of which 3.5% of them practice modern methods (Ugwu, 2014)

5.4.3 Parents approval and discussing contraception with others

From this study, parents approval of the use of contraception (OR=0.342, P= 0.023, 95% CI=0.122-0.945) and participants who discuss the use of contraception with others (OR=0.342, P= 0.014, 95% CI=0.123-0.876) are significantly associated with the use of contraception. This agrees with Kinaro, (2014) in the study to investigate perceptions that influence contraceptive use among adolescents 15-19 years old Kinaro, (2014) showed that the main perceptions associated with contraceptive use are parental approval, opinion of adolescents, ability to get a method for self and discussion with sexual partner. He further claimed that results show that teachers lack adequate skills while parents feel inadequate to

teach sexuality issues. Despite the fact that the family and school are critical socialization institutions, teachers and parents focus on discouraging the use of contraceptives with more adolescents using contraceptives getting sexuality information from other sources and this poses a significant challenge for policies and programs (Kinaro, 2014).

5.4.4 Having Reason for Using Contraception

Avoiding pregnancy was more likely to encourage the use of contraception than any other reason (OR=2.343, P=0.002, 95% CI=1.453-5.143). This finding agrees with Susan *et al.*, (2017) who revealed that if adolescent do not think they are exposed to pregnancy and have the attitude “it won’t happen to me”, then they are less likely to make any choice at all concerning contraceptive method (Susan *et al.*, 2017). Similarly, several adolescent seek information on contraceptives merely after a pregnancy worry. Adolescents seek contraceptive services for both pregnancy prevention and the prevention of sexually transmitted infections (STIs). When they first become sexually active, adolescents tend to rely on condoms, withdrawal, and informal ovulation-timing methods (e.g., having sex when they think it is a safe time of the month). As they become more sexually active, they tend to transition to hormonal methods of contraception, which requires formal engagement with a health service provider (Jaccard and Levitz, 2013). They are less likely to have the enthusiasm and ability to consume a contraceptive method appropriately.

However, Woog *et al.*, (2015) documented that adolescent level of perception of the pregnancy outcomes may influence their contraceptive utilization; during their growth, adolescent continually analyze their environment testing boundaries for possible matter and this can lead to risk-taking behavior. They may, for instance, recognize the risk of pregnancy as low, and may then consume an unsuccessful contraceptive option or none at all, or use a technique wrongly (Woog *et al.*, 2015). In addition, adolescents frequently lack essential information on contraceptive options, and the little information they might have is often inappropriate; most get the information from their peers. In South Africa, 23% of adolescent pregnancy is due to girls wanting to verify their fecundity. This perception encourages adolescents to engage in unprotected sexual intercourse and avoid using contraceptives so as to prove their fertility (Sibeko, 2012).

5.5 BARRIERS TO THE USE OF CONTRACEPTION

Many adolescents are unable to obtain contraception (including emergency contraceptives) to avoid unwanted pregnancy. Even those adolescent who can obtain contraceptive does not always use them correctly and consistently. Lack of knowledge (47.9%), fear of side effects (47%), attitude of teachers (45.8%), religious beliefs (44.4%), attitude of contraceptive providers (42.7%), cultural or traditional beliefs (38.5%) and distance to acquisition of contraceptives (34.2%) were the main reasons why female adolescents were among the reasons adolescents did not use contraceptives according to findings in this study. Other reasons include partner opposed to using contraceptives (29.9%), hard to get preferred methods (23.9%), contraceptives being too costly (19.7%), infrequent sex (13.7%) and family members opposed to using contraceptives (9.4%). According to WHO Family planning/ Contraception (2013), an estimated 222 million women in developing countries would like to delay or stop childbearing but are not using any method of contraception. Reasons include limited access to contraception, particularly among young people, poorer segments of populations, or unmarried people, limited choice of methods, fear or experience of side-effects, cultural or religious opposition (WHO, 2017).

In the same vein, Over 200 million women worldwide have no access to modern and effective contraceptives (Williamson, 2015). In developed and developing nations alike, adolescent pregnancy is of growing public health importance with approximately 11% of global births occurring in girls aged 15 to 19 years, and about 95% of these births occur in low and middle countries (LMICs) (Sama et al., 2017). The regional burden in LMICs is more in sub-Saharan Africa (SSA), where it is estimated that about half of the women gave birth before the age of 20 years, with a resultant high pregnancy-related morbidity and mortality (Sama et al., 2017). In the developing countries, the lack of access to contraceptives results in 76 million unplanned pregnancies each year.

Judgmental attitudes of healthcare providers and community about sexual activity abound, especially for those out of a marriage and sexually active girls and women discourage adolescent from seeking reproductive health care (Morris and Rushwan, 2015). In some regions, accepted practices of early marriage and childbearing, age differences between partners, and societal pressure prohibiting the use of contraceptive methods may also exist. Lastly, Poor ASRH can be further confounded by conflict, migration, urbanization, and lack of schooling (Morris and Rushwan, 2015).

Contraceptive services need to be “youth-friendly” in order to encourage adolescent to seek reproductive health care (Hofman et al., 2016).

SIX: CONCLUSION AND RECOMMENDATIONS

6.1 CONCLUSION

This study used a cross-sectional survey to assess the use of contraception among 117 female high school adolescents. The findings revealed the low rate of contraceptive utilization in spite of a high level of knowledge. Bivariate analysis and logistic regression of independent variables were used to determine the factors enabling the use of contraception among sexually active female adolescents. The findings revealed that the participants know about contraceptives but the utilization rate is still as low as 39% among sexually active female high school adolescents at the study site. Factors like education, parents' approval of contraception, discussing contraception with others, knowledge and avoiding pregnancy were significantly associated with the use of contraceptive methods at the study site. However, lack of knowledge, fear of Side effects, the attitude of teachers, religious beliefs, attitude of contraceptive providers, cultural or traditional beliefs and distance to the acquisition of contraceptives were identified as barriers to the use of contraceptives by the participants. More effort is needed to bridge the gap between having the knowledge and using contraception among high school female adolescents.

6.2 RECOMMENDATIONS

The following recommendations are made based on the study results to address the low rate of contraceptive use through the Rwanda Ministry of Health, Rwanda Ministry of youth and Information and Communication Technology, Rwanda Ministry of education, researchers, Selected Rwamagana school administration and Rwanda Ministry of Gender and Family Promotion

Ministry of Health

- ✓ Attitudes of contraceptive providers should not prevent nor discourage adolescents from accessing RHS and supplies; so Rwanda Ministry of Health should train or retrain all reproductive health service providers in the Rwamagana community in the provision of youth-friendly services to enable them to provide friendly services to adolescents

Ministry of Youth and Information and Communication Technology

- ✓ Promote mass media campaigns to control unplanned pregnancies and encourage the use of contraceptive services among learners.

- ✓ Programs and workshops should be offered about communication between parents and their children about sexuality, safe sex, and contraception.
- ✓ Improve on the attendance of female adolescents to the youth centers and/or school-based contraceptive services in order to acquire learner-friendly services and supplies.
- ✓ To enhance contraceptive use among adolescents and to improve on sexuality education at home, several program issues should be addressed.

Ministry of education

- ✓ Enhance or incorporate sex education programs in the curricula of all levels of education since this study has shown more contraceptive use in year 3 of the study compared to year 1 of study. Commencing sexuality education in the primary school level would be better.
- ✓ Incorporate culture and traditional beliefs across the sex education programs as these were shown among the barriers to the contraceptive use among secondary school female adolescents
- ✓ In-service teacher training programs should be provided and schools should offer not only sexuality education sessions but also counseling services.

Selected Rwamagana school administration

- ✓ School administration where data were collected should strengthen parent-child communication via their period meetings.
- ✓ Training of teachers in collaboration with Rwamagana district and the Ministry of Education to improve message delivery to female students regarding reproductive health.

Strategies to educate parents on adolescents' sexuality issues with age-specific messages should be developed

Future Research

- ✓ To have an impact on sexuality education, further research is required to identify and develop age-specific messages to guide school education curriculum as well as messages for parent-child communication program.
- ✓ Conduct a qualitative study to bridge the gap between a high level of knowledge and use of contraception among female high school adolescents
- ✓ Conduct a countrywide survey of factors influencing adolescent utilization of contraception. This will provide useful information for adolescent pregnancies prevention programs etc.

- ✓ As mentioned in the methodology, this study findings can not be generalized to all female adolescent population in Rwanda. Therefore, futher studies on the use of contraceptive methods are recommended.

LIST OF REFERENCES

- Abdul-razak, A. (2016) *Factors Influencing Non-Use of Modern Contraceptives among Adolescents in the Sunyani Municipality*. University of Ghana.
- Agyemang, J., Newton, S., Nkrumah, I., Tsoka-Gwegweni, J.M., Nambile, S. . (2019) 'Contraceptive use and associated factors among sexually active female adolescents in Atwima Kwanwoma District, Ashanti region-Ghana', *Pan African Medical Journal*, 32(16), pp. 1–13.
- Aishath (2016) *Right to Sexual & Reproductive Health Education*. Maldives O. Edited by Maurifa. Maldives: Mohamed.
- Ajah, L.O., Obi, V.O., Ozumba, B.C., Umeora, O.U.J., Onwe, O.E., Ezeonu, C.T., Onu, F. A. (2015) 'Attitude of healthcare providers to adolescent contraception in Abakaliki, South East Nigeria.', *International Journal of Medicine and Health Development*, 20(1), pp. 13–20. doi: <http://dx.doi.org/10.4314/jcm.v20i1.3>.
- Ajayi, A., Adeniyi, O. V. and Akpan, W. (2018) 'Use of traditional and modern contraceptives among childbearing women : findings from a mixed methods study in two southwestern Nigerian states', *Ajayi et al. BMC Public Health*. BMC Public Health, 3(1), pp. 1–9.
- Ajzen, I., & Fishbein, M. (1980) *The theory of reasoned action. Adopted from understanding attitudes and predicting human behavior*. New Jersey: Prentice Hall, Englewood.
- Appiah-Agyekum, N. N. and Kayi, E. A. (2015) 'Students' perceptions of contraceptives in university of Ghana.', *Journal of family & reproductive health*, 7(1), pp. 39–44.
- Asiamah, N., Mensah, H. K., & Oteng-Abayie, E. (2017) 'General , Target , and Accessible Population : Demystifying the Concepts for Effective Sampling General , Target , and Accessible Population : Demystifying the Concepts', *The Qualitative Report*, 22(6), pp. 1607–1621.
- Awazzi, E. . (2016) 'Exploring The Influencing Factors On Adolescent Sexual Behaviour And Reproductive Health Challenges In Nigeria: A Case Study Of Plateau State', *Reproductive Health*, 7(1), p. 26.
- Basinga, P. Moore, A. M., S, S. and Lisa. R, B. F. N. L. (2012) 'Unintended Pregnancy And Induced Abortion In Rwanda', p. 26.
- Blumoff, K. G., Makino, K.K and Mandy, S. . (2014) 'Factors associated with provision of long-acting reversible contraception among adolescent health care providers. NIH Public Access', *J Adolesc Health*, 52(3), pp. 372–374.
- Boamah, E.A., Kwaku, P. A., Mahama, E., Manu, G., Kwesi, E. A., Adeniji, E., Owusu-Agyei, S. (2014) 'Use of contraceptives among adolescents in Kintampo, Ghana: a cross-sectional study', *Open Access Journal of Contraception*, 5(2), pp. 7–15.

Bolarinwa, O. (2015) 'Principles and methods of validity and reliability testing of questionnaires used in social and health science researches', *Nigerian Postgraduate Medical Journal*, 22(4), p. 195.

Brown H, Coulson J, Gordon-Maclean C, Nyalali K, Maternowska C, and T. A. (2015) *Unintended pregnancy among teenagers in Arusha and Zanzibar, Tanzania: A situation analysis*. : Marie Stopes International. Available at: -and-zanzibar-tanzania.pdf.

Burns, N. and Grove, S. K. (2014) *Understanding Nursing Research-Building an evidence based practice*. 4th editio. Edited by St. Louis. Philadelphia: Saunders Elsevier.

Chhabra S and Singh R (2016) 'Adolescents' Birth Control Practices', *Journal of Contraceptive Studies*, 1(3), p. 17.

Curtis, A. C. (2015) 'Defining Adolescence', *Journal of Adolescent and Family Health*, 7(2), pp. 1–39.

Deborah,J.J., Kincaid,C.,Sterret, E.,Laura, M. (2017) 'A review of parenting and adolescent sexual behavior: The moderating role of gender', *Journal of Clin Psychol*, 32(3), pp. 177–188.

Dehlendorf, C., Krajewski, C. and Borrero, S. (2014) 'Contraceptive counseling: Best practices to ensure quality communication and enable effective contraceptive use', *Clinical Obstetrics and Gynecology*, 57(4), pp. 659–673.

Esantsi, S.F., Onyango, F., Quansah, A.G.J., Kuffour, E.O., Tapsoba, P., Birungi, H., Ian, A. (2015) 'Understanding the Reproductive Health Needs of Adolescents in Selected Slums in Ghana: A Public Health Assessment Understanding the Reproductive Health Needs of Adolescents in Selected Slums in Ghana', *Reproductive Health*, 2(1), p. 17.

Gebhard, P. H. (2018) 'Adolescent Sexual Behaviour in Nigeria', *Journal of Family Issues*, 3(2), p. 12.

Guttmacher Institute (2017a) *Abortion and Postabortion Care in Uganda*, *Guttmacher Institute*. Available at: <https://www.guttmacher.org/sites/default/files/factsheet/abortion-and-postabortion-care-uganda.pdf> (Accessed: 3 July 2019).

Guttmacher Institute (2017b) 'Adolescent Sexual and Reproductive Health in the United States', (August). Available at: <https://www.guttmacher.org/sites/default/files/factsheet/adolescent-sexual-and-reproductive-health-in-united-states.pdf>.

Hagan, J. E. and Buxton, C. (2014) 'Contraceptive Knowledge, Perceptions and Use among Adolescents in Selected Senior High Schools in the Central Region of Ghana', *Journal of Sociological Research*, 3(2). doi: 10.5296/jsr.v3i2.2311.

Hofman, J.J., Quinney, D., Lavussa, J.A., Olenja, J.M., Godia, P. . (2016) 'Sexual reproductive health service provision to young people in Kenya ; health service providers ' experiences', *BioMed Central Health Services Research*, 5(1), p. 13;476.

Hubacher, D. and Trussell, J. (2015) 'A definition of modern contraceptive methods', *Contraception*. Elsevier Inc., 92(5), pp. 420–421. doi: 10.1016/j.contraception.2015.08.008.

Jaccard, J., Ph, D. and Levitz, N. (2016) 'Counseling Adolescents About Contraception : Towards the Development of an Evidence-Based Protocol for Contraceptive Counselors', *Journal of Adolescent Health*, 52(4), pp. S6–S13.

Karen, P., Zapata, L.B., Stephen, J. T., Mautone-Smith, N., Loretta, E. G. (2016) 'Impact of Contraceptive Education on Contraceptive Knowledge and Decision Making', *American Journal of Preventive Medicine*, 118(24), pp. 6072–6078.

Kinano, Joyce (2014) *Perceptions as a barrier to Contraceptive Use Among Adolescents: A case Study of Nairobi, Kenya*.

Kirchengast, S. (2016) 'Teenage Pregnancies: A Worldwide Social and Medical Problem', *Open Access Journal of Contraception*. University of Vienna, 15(4), p. 19.

Landry, M., Turner, M., and Wood, S. (2017) *Social Media and Sexual Behavior Among Adolescents: Is there a link?* Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5457530/> (Accessed: 29 June 2019).

Lawrence B. F., Jesse M and Philbin, B. . (2017) 'Sexual Initiation , Contraceptive Use , and Pregnancy Among Young Adolescents', *Official Journal of the American Academy of Pediatrics*, 2(1), p. 15. doi: 10.1542/peds.2012-3495.

Layu, D., Dohbit, Julius, S., Tsoka-Gwegweni, J.M., Cumber, N. S. (2018) 'Factors associated with adolescent school girl's pregnancy in Kumbo East Health District North West region Cameroon', *Pan African Medical Journal*, 8688, pp. 1–11. doi: 10.11604/pamj.2018.31.138.16888.

Lloyd, C. B. (2015) 'growing up global the changing transitions based on research by a panel on Transitions to Adulthood in Developing Countries convened by the National Academies ' National Research Council and Institute of Medicine'.

Maharjan, B., Rishal, P. and Svanemyr, J. (2019) 'Factors influencing the use of reproductive health care services among married adolescent girls in Dang District , Nepal : a qualitative study', *Journal of Graduate Medical Education*. BMC Pregnancy and Childbirth, 3, pp. 1–9. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4763399/pdf/i1949-8357-8-1-97.pdf>.

Morris, J. L. and Rushwan, H. (2015) 'International Journal of Gynecology and Obstetrics Adolescent sexual and reproductive health: The global challenges', *International Journal of Gynecology and Obstetrics*. Elsevier B.V., 131, pp. S40–S42. doi: 10.1016/j.ijgo.2015.02.006.

Moyo, S. and Rusinga, O. (2017) 'Contraceptives: Adolescents' Knowledge, Attitudes and Practices. A Case Study of Rural Mhondoro-Ngezi District, Zimbabwe.', *African journal of reproductive health*, 21(1), pp. 49–63. Available at:

<http://www.ncbi.nlm.nih.gov/pubmed/29595025>.

Nakirijja, D. S. (2018) 'iMedPub Journals Socio-economic Determinants of Access to and Utilization of Contraception among Rural Women in Uganda: The Case of Wakiso District Background of the Research', pp. 1–20. doi: 10.21767/1791-809X.1000608.

NISR (2015) *Demographic and Health Survey RDHS / 2014-15: District Profile Chart Book*. Available at: http://www.kigalicity.gov.rw/fileadmin/Template/Documents/reports/Kigali_City_profile

NISR, M. and I. I. (2015) *Rwanda Demographic and Health Survey 201415: Key Indicators, Rockville, Maryland, USA: National Institute of Statistics of Rwanda (NISR) [Rwanda], Ministry of Health (MOH) [Rwanda], and ICF International*.

Nsubuga, H., Sekandi, J.N., Sempeera, H., Makumbi, F. E. (2016) 'Contraceptive use , knowledge , attitude , perceptions and sexual behavior among female University students in Uganda: a cross-sectional survey', *BMC Women's Health*. *BMC Women's Health*, 3(1), pp. 1–11.

Nyarko, S. H. (2015) 'Prevalence and correlates of contraceptive use among female adolescents in Ghana', *BMC Women's Health*. *BMC Women's Health*, 3(2), pp. 4–9.

Ochako, R., Mbondo, M., Aloo, S., Kaimenyi, S., Thompson, R. and Temmerman, M. Kays, M. (2015) 'Barriers to modern contraceptive methods uptake among young women in Kenya: a qualitative study', *BMC IPublic Health*, 2(1), pp. 1–9.

Omedi, G. (2014) 'Adolescent Motherhood in Kenya', *Research on Humanities and Social Sciences*, 4(23), pp. 1–10.

Ott, M. A. Sucato, G.S., Braverman, P. K., Adelman, W. P., Alderman, E. . . , Breuner, C. C., Levine, D. A. and Marcell, A. V., O'Brien, R. F. Murray, P. J., Gavin, L. E., Lane, M., Miller, R. J., Shain, B. Smith, K. .S., Baumberger, J. . . (2014) 'Contraception for adolescents', *Pediatrics*, 134(4), pp. e1257–e1281.

Polit, F. D. and Beck, T. C. (2014) *Essentials of Nursing Research: Appraising Evidence for Nursing Practice*. 8th editio. Wolters Kluwer Health | Lippincott Williams & Wilkins. All.

RDHS (2015) *Rwanda Demographic and Health Survey 2014-2015*. Available at: https://pdf.usaid.gov/pdf_docs/PBAAE422.pdf.

Sama, C., Ngasa, S.N., Dzekem, B. S., Choukem, S. (2017) 'Prevalence , predictors and adverse outcomes of adolescent pregnancy in sub-Saharan Africa: a protocol of a systematic review', *BioMed Central*. *Systematic Reviews*, 2(1), pp. 1–6.

Schaapveld, A & Ineke, V. . (2018) 'Contraceptives Knowledge among High School Female Adolescents', *Reproductive Health*, 2(1).

Sekanyange, J. L. (2016) *Report on Early / Unwanted Pregnancy for Under 18 Years in 10 Districts of Rwanda*. Kigali.

Sibeko, G. (2012) 'The effects of pregnancy on school girls education'. Available at: [uzspace.uzulu.ac.za/bitstream/handle/10530/1238/The effect of.](http://uzspace.uzulu.ac.za/bitstream/handle/10530/1238/The%20effect%20of%20pregnancy%20on%20school%20girls%20education)

Silk, J. and Romero, D. (2014) 'The Role of Parents and Families in Teen Pregnancy Prevention: An Analysis of Programs and Policies', *Journal of Family Issues*, 35(10), pp. 1339–1362. doi: 10.1177/0192513X13481330.

Susan, M. J., DuRant, R.H., Shoffitt, T., Linder, C.W., and Farris, F. (2017) 'Effect of peer counselors on adolescent compliance in use of oral contraceptives', *Pediatrics*, 73(2), pp. 126–131. Available at: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emed1b&NEWS=N&AN=1984063439>.

Taherdoost, H. (2016) 'Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research', *International Journal of Academic Research in Management (IJARM)*, 5(2), pp. 18–27.

Tanzania Demographic and Health Survey (2015) *Tanzania Demographic and Health Survey and Malaria Indicator Survey*. Available at: <https://dhsprogram.com/pubs/pdf/fr321/fr321.pdf>.

Tchokossa and Adeyemi (2018) 'Knowledge and Use of Contraceptives among Female Adolescents in Selected Senior Secondary Schools in Ife Central Local Government of Osun State', *Journal of Community Medicine & Health Education*, 8(3), pp. 1647–1661.

Uganda Demographic and Health Survey (2017) 'Uganda Demographic and Health Survey Key Indicators Report', (March), p. 70. Available at: https://www.ubos.org/onlinefiles/uploads/ubos/pdf/documents/Uganda_DHS_2016_KIR.pdf.

Ugwu, N. H. (2014) 'Knowledge and Use of Contraceptive Methods among Youth in Abuja Metropolis', *Journal of Adolescent Health*, 2(1), p. 13.

UNFPA (2013) *ADOLESCENT PREGNANCY: A Review of the Evidence*. Available at: https://www.unfpa.org/sites/default/files/pub-pdf/ADOLESCENT_PREGNANCY_UNFPA.pdf (Accessed: 11 October 2018).

UNFPA (2016) *Sexual and Reproductive Health for All, United Nation Population Fund*. Available at: <http://www.unfpa.org/public/home/publications/pid/6526> (Accessed: 2 July 2019).

UNICEF (2018) *Sexual and Reproductive Health for Adolescents*. New York: UNICEF. Available at: <https://www.unicef.org/adolescence> (Accessed: 2 July 2019).

UNICEF/UNFPA (2018) *Joint Programme on Female Genital Mutilation / Cutting: Accelerating Change, UNICEF/UNFPA*. Available at: [https://www.unfpa.org/.../UNICEF-UNFPA Joint Programme AR_final_v1](https://www.unfpa.org/.../UNICEF-UNFPA%20Joint%20Programme%20AR_final_v1) (Accessed: 30 June 2019).

United Nation, D. of E. and S. A. (2015) *Trends in Contraceptive Use Worldwide*. Available at: <http://www.un.org/en/development/desa/population/publications/pdf/family/trendsContraceptiveUse2015Report.pdf>.

Vargas, C.N.C., Ewerling, F., Hellwig, F., and Barros, A. J. D. (2019) 'Contraception in adolescence: the influence of parity and marital status on contraceptive use in 73 low-and middleincome countries', *Journal of Reproductive Health*, 16(1), pp.1–12. Available at: r.

Wanjiru (2012) *Utilization of Contraceptives among Secondary School Adolescent Girls in Karuri, Kiambaa Sub-County, Kiambu County*. Kenyatta University.

WHO (2014a) *Maternal, Newborn, Child and Adolescent Health*. Available at: http://www.who.int/maternal_child_adolescent/topics/maternal/adolescent_pregnancy/en/ (Accessed: 15 July 2018).

WHO (2014b) *WHO calls for stronger focus on adolescent health*. Available at: http://origin.searo.who.int/entity/child_adolescent/data/adolescent_health/focus/en/ (Accessed: 19 July 2018).

WHO (2015a) *Health for the World's Adolescent Reports. Highlits from the South-East Asian Region, World Health Organization . Regional Office for South-East Asia*. Available at: http://origin.searo.who.int/entity/child_adolescent/sear-highlights-hwa.pdf (Accessed: 30 August 2018).

WHO (2015b) *Position paper on mainstreaming adolescent pregnancy in efforts to make pregnancy safer, World Health Organization*. Available at: <https://www.gfmer.ch/SRH-Course-2010/adolescent-sexual-reproductive-health/pdf/WHO-mainstreaming-adolescent-pregnancy-efforts-MPS-2015.pdf> (Accessed: 28 June 2019).

WHO (2016a) *Global Accelerated Action for the Health of Adolescents (AA-HA !): Implementation Guidance DRAFT*. Geneva.

WHO (2016b) 'Reducing early and unintended pregnancies among adolescents', *Family Planning*, pp. 1–4.

WHO (2016c) *Unsafe abortion incidence and mortality Global and regional levels in 2008 and trends*. doi: WHO/RHR/12.02.

WHO (2017) *Addressing the sexual and reproductive health of adolescents. Sexual and reproductive health, World Health Organization*.

WHO (2018a) *Adolescent pregnancy*. Available at: <http://www.who.int/news-room/fact-sheets/detail/adolescent-pregnancy> (Accessed: 11 October 2018).

WHO (2018b) *Child and adolescent health and development*. Available at: http://www.searo.who.int/entity/child_adolescent/topics/adolescent_health/en/.

WHO (2018c) *Sexual and reproductive health*. Available at: http://www.who.int/reproductivehealth/topics/family_planning/contraceptive_prevalence

Wildsmith, E., Barry, M., Manlove, J., Vaughn, B. (2017) 'Dating and sexual relationships', *Journal of Adolescent Health*, 3(1), pp. 1–10.

Williamson, N. (2015) *Motherhood in Childhood: Facing the Challenge of Adolescent Pregnancy*, *State of the World Population 2015*.

Woods, J., Shew, M., Tu, W., Ofner, S., Ott, M., & Fortenberry, D. (2016) 'Patterns of oral contraceptives, pill taking and condom use among adolescents contraceptive pill users', *Journal of adolescent health*, 39(3), pp. 381–387.

Woog, V., Susheela, S., Browne, A., Philbin, J. (2015) 'Adolescent Women ' s Need for and Use of Sexual and Reproductive Health Services in Developing Countries', *Journal of BioMed Central.*, 6(2), p. 33.

Wright, S., Brien, C.O., Nimmon, L., Marcus, L., Mylopoulos, M. (2016) 'Research Design Considerations', *Journal of Graduate Medical Education*, 3(1), pp. 7–8.

Yakubu, I. and Salisu, W. J. (2018) 'Determinants of adolescent pregnancy in sub-Saharan Africa: A systematic review', *Journal of Reproductive Health*, 15(1), p. 11.

APPENDICES

APPENDIX A: PERMISSION TO USE THE STUDY TOOL

Requesting the permission to adopt a Research Questionnaire - ngerageze... <https://mail.google.com/mail/u/1/#search:mmurigi@kyu.ac.ke:FMfegx...>

The screenshot shows a Gmail interface. On the left is a sidebar with navigation options: Compose, Inbox (60), Starred, Snoozed, Categories (Social: 2,202, Updates: 334, Forums: 9), and a contact named ngerageze (+). The main area shows an email from ngerageze innocent with the subject 'Requesting the permission to adopt a R...'. The email body contains a message from Mary Murigi (mmurigi@kyu.ac.ke) to ngerageze, dated 23-Sep-19, 12:14 PM. The message text is: 'Dear Ngerageze, I hope these finds you well. I am glad my work interested you, you can adopt the questionnaire. It will be interesting to see the results from your work as well. Thanks for taking the step to contact me. Share your results once you are done for comparative purposes. Good luck.' Below the message is an Avast virus-free notification and a confidentiality disclaimer: 'This email and any attachments (if any) is confidential and may also attachments (if any) and notify the sender immediately. [Kirinyaga Un...](#) passed by e-mail'. The sender's name and email address, ngerageze innocent <ngeragezeinnocent@gmail.com>, are visible at the bottom of the email.

APPENDIX B: ETHICAL CLEARANCE



UNIVERSITY OF

RWANDA

COLLEGE OF MEDICINE AND HEALTH SCIENCES

CMHS INSTITUTIONAL REVIEW BOARD (IRB)

Kigali, 14/01/2019
Ref: CMHS/IRB/049/2019

NGERAGEZE Innocent
School of Nursing and Midwifery, CMHS, UR


Dear NGERAGEZE Innocent

RE: ETHICAL CLEARANCE

Reference is made to your application for ethical clearance for the study entitled *“Utilization of Contraceptive Methods among High School Female Teenager at a Selected Secondary School in Rwamagana District, Rwanda”*.

Having reviewed your protocol and been satisfied with your revised version incorporating the comment from the IRB, your study is hereby granted ethical clearance. The ethical clearance is valid for one year starting from the date it is issued and shall be renewed on request. You will be required to submit the progress report and any major changes made in the proposal during the implementation stage. In addition, at the end, the IRB shall need to be given the final report of your study.

We wish you success in this important study.


Professor Jean Bosco GAHUTU
Chairperson Institutional Review Board,
College of Medicine and Health Sciences, UR

Cc:

- Principal, College of Medicine and Health Sciences, UR
- University Director of Research and Postgraduate studies, UR

APPENDIX C: PERMISSION TO CONDUCT A STUDY

REPUBLIC OF RWANDA



EASTERN PROVINCE

RWAMAGANA DISTRICT

P.O BOX 24 RWAMAGANA

TO
Mr. Innocent NGERAGEZE

18th February, 2019

Dear,

RE: Response to your letter

Reference to your letter dated on 7th February; 2019 requesting for permission to conduct a study entitled "*Utilisation of contraceptives Methods among high school Female Teenagers*"

I am pleased to inform you that you are allowed to conduct the study stated above in G S NSINDA (Data Collection) and G S APAGIE MUSHA (Pilot study).

I hope you will share with us findings after the study completion.

We wish you all the best.

MBONYUMUVUNYI Radjab
Mayor of Rwamagana District.



Cc:

- Head Teacher of G S NSINDA
- Head Teacher of G S APAGIE MUSHA

N° 767/05.01

APPENDIX D: INFORMATION DOCUMENT

Study Title: Utilization of Contraceptive Methods among High School Female Teenagers at a Selected Secondary School in Rwamagana District, Rwanda

Investigator: NGERAGEZE Innocent, School of Nursing and Midwifery, College of Medicine and Health Sciences, University of Rwanda.

Introduction

I, NGERAGEZE Innocent, I am currently a student from University of Rwanda, College of Medicine and Health Sciences, Remera campus in Master of Science Nursing. I would like to request you to participate in my study. The purpose of this document is to give you information you will need to participate in this study. Please read this form carefully, you are free to ask questions about study and the investigator is available to answer you.

Purpose of the study

To assess the utilization of contraceptive methods among high school female adolescents at a selected secondary school in rwamagana district.

Study procedure

If you agree to participate in the survey, the researcher will give you some questions about the use of contraception among female high school adolescents. These will take you about 25 minutes.

Confidentiality and privacy

Any information you provide including your identity, personal information will be treated with highest confidentiality level. The information will be only used for this study.

Benefits

This may not have a direct benefit to you but the results may inform nurse leaders and other policymakers on future review and revision of policies and practices regarding adolescent's reproductive health , sexuality and family life measures that might enhance the use of contraceptives by adolescents by removing possible barriers thus mitigate the burden of unintended pregnancies

Risk of the study

No invasive procedure or legal and administrative process involved in the study.

Voluntarism

Participation in this study is voluntary and you are free to withdraw from the study if you wish without any penalty

Compensation

No compensation will be offered for participation in the study.

Contact information

If you have any questions about the study or your participation in the study now or later you may contact:

Principal investigator:

NGERAGEZE Innocent Tel: 0782727667 Email: ngeragezeinnocent@gmail.com

Supervisors:

Dr. MUKESHIMANA Madeleine Tel: 0785256459 Email: angemado@gmail.com

Mr NKURUNZIZA Aimable Tel: 0788221439 Email: aimableinter@gmail.com

If you have any questions on your rights about investigator or his supervisors, you can contact:

University of Rwanda, College of Medicine and Health Sciences. Chairperson of the CMHS IRB (0788 490 522) and of the Deputy Chairperson (0783 340 040).

APPENDIX E: INFORMED CONSENT FORM (for parent/guardian)

Title of Research Project: Utilization of Contraceptive Methods among High School Female Adolescent at a Selected Secondary School in Rwamagana District, Rwanda.

Investigator: NGERAGEZE Innocent, School of Nursing and Midwifery, College of Medicine and Health Sciences, University of Rwanda.

I confirm that I have read the letter of information of the study, have had the purpose of the study explained to me and all procedures that I am asked to participate in. I have had the opportunity to consider the information, ask questions regarding the study and have had these answered adequately. I clearly understand that my contribution is to allow my child to take part in this study. I understand that my child identity will not be disclosed and that she may withdraw from the study at any time with no reason and this will not negatively affect her in any way. Therefore, I freely and voluntarily allow my child to participate.

Parent/Guardian name:

Researcher:

Signature:

Signature.....

Date:

Date.....

APPENDIX F: ASSENT FORM (for student)

Title of Research Project: Utilization of Contraceptive Methods among High School Female Adolescent at a Selected Secondary School in Rwamagana District, Rwanda.

Investigator: NGERAGEZE Innocent, School of Nursing and Midwifery, College of Medicine and Health Sciences, University of Rwanda.

I confirm that I have read the letter of information of the study, have had the purpose of the study explained to me and all procedures that I am asked to participate in. I have had the opportunity to consider the information, ask questions regarding the study and have had these answered adequately. I clearly understand what I will be required to do if I agree to take part in this study. I understand that my identity will not be disclosed and that I may withdraw from the study at any time with no reason and this will not negatively affect me in any way. Therefore, I freely and voluntarily agree to participate.

Participant's name:

Researcher :

Participant's signature:

Signature.....

Date:

Date.....

APPENDIX F: QUESTIONNAIRE

PARTICIPANTS' INSTRUCTIONS

Do not write your name; tick only one correct response and multiple responses where applicable. Only adolescent aged between 10-19 years are eligible for this study.

SECTION A: SOCIO-DEMOGRAPHIC INFORMATION

1. How old are you?
 - i. Under 14
 - ii. 14-16
 - iii. 17-19
2. What is your year of study?
 - i. Year 1
 - ii. Year 2
 - iii. Year 3
3. What is your religion?
 - i. Christian
 - ii. Muslim
 - iii. Other: specify.....
4. What is your marital status?
 - i. Single
 - ii. Co-habiting
5. What is the level of education of your mother/guardian?
 - i. Primary
 - ii. Secondary
 - iii. University
 - iv. Vocational training
 - v. None
6. What is the level of education of your father/guardian?
 - i. Primary
 - ii. Secondary
 - iii. University
 - iv. Vocational training
 - v. None
7. Who do you live with?
 - i. Parents
 - ii. Partner
 - iii. By myself
 - iv. Other specify.....
8. What is the occupation of your mother/guardian?
 - i. Formal
 - ii. Informal
 - iii. Other: specify.....
9. What is the occupation of your father/guardian?
 - i. Formal
 - ii. Informal
 - iii. Other: specify.....

SECTION B: KNOWLEDGE OF CONTRACEPTIVES

10. Have you ever heard of contraceptives
 - i. Yes
 - ii. No
11. Contraception is any method or procedure used to prevent pregnancy?
 - i. Yes
 - ii. No
 - iii. Don't know
12. Which types of contraceptives do you know?
 - i. Pills
 - ii. Condoms
 - iii. Injection
 - iv. Implants
 - v. Intrauterine devices
 - vi. Diaphragm
 - vii. Tubal ligation
 - viii. Others: specify.....
13. Do you know any place in your community where you can get a contraceptive?
 - i. Yes
 - ii. No
14. Overall do you think contraception is a woman business and a man should not have to worry about it?
 - i. Yes
 - ii. No
 - iii. I don't know
15. Women who use contraceptives may become promiscuous?
 - i. Yes
 - ii. No

SECTION C: CONTRACEPTIVE UTILIZATION

16. Did you use contraceptive the first time when you had sexual intercourse?
 - i. Yes
 - ii. No
17. What are your reasons for using contraceptives?
 - i. To avoid pregnancy
 - ii. To prevent STIs
 - iii. To delay childbirth
 - iv. Others (list).....
18. Who in your opinion should use contraceptives?
 - i. Married couples only
 - ii. All sexually active persons
 - iii. Adults only
 - iv. Unmarried couples only
 - v. Others specify.....
19. The last time you had sex did you or your partner use any contraceptive?
 - i. Yes
 - ii. No
20. The last time you used contraceptive who decided on what to use?
 - i. Myself
 - ii. Partner

- iii. Friend
 - iv. Parents
 - v. Others specify.....
21. If you wanted to, could you yourself get any contraceptives?
- i. Yes
 - ii. No
22. Would your parent/guardian approve contraception if you are/were married?
- i. Would object
 - ii. Would not object
 - iii. Others specify:.....
23. Do you think it is wise for you to use contraceptives?
- i. Yes
 - ii. No
24. Do you discuss/communicate about contraceptives with anyone?
- i. Yes
 - ii. No

SECTION D: FACTORS ENABLING THE CONTRACEPTIVE USE

25. Have you ever had sex before?
- i. Yes
 - ii. No
26. How old were you when you had first sexual encounter?
- i. Below 14
 - ii. 14-16
 - iii. 17-19
27. Do you currently have a sexual partner (boyfriend)?
- i. Yes
 - ii. No
 - iii. Other: specify....
28. Do you feel any pressure from others to have unprotected sexual intercourse?
- i. Yes
 - ii. No
29. If yes to question 13, from whom do you feel pressure?
- i. Friends
 - ii. Partner
 - iii. Relatives
 - iv. Others specify.....
30. Have you ever sought reproductive health services from the hospital?
- i. Yes
 - ii. No
31. Have you ever faced discrimination in the hospital when seeking reproductive health services?
- i. Yes
 - ii. No
32. In your opinion, do you think using contraceptives is harmful?
- i. Yes
 - ii. No
 - iii. I don't know
33. Do you think sex education can influence contraceptive use?
- i. Yes
 - ii. No

34. Did you get education on sex in school?

- i. Yes
- ii. No

SECTION E: BARRIERS TO THE USE OF CONTRACEPTIVES

35. What will you say are the reasons why adolescents do not use contraceptives?
(can tick more than one)

- i. Religious beliefs
- ii. Distance to acquisition of contraceptives
- iii. Attitude of contraceptive providers
- iv. Attitude of our teachers
- v. Partner opposed to using
- vi. Family members opposed to using
- vii. Side effects
- viii. Lack of knowledge
- ix. Infrequent sex
- x. Hard to get preferred methods
- xi. Too costly
- xii. Counseling received about contraceptives
- xiii. Cultural or traditional beliefs
- xiv. Others specify.....

END OF QUESTIONS

APPENDIX G : INYANDIKO NSOBANURA BUSHAKASHATSI

Umutwe w'Ubushakashatsi: Imikoreshereze y'uburyo burinda gusama ku bangavu mu banyeshuri babakobwa biga mu mashuri yisumbuye ku kigo cyatoranyijwe gihereye mu karere ka Rwamagana mu Rwanda.

Umushakashatsi: NGERAGEZE Innocent, Ishuri ry'Ubuforomo n'Ububyaza, Koleji y'Ubuvuzi n'Ubuzima, Kaminuza y'u Rwanda.

Iriburiro

Njyewe, NGERAGEZE Innocent, ndi umunyeshuli muri kaminuza y'u Rwanda, ishuli ry'ubuvuzi n'ubumenyi, ishami rya Remera mu gashami k'ubuforomo. Nifuzaga ko mwakwitabira ubushakashatsi bwanjye. Intego y'iyi nyandiko ni ukugira ngo uhabwe amakuru yose yerekeranye n'ubushakashatsi yagufasha kwemera kubwitabira cyangwa kutabwitabira. Usabwe kuyisoma neza witonze, ufite uburenganzira busesuye ukabaza ibibazo byerekeranye nabwo kandi abashakashatsi bacu biteguye kugusubiza.

Incamake y'imigendekere y'ubushakashatsi

Uwemeye kwitabira ubu bushakashatsi arahabwa ibibazo byerekeranye n'imikoreshereze y'uburyo burinda gusama ku bangavu babakobwa biga mu mashuri yisumbuye. Biraza kumara byibuze iminota makumyabiri nitanu. Amakuru bwite y'usubiza, ibisubizo azabikwa mu ibanga. Ayo makuru azifashishwa muri ubu bushakashatsi gusa. Uwitabiriye azakuramo ubumenyi n'ibisobanuro byimbitse ku byerekeranye no gukoresha uburyo burinda gusama ku buntu. Nta ngaruka mbi uwitabiriye yahura nazo muri ubu bushakashatsi, kwitabira n'ubushake kandi uwanze kwitabira ntahanwa. Nta gihembo gitegairijwe uwitabiriye.

Ku bindi bisobanuro ugize ikibazo ku byerekeranye n'ubushakashatsi wabaza:

Umushakashatsi: NGERAGEZE Innocent umurongo: 0782727667

Abalimu: Dr. MUKESHIMANA Madeleine umurongo: 0785256459

NKURUNZIZA Aimable umurongo:0788221439

Abahagarariye akanama k'ubushakashatsi muri Kaminuza:

Umuyobozi (0788 490 522), Umwungirije (0783 340 040)

APPENDIX H: KWEMERA KUGIRA URUHARE MU BUSHAKASHATSI

(Umubyeyi/Umurera)

Umutwe w'Ubushakashatsi: Imikoreshereze y'uburyo burinda gusama ku bangavu mu banyeshuri babakobwa biga mu mashuri yisumbuye ku kigo cyatoranyijwe gihereye mu karere ka Rwamagana mu Rwanda.

Umushakashatsi: NGERAGEZE Innocent, Ishuri ry'Ubuforomo n'Ububuyaza, Koleji y'Ubuvuzi n'Ubuzima, Kaminuza y'u Rwanda.

Nemeye ko nasomye kandi nasobanukiwe ibaruwa itanga amakuru kuri ubu bushakashatsi, nasobanuriwe kandi numvise impamvu y'ubu bushakashatsi hamwe n'ibyo nsabwa kugiramo uruhare. Nabonye umwanya wo kumva no kubaza kugira ngo nsobanurirwe kandi nasobanukiwe bihagije impamvu y'ubushakashatsi . Numvise neza ko icyo nsabwa ari ukwemerera umwana wanjye/mpagarariye kugira uruhare mu bushakashatsi. Nsobanukiwe kandi ko amakuru atanga mu gusubiza ndetse n'ibizava mu bushakashatsi bizarebwa n'abo bigenewe gusa, bigendanye n'ubushakashatsi kandi numvise neza ko ashobora guhagarika kugira uruhare mu bushakashatsi mu gihe atagishaka gukomeza gutanga umusanzu we adasabwe gusobanura impamvu kandi nta ngaruka nimwe bigomba kumugiraho mu buryo ubwo aribwo bwo. bityo, nemereye umwana wanjye/mpagarariye kugira uruhare mu bushakashatsi nta gahato.

Umubyeyi/Umuhagarariye:

Umushakashatsi:

Umukono:

Umukono

Itariki:

Itariki

**APPENDIX I: KWEMERA KUGIRA URUHARE MU BUSHAKASHATSI
(Umunyeshuri)**

Umutwe w'Ubushakashatsi: Imikoreshereze y'uburyo burinda gusama ku bangavu mu banyeshuri babakobwa biga mu mashuri yisumbuye ku kigo cyatoranyijwe gihereye mu karere ka Rwamagana mu Rwanda.

Umushakashatsi: NGERAGEZE Innocent, Ishuri ry'Ubuforomo n'Ububyaza, Koleji y'Ubuvuzi n'Ubuzima, Kaminuza y'u Rwanda.

Nemeye ko nasomye kandi nasobanukiwe ibaruwa itanga amakuru kuri ubu bushakashatsi, nasobanuriwe kandi numvise impamvu y'ubu bushakashatsi hamwe n'ibyo nsabwa kugiramo uruhare. Nabonye umwanya wo kumva no kubaza kugira ngo nsobanurirwe kandi nasobanukiwe bihagije impamvu y'ubushakashatsi . Numvise neza icyo nsabwa mu kugira uruhare muri ubu bushakashatsi. Nsobanukiwe kandi ko amakuru ntanga mu gusubiza ndetse n'ibizava mu bushakashatsi bizarebwa n'abo bigenewe gusa, bigendanye n'ubushakashatsi kandi numvise neza ko nshobora guhagarika kugira uruhare mu bushakashatsi mu gihe ntagishaka gukomeza gutanga umusanu wanjye ntasabwe gusobanura impamvu kandi nta ngaruka nimwe bigomba kungiraho mu buryo ubwo aribwo bwose. bityo, nemeye kugira uruhare mu bushakashatsi nta gahato.

Umuyeshuri:

Umushakashatsi:

Umukono:

Umukono

Itariki:

Itariki

APPENDIX J: URUPAPURO RW'IBIBAZO KU BUSHAKASHATSI

AMABWIRIZA

Ntiwandike izina kuri uru rupapuro rw'ibazwa ku bushakashatsi.

Hitamo igisubizo nyacyo, Kimwe cyangwa birenze kimwe mugihe ari ngombwa.

Umwangavu ufite imyaka hagati ya 10 na 19 niwe wemerewe gusubiza ibi bibazo

IGICE CYA A: IBIRANGA UGIZE URUHARE MU BUSHAKASHATSI

1. Ufite imyaka ingahe?
 - iv. Minsi ya 14
 - v. Hagati ya 14-16
 - vi. Hagati ya 17-19
2. Wiga mu mwaka wa kangahe?
 - i. uwa 1
 - ii. uwa 2
 - iii. uwa 3
3. Usengera murihe dini?
 - i. Abakirisitu
 - ii. Abayisiramu
 - iii. Irindi: rivuge:.....
4. Vuga irangamimerere yawe?
 - i. Ingaragu
 - ii. Mbana n'umukunzi bitemewe namategeko
5. Mama wawe /ukurera yize amashuri angahe?
 - i. Abanza
 - ii. Ayisumbuye
 - iii. Kaminuza
 - iv. Imyuga
 - v. Ntiyize
6. Papa wawe /ukurera yize amashuri angahe?
 - i. abanza
 - ii. Ayisumbuye
 - iii. Kaminuza
 - iv. Imyuga
 - v. Ntiyize
7. Ubana nande?
 - i. Ababyeyi
 - ii. Inshuti (umuhungu/Umugabo)
 - iii. Ndibana
 - iv. Abandi (bavuge).....
8. Mama wawe/ukurera akora iki?
 - i. akorera akazi kinjiza umushahara wa buri kwezi
 - ii. akorera akazi kinjiza umushahara wa buri kwezi
 - iii. Ikindi: kivuge.....
9. Papa wawe/ukurera akora iki?
 - i. akorera akazi kinjiza umushahara wa buri kwezi
 - ii. akorera akazi kinjiza umushahara wa buri kwezi
 - iii. Ikindi: kivuge.....

IGICE CYA B: UBUMENYI KU BURYO BURINDA GUSAMA

10. Wigeze wumvaho uburyo burinda gusama?
- Yego
 - Oya
11. Uburyo burinda gusama ni uburyo ubwo aribwo bwose butuma umuntu adatwita?
- Yego
 - Oya
 - Simbizi
12. Uburyo burinda gusama uzi ni ubuhe?
- Ibinini
 - agakingirizo
 - urushinge
 - agapira ko mu kuboko
 - Agapira ko mu mura
 - Diyafuragime
 - Ubwa burundu ku bagore
 - Ubundi: buvuge.....
13. Hari ahantu uzi aho mutuye ushobora kubona uburyo burinda gusama?
- Yego
 - Oya
14. Ukekako kwirinda gusama bireba umugore naho umugabo ntibigomba kwirirwa bimuhangayikisha?
- Yego
 - Oya
 - Simbizi
15. Umugore ukoresheje uburyo bumurinda gusama ashobora kuba indaya?
- Yego
 - Oya

IGICE CYA C: GUKOresha UBURYO BURINDA GUSAMA

16. Wigeze ukoresha uburyo burinda gusama igihe wakoze imibonano mpuzabitsina bwa mbere?
- Yego
 - Oya
17. Impamvu yo gukoresha ibirinda gusama ni iyihe ku giti cyawe
- Kwirinda inda
 - Kwirinda indwara zandurira mu mibonano mpuzabitsina
 - Kuboneza urubyaro
 - Izindi (zivuge).....
18. Ku giti cyawe ni nde wakabaye akoresha uburyo burinda gusama
- Abashakanye gusa
 - abantu bose bakora imibonano mpuzabitsina
 - abantu bakuze gusa
 - Abandi, bavuge.....
19. Igihe uherukira gukora imibonano mpuzabitsina waba warakoresheje/uwo muyikorana yarakoresheje uburyo bwo kwirinda gusama?
- Yego
 - Oya

20. Impamvu yo gukoresha ibirinda gusama ni iyihe ku giti cyawe
- v. Kwirinda inda
 - vi. Kwirinda indwara zandurira mu mibonano mpuzabitsina
 - vii. Kuboneza urubyaro
 - viii. Izindi (zivuge).....
21. Ku giti cyawe ni nde wakabaye akoresha uburyo burinda gusama
- v. Abashakanye gusa
 - vi. abantu bose bakora imibonano mpuzabitsina
 - vii. abantu bakuze gusa
 - viii. Abandi, bavuge.....
22. Igihe uherukira gukora imibonano mpuzabitsina waba warakoresheje/uwo muyikorana yarakoresheje uburyo bwo kwirinda gusama?
- iii. Yego
 - iv. Oya
23. Igihe uherukira gukoresha uburyo burinda gusama ninde wafashe umwanzuro mu guhitamo uburyo bwakoreshejwe?
- i. njye kubushake bwanjye
 - ii. uwo twayikoranye
 - iii. ababyeyi banjye bangiriye inama
 - iv. Inshuti/ ababyeyi buwo twakoranye imibonano mpuzabitsina
 - v. Abandi (bavuge).....
24. Iyo ubishaka, wari Kubasha kwibonera uburyo bukurinda gusama?
- i. Yego
 - ii. Oya
25. Ese Umumbyeyi wawe/ukurera yakwemerera gukoresha uburyo burinda gusama uramutse urongowe?
- i. Yabyanga
 - ii. Yabyemera
 - i. Ikindi (kivuge):.....
26. Ese wumva bikwiye ko wakoresha uburyo bukurinda gusama?
- i. Yego
 - ii. Oya
27. Hari umuntu mujya muganira/ujya ubwira ibijyanye n'uburyo bwo kwirinda gusama?
- i. Yego
 - ii. Oya

IGICE CYA D: IBITUMA ABANGAVU BAKOresha UBURYO BURINDA GUSAMA

28. Wigeze ukora imibonano mpuzabitsina?
- i. Yego
 - ii. Oya
29. Niba ari yego (25) wari ufite imyaka ingahe uyikora bwa mbere?
- iv. Minsi ya 14
 - v. Hagati ya 14-16
 - vi. Hagati ya 17-19
30. Ubu ngubu waba ufite umuhungu mukundanacyangwa uwo mukorana imibonano mpuzabitsina?
- i. Yego
 - ii. Oya

- iii. Undi: muvuge.....
31. Wumva igitutu giturutse kubandi kiguhatira gukora imibonano mpuzabitsina idakingiye?
- i. Yego
 - ii. Oya
32. Niba ari yego 28) igitutu gituruka kurinde?
- i. inshuti
 - ii. umuhungu dukundana
 - iii. abavandimwe
 - iv. abandi (bavuge)
33. Wigeze ushaka serivise z'ubuzima bw'imyororokere kwa muganga?
- i. Yego
 - ii. Oya
34. Wigeze wakirwa nabi ku bitaro igihe washakaga serivise ijyanye n'ubuzima bw'imyororokere?
- i. Yego
 - ii. Oya
35. Utekerezako gukoresha uburyo burinda gusama ari bibi?
- i. Yego
 - ii. Oya
36. Utekerezako inyigisho/uburezi ku bitsina bishobora kugira icyo bihindura ku mikoreshereze yuburyo burinda gusama?
- ii. Yego
 - iii. Oya
37. Wigeze wigishwa ku bitsina mu ishuri?
- i. Yego
 - ii. Oya

IGICE CYA E: IMBOGAMIZI KU GUKOresha UBURYO BURINDA GUSAMA

38. wavuga ko ari izihe mpamvu zituma abangavu badakoresha uburyo bubarinda gusama? (ushobora guhitamo ibirenze kimwe)
- i. imyizerere y'amadini
 - ii. Bisaba kugenda urugendo rurerure kugirango babubone
 - iii. Imyitwarire y'ababutanga (urugero abaganga)
 - iv. Imyitwarire y'abatwigisha (abarimu)
 - v. umukunzi wanjye cyangwa ntabishaka
 - vi. Ababyeyi/abavukanyi babirwanya
 - vii. ingaruka zitunguranye
 - viii. Kubura ubumenyi
 - ix. Gukora imibonano mpuzabitsina inshuro nke
 - x. Biragoye kubona uburyo bukubereye
 - xi. Burahenze cyane
 - xii. ubujyanama wabonye kurubwo buryo
 - xiii. Umuco cyangwa imyizerere ya Gakondo
 - xiv. Ibindi (bivuge).....