ROLE OF KNOWLEDGE ON REPRODUCTIVE HEALTH IN INFLUENCING SEXUAL TRANSMITTED INFECTIONS AMONG ADOLESCENT.

THE CASE OF SELECTED SECONDARY SCHOOLS, MKALAMA DISTRICT
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THE CASE OF SELECTED SECONDARY SCHOOLS, MKALAMA DISTRICT

By

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MHSM/MZC/009/T.13

A Dissertation Submitted to the School of Public Administration and Management in Partial fulfillment of the Requirements for the Award of the Degree of Master of Health System Management of Mzumbe University.

2015
CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation titled “Role of knowledge on reproductive health in influencing the transmission of Sexual Transmitted Infections to Adolescent: The case of selected secondary schools, Mkalama District”, in partial fulfillment of the requirements for award of the degree of Master of Health Systems Management of Mzumbe University.

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Internal Examiner

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External Examiner

Accepted for the Board of School of Public Administration and Management

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DEAN
DECLARATION AND COPYRIGHT

I, Gerald Dominick Minja, declared that this dissertation is my own original work and that it has not been presented and will not be presented to any other higher learning Institutions for a similar or any other academic award.

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DEDICATION

I dedicate this dissertation to my lovely wife Cypriana Shirima and my precious children Aneth, Dominick, Christalincy and Victor for their patience during my absence and facilitation in my academic success.
# LIST OF ABREVIATIONS AND ACRONYMS

<table>
<thead>
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<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
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<tr>
<td>ARSH</td>
<td>Adolescent Reproductive and Sexual Health</td>
</tr>
<tr>
<td>CDC</td>
<td>Center for Diseases Control</td>
</tr>
<tr>
<td>CRHC</td>
<td>Comprehensive Reproductive Health Care</td>
</tr>
<tr>
<td>FCI</td>
<td>Family Care International</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>ICPD</td>
<td>International Conference on Population and Development</td>
</tr>
<tr>
<td>IEC</td>
<td>Information, Communication and Education</td>
</tr>
<tr>
<td>MDGs</td>
<td>Millennium Development Goals</td>
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<tr>
<td>MOH</td>
<td>Ministry of Health</td>
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<tr>
<td>MOHSW</td>
<td>Ministry of Health and Social Welfare</td>
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<tr>
<td>NACP</td>
<td>National AIDS Control Program</td>
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<tr>
<td>NDP</td>
<td>United Nations Development Program</td>
</tr>
<tr>
<td>NRC-NFE</td>
<td>National Resource Centre for Non-Formal Education</td>
</tr>
<tr>
<td>PROAP</td>
<td>Principal Regional Office for Asia and the Pacific</td>
</tr>
<tr>
<td>RCH</td>
<td>Reproductive and Child Health</td>
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<tr>
<td>RHC</td>
<td>Reproductive Health Care</td>
</tr>
<tr>
<td>RHS</td>
<td>Reproductive Health Services</td>
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<tr>
<td>STIs</td>
<td>Sexual Transmitted Infections</td>
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<tr>
<td>TDHS</td>
<td>Tanzania Demographic and Health Survey</td>
</tr>
<tr>
<td>THMIS</td>
<td>Tanzania HIV/AIDS and Malaria Indicator Survey</td>
</tr>
<tr>
<td>UAFD</td>
<td>Ubora wa Afya kwa Familia Duniani</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
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ABSTRACT

This study was carried out to explore the role of knowledge on reproductive health in influencing the transmission of Sexual Transmitted Infections (STIs) to adolescent. Their knowledge is very vital towards combating a negative health outcome such as their vulnerability to STIs and unwanted pregnancy. The study was conducted in Mkalama District involving Gunda and Iambi secondary schools owing to cost reduction and time limit. A cross sectional comparative study was carried out from 16th to 27th February 2015. Structured questionnaires were administered to 329 respondents whom were 303 students and 26 teachers from selected schools through stratified and purposive sampling techniques. Analysis of data was through Statistical Package for the Social Sciences (SPSS) after consistency data checking and cleaning. The findings showed that more than half (67.7%) of the adolescent had an average knowledge on Reproductive Health Care (RHC). In spite of the knowledge they had, yet more than half of the respondent (53.1%) did not know signs and symptoms of STIs. Majority of both students (98.7%) and teachers (81%) were aware of the incorporation of RHC in the curriculum and also agreed that knowledge on RHC was provided to adolescent who are in school as per curriculum. The sources of RHC knowledge to adolescent in this study were identified to be teachers, parents, doctors/nurses, friends, sister, mass media and brother. Therefore there is a need for the government to increase adolescent knowledge on RHC in order to overcome negative health outcome. Special emphasize should be on the signs and symptoms of STIs which was low in this study. For instance have special sustainable educative program through the media, work shop, peer education and printed materials for easier access to upgrade their knowledge on RHC.
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CHAPTER ONE

1.1 Introduction

Adolescent faces a lot of challenges such as pressure to engage in sexual relationship at an early age. As a result they are at increased risk for STIs including the Human Immunodeficiency virus (HIV) because many sexual contacts among them are unprotected. Studies have reported that young people form a significant number of those attending STI clinics and those infected by HIV. Half of all new HIV infection which occurs in the world accounted in young people aged 15-24 years. About one-seventh of all new HIV infections occur during adolescence. Furthermore, more than five young people worldwide get infected with HIV every minute (UNAIDS, 2004; www.hawaii.edu, 15/04/2015).

Among the population infected with AIDS, female are more affected than males and the female become infected at younger age than male. This is because young women engage in high-risk sexual behaviors than young men. Tanzania, Demographic and Health Survey (TDHS, 2010) showed that 13 per cent of young women were sexually active by age 15, but only 7 per cent of young men were sexually active by age 15. Despite the fact that majority of adolescent have heard about HIV/AIDS, great percent are not aware or do not believe that they are at risk of acquiring HIV. Even those who are aware and believe that they can acquire HIV, often they do not protect themselves, due to inadequate decision-making skills and lack of safer sexual behaviors (Hindin and Fatusi, 2009; UNICEF).

1.2 Background of the study

Adolescence is a specific period which is neither childhood nor adulthood. It is a time where the body mature and the mind become more questioning and interdependent due to various changes varying from major physical, social, and emotional development with subsequent impact on their sexual and reproductive health (MOHSW, 2011). This period is associated with an emerging awareness with
increase desire for sexuality, accompanied with marked vulnerability to reproductive health problems especially those related to unsafe sex activity such as STIs including HIV/AIDS, unwanted pregnancies, unsafe abortion and its complications (MOH & FCI; Ubora wa Afya kwa Familia Duniani (UAFD), 2001).

Despite of the various changes occurs during adolescent period, no information relating to sexual reproductive health given or discussed openly by parents/guardians or care taker. They are neglected of their rights and needs which are: information and advice; health services; competence providers; well organize service delivery points; community and parental support; and policies and well function management system (MOHSW, 2011). Adolescent are considered as children who basically need just food and shelter to grow. Sexual activity among them are stigmatized and opposed in most Tanzanian culture. Contrary, police makers, researcher and other experts, have recently recognized that adolescent have rights to satisfying their needs and safe sexuality (Dehne & Riedner, 2005).

Adolescent tend to succumb multiple reproductive health problems ranging from early sexual debut, early marriage, complication arising from early child bearing, Female Genital Mutilation (FGM), difficulties in accessing family planning services, early unwanted pregnancy which ended into unsafe criminal abortion and major negative impact on their education, STIs including HIV/AIDS and eventually infertility and sexual dysfunction (erectile dysfunction) if not properly identified and treated accordingly at an early stage (UAFD, 2001). The condition also leads to reduction in economic productivity of the country and entire nations due to ill health accompanied by inability to work.

Majority of adolescents who suffer from sexual or reproductive health problems face a lot of difficulties in get rid of their problems. They have to make use of the same services as those provided for adults while their needs, behaviors and expectations are unique; hence they are discouraged from doing so.
Also reproductive health services are not convenient in terms of locations, opening hours, and high costs of treatment. Moreover embarrassment, stigmatization, denial and judgmental attitudes among health workers who may also have inadequate knowledge on reproductive health care become a barrier for treatment. The situations will lead to late treatment of the underlying problem or ineffective treatment or no treatment at all (Agampodi et al, 2008; UAFD, 2001, UNESCO, 1998).

Many adolescents around the world are sexually active. They develop interest in sex as their bodies’ changes and mature. They engage in sexual contacts early while they have no experience, skills and adequate information on how to protect themselves and their partners hence contracting STIs. STIs is not only a problem among adolescent in Tanzania context, it is the most common cause of illness in the world leading to social and economic consequences for many countries. It has remained to be a public health problem of a major economical significance (MOHSW, 2011; MOH, 2003; Ballard et al 2000).

The likelihood of contracting STIs depends on; frequency and type of intercourse being practiced, the number of sexual partners and their characteristics, the frequency and appropriateness of condom use, the risk of violence and the epidemiology of STIs at a particular locality (Ballard et al, 2000: WHO, 2004). Adolescent who have information on reproductive health are less at risk of contracting STIs. They tend to restrict themselves from sexual activity since they know its consequences. Even those who engage in sexual activity, they start in late teens and take all precaution against STIs and unwanted pregnancy (WHO, 2011).

According to MOH, (2003) about 333 million new STIs cases which are curable occur worldwide each year. The most affected group is among 20-24 year-olds, followed by 15-19 year-olds. One out of 20 young people contract a curable STI each year, excluding HIV and other viral infections.
One of the reasons why young people are particularly vulnerable to STIs is the lack of sex education, including preventive measure. Secondly, sex education which is supposed to be incorporated in schools program is probably insufficient or begun too late (WHO, 2001; WHO, 2004).

Among barriers to effective STI care for adolescents include: lack of knowledge about and awareness on the seriousness of STIs; absence of symptom in most important infections; lack of modern and suitable methods to detect some of STIs; and barriers in accessing STI services in terms of availability of services and their cost (Dehne & Riedner, 2005; Kotwal, 2004). Towards overcoming the barriers, much effort needs to be done to assist adolescent make a healthy transition into adulthood. In so doing, it will help in achieving the Millennium Development Goals (MDGs) especially number 4 and 6 and other national development goals in sub-Saharan Africa such as helping young people complete their education, prevent unintended pregnancy and HIV/AIDS & other STIs (UAFD, 2001).

What is of important when addressing issues related to adolescent is to consider their knowledge and skills, their behavior and decision they made regarding different matters as they all play a role in future health and development. Hence having health adolescents means having stable economic productivity of the nation (Kotwal, 2004; MOHSW, 2011).

1.3 Statement of the problem

Adolescent experiences physical, psychological, emotional and economic changes in transition from childhood to adulthood. At this particular time, they need to be guided so as to make proper decision about themselves (Ministry of health-MOH). It has been said that adolescent who ended up with primary school education has less knowledge on reproductive health care than those attaining secondary school educations.
In addition to that the problem of STIs is less common to school-going adolescents than those who are not going to school as those goes to school are believed to have less idle time to think about sex nor to practice it.

WHO through ministries of education and ministries of health have suggested various ways in combating the problem of RHC to adolescents through information, counseling and services such as; creating and sustaining supportive environments for young people, providing the necessary information and skills, and expanding access to health services. This is suggestion by WHO in 1994 followed by launched decision that was reached in the International Conference on Population and Development (ICP&D) that happened in Cairo where it was agreed among 179 countries to have school health program in impacting knowledge on RHC among others secondary school students towards reducing negative health outcome. This is because school years are the most appropriate time for shaping attitudes and changing behavior (MOH & FC; UAFD, 2001; UN, 1995).

Despite the fact that the government of Tanzania set up a strategy of incorporating Comprehensive Reproductive Health Care (CRHC) in secondary school since 2001, yet the problem of reproductive health to adolescent is still notable. For instance the transmission of STIs among adolescent is still on the rise. It could be explained by late initiation of the subject matter, lack of competent teacher to deliver appropriate information or behavior and attitude among adolescents.

1.4 Research objectives

1.4.1 General objective

To explore how knowledge on reproductive health influences the transmission of STIs to adolescent at Gunda and Iambi secondary schools in Mkalama District.
1.4.2 Specific objectives

i. To determine level of knowledge on RHC among the student at Gunda and Iambi secondary schools.

ii. To establish whether teachers are aware of the incorporation of the RHC in the curriculum of secondary schools.

iii. To identify the alternative sources of RHC knowledge to adolescents

1.5 Research questions

i. What is the level of knowledge on RHC among the student at Gunda and Iambi secondary schools?

ii. Are teachers aware of the incorporation of the RHC in the curriculum of secondary schools?

iii. What are the alternative sources of RHC knowledge to adolescents?

1.6 Significance of the study

Findings from this study provide baseline information of intervention that should be put in place in order to improve or overcome the RHC problems to adolescent. It also provided insights to researchers when one wants to investigate on issues relating to knowledge on RHC and STIs. In addition it provides areas for future research.

1.7 Scope of the study

Scope of study is a general outline of what the study will cover (www.answers.com, 15/4/2015). It is of value importance since it provides solution to the problems under study. In other ways, it answers research questions. This study includes students and teachers from Gunda and Iambi secondary schools in Mkalama.
District. The study confines itself to explore the role of reproductive health knowledge on the transmission of STIs. The researcher chose Mkalama District due to the great number of adolescent with unwanted pregnancy and STIs observed over the past years.

1.8 Justification

Various studies on Adolescent Reproductive and Sexual Health (ARSH) have been conducted in different geographical settings. The studies differ in one another depending on what issue on ARSH being addressed. For instance Ntangeki, (2009) looked at ARSH and parents communication where Dehne, & Riedner, (2005) concentrated on the need for adequate health services among adolescents with STIs. However Hughes & McCauley, (1998) deals with Improving the Fit in the future program on ARSH in developing countries.

This study was necessary to undertake due to an increase number of adolescent with HIV/AIDS and other STIs. In assessing this, the important parameters to be looked at are their knowledge regarding RHC, their behavior and attitudes since they are very crucial towards an increase or decrease of the transmission of STIs. The findings from this study will provide areas for suggesting different ways towards increasing adolescent knowledge on RHC in order to overcome negative health outcome. Though there may be similar study been carried out, the context at which the study took place differ from these study as well as culture and taboos. However, the literature that I managed to review did not produce any studies which explored how knowledge on reproductive health care influences the transmission of STIs among adolescent in Tanzania rural settings.

1.9 Definitions of terms

Adolescent: Adolescents are people aged 10 to 19 yrs (WHO, 1994).
**Reproductive health:** Reproductive health is defined as a state of physical, mental, and social well-being in all matters relating to the reproductive system, at all stages of life (Reproductive-health-journal). Furthermore it implies people ability and a responsibility in satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so (WHO, 1994).

**Reproductive health care:** Reproductive health care is defined as the constellation of methods, techniques and services that contribute to reproductive health and well-being by preventing and solving sexual health problems. It is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity in all matters related to reproductive system, its function and process (UNFPA, 1994).

**Reproductive and sexual health education:** Reproductive and sexual health education is an educational experience aimed at developing capacity of adolescents to understand their sexuality in the context of biological, psychological, socio cultural and reproductive dimensions and to acquire skills in making responsible decisions and actions with regard to sexual and reproductive health behavior(Reproductive-health-journal).

**Sexual Health:** Sexual Health is the enhancement of life and personal relations, and not merely counseling and care related to reproduction and STDs. More over it is a state physical, emotional, mental and social well-being in relation to sexuality and not merely the absence of disease, dysfunction or infirmity (UNFPA, 1994).
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature covering concepts of theoretical and empirical review, conceptual frameworks and research gap guiding this study.

2.2 Theoretical and empirical literature review

Theoretical and empirical reviews have been combined together in this section in order to cementing the matter. Theoretical review consisting of available information from various source of literature relating to adolescent knowledge on RHC where empirical review consist of findings from previous studies that have been done by other researcher on the same subject matter.

2.2.1 Reproductive health care

Reproductive health care is of paramount not only to adolescent but also to each individual. It will maintain physical and mental state of an individual as well as social wellbeing in all matters relating to the reproductive system, at all stages of life (Reproductive-health-journal.com). Majority of young people face barriers to reproductive health information and care. Even those few who are able to find accurate information about their health and rights are unable to access the services needed to protect their health. Access to youth friendly health services is of vital in ensuring sexual and reproductive health and well-being of adolescents (UNFPA, 2004). In addition to that, education was identified to be a determining factor in the RHC and well-being of young people. When given appropriately to adolescents, it help them in acquiring knowledge, autonomy and necessary skills such as decision making in various area on reproductive health (UAFD, 2001).
2.2.2 Adolescent

WHO, (1995) define Adolescent as a person aged ten to nineteen years. It is the period of transition from childhood to adulthood characterized by puberty changes such as physical appearance, reproductive capability, psychological or cognitive transition. Due to various body changes among adolescent with limited or lack of information, they become more creative and innovative trying to overcome the challenges as well as coping with today’s world without considering very important aspect of future life or implication of whatever they are doing.

According to UNICEF, “there were 1.2 billion adolescents in 2009 that make up 18 per cent of world population”. About 88 percent of them live in developing countries like Tanzania. In Sub-Saharan Africa, the number of young people aged 10 to 24 is believed to be more than one-third of the total population. According to 2012 Tanzania population census, adolescents make up more than 40 per cent of the population. That is two out of every five Tanzanians is an adolescent.

In Tanzania, Demographic and Health Survey (TDHS, 2010) showed that 32 per cent of 44.8 million people in the county consisted, of the young people between 10 and 24 years of age. The average age of first intercourse is 16.7 years for Tanzanian women and 18.1 years for men. But these figures vary from region to region within the same country. Early married account for 37 per cent especially by the age 18 years and early childbearing is high where 13 per cent of female adolescents aged 15 to 19 giving birth each year. 13 per cent of young women were sexually active by age 15, but only 7 per cent of young men were sexually active by age 15. HIV prevalence is relatively high in Tanzania with 3.6 per cent of young women aged 15 to 24 infected while in young men, it only account 1.1 per cent.
2.2.3 Service delivery to adolescent

Despite adolescent being affected by multiple reproductive health problems, the delivery of Reproductive Health Services (RHS) within the country is not friendly to adolescent. The routine health care system has no special clinic offering services for adolescent. Once they have problem or have a certain issue to be clarified, they have to attend the same clinic as for adults where probably they can meet one of the family member. No special attention for adolescent whom at time need to be served at particular time of the day or need to be served by a particular gender. At home, Parents/guardians or care taker they don’t discuss issues relating to reproductive health care openly. Even at schools, such matters are rarely or not discussed at all due to lack of teachers specialized in science subject and conversant on subject matter leading to inappropriate knowledge (UNESCO, 1998).

2.2.4 Reproductive health problem encountered by adolescents

Adolescent do not get appropriate information on reproductive health issues (UAFD, 2001). Appropriate information is necessary to increase their knowledge, autonomy and skills so that they can make proper decision and proper transition to adult-hood in a good sexual health. They require: information including comprehensive sex education; access to a full range of sexual and reproductive health services, including condoms, other means of contraception as appropriate and other interventions for the prevention, treatment and care of sexually transmitted infections, including HIV; and safe and supportive environments free from exploitation and abuse (Kamala, 2006).

Adolescent lack information from parents/guardians or care taker as well as proper health education in schools (Hughes & McCauley, 1998). The problem arise from culture and taboos where in most Tanzanian society, traditional talks on such topic are rare and not openly discussed. Pertaining to proper health education in the schools, it has become a problem because most schools have few teachers and
others do not have a teachers specialized on science subject especially in rural settings. As a result, adolescent will seek and work on information gathered from peers regardless their truthiness or the mass media which may provide sensational and inaccurate information (NRC- NFE, Nepal; Hughes & McCauley, 1998).

Generally, parent –adolescent communications on sexual and reproductive health issues is low especially by male parents compared to female parents. The matter become more complex when farther is responsible to give information to her daughter or when mother is responsible to give information to his son (Ntangeki, 2009). Most information on reproductive health matters are gathered from peers especially of the same sex who may have inadequate or incorrect information (UAFD, 2001). It is well known that once someone has right information, he/she will have life skills on what to do and how to do it in healthy ways as information is the power.

Adolescent whose parents communicate with them about sexuality are more likely to delay in practicing intercourse. They already have information on dangers of sexual activity at young age and its consequences. As a matter of facts, they do not involve in sexual activity at young age. In case they have intercourse, they will consider using protection against pregnancy and STIs as well as having fewer partners (Diclimente et al, 2001). Hence they are less likely to suffer from STIs, unwanted pregnancy and its complications.

A study done in Ethiopia by Shiferaw et al, (2013) on the assessment of adolescents’ communication on sexual and reproductive health matters with parents shows that only 36.9 % adolescent had discussion with their parents. Singh et al, 1999, reported that parents –adolescent communication accounted 37.7% where major source of information was from television followed by radio, friends, and posters. Teachers and health professionals contributed very little in giving information to adolescent (only 6.9%).
Studies suggested that adolescents have limited knowledge about SRH and know little about the natural process of puberty (AMREF, 1994). For instance Most of the girls feel anxious and embarrassed at the first episode of menstruation because they have no knowledge on the subject matter. However a study done by Singh et al, 1999 showed that 50.8% of the girls know normal duration of pregnancy. Also majority of them knew about importance and interval period for child spacing and regular check up during pregnancy. What was not much known to them is the need for extra food during pregnancy. Only 41.7% of the girls had knowledge on the need for extra food during pregnancy.

Agampodi et al, (2008) reported that adolescent had barrier to access the RHS and lack information from the Parents and teachers. Adolescent thought that the information was intentionally made unavailable for them increasing their vulnerability to reproductive health problems including STIs. Vulnerability to reproductive health problems among adolescent depends on a certain issues such as age group, stage of development and circumstances in which someone lives. Key factors for adolescent vulnerability to sexual and reproductive health problems include: lack of awareness and lack of correct information about the risks of unwanted pregnancies and STIs, peer and other social pressures, lack of skills needed to resist such pressures and to practice safe behavior, lack of youth-friendly sexual health and counseling services, poverty, traditional cultural norms that give young women a low social position, and little power to resist persuasion or coercion into unwanted sex (MOHSW, 2011; UAFD, 2001).

Millions of young people around the world face a lot of challenges in their body during adolescence period. One of the challenges encountered is the pressure to engage in sexual relationship at an early age. The problem can be prevented if young people have access to accurate information and preventive health services. Majority of adolescent are unaware and lack correct information about the risks of STIs (UAFD, 2001).
Studies have shown that the provision of sexual health education and related services is associated with lower risk of STIs unwanted pregnancy and abortion (UNAIDS, 1997).

STIs are diseases which are transmitted from one person to another mainly through unprotected penetrative homosexual or heterosexual intercourse with an infected person. Contact with body fluids being either infected blood, vaginal secretion or semen during sexual intercourse become an ideal situation for transmission. Other ways of acquiring STIs are; contact with infected blood/ its product, contact with body fluids such as vomitus or fecal matter, and during blood transfusion (MOH, 2003).

Many STIs can be treated promptly with antibiotics especially if identified at an early stage followed by treatment adherence. Few exceptions of STIs particularly viral in origin such as HIV, Herpes Genitalia and condylomata acuminata are untreated (Center for Diseases Control [CDC], 2009). Individual need to adhere on preventive measures against viral STIs because once enter in the body, no successfully treatment can be given. By so doing, they will have a protective factor which will discourage one or more behaviors that might lead to negative health outcomes.

Studies conducted in different geographical settings have shown that Adolescent tends to succumb from different STIs (WHO, 2004). Due to the effect of globalization with increased opportunities for socialization, the risk of acquiring and transmitting HIV/AIDS and other STIs have being increasing (Dehne & Riedner, 2005). The situation is brought about by lack of knowledge on RHC by many adolescents on how to protect themselves and their partners against HIV/AIDS and other STIs. Also the trend have being increasing due to attitude of having many sexual partners accompanied with low, irregular or not using condom brought by either unavailability or lack of access to condom, lack of pleasure when using condom as perceived by young people, partner not ready to use and failure to
insist condom use by female partners (WHO, 2004; MOH TZ, 2003; Dehne & Riedner, 2005).

There has being a progressive increase in the number of adolescent suffering from STIs including HIV. It is estimated that about one out of every 20 adolescents contract STIs each year. Yet majority of them especially male do not seek assistant from health care even when they know that they have contracted the disease. Instead they purchase medicine from the local pharmacy without proper dosage and instructions. Among adolescents and young people, there is a rapidly growing of the number of people living with HIV/AIDS worldwide. WHO estimates that 60% of all new HIV infections occur in adolescents during their 15 to 19 years. In 2013, 670,000 young people between the ages of 15 to 24 were newly infected with HIV, of whom 250,000 were adolescents between the ages of 15 and 19 (WHO).

STIs are generally more common in female than males though it varies with age group (WHO, 2004). NACP, 1998 reported that female adolescent aged 15 to 19 year are affected twice compared to males. However NACP THMIS-Tanzania HIV/AIDS and malaria indicator survey 2007 showed that boys below 15 yrs are affected with curable STIs three times than girls. Most female are asymptomatic where majority of males shows clinical signs and symptoms. Regarding to HIV infection, it has shown that both men and women are equally affected at 1.3 percent at the age of 15 to 19 yrs.

The risk for adolescent to acquire and transmit STIs through heterosexual intercourse is very great. When condoms are used regularly, correctly, and consistent during sexual intercourse, it can greatly reduce or eliminate the problem (Dehne & Riedner, 2005; Hindin & Fatusi, 2009). However, adolescents’ are less likely to use condoms due to lack of access and, for girls in particular, the inability to insist on their use.
According to Tanzania Health Management Information System (THMIS) Reports 2007-2008, among adolescent aged 15-19 yrs, only 18% of the girls and 36% of the boys had used condom in their lifetime to protect themselves against STIs or for family planning purposes. Study done by Brown et al, (2008) assessing condom use among high risk adolescents found that almost two-thirds of adolescents did not use condoms at the time of last intercourse.

Towards improving the reproductive and sexual health of young people, Information, Communication and Education (IEC) materials play an important role in transforming knowledge to adolescent. When properly given, it tends to have positive effect towards expanding knowledge and health habits (Kotwal et al, 2004). Most young people do not routinely seek appropriate sexual and reproductive health information and care from health unit. When IEC are freely given, it improves the health status of young people (UNESCO PROAP, 1998). This is truly because the routine health education that is supposed to be provided is under quality and at times not provided due to inadequate budget from public systems that are in place.

2.3 Research gap

Different studies on ARSH have been conducted in different geographical settings. They were assessing knowledge to adolescent by looking at awareness on various aspects. Among the reviewed studies, no any study reported the overall knowledge of adolescent on reproductive health matters as well as knowledge on STIs. Due to the existing literature gap, this study attempts to explore the role of knowledge on reproductive health in influencing the transmission of STIs to adolescent.

2.4 Conceptual framework

Conceptual framework is defined as an end result of bringing together a number of related concepts to explain or give a broader understanding of the study phenomenon of interest (Imenda, 2014). In this regard, the conceptual framework in this study comprise of Knowledge on RHC as dependent variables.
Independent variables comprise of awareness on RHC incorporation in secondary school curriculum, Provision of RHC in secondary school, and Parents/ guardians or care taker talks on reproductive health matters.

**Figure 2.1 Conceptual Framework**

- **Provision of RHC knowledge in schools**
- **Availability of different sources of RHC knowledge to adolescents**
- **Knowledge on RHC towards influencing STIs**
- **Teachers’ awareness of the incorporation of RHC in the curriculum**
- **Availability of comprehensive RHC package in the curriculum**
- **Behavior and attitude**
- **Poverty**

Source: Researchers model, 2015
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methods used to collect the information in order to meet research objectives.

3.2 Study design

According to Yin, 2003 Study design is the logic that links the data to be collected and conclusion to be drawn to the initial questions of the study. It is a detailed outline of how an investigation will take place. A cross-sectional comparative study was conducted at Gunga and Iambi secondary schools from 16th to 27th February 2015. The study was aiming to explore the role of knowledge on RHC in influencing the transmission of STIs among Adolescent. Two schools which were Gunda and Iambi secondary schools were compared under different aspect to find out which one was more or less affected by a certain factor.

3.3 Study area

Study area is a place where the research is going to be conducted. It involves a political or geographical area including its history, geography, language, and general culture (http://dictionary.reference.com, retrieved 15/04/2015). The study was conducted at Mkalama District in Singida region. Mkalama District is located seventy (70) kilometer from the main town of Singida region. It has poor network system including roads and electrical supply where people/adolescent gets access to different services. Owing to the cost reduction and time limit, two secondary schools which were Gunda and Iambi were chosen. Gunda being a government secondary school and Iambi a private school belongs to faith based organization.
3.4 Study population

Yin, (1994) defined study population as a specific population of inquiry that the researcher draws the sample size of the study. The study population consisted of all students and teachers from Gunda and Iambi secondary schools regardless of their age. It included 722 people whom where 27 teachers from both school 19 from Gunda and 8 from Iambi, 501 students from Gunda secondary school and 194 students from Iambi secondary school.

3.4.1 Inclusion criteria

They are standard that are set out before a study or review to determine whether a person can participate in a research study or whether an individual study can be included in a systematic review (http://effectivehealthcare.ahrq.gov, 15/4/2015). It assists the researchers to find out the most suitable candidates. This study involved all students aged 10 to 19 years who fall under the group of adolescent and teachers aged 21 to 60 years from Gunda and Iambi secondary schools. Those who were present on the days of interview and consented or agree to participate in the study were the one included.

3.4.3 Exclusion criteria

All students below 10 years and above 19 years old were not fit for study. Underlying reasons being not considered as adolescent. Secondly, people who are below 10 years tend to have less information on RHC. Once included in the sample size, there is likely hood that the information collected will give rise to wrong interpretation. Likewise, involving people above 19 years may produce unexpected results. Also teachers who were newly employed were excluded from the study (< 3 months)

3.5 Units of analysis

According to Kombo and Tromp, (2006) a unit is the major entity that is being analyzed in the study. It is what is being studied. In social science research, units of analysis include: individuals; groups; social organizations and social artifacts such as books,
photos, and newspapers; geographical units such as town and census. The units of analysis in this study were individual student and teacher from Gunda and Iambi secondary schools from which the sample was drawn.

3.6 Sample size and sampling techniques

According to Adam and Kamuzora, (2008) sample size is the exact number of items selected from the population to constitute a sample for the study. Our population consisted of 722 people whom where 27 teachers 695 students from Gunda and Iambi secondary schools. Out of this population, a sample of 329 respondents was drawn to ensure proper representation and good response to the given questionnaire. Among 329 respondents, 303 were students and 26 were teachers.

Table 3.1 Distribution of the sample size

<table>
<thead>
<tr>
<th>School name</th>
<th>Type of respondents</th>
<th>Population number</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gunda</td>
<td>Student</td>
<td>501</td>
<td>223</td>
</tr>
<tr>
<td></td>
<td>Teachers</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Iambi</td>
<td>Students</td>
<td>194</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Teachers</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>722</td>
<td>329</td>
</tr>
</tbody>
</table>

The sampling techniques used in this study were stratified and purposive sampling. Stratified sampling technique was used to ensure representation of all members in terms of their sex, age group and education levels among adolescent. Purposive sampling technique was used upon selecting teachers.

3.7 Variables and their measurement

3.7.1 Dependent Variables

Dependent variable is the variable that is used to describe or measure the problem under study (Yin, 1994). Dependent variable in this study was knowledge on RHC. Level of knowledge on RHC was assessed by posing five questions relating to RHC. Each question had sub points which made 32 total points to be scored. Adolescent who scored 0 – 10 points were regarded as having poor knowledge.
Those scored 11 – 21 points were regarded as having average knowledge and those scored 22 -32 points as having good knowledge.

3.7.2 Independent Variables

Independent variables are variables that are used to describe or measure the factors that are assumed to cause or at least to influence the problem (Yin, 1994). Independent variables in this study were; awareness of the incorporation of the RHC in the curriculum by the teachers, provision of RHC in secondary school and parents/guardians or care taker talks on reproductive health matters.

i. **Awareness of the incorporation of the RHC in the curriculum by the teachers** - was measured by asking question among teachers if they were aware or not. The response was either yes or no. Other few questions were asked which reflected the degree of awareness someone had.

ii. **Provision of RHC in secondary school** - was measured by asking students if RHC was included in the study. The response was either yes or no.

iii. **Parents/ guardians or care taker talks on reproductive health matters** - was measured by asking question which eventually identify the sources of information they had on RHC.

3.8 Data types, sources and collection methods

3.8.1 Data types and sources

Both primary and secondary data were used in this study. Primary data are those data that are collected afresh and for the first time through either use of questionnaire, Interview or group discussion Primary data were gathered directly from the respondents through the use of questionnaires which were self administered among students and teachers.
Secondary data include those data which were already collected and available in the office. They consisted of all those information extracted from various documents such as curriculum, syllabus, lesson plan, lesson notes, subject log book and text books in appropriate schools.

3.8.2 Data collection methods

Data was collected through multiple approaches including questionnaires and by using available information. The triangulation of the methods enabled the researcher to get more insights pertaining to the problem under the study.

Self-administered questionnaires were used to extract information from students and teachers on reproductive health matters. It allows more information being gathered as well as saving time. Some of the questionnaires were close-ended in a manner that they were categorized into possible answers on which the respondents were restricted to choose an answer. Others were open-ended especially the one which were assessing knowledge. Open-ended questions were aiming at giving respondents free chance to give out their views.

The questionnaires were pre-tested to check whether they guarantee the intended responses and thereafter distributed to the adolescent in respected schools. Each class was assembled in one place at one time where instructions and clarification of each question was given. Students were then given time to fill the questionnaire with presence of researcher in the same venue. When a respondent was not clear on a certain point, individual clarification was given by the researcher. Following completion of the questionnaire, each form was counter checked during collection to ensure that it was complete and properly filled.

Another technique used was available information. Various documents such as syllabus, lesson plan, lesson notes, subject log book and text books in each school were reviewed to find out if important topics are included in the syllabus. Another area of concentration which was looked at was the way in which the matter was delivered to students.
3.9 Data processing and analysis

Data processing is the process where raw data obtained from the field are to be prepared before analysis takes place. It involves editing, coding, classification and tabulation (Adam and Kamuzora, 2008). The process of data processing started from field work. During collection of the questionnaire from the respondents, the researcher made sure that each form was correctly and completely filled. In case the form was not properly filled, respondent was requested to complete it. Before entrance of the data in the computer program, consistency checking and cleaning of data were done by researcher on daily basis. Data were then categorized, coded and then entered into the computer statistical program which was Statistical Package for the Social Sciences (SPSS). Descriptive statistical analysis was performed in all questions to produce an overview of data in the form of frequency tables, cross tabulations and figures.

Data analysis refers to the computation of a certain measure along with searching for pattern of relationship that exists among data groups (Kothari, 2004). Data from frequency tables cross tabulations and figures were observed and then interpretation made to support or reject the ideas which were in mind before field work.

3.10 Ethics Considerations

The code of conduct on ethical issues during data collection process was adhered. The aim was to prevent participants harm as result of the research. All participants were given informed consent and information on the objectives and potential benefits of the study. Participants were assured that all information would be confidentially kept and were not required to write their names on the questionnaires sheets.
CHAPTER FOUR

PRESENTATION AND DISCUSSION OF THE FINDINGS

4.1 Introduction

This chapter presents the results of data collected from the respondents. They are presented in descriptive form, tables and figures.

4.2 Description of the study respondents.

The study constitutes of 329 respondents whom were 303 students and 26 teachers from Gunda and Iambi secondary schools. The numbers represents the population of 695 students and 27 teachers from the same schools where sample was drawn. Generally, there were more respondents from Gunda secondary school than from Iambi secondary school. Out of 303 students, 223(73.6%) of the respondents were from Gunda secondary school and the remaining 80(26.4%) were from Iambi secondary school. Majority of the teachers 19(73.1%) out of 26 teachers were from Gunda where only 7(26.9%) were from Iambi secondary school.

There were more respondents among students aged 15 years 73(24.1%) with fewer respondents in students aged 13 years 5(1.7%). The age range of the respondents was 13 to 19 years with a mean age of 16 years In terms of gender issue, majority of respondents were female 185(61.1%) with fewer male 118(38.9%). Education level which had more respondents was form thee 92(30.4%) followed by form one 83(27.4%) where form two was the least 59(19.5%).
Table 4.1 Social demographic characteristics of the students  \( n = 303 \)

<table>
<thead>
<tr>
<th>Factors</th>
<th>( n (%) )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School name</strong></td>
<td></td>
</tr>
<tr>
<td>Gunda</td>
<td>223(73.6)</td>
</tr>
<tr>
<td>Iambi</td>
<td>80 (26.4)</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>118(38.9)</td>
</tr>
<tr>
<td>Female</td>
<td>185(61.1)</td>
</tr>
<tr>
<td><strong>Age of students</strong></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>5(1.7)</td>
</tr>
<tr>
<td>14</td>
<td>37(12.2)</td>
</tr>
<tr>
<td>15</td>
<td>73(24.1)</td>
</tr>
<tr>
<td>16</td>
<td>69(22.8)</td>
</tr>
<tr>
<td>17</td>
<td>60(19.8)</td>
</tr>
<tr>
<td>18</td>
<td>49(16.2)</td>
</tr>
<tr>
<td>19</td>
<td>10(3.3)</td>
</tr>
<tr>
<td><strong>Education levels</strong></td>
<td></td>
</tr>
<tr>
<td>Form I</td>
<td>83(27.4)</td>
</tr>
<tr>
<td>Form II</td>
<td>59 (19.5)</td>
</tr>
<tr>
<td>Form III</td>
<td>92 (30.4)</td>
</tr>
<tr>
<td>Form I Form IV</td>
<td>69(22.8)</td>
</tr>
</tbody>
</table>


Table 4.2 below showed that majority of teachers were in age group 21 – 30 years (19)73.1%. There were few respondents in age group 31- 40 years and 41- 50 years 2(7.7% in each). More than a half 14(53.8%) were male compared to female who were 12(46.2%). 50% of teachers’ had Diploma and another 50% were degree holders.
Table 4.2 Social demographic characteristics of the teachers  n=26

<table>
<thead>
<tr>
<th>Factors</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>School name</td>
<td></td>
</tr>
<tr>
<td>Gunda</td>
<td>19(73.1)</td>
</tr>
<tr>
<td>Iambi</td>
<td>7 (26.9)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>14(53.8)</td>
</tr>
<tr>
<td>Female</td>
<td>12(46.2)</td>
</tr>
<tr>
<td>Age category of the teachers</td>
<td></td>
</tr>
<tr>
<td>21-30</td>
<td>19(73.1)</td>
</tr>
<tr>
<td>31-40</td>
<td>2(7.1)</td>
</tr>
<tr>
<td>41-50</td>
<td>2(7.1)</td>
</tr>
<tr>
<td>51-60</td>
<td>3(11.5)</td>
</tr>
<tr>
<td>Education levels</td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td>13(50)</td>
</tr>
<tr>
<td>Degree</td>
<td>13(50)</td>
</tr>
</tbody>
</table>


4.3 Level of knowledge on RHC among students

Knowledge on RHC is of vital importance towards overcoming negative health outcome. When someone has good knowledge on RHC, he/she can easily protect himself/herself from STIs since he/she knows preventive measures. The study found that more than half of the students had average knowledge 205(67.7%) followed by those who had poor knowledge 71(23.4%). Only 27(8.9%) of the student had good knowledge (Table 4.3). Likewise the trend is the same in both schools that is the large number of the student had average knowledge followed by those with poor knowledge and fewer with good knowledge.

Table 4.3 Level of knowledge on RHC among students

<table>
<thead>
<tr>
<th>Level of knowledge</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>71</td>
<td>23.4</td>
</tr>
<tr>
<td>Average</td>
<td>205</td>
<td>67.7</td>
</tr>
<tr>
<td>Good</td>
<td>27</td>
<td>8.9</td>
</tr>
<tr>
<td>Total</td>
<td>303</td>
<td>100</td>
</tr>
</tbody>
</table>

There were fewer students with average knowledge from Gunda secondary school (64.6%) than from Iambi secondary school (76.2%). But the percentages of students who demonstrate poor and good knowledge are greater in Gunda secondary school (25.6% and 9.9%) than in Iambi secondary school (17.5% and 6.2%). From this observation, students from Iambi secondary school were more knowledgeable than those from Gunda secondary school. However, the observed differences between the level of knowledge and school name were not statistically significant. P-value was 0.159 which means greater than expected (<0.05) where Chi-square was 3.68 instead of being >3.84.

Figure 4.1 Level of knowledge on RHC among students from Gunda and Iambi secondary schools.


There was slight difference in knowledge level among male and female. Female students had average knowledge (68.1%) than male students (66.9%) but the number of those who had good knowledge is greater in male (10.2%) than female students (8.1%). When the results were looked in depth, there are no actual differences in knowledge among male and female. P.value was 0.826 which means greater than the expected (<0.05) where Chi-square was smaller (0.38) than expected (>3.84). The observed differences between the level of knowledge and sex were not statistically significant.
Comparing the level of knowledge among students at different levels, the student who were in form four were the one who scored more among student with average and good knowledge. That is, 82.6% of the students who were in form four had average knowledge and 11.6% had good knowledge. It was education level which also demonstrated to have low percentage of student who had poor knowledge (5.8%). The level of knowledge was increased with increased education level except in form three where the trend decreased. There were few students who scored average and good level of knowledge in form three than the other education levels. It was also the education level which represents large number of those who had poor knowledge (46.7%). P.value was 0.001 which means less than the expected (<0.05) where Chi-square was greater (49.85) than expected (>3.84). The observed differences between the level of knowledge and education level were statistically significant.

Table 4.4 Level of knowledge on RHC by sex and education levels among students n=303

<table>
<thead>
<tr>
<th>Variables</th>
<th>Level of knowledge</th>
<th>Chi-square</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor</td>
<td>Average</td>
<td>Good</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>27(22.9%)</td>
<td>79(66.9%)</td>
<td>12(10.2%)</td>
</tr>
<tr>
<td>Female</td>
<td>44(23.8%)</td>
<td>126(68.1%)</td>
<td>15(8.1%)</td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form I</td>
<td>19(22.9%)</td>
<td>57(68.7%)</td>
<td>7(8.4%)</td>
</tr>
<tr>
<td>Form II</td>
<td>5(8.5%)</td>
<td>45(76.3%)</td>
<td>9(15.2%)</td>
</tr>
<tr>
<td>Form III</td>
<td>43(46.7%)</td>
<td>46(50%)</td>
<td>3(3.3%)</td>
</tr>
<tr>
<td>Form IV</td>
<td>4(5.8%)</td>
<td>57(82.6%)</td>
<td>8(11.6%)</td>
</tr>
</tbody>
</table>

When adolescent are provided with adequate and appropriate knowledge on RHC at school, it tends to affect or shaping their behavior and attitude. Those adolescent who acquire the knowledge early, it will prevent them from involving themselves in a negative health habits. This study found that most students 299(98.7%) agreed that knowledge on RHC is being provided to adolescent who are in school as per curriculum. Only 4(1.3%) students did not agree to whether knowledge on RHC was provided in schools. The percentage of those who agreed was observed to be almost the same in both schools that is 98.8% at Iambi secondary school and 98.7% at Gunda secondary school.

Student aged 14, 15, 18 and 19 years agreed that knowledge on RCH is being provided in secondary schools (100%) followed by those aged 16 and 17 years (98.6% and 96.7% respectively) and finally those aged 13 years (80%). The observed differences were statistically significance. P.value was 0.008 which means smaller than the expected (<0.05) where Chi-square was greater (17.53) than expected (>3.84).

Gender and education levels appears to have little or no influence in establishing if knowledge on RHC is being provided in secondary schools. Both sex responded almost similarly by agreed that the subject matter is being taught in schools. Male accounted 117(99.2%) where female accounted 182(98.4%). Students who were in form two fully agreed (100%) that they were provided with appropriate knowledge as per curriculum. Other student who were in form one, form three and form four had almost similar agreement on the subject matter (98.8%, 97.8%, and 98.6% respectively). The observed differences are not statistically significance.
Table 4.5 Provision of knowledge on RHC in secondary schools  n=303

<table>
<thead>
<tr>
<th>Factors</th>
<th>Students awareness on provision of RHC</th>
<th>Chi-square</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes n (%)</td>
<td>No n(%)</td>
<td></td>
</tr>
<tr>
<td>Provision of RHC in school</td>
<td>299(98.7)</td>
<td>4(1.3)</td>
<td></td>
</tr>
<tr>
<td>School name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gunda</td>
<td>220(98.7)</td>
<td>3(1.3)</td>
<td>0.004</td>
</tr>
<tr>
<td>Iambi</td>
<td>79 (98.8)</td>
<td>1(1.2)</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>117(99.2)</td>
<td>1(0.8)</td>
<td>0.33</td>
</tr>
<tr>
<td>Female</td>
<td>182(98.4)</td>
<td>3(1.6)</td>
<td></td>
</tr>
<tr>
<td>Age of students</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>4(80)</td>
<td>1(20)</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>37(100)</td>
<td>0(0)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>73(100)</td>
<td>0(0)</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>68(98.6)</td>
<td>1(1.4)</td>
<td>17.53</td>
</tr>
<tr>
<td>17</td>
<td>58(96.7)</td>
<td>2(3.3)</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>49(100)</td>
<td>0(0)</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>10(100)</td>
<td>0(0)</td>
<td></td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form I</td>
<td>82(98.8)</td>
<td>1(1.2)</td>
<td>1.32</td>
</tr>
<tr>
<td>Form II</td>
<td>59(100)</td>
<td>0(0)</td>
<td></td>
</tr>
<tr>
<td>Form III</td>
<td>90(97.8)</td>
<td>2(2.2)</td>
<td></td>
</tr>
<tr>
<td>Form IV</td>
<td>68(98.6)</td>
<td>1(1.4)</td>
<td></td>
</tr>
</tbody>
</table>


4.4 Awareness of the curriculum by the teachers

Awareness is the state of being consciousness that something exists, or understanding of a situation or subject at the present time based on information or experience. Awareness of the incorporation of the RHC in the curriculum by the teachers is of paramount. Teachers who are well aware on the subject matter can deliver required knowledge to adolescent preventing them from acquiring and transmitting STIs and other negative health outcomes. The results showed that majority of the teachers (81%) were aware of the incorporation of RHC in the curriculum. Only 19% of the teachers were not aware of the incorporation. When two schools were compared; teachers from Iambi secondary school were fully aware of the integration of RHC into the curriculum (100%) while only 73.7% of the teachers from Gunda secondary school were aware of the subject
matter. However the observed difference was not statistically significance. P.value was 0.131 which means greater than the expected (<0.05) where Chi-square was smaller (2.28) than expected (>3.84).

**Figure 4.2 Teachers awareness on the integration of the RHC in secondary school curriculum**

![Pie chart showing 81% Yes and 19% No]


**Figure 4.3 Awareness of the integration of the RHC in the curriculum by the teachers in relation to schools.**

![Bar chart showing 73.7% Yes and 26.3% No for Gunda and Iambi separately]

Age group 31- 40 years and 51-60 years were full aware of integration (100%) while only 50% of those aged 41- 50 years were aware of the integration. This implies that age is independent factor on the awareness of the curriculum. P.value was 0.484 which means greater than the expected (<0.05) where Chi-square was smaller (2.45) than expected (>3.84). The observed difference was not statistically significant.

**Figure 4.4 Awareness of the integration of RHC in the curriculum by teacher’s and their age groups**

![Bar chart showing awareness by age group](chart.png)


Gender has shown to have an effect on the awareness of the curriculum. Male teacher were more aware of the subject matter 12(85.7%) than female Teacher 9(75%) though observed differences are not statistically significant. P.value was 0.422 which means greater than the expected (<0.05) where Chi-square was smaller (0.48) than expected (>3.84). Education level was also found to have an effect on the awareness in this study. Those teachers who had degree were more aware (84.6%) than those with diploma (76.9%). However the observed differences are not statistically significant. P.value was 0.500 which means greater than the expected (<0.05) where Chi-square was smaller (0.248) than expected (>3.84).
Duration of teaching and subject being teaching plays role on the awareness of the curriculum. Teachers who had been teaching for less than a year and those who taught for three to five years were fully aware of the integration (100%) while those who had been teaching for one to two years were less aware (71.4%). P.value was 0.555 which means greater than the expected (<0.05) where Chi-square was smaller (2.09) than expected (>3.84). The observed differences between the duration of teaching and awareness of the curriculum by the teachers were not statistically significant. Also, teacher who were teaching specific subject such as Biology and Geography/History were aware of the integration of RHC in the curriculum (100%) than those who were teaching English/Kiswahili or Physics/Chemistry/Mathematics (66.7%). The observed differences are not statistically significance. P.value was 0.209 which means greater than the expected (<0.05) where Chi-square was smaller (4.54) than expected (>3.84).

Table 4.6 Awareness of the curriculum by teachers  n=26

<table>
<thead>
<tr>
<th>Factors</th>
<th>Awareness of integration</th>
<th>Chi-square</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes n(%)</td>
<td>No n(%)</td>
<td></td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>12(85.7)</td>
<td>2(14.3)</td>
<td>0.48</td>
</tr>
<tr>
<td>Female</td>
<td>9(75)</td>
<td>3(25)</td>
<td></td>
</tr>
<tr>
<td><strong>Duration of teaching</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1 year</td>
<td>3(100)</td>
<td>0(0)</td>
<td>2.09</td>
</tr>
<tr>
<td>1-2 years</td>
<td>10(71.4)</td>
<td>4(28.6)</td>
<td></td>
</tr>
<tr>
<td>3-5 years</td>
<td>2(100)</td>
<td>0(0)</td>
<td></td>
</tr>
<tr>
<td>&gt;5 years</td>
<td>6(85.7)</td>
<td>1(14.3)</td>
<td></td>
</tr>
<tr>
<td><strong>Education level</strong></td>
<td></td>
<td></td>
<td>0.25</td>
</tr>
<tr>
<td>Diploma</td>
<td>10(76.9)</td>
<td>3(23.1)</td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td>11(84.6)</td>
<td>2(15.4)</td>
<td></td>
</tr>
<tr>
<td><strong>Subjects</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geography/History</td>
<td>9(100)</td>
<td>0(0)</td>
<td>4.54</td>
</tr>
<tr>
<td>English/Kiswahili</td>
<td>6(66.7)</td>
<td>3(33.3)</td>
<td></td>
</tr>
<tr>
<td>Physics/Chemistry/Math</td>
<td>4(66.7)</td>
<td>2(33.3)</td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>2(100)</td>
<td>0(0)</td>
<td></td>
</tr>
</tbody>
</table>

Despite of the observed awareness on the integration of RHC in the curriculum, 16(61.5%) teachers were found to be in dilemma when they were asked a question whether they are conversant or have adequate knowledge on RHC to an extent that they can answer most question posed by student. Only 10(38.5%) reported that they can answer most questions.

**Figure 4.5 Dilemma among teachers weather conversant or have adequate knowledge on RHC**


The dilemma was more observed at Gunda secondary school (73.7%) than at Iambi secondary school (28.6%). It was common among female teachers (75%) than male teachers (25%) and those teachers with Diploma were more affected (69.2%) than degree holders (53.8%). Based on age factor, teachers who were aged 41-50 years were severely affected (100%) followed by those aged 21-30 years. Only age group 31-40 years were spared.
Table 4.7 Dilemma among teachers as either conversant or have adequate knowledge on RHC n=26

<table>
<thead>
<tr>
<th>Factors</th>
<th>Conversant on RHC</th>
<th>Somehow n(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes n(%)</td>
<td></td>
</tr>
<tr>
<td>School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gunda</td>
<td>5(26.3)</td>
<td>14(73.7)</td>
</tr>
<tr>
<td>Iambi</td>
<td>5(71.4)</td>
<td>2(28.6)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>7(50)</td>
<td>7(50)</td>
</tr>
<tr>
<td>Female</td>
<td>3(25)</td>
<td>9(75)</td>
</tr>
<tr>
<td>Education level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td>4(30.8)</td>
<td>9(69.2)</td>
</tr>
<tr>
<td>Degree</td>
<td>6(46.2)</td>
<td>7(53.8)</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-30</td>
<td>6(31.6)</td>
<td>13(68.4)</td>
</tr>
<tr>
<td>31-40</td>
<td>2(100)</td>
<td>0(0)</td>
</tr>
<tr>
<td>41-50</td>
<td>0(0)</td>
<td>2(100)</td>
</tr>
<tr>
<td>51-60</td>
<td>2(66.7)</td>
<td>1(33.3)</td>
</tr>
</tbody>
</table>


4.5 Alternative sources of RHC knowledge to adolescents
Adolescent receive information on RHC from different people. Information on RHC is very influential towards increasing adolescent knowledge (WHO, 2004). The sources of RHC knowledge to adolescent in this study were identified to be teachers (288), parents (279), doctors/nurses (213), friends (160), sister (108), mass media (61) and brother (51). Other fewer sources were guardians, grandparents, aunt, uncle and neighbor (45). Few respondents could specify three route of information which was health facilities, schools and home. 12.9% of students reported that they got the information from primary school, 2.3% from health facilities and 2.3% from health facilities, schools and home.
Figure 4.6 Sources of information on RHC to adolescents

![Bar chart showing sources of information on RHC to adolescents]


The study further reported that when adolescents need some clarification on issues pertaining to RHC, the first and foremost person to consult are parents followed by teacher and eventually doctors/nurses. Therefore their talks are very influential towards contributing knowledge on RHC to adolescent. Although parents were identified to be the first source in providing knowledge on RHC to adolescent, adolescence had preference in seeking or discussing issues relating to RHC. Generally, adolescent feel free to discuss RHC with mother 184(61%) than with Father 85(28%) or both parents 34(11%).
Figure 4.7 Freedom to discuss RHC among adolescent with parents

Male student feel free to discuss reproductive health matters to their father 75(63.6%) than to their mothers 21(17.8%) or in both sitting that is when mother and father are together 22(18.6%). Similarly female prefer to discuss reproductive health issues with mother 163(88.1%) than with father 10(5.4%) or both 12(6.5%). The observed differences were statistically significance. P.value was 0.001 which means less than the expected (<0.05) where Chi-square was greater (15.5) than expected (>3.84).

Table 4.8 Freedom to discuss reproductive health matters with parents.

<table>
<thead>
<tr>
<th>Socio-factors</th>
<th>Total n=303</th>
<th>Father n (%)</th>
<th>Mother n (%)</th>
<th>Both parents n (%)</th>
<th>Chi-square</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>118</td>
<td>75(63.6)</td>
<td>21(17.8)</td>
<td>22(18.6)</td>
<td>1.55</td>
<td>0.000</td>
</tr>
<tr>
<td>Female</td>
<td>185</td>
<td>10(5.4)</td>
<td>163(88.1)</td>
<td>12(6.5)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.6 Discussion of the findings

The study found that more than half of adolescent had average knowledge on RHC (67.7%). This has been attributed by: greater access to the information from various source such as parents, doctors/nurses and friends as confirmed in one of the objective in this study; presence of competent teachers who were well organized in their lesson plan, lesson notes and subject log books; and integration of the subject matter even in primary schools (reported by some students).

Various studies have been conducted towards assessing knowledge on reproductive health and sexuality with different results, mostly below what this study come up with. Each study used its scale or measurement. Ntangeki, (2009) classify knowledge as either adequate or inadequate. On her study she found that adolescent had low knowledge where 64% of males and 73.9% of female had inadequate knowledge. Rajapaksa-Hewageegana et al, (2014) similarly found that adolescent had low knowledge. In their study, they pose different questions on different issues where only 6% of the respondents (2020) could identify preventing measures for STIs and it was less than one quarter of the respondents who knew that someone can become pregnant or acquire STIs during first intercourse (that is only 0.4% of the respondents responded positively to the posed question).

A study done by singh et al, (1999) showed that awareness on knowledge of normal duration of pregnancy was 50.8% and the percentage of those who knew the need of extra food during pregnancy was 41.7% which was lower than findings from this study. It was only knowledge on interval at which a woman should give birth and its importance was known to majority of the respondents. The higher level of knowledge in this study than other studies can be explained by the increase resources for information such as media which was not the case in some years back.

Despite the fact that majority of respondents had an average knowledge (67.7%), yet more than half of the respondents did not know exactly signs and symptoms of STIs.
161 (53.1%). 20.8% could not mention even a single sign or symptom of STIs, 8.1% mentioned only those symptoms of HIV/AIDS and 24% mention only one symptom which on its own, cannot conclude STI. Only 142 (46.9%) respondents knew at least two or more sign and symptoms of STIs. This means that when they have STI, they cannot recognize it as they do not know its presenting signs and symptoms. As a result, they will only present themselves to the health facility when the condition is advanced or when complications has already set in.

Ultimately they will end up with negative impact on their education due disease state accompanied with failure to concentrate during the study. If the condition left untreated, it can lead to reduce man power resulting to reduction of economic productivity of an individual, family, society and eventually the whole nation. Furthermore it can lead to infertility among the infected person, reduction in sexual power (erectile dysfunction), disharmony among married couple and separation or divorce (UAFD, 2001; MOH, 2003).

Awareness of the signs and symptoms of STIs was directly related to the level of knowledge. Those students who had good knowledge were more aware (88.9%) on the signs and symptoms of STIs than those with average (54.2%) and poor knowledge (9.9%). The observed differences were statistically significance ($X^2 = 1.17$ and P. value 0.001). Moreover, the awareness on preventive measures against STIs and unwanted pregnancy was directly related to the level of knowledge.

More than half of students (55.6%) who had good knowledge were able to mention at least three to four preventive measures against STIs. Among the mentioned measure were: use of condom, abstinence from sexual activity, avoids sharing sharp instruments, and safe blood transfusion. 33.3% of students were able to mention two preventive measures against STIs. No respondents among those with good knowledge failed to mention at least one preventive measure against STIs unlike those with average and poor knowledge. 10.7% of respondents who had an average knowledge, failed to mention even single preventive measure for STIs.
Similarly, 39.4% of respondents with poor knowledge failed to mention even single preventive measure for STIs. It was also founded that 16.5% of the respondents do not know how to protect oneself from STIs and 19.5% do not know preventive measures from unwanted pregnancy. Hence they are likely to acquire STIs as well as unwanted pregnancy.

There was higher percentage of adolescents who had average knowledge on RHC from Iambi secondary school (76.2%) compared to Gunda secondary school (64.6%) though the difference is not statistically significant. The difference is likely to occur by chance although if you look at what is happening today in private and government secondary schools, one may find that private schools like Iambi are better than government secondary schools. The presence of committed and motivated teachers, average number of students in the class which can easily be managed and the presence of necessary teaching aid are possible factors.

Knowledge level was found to be slight higher in female (68.1%) than males (66.9%) among those who scored average knowledge unlike the findings from Neema et al, (2004) where males where more knowledgeable (70%) than female(66%). The difference observed from this study and that of Neema et al, (2004) is due time factor. In 11 years ago female were not given enough time to study dissimilar to male. After class hour, they were busy assisting mother to fetch water, washing dishes and similar kind of work where males where free either discussing issues with peers, friends or watching television from which they can obtain or gain necessary information hence acquiring knowledge.

Education level had direct influence on the level of knowledge in this study. There was progressive increase in level of knowledge with increase education level. However the trend decreases in form three where there were few students who scored average and good level of knowledge with large number of those who had poor knowledge.
The increase level of knowledge with increase education level is because sensitive topics on RHC was in form three and form four (Secondary biology syllabus). No explanation why form three were less knowledgeable.

Schools have the potential to reach a large portion of the world’s children and adolescents especially in today’s world where more children attend school (UNFPA, 2003). Teachers are supposed to be aware of the incorporation of RHC in the curriculum/syllabus so that they can deliver required information to adolescent who are in schools. Appropriate information will make adolescent acquiring necessary knowledge for themselves and later to their family, society and whole nation.

Vast majority of the students (98.7%) agreed that knowledge on RHC is being provided to adolescent who are in school as per curriculum. Those students, who did not agree 4 (1.3%), come to an agreement unknowingly when further question posed. They were asked to identify the sources where they receive the information on RHC. Teachers were among the mentioned source of information which means the second answer contradicting the first one. This simplify that all student agreed RHC knowledge was being provided in school.

More than half of adolescent (53.8%) reported that though RHC is included in the study, the subject matter is being studied occasionally. They suggested that if possible, RHC should be studied more often if not always as it is very vital to their life. In order to verify what they had agreed, adolescent where asked to mention the kind of information they were given concerning RHC. 26.4% reported that they were informed on changes occur in puberty, 22.4% reported to be given information on family planning, 10.2% reported that they were told to avoid sexual activity at young age, 8.6% on STIs, 7% on reproduction, 2.3% on personal hygiene, 1.7% reported to be told that when someone have sex on danger days will conceive where 2% reported to be given information on dangers of early marriage and 19.1% did not report anything.
There were few adolescents who were identified to have misconception after being asked to mention the kind of information given. For instance, 17 years old lady who was in form three reported to be told that *a lady is not suppose to have sexual intercourse while on menstrual period otherwise she will get pregnancy*. Another student of the same class who was 16 year’s further reported to be informed that *when any one is on menstrual period, she should not have sex till seven days after, otherwise she will conceive*.

Additional question was given to find out what they are studying was adequate or presented in a manner that was well understood. Very few adolescents were able to give out their comments. Among the comments given were: *topics were good but we need teachers from other place who know the topic well or other professionals; the content of the study was good but we advice if possible non government organizations dealing with health matters should visit our schools and talk with us in details on STIs; topics should stress on preventive measures against STIs; the teacher should go more deeper when presenting a topic for a better understanding of the student; and teachers must put more effort on the topics because they are very important on educating us how to leave safely*.

This study found that majority of the teachers was aware of the incorporation of RHC in the curriculum. Teachers from Gunda secondary school were less aware of incorporation of RHC in the curriculum compare to teachers from Iambi secondary school. Lack of motivation among government teachers such as permission to attend seminars where updates are given can be one of the underlying reasons. Age group of the teachers, gender, education level, duration of teaching and subject being teaching was thought to have contributory effect on the awareness of incorporation of RHC in the curriculum though not statistically proven. Teachers with younger age and those who were about to retire from work were more aware of the subject matter because morality to work begins when someone starts to work and become less and less as someone works, however it resume back towards completion of work.
When someone is newly employed or has just work for few years, he/she tends to be cooperative and give out positive answer to all what he/she has come through. The longer he/she stays at work he turned to a negative way especially if denied of his/her right. Even though he/she is asked question on something he/she knew, he/she may give wrong answers. However someone who is about to retire tend to be supportive and come up with true answers.

Female teachers were less aware of the integration of RHC into the curriculum (75%) compared to male teachers (85.7%) though no other similar study found to give comparison. Female tends to large behind males in most issues. For instance, awareness on financial matters differs among men and women. Theodos et al, (2014) found that women are less financially knowledgeable than men because they take less financial risks. When you look at political issues, you will find that women are less aware on political issues compared to male. According to study on Wide Political Knowledge Gap Exists Between Men and Women accessed on www.usnews.com which was retrieved 15/04/2015, it was reported that “wide political knowledge gap exists between men and women regardless of how progressive a country is in terms of gender equality”. For instance, Norway being a country perceived to be in the highest rank in gender equality globally, yet the knowledge gap on politics is still greater. That is to say, men are more aware on political issues than women.

Level of education was very vital on the awareness of incorporation of RHC in the curriculum. The higher the level of education someone has attained, the more the awareness. The findings can be supported by a research done by Gürdal et al, (2012) on the effects of educational level on breast cancer awareness. They found that those women who had higher educational levels were performing routine self breast examination than those with low levels of education.

Teachers who taught specific subjects such as biology and civics were more aware of the subject matter than other teachers. Underlying reason being RHC topics are specifically included in biology books with some few topics in civics. Despite the fact that majority
of the teacher were aware of the incorporation of RHC in the curriculum, yet almost all respondents could not tell exactly when and where they get information that RHC is supposed to be taught in school. When they were asked question as to where and when they get information, the response was as follows: *Through reading different text books concerning RHC such as biology book; from mass media; I got information when I was in college/university; I got the information when I was in ordinary and advance level; I got the information when I attended a seminar which was on reproductive health at Kibaha in 1997.*

The most sources of RHC knowledge to adolescents were identified to be teacher (95%) followed by parents (92%) then doctors/nurses (70.3%), friends (52.8%), Sister (35.6%), mass media (20.1%) and brother (16.8%) in this study. The findings are similar with studies done by Singh et al, (1999) and Tegegn1 et al, (2008) although they differ in frequency and order. In the study conducted by Singh et al, (1999) the identified sources where; mass media in which television (73.1%) and radio (37.7%) were the leading followed by parents (36.1%), friends (22.3 %) posters (16.9%), teachers (6.9%) and then health professionals (6.9%). Tegegn1 et al, (2008) identify radio (80.4%), television (73%) and school teachers (71.8%) as a major sources of information for RH.

Mass media was found to be the leading source of information to adolescent according to Singh et al, (1999) and Tegegn1 et al, (2008) unlike this study. Underlying reason been different in locality. This study was carried out in country side where only few places have electrical supply and only few people have television. Other studies were conducted in town where electricity is freely available and most people have television through which adolescent can have access. Even those families where television is absent, they access television from public places.

On the other hand, this study reported that when adolescents need clarification on issues relating to RHC, the most persons to consult are parents followed by teacher and eventually doctors/nurses. Similarly, Singh et al, (1999) reported parents and doctors to be among person to seek advice.
Teacher was replaced by friends in Singh et al, (1999) findings. In a study done by Rajapaksa-Hewageegana et al, (2014) parent, friend and sibling were the most person to discuss with incase they have question.

It was also observed that each adolescent prefer to discuss reproductive health issues with parents of the same sex. However male adolescents can discuss reproductive health issues with mother or with both parents when they are together compared to female adolescent discussing reproductive health issues with both parents. Furthermore, it was found that adolescent generally feel free to discuss reproductive health issues with mothers rather than father or both. The findings are supported by the study done by Rajapaksa - Hewageegana et al, (2014) where majority of girls and boys (80%) were very close to their mother compared to 67% of the girls and 70% of the boys who were very close to their father. Therefore a mother is very influential in the community towards impacting knowledge to adolescent.
CHAPTER FIVE

SUMMARY, CONCLUSION AND POLICY IMPLICATION

5.1 Introduction

This chapter represents an overview of the findings with conclusion made by this study and way forward to various stakeholders

5.2 Summary

A cross sectional comparative study was conducted in Mkalama District involving two secondary schools which were Gunda and Iambi. It was exploring the role of knowledge on reproductive health in influencing the transmission of STIs to adolescent. The study found that more than half of the adolescent had average knowledge on RHC 205 (67.7%) where 71(23.4%) had poor knowledge and 27(8.9%) had good knowledge. Despite the knowledge they had, yet more than half of the respondents (53.1%) did not know exactly signs and symptoms of STIs. However the awareness of the signs and symptoms of STIs was directly related to the level of knowledge. Adolescent who had good knowledge were more aware of STIS signs and symptoms (88.9%) than those with average (54.2%) and poor knowledge (9.9%). The observed differences were statistically significance ($X^2 = 1.17$ and P. value 0.000). No respondents among those with good knowledge failed to mention at least one preventive measure against STIs unlike those with average and poor knowledge.

School in which someone was had no effect on the level of knowledge. Gender has no effect too on the level of knowledge. Female students were found to have average knowledge accounting 68.1% which is slight higher than male students (66.9%) but the differences observed were not statistically significance. The factor which was found to have relation with knowledge level was the education levels. There was increased level of knowledge with the increased education levels except in form three.
Most students 299(98.7%) agreed that knowledge on RHC was provided to adolescent who were in school as per curriculum. Only 4(1.3%) students did not agree to whether knowledge on RHC was provided in schools. The observation was similar in both schools. There was no much variation in percentage among those who agreed by gender. Male accounted 117(99.2%) and female accounted 182(98.4%).

Age factor was found to have an effect towards provision of RHC among adolescent. Student aged 14, 15, 18 & 19 years agreed that knowledge on RCH was being provided in secondary schools (100%) followed by those aged 16 and 17 years (98.6% and 96.7% respectively) and finally those aged 13 years (80%). In terms of education levels, students who were in form two fully agreed (100%) that they were provided with appropriate knowledge as per curriculum. Other student who were in form one, form three and form four had almost similar agreement on the subject matter (98.8%, 97.8%, and 98.6% respectively).

Majority of the teachers (81%) were aware of the incorporation of RHC in the curriculum. Despite of the observed awareness, only 38.5% of the teachers reported to be conversant or have adequate knowledge on RHC to an extent that they can answer most question posed by student. The remaining 61.5% of teachers were in dilemma. Teachers from Iambi secondary school were fully aware of the integration of RHC into the curriculum (100%) while only 73.7% of the teachers from Gunda secondary school was aware of the subject matter. Male teacher were more aware of the subject matter 12(85.7%) than female teacher 9(75%). Age group 31- 40 years and 51-60 years were full aware of integration (100%) while only 50% of those aged 41- 50 years were aware of the integration.

Teachers who had degree were more aware of the integration (84.6%) than those with diploma (76.9%). Teachers who had been teaching for less than a year and those who taught for three to five years were fully aware of the integration of RHC in the curriculum (100%) compared to others. Those who had been teaching for one to two years were least aware (71.4%).
Teacher who were teaching specific subject such as Biology and Geography/History were aware of the integration of RHC in the curriculum (100%) than teachers who were teaching other subjects. Above all factors which were looked at, no single factor found to have statistical association on awareness of the incorporation of RHC in the curriculum by the teachers.

The sources of RHC knowledge to adolescent in this study were identified to be teachers (288), parents (279), doctors/nurses (213), friends (160), sister (108), mass media (61) and brother (51). Adolescent reported that when they need some clarification on issues pertaining to RHC, the first and foremost person to consult are parents followed by teacher and eventually doctors/nurses. The study further reported that among father and mother, male adolescent fee free to discuss reproductive health matters to their father 75(63.6%) than to their mothers 21(17.8%) or in both sitting that is when mother and father are together 22(18.6%). Similarly female prefer to discuss reproductive health issues with mother 163(88.1%) than with father 10(5.4%) or both 12(6.5%).

5.3 Conclusion

Knowledge on RHC is of paramount in view of the fact that it maintains physical and mental state as well as social wellbeing of adolescents. Adolescents who have good or adequate knowledge on RHC have autonomy, necessary skills and power to make decision in various areas on reproductive health. Hence they are likely to overcoming negative health outcome. This study explored the role of knowledge on reproductive health in influencing the transmission of STIs to adolescent. More than half of the adolescent were found to have average knowledge on RHC but did not know signs and symptoms of STIs. Awareness of the signs and symptoms of STIs was directly related to the level of knowledge. That is adolescent who had good knowledge were more aware on the signs and symptoms of STIs than those with average and poor knowledge. Therefore there is a need for the government to breach the gap in order to increase adolescent knowledge and overcome negative health outcome.
5.4 Policy implication

5.4.1 To Ministry of Education

1. To review secondary syllabus so that sensitive topic are included in all classes with addition of other important areas such as menstrual disorders among female or consequence of masturbation in males to cover all aspects of adolescent health.

2. Have special sustainable educative program through the media, work shop, peer education and printed materials which will give adolescent chance to gain more information and upgrading their knowledge on RHC.

3. If possible, there should be a seminar among adolescent with medical professional. It will assist in those areas where certain difficult issues are to be discussed by parents or relatives.

5.4.2 To the Government

1. Educational activities such as seminars should be conducted among parents, relatives and friends to impact them with appropriate knowledge so that they can deliver the right information to adolescent.

2. Another big research (survey) to be carried out involving large area to address the problem so that the result can be generalized.

5.4.3 Police Maker (Parliament)

Should come up with rule or law where by both parents are supposed to have talks and discussion on reproductive health issue with adolescent in one sitting. By so doing, there will be delivering of proper information to adolescent. When only one parent is giving information to adolescent, he/she can give wrong information depends on how he/she behave and or perceive.
5.5 Areas for further research

Since the general knowledge on issues related to RHC to adolescent was not known, there is a need to carry out big study (survey) involving the larger area of the country to establish overall knowledge on reproductive health matters among adolescent. In addition to that, study on knowledge on STIs in relation to its prevalence should be carried out to have baseline data at hand and possible measures to overcome the problem.
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APPENDICES

Appendix 1: Informed Consent

Greetings!
My name is Gerald Dominick Minja, a student at Mzumbe University. I am conducting a research on how knowledge on reproductive health influences the transmission of STIs to Adolescent. The study involves adolescent and teachers at Gunda and Iambi secondary schools in Mkalam District.

Kindly, I am requesting you to fill the form provided with clear and correct information. I would like to assure you that all the information gathered, will be kept strictly confidential and will be used by planners, policy makers and other stakeholders for intended interventions. Your name will not appear anywhere in this form.

I agree to participate in this study.

Signature of Participant ………………………………………

Date ……………………………………………………………..
Appendix 2

QUESTIONNAIRES FOR THE STUDENT ONLY

1. Identification number………………………………

2. Name of the school
   a. Gunda Sec School    b. Iambi Sec School

3. Sex
   a. Male    b. Female

4. Age in years ………………………………………….

5. Which class are you?
   a. Form one    b. Form two    c. Form three    d. Form Four

6. Do you have any information relating to or concerning Reproductive Health Care?
   a. Yes    b. No

7. Where did you get the information?
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………

8. What kind of information where you given concerning Reproductive Health Care?
   (Briefly mention)
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
   ……………………………………………………………………………………………
9. Is Reproductive Health Care included in your study?  
   a. Yes     b. No

10. How often do you study Reproductive Health Care?  
   a. Rarely  b. Occasionally  c. Often  d. Always

11. What are your comments on the content of the study?  

………………………………………………………………………………………..  
………………………………………………………………………………………..  
………………………………………………………………………………………..

12. Suppose you need some clarification on issue pertaining to Reproductive health, where do you get assistance? Or where else do you get information on Reproductive Health Care?  

………………………………………………………………………………………..  
………………………………………………………………………………………..  
………………………………………………………………………………………..

13. Whom most do you receive information on Reproductive Health Care?  

………………………………………………………………………………………..  
………………………………………………………………………………………..  
………………………………………………………………………………………..

14. Among mother and father, to whom do you feel free to discuss with on issues relating to reproductive health care?  
   a. Father  b. Mother  c. Both
Knowledge Assessment

15. Mention at least 4 changes that occur in male and female during transformation of childhood to adult hood.

Male:
a……………………………………………………………………………………………
b……………………………………………………………………………………………
c……………………………………………………………………………………………
d……………………………………………………………………………………………

Female:
a……………………………………………………………………………………………
b……………………………………………………………………………………………
c……………………………………………………………………………………………
d……………………………………………………………………………………………

16. What is Sexual Transmitted Infections (Disease)
……………………………………………………………………………………………
……………………………………………………………………………………………

17. Mention any sexual transmitted infection you know.
a……………………………………………………………………………………………
b……………………………………………………………………………………………
c……………………………………………………………………………………………
d……………………………………………………………………………………………
e……………………………………………………………………………………………

18. What are the signs and symptoms of Sexual Transmitted Infections?
a……………………………………………………………………………………………
b……………………………………………………………………………………………
c……………………………………………………………………………………………
d……………………………………………………………………………………………
e……………………………………………………………………………………………
19. How can someone prevent him/herself from Sexual Transmitted Infections and Unwanted pregnancy?

Sexual Transmitted Infections

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..................................................................................................................................................
..................................................................................................................................................
..................................................................................................................................................

Unwanted pregnancy
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..................................................................................................................................................

THANKS FOR PARTICIPATING
Appendix 3

QUESTIONNAIRES FOR THE TEACHER ONLY

1. Identification number………………………………

2. Name of the school
   a. Gunda Sec School       b. Iambi Sec School

3. Sex
   a. Male       b. Female

4. Age in years ……………………………………………

5. What is the highest level of education you have ever attained?
   a. Diploma     b. Degree     c. Master

6. For how long have you been teaching?
   ………………………………………………………

7. Which subjects are you teaching?

8. Are you aware that Reproductive Health Care is supposed to be taught in school?
   a. Yes       b. No

9. If answer to ques 8 is yes, where and when did you get the information?
   ………………………………………………………………………………………………
   ………………………………………………………………………………………………
   ………………………………………………………………………………………………

10. Do you think you are conversant or have adequate knowledge on Reproductive Health Care to an extent that you can answer most questions posed by student?
    a. Yes       b. Somehow    c. No

THANKS FOR PARTICIPATING