ASSESSMENT OF KNOWLEDGE ON REPRODUCTIVE HEALTH AMONG ADOLESCENTS ATTENDING SECONDARY SCHOOLS IN MOSHI MUNICIPALITY OF KILIMANJARO, TANZANIA

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DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUREMEMNTS FOR THE DEGREE OF MASTER OF ARTS IN SOCIAL WORK OF THE OPEN UNIVERSITY OF TANZANIA

2013

CERTIFICATION

I am writing to certify that I have read and hereby recommend for acceptance by the Open University of Tanzania a dissertation entitled: "*Assessment of Knowledge on Reproductive Health Among Adolescents Attending Secondary Schools in Moshi Municipality of Kilimanjaro, Tanzania"* in partial fulfillment of the requirements for the degree of Master of Arts in Social Work (MASW) of the Open University of Tanzania.

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Prof. Sylvester L.B. Kajuna

(Supervisor)

……..

Date

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DECLARATION

I, Hannah Peter, declare that Assessment of Knowledge on Reproductive Health Among Adolescents Attending Secondary Schools in Moshi Municipality of Kilimanjaro, Tanzania is my own work and all the sources that I have used have been indicated and acknowledge by means of complete reference and that this work has not been submitted before for any other degree at any other institution.

……..

Signature

……..

Date

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ABSTRACT

This study seeks to assess knowledge that adolescents students in Moshi Municipality posses on reproductive health. Through the study I understand preference of adolescents, their knowledge on reproductive health and sources from which adolescents get that knowledge. The major discovery in this study was inadequate knowledge on reproductive health among adolescents. This make adolescent more vulnerable to reproductive health problem, where others have failed to continue with secondary school due to early pregnancy. In helping adolescents knowledge on reproductive health should be provided in both formal and informal sectors throughout the year, within a conducive environment that will allow privacy and confidentiality. Social worker should cooperate with other stakeholders within a community to understand adolescents as the most vulnerable group and help them through frequently visits in order to understand their need, make referral and advocating for their right.

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LIST OF ABBREVIATIONS ACRONMYS

AIDS	-	Acquired Immune Deficiency Syndrome
ASRH	-	Adolescents Sexual Reproductive Health
AYA	-	African Youth Alliance
BCC	-	Behavior Communication Change
FHI	-	Family Health International
HIV	-	Human Immune Deficiency Virus
FGM	-	Female Genital Mutilation.
MKUKUTA	-	Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Tanzania
MKUZA	-	Mkakati wa Kukuza Uchumi Zanzibar
MNH	-	Muhimbili National Hospital
MOH	-	Ministry of Health
NGOS	-	Non-Governmental Organizations
NHP	-	National Healthy Policy
RCHS	-	Reproductive and Child Healthy Section
RH	-	Reproductive Health
SRH	-	Sexual and Reproductive Health.
STIs	-	Sexual Transmitted Infections
TDHS	-	Tanzania Demographic and Health Survey
TGNP=	-	Tanzania Gender Network Program
UNICEF	-	United Nations Children's Funds
VCT	-	Voluntary Counseling and Testing
WHO	-	World Health Organization

CHAPTER ONE

1.0 INTRODUCTON

This chapter is exposing the issue of knowledge on reproductive health among students in which the background information on the topic, statement of the problem, purpose and objectives of the study are indicated. Moreover the chapter highlights research tasks and questions, significance of the study and its anticipated limitations. The chapter also provides definitions of the key terms and conceptual framework on which the study is based.

1.1 Background to the Problem

It has been revealed that more than five young people worldwide are affected by reproductive health problems including infection of HIV/ AIDS Eaton *et al.* (2003). In Moshi municipality there are about17, 173 adolescents attending secondary schools Kilimanjaro region office (2011). Moshi Municipality is the home of majority Chagga, and other tribes like Maasai, Pare and others. Secondary schools in Tanzania involve students whose majorities are aged between 14 and 19, at which students are in the adolescence period. This is a transition period from childhood to adulthood characterized by physical growth, hormonal changes, social and emotional development (UNICEF, 2011).

Similar to other adolescents worldwide, adolescents in Tanzania use their second decade of life in a transitional period whereby they are exposed to too many risks and become vulnerable to problems that can have a long term impact on their lives. During this period adolescents start to understand their family status, while (to

others) early pregnancies, sudden loss of parents, effects of HIV/AIDS, having sex with multiple partners, engage in alcohol and drug abuse, limited awareness of STI prevention and lack of skills to negotiate safer sex, become sources of adolescents' problems (UNICEF, 2011).

Adolescents in Moshi municipality are found to be at risk as adolescence pregnancies become a great threat to female adolescent's right of pursuing secondary school education despite efforts made to educate them on reproductive health. Statistics in 2011 show the number of females who fail to complete secondary education is rising twice from 2010 where 7 students were victim while in 2011, 18 students were victims. The leading school is Mjimpya secondary school where in 2010, two students were dismissed from school and in 2011, five students were dismissed. Other schools are Msasani 4 students, J. K. Nyerere 2 students, and Korongoni 2 students (Mushi, 2012). Due to this situation I as a researcher and a social worker felt pain and concern for adolescent students' welfare in Moshi and conducted this study to expose their knowledge.

Knowledge is awareness of something or event, it is also power that one needs so as to be in advantage (Urinate, 2008). Marealle (1947) explains that, before formal education adolescents from Chagga tribe in Moshi were provided with knowledge through lessons which was essential like how we value formal education these days. Those lessons were known as "Shiga," "Mrigo" and "Ngasi". These lessons equipped them with knowledge on reproductive health, good behavior, and how to participate in economic activities like agriculture and hunting. These days' things

have changed as young people's life in Moshi differ dramatically from those of their parents and grandparents due to the development of science and technology, tourism, and globalization. Children spend much time in school and marry later compared to their parents whose major concern was marriage while school was of a less priority. Children also enter puberty earlier than their parents due to improved nutrition and other factors possibly due to change in feeding behaviors.

Most adolescents find themselves in critical health status due to ignorance or possession of inadequate or improper knowledge on reproductive health. Studies indicate that more knowledge leads to less reproductive health problems. Sexual education is found to be the most useful way to reduce problems associated with sex as it educates adolescents on

safe sex, abstinence and contraceptive use. Also it makes them become more responsible in making decisions about their life (Khoza, 2004).

Currently the world is more interconnected than ever before, secondary school students all over the world are asking for convincing and available information about sexual and reproductive health education. They need information not only about bodily processes and a better understanding of the norms that society has set for sexual behavior, but they also need to acquire the skills necessary to develop healthy relationships and engage in responsible decision-making about sex, especially during adolescence when their emotional development accelerates (Kriby, 2001).

To act on those needs adolescent should be equipped with relevant knowledge so as to enhance reproductive health and avoid reproductive health related problems (Fishe

and Fisher, 1998; Health Canada, 2003). Provision of such knowledge is and ought to be recognized internationally as one of the human rights (United Nations Committee on Economic, Social and Cultural Rights, 2000; United Nations Committee on the Rights of the Child, 2003). Therefore Governments and other stakeholders have the responsibility of developing programmes that provide adolescents with accurate information to enable them to have a desirable control over issues pertaining to reproductive health.

In Zanzibar behavior change communication strategies was conducted by African youth alliance project on sexual reproductive health. Under this project peer education, community mobilization, and adult child discussion was seen as the major strategies to change youth risk taking behavior which lead to reproductive health complications (AYA, 2004).

In Tanzania mainland adolescents' have been connected through radio, television, internet, mobile phones and socialization groups where a lot about sexual life is shared. Others have become peer educators through various social clubs like FEMA clubs which discuss various youth challenges on reproductive health. Across the country, adolescents are proving that they have the drive, creativity and vision to make an important contribution to national development if they are empowered especially by knowledge (UNICEF, 2011).

Despite the reported increase in global connections and media coverage, still Tanzanian youths are facing reproductive health problem. It has also been identified that many adolescents lack awareness on available services, they are also restricted

from seeking reproductive health information and services and fear the stigma associated with seeking sexual and reproductive health care from formal health centers (African youth alliance, 2003).

1.2 Statement of the Problem

There have been efforts by government and non-governmental organizations to provide knowledge to adolescents on reproductive health. However there are still reported increases in reproductive health problems in this population. This study will therefore seek to know what is missing in the provided knowledge. Non government organizations through television programs like FEMA TV TALK SHOW program on ITV at 7PM every Sunday, also FEMA magazine which are distributed freely to secondary school students, behaviors communication change strategies AYA (2004) and other efforts by UNICEF (2011) to educate adolescents on reproductive health.

Ministry of education and vocational training MOEVT (2004) provide training manual on school health education, as a respond to United Nations Committee on Economic, Social and Cultural Rights 2000 and United Nations Committee on the Rights of the Child, 2003 which state reproductive health as among human rights. The manual among other things covers basic education on HIV/AIDS and STIs, safe and healthy life style, sex and sexuality, and responsible behaviors for adolescent students.

Despite these efforts the welfare of adolescents continues to be poor as studies indicates that most adolescents in Tanzania start sexual intercourse at early age.

According to Tanzania demographic and health survey of 2010, 11.3% of women aged 15-19 had sex before the age of 15 also 7.8% of boys at the same age had sex before the age of 15.Child bearing at early age increases the risk of pregnancy related complications and contributes to higher rates of maternal and infant mortality as statistics show that 25% of women aged between 15 to 19 are getting pregnant or have children TDHS, (2004-5).

Furthermore, early pregnancy limits female students' access to education and better income which put female adolescents in most vulnerable situation, leading to high dependence rate (Save children, 2004; Mushi, 2012). Contraceptive use among adolescents in Tanzania is relatively low because the majority doesn't know them and sometimes they cannot afford them (TGNP, 2007). On the other hand the few adolescents who are well equipped with knowledge on contraceptives use are held back by the belief that only adults are allowed to access and use contraceptives (Rasch and Silberchmidt, 2008).

These facts show that there is a strong need of assessing the knowledge that adolescent possess and thereafter to plan for strategies for helping them by addressing the knowledge gaps because sexual and related risk behaviors among adolescents can be reduced through raise of awareness about HIV/AIDS, abortion, early pregnancies and the related factors (Leshabari *et al.,* 2008).

1.3 Objectives of the Study

1.3.1 General Objective

To assess knowledge on reproductive health among adolescents attending secondary schools in Moshi municipality, of Kilimanjaro region, Tanzania.

1.4 Specific Objectives

(i) To determine knowledge on sexual intercourse, pregnancy, contraceptive use and abortion among adolescents in Moshi municipality.

(ii) To determine what knowledge adolescent students possess about transmission, and prevention of HIV/AIDS and STIs.

(iii) To determine sources from which adolescent students get information about reproductive health and HIV/AIDS.

1.5 Research Task and Questions

The core issues which will be reviewed in the proposed study are physical changes in the adolescents, sexual behavior, abortion, contraceptive use, and knowledge related to HIV/AIDS, sexually transmitted infections (STIs), attitudes and protective practices among young people, and health information and services. In order to explore the aforementioned areas, the following questions were formulated for this research project:

(i) Are the adolescents aware of the meaning of the physical changes they experience during puberty?

(ii) Do the adolescents feel that they have enough knowledge about sex?

(iii) What knowledge and attitude do they have on use of contraceptives including condom?

(iv) What do they know about pregnancy and abortion?

(v) Do adolescents in Moshi municipality know about transmission, prevention and treatment of HIV/AIDS and STIs?

(vi) From where do the adolescent students get their information about sexual reproductive health?

(vii) From whom would the students like to receive information about sexual reproductive health?

(viii) How would the students want to receive the sexual reproductive health information?

(ix) 10. What do the students suggest to enhance knowledge and application of the acquired knowledge to enhance reproductive health?

1.6 Significance of the Study

In 1994, the International Conference on Population and Development (ICPD) stressed the importance of adolescence to sexual and reproductive health all over the life cycle. It also (for the first time in an international agreement) recognized that adolescents have particular health needs that differ in important ways from those of adults, and stressed that gender equity is an essential component of efforts to meet those needs (UNFPA, 2003). Therefore the proposed study will be useful at individual level, family level, community and national level as follows.

This study will help social workers to help the adolescent as they are knowledgeable about what knowledge adolescents possess and what their preference are. There after they will formulate strategies on visiting them, counsel and guide them, acting as broker and referees, advocating for them to get the required service, help them to analyze and interpret their dreams and finally help them realize their dreams. This will reduce dependence rate within the family, and build a spirit of self-confident.

At individual level the study will help adolescent students by exposing what they know about sexual reproductive health for identification of knowledge gaps.

Consequently this will pave a way to deal with what is lacking in sexual reproductive issues, education being a priority. Moreover the release of the study report will help students to understand themselves and also be understood by others within a society.

At a family level the study results will help the family members to deal with adolescents within their families with the identified knowledge needs, gaps and preferences in mind. This confidence is based on the fact that in many cases the ones most trusted and listened to by young people are the family members. The researcher views the family as the most primary and basic institution in which behaviors, character and conducts are conceived and nurtured.

This importance line with MKUKUTA as it contributes to reduction of poverty. Research shows that if investment will be priority on the poorest adolescents, their progress will be achieved more quickly and more cost-effectively. Hence more success on Tanzania's Poverty Reduction Strategies for2010-2015 (MKUKUTA) on the Mainland and the MKUZA in Zanzibar (UNICEF, 2011).

1.8 Definition of Key Terms

Adolescent: Is defined as a person between 10-19 years of age (UNICEF, 2011).

Knowledge: Knowledge is awareness of something or event; it is also the power that one needs to hold it so as to be in advantage Urinate, (2008), is a familiarity with someone or something, which can include facts, information, descriptions, or skills acquired through experience or education.

Sexual reproductive health: Is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the

reproductive system and to its functions and process Population reference (Bureau sexual and Reproductive Health in the Middle East and North Africa, 2008).

1.9 Conceptual Framework

According to Miles and Huberman, (1994) conceptual framework is a visual or written product that explains main issues to be studied in a graphical or narrated form, where the key factors, concepts, or variables are explained. The proposed study conceptualizes reproductive health as being learnt during socialization processes where adolescents interact with others, parent, teacher, peer, health provider, and reproductive health materials with knowledge on reproductive health as the central issue.

The conceptual framework of the proposed study involve the systems of concepts, assumptions, expectations, beliefs, and theories that supports and give out information on RH as well as how knowledge on RH can change adolescents' decision-making and overall sexual behavior. In the light of social learning theory by Albert Bandura People learn by watching others within a social context, these processes are central to understanding personality.

Through observation and modeling one can change or cannot change his or her behavior. Same applies to adolescent in order for them to understand RH issues they have to interact with knowledgeable people on RH also one must be exposed to materials that educate on RH. Therefore in order to assess knowledge of adolescent on RH I will analyze the available interaction which aims at educating adolescents in Moshi municipality on reproductive health. I also believe that provision of

reproductive health knowledge can change adolescent sexual behavior hence good status of RH as shown in the illustration below.

Existing state of RH	**Process**	**Results and impacts**
Spread of HIV/AIDS and STIs, RH early pregnancy Unsafe abortion, complication during delivery. Poor performance in school, school dropout and increased in family dependent,	Provision of RH knowledge. Adolescent, schools, parents and community participation in planning and implementation of RH programs. National policy on RH review and amendments	Lower spread of HIV/AIDS and STI hence healthy nation. Low rate of adolescent pregnancy and abortion. Increased in school performance and increase of educated youth. Free from poverty and vulnerability and increased per capital income.

Figure 1.1: Conceptual Framework

Source: Researcher, (2013)

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter provides relevant material concerning adolescents' reproductive health which has been done by other scholars. The chapter 1 gives out general view of adolescent reproductive health worldwide and narrows the discussion to Africa sub-Saharan countries then East Africa and Tanzania in particular. In line with this topic, this chapter contains the information obtained from the literature on supportive environment for adolescent to get knowledge on reproductive health, the importance of adolescent reproductive health, and factors that affect provision of adolescents' reproductive health knowledge at national level.

2.2 The Scope of Adolescent Sexual Reproductive Health

Today the world is a home to the largest generation of 10-19 as they cover 1.2 billion of the whole population worldwide. Nearly 90 per cent live in developing countries (UNICEF, 2012). At the same time there is increased urbanization and industrialization, as well as the revolution in modern communications and information technology (Guttmacher A., 1998). The demands on young people are dynamic and unprecedented; their parents could not have predicted many of the pressures they face. How we help adolescents meet these demands and equip them with the kind of education, skills, and outlook they will need in a changing environment will depend on how well we understand their world. This implies that as parents, guardians and teachers we have to understand adolescents' world so that we can be in a position to guide them accordingly.

A report presented by sex information and education council of Canada SIECCAN, (2004) explains that: A broad conceptualization of adolescent reproductive health implies attention to a wide range of issues including sexual attitudes, sexual behaviors, and the personal and social factors that influence them. The report presents the current adolescent status in Canada basing on sexual reproductive health. Canadian teen pregnancy, abortion, and birth rates indicate that teen's pregnancies have been reduced due to the use contraceptive.

In addition, the percentage of sexually active teens who report to have had only one sexual partner has increased substantially while the percentage who report six or more lifetime sexual partners has declined. Overall, these data are encouraging and suggest that in some important respects the status of adolescent reproductive health in Canada has improved. However it is difficult to compare such results with what can be expected of Tanzania bearing in mind the socio-cultural and economic differences between the two settings.

Elsewhere adolescents in Pakistan have poor knowledge on sexually transmitted diseases (Khan, 2000). An interview conducted in Chanessar Goth Karachi show that 11-19 aged adolescents have heard about HIV/AIDS but only 23% knew that sex is the leading mode of transmission and only 31%knew that wearing condom reduce risk of having HIV/AIDS and STIs. The study came up with conclusion that Pakistan adolescents, particularly girls under age 20, are not exempt from a reproductive health burden that they share with their older counterparts. This includes burdens of maternal health and morbidity, risks of exposure to sexually transmitted diseases,

vulnerability to sexual violence, restricted access to health and family planning services, and lack of adequate information on reproductive health issues. The Pakistani study can partially compare with anticipated results from other developing countries such as Tanzania especially if it was conducted in the rural areas based on the more or less economic status. However socio cultural components may as well make a difference from one region to another within the circle of the developing countries.

In the United states of America USA about 850,000 adolescents become pregnant each year (Realini, 2004). The same applies to United Kingdom (UK) where in (2000) reproductive health was still a problem which led to the cases of adolescents pregnancy in which about 36,690 girls under 18 years of age got pregnant and 44% of those pregnancies lead to legal abortion (Linda, 2003). Under these studies we come to know that reproductive health problems are common to both developed and developing countries.

In sub Saharan countries adolescent reproductive health has emerged as an area of key concern because HIV and AIDS accounts for the second highest number of deaths. Globally one-fourth of those cases represent people under the age of 25 years with 63 per cent residing in Sub Sahara Africa (UNAIDS, 2004). Young women are three times as likely as young men to be infected possibly due to their anatomy and socio cultural issues. Adolescents in East and South Africa also face sexual reproductive problems such as STIs, HIV/AIDS, unsafe abortion, sexual abuse and rape, female genital mutilation (FGM) maternal and child mortality (Knut-IngeKlepp *et al.,* 2008).

Furthermore, researches indicate that Sub Saharan adolescents are sexually active and that at the age of 20 at least 80 percent of sub-Saharan African youth are sexually experienced. Seventy-three percent of all Liberian women ages 15 to 19 have had intercourse, as have 53 percent of Nigerians, 49 percent of Ugandans, and 32 percent of Botswana women. Factors that influence the median age at first intercourse include residence and level of education. In Kenya, rural young women engage in intercourse earlier than urban women, and the median age at first intercourse for women with no education is three years earlier than women with at least a secondary school education the same applies to Tanzanian women. This is more pronounced among the pastoralist communities who are reported to experience first intercourse earlier than others leading to early marriage and lack of formal education (Ayana, 2005).

Although we are not informed of the outcomes, Ghana government developed an adolescent reproductive health policy in (2000) and national HIV/AIDS and STI policy in (2001) so as to serve adolescent in Ghana who were observed to be at risk due to technological change and invention of science and technology Awusabo-(Asare *et al.,* 2004). This is tactic that other African nations such as Tanzania can copy from because RH requires not only finance but also a sound political will for extensive and sustainable change.

Research conducted in Uganda by Neema *et al.* (2004) substantiates that adolescents in Uganda are knowledgeable about HIV/AIDS measures, prevention strategies, but still number of adolescents who experience first intercourse at age 15 is raising even

though number of sexual partners among adolescents has declined over time. These results would be of great significance for Tanzanian researchers bearing in mind that Tanzania and Uganda are similar in various aspects. One can partially infer that same results reflect situation in Tanzania unless proved differently by another scientific study. Adolescent sexual and reproductive health services and information are still insufficient and not friendly to youth, though there are centers in some main towns that cater solely to adolescents' information, education and communication materials on reproductive health for adolescents in the form of videos, posters, leaflets, straight talk, and radio programs are available but have not been adequate in terms of quantity, quality and types/choices presented.

2.3 Supportive Environment for Adolescent to Get Knowledge on Reproductive Health

2.3.1 Role of Government

Providing the youth with sexual and reproductive health information, education, and services was once a sensitive issue in Tanzania. Despite government endorsement through the 1994 national policy guidelines and standards for family planning provision that made adolescent sexual and reproductive health (ASRH) information and services about ASRH accessible to adolescents there was concern that providing information on sexuality and health to the youth might provoke irresponsible sexual behaviour to adolescents (African Youth Alliance 2005a, 2005b, 2006).

Furthermore ministry of health (MOH) in Tanzania has developed national health and development stakeholders' board to guide sexual and health intervention so as to

ensure quality services for adolescents. Under this board adolescent problems are discussed and those seems to be complex are reefed to other institution which can be more helpful. More over advocacy for adolescent problems is done in this board (RCHS, 2003).

2.3.2 Non-Government Organizations (NGOs)

For years, non-governmental organizations (NGOs) worked virtually alone in providing ASRH information and services youths, thereby making small-scale efforts with limited governmental involvement. Public health service networks were potentially well positioned to address ASRH needs and Facilities. When piloting a program for introducing youth-friendly services (YFS), the government's Infectious Diseases Centre (IDC) saw fewer than 20 cases per day, despite serving as the leading YFS provider in the public Sector in Tanzania's capital, Dar es Salaam (African Youth Alliance, 2005).

More over larger school based evaluation the Mema Kwa Vijana (MKV) Project conducted in Mwanza region from 1994 to 1998, provide school based and peer education, community based programs, condom distribution, community mobilization activities, and a strategy to build local institutional capacity. It set out to develop ways to reduce HIV, other sexually transmitted infections (STIs), and unwanted pregnancies and to improve ASRH knowledge and attitudes Research and Training Institute (2007).

2.3.3 Role of Parents, Teachers and Peers

A questionnaire study in Dar es Salaam, Tanzania showed that 27 % of the students (12-14years old) communicated with their parents about HIV, while 36%

communicated with teachers. A considerable number (37%) have not shown whom do they communicate with about reproductive health. The students who communicated with teachers about HIV/AIDS and sex were significantly less likely to initiate sexual activities. The study showed that teachers can play an important role in discussing HIV and sex with adolescents. In the conclusion the authors´ highlighted the important role of the teachers´ in health programs and that it vital to train teachers so as to improve their knowledge of teaching and discussing about sexual and reproduction.

Another survey study in South Africa and Tanzania showed that teachers in both rural and urban areas felt fairly confident in teaching HIV/AIDS and sexuality. The Tanzanian teachers reported higher levels of confidence than the South Africa teachers. The teachers´ confidence in teaching was significantly associated with the numbers of years teaching HIV/AIDS and sexuality, formal training in these subjects, experience in discussing the topics with others, school policy and priority given to teaching HIV/AIDS and sexuality at school. The authors´ conclusion is that strengthening the teachers' confidence in teaching HIV/AIDS and sexuality could be important for improving the implementation of such programmes (Helleve *et al.* 2009).

2.4 Factors Influencing Reproductive Health Among Adolescent

Factors that affect health of adolescent can be by either hindering efforts made to educate them or personal characters of adolescent stage which is mostly derived by sexual interest.

Norm's culture and taboo in some societies are among hindrances to provision of knowledge to adolescent. Discussions about sex between adults and young people are taboo and that the sex education in school was focused on biological description of sexual organs, rather than discussion about relationships and emotions, hence little knowledge among adolescents that would make them have control over their sexual life (Campbell and MacPhail, 2002). On the other hand there are some parents who have a culture of encouraging their sons to engage in early sexual intercourse so as t to prove they are real. They may even think that their sons are not normal once they did not see any sign of them having relationships with girls (Irinoye *et al.,* 2004).

Religious factors, in some religion like catholic discourages usage of condoms and those who use it are regarded as sinners so it is difficult for religious leaders and followers to teach their children on use of contraceptive hence more complication among adolescents' reproductive health education (Smith, 2006). Nature and mode of implementing RH in Tanzania is still a problem because most of programs are designed and implemented without considering needs and preference on whom? How? Why and when adolescents want to hear about reproductive health hence poor implementation of programs.

School environment and curriculum in secondary schools teach Reproductive health but it is inadequate as it based on biology (study of living organism) where adolescent are taught on their biological parts and function but they are not taught how to relate those biological changes and actual environment including the truth about reproductive health. Still there is scarcity of material for teaching and

incompetent teachers on reproductive health matters. Adolescent character on sexual behavior: during adolescent period is when an individual is sexual active than ever due to development of secondary characteristics and increased of hormone activities (testosterone hormone) to them sex become the first priority.

Social culture and economic factors; risk taking behaviors and early dating, use of alcohol is the culture of most adolescents. This affects the life of youth as it puts them to risk of adopting bad behaviors. Other factors are such as poor parenting style, lack of good models, less per capital income which does not satisfy needs of adolescents, less supervision Blum, (2000), Ikamba and Quedraogo (2003). Moreover, single parenting has an impact on adolescent behavior and performance in school because of its permissive nature. According to Ellis *et al.* (2003), absence of father has a greater impact on their daughter's sexual activity hence both parents are prerequisite for a good raising of a child.

Another factor is educational status: Currently studies have shown that women with low educational status are likely to engage in early sexual intercourse and they are also ill equipped with knowledge on HIV/AIDS, STIs and contraceptive use. In sub-Saharan countries most women with less than seven years education have a child before the age of 18 compared with those who have more than standard seven education (Venture *et al.*, 2004).

Urbanization, poor infrastructure and limited resources in villages are other factors that have considerable effect on to RH. Many youths are stimulated to move from rural to urban areas to seek for modern way of life like use of internet, mass media

and achieving the fruits of globalization. These changes the traditional ways previously used to shape their adolescence; instead adolescents are left to be taught by mass media and peers from different cultural backgrounds including their town-born counterparts. Moreover, the youth are faced with many obstacles in accessing care, including timing of service provision, attitudes of service providers, and the limited privacy in health care provision (Senderwortiz, 2003).

2.5 Status of Adolescents Reproductive Health in Tanzania

Ministry of health and social affairs has made reproductive health available to adolescents through private and government organization. Services provided are as follows:

(i) Provision of information and counseling on reproductive health.

(ii) Testing services and management of AIDS, VCT, STI, PMTC and pregnancies.

(iii) Focused antenatal care.

(iv) Care during birth.

(v) Post abortion care

(vi) Contraceptive use including condom promotion and supervision.

However the provision of reproductive health to adolescents is done by each individual in a community such as parents, elders, religious leaders, teachers, health service providers and also special programs for adolescent care (RCH, 2004).

2.5.1 On Contraceptive Use

In Tanzania the extent of using contraceptives by adolescents is still a problem whereby about 75% do not use condom during first intercourse because it happens

without any preparation (Nkuba, 2007). Nassoro (2003) conducted a study in Dar es Salaam and came up with a conclusion that awareness about contraceptive is high especially on condom use but adolescents admit not using them because they need preparation like buying them while sexual activity to them happens so fast.

Moreover, others did not see the necessity of using them because they are only afraid of pregnancy and not AIDS or STIs. Others said they had sexual intercourse more than two times and they did not get pregnant, and therefore thought they will never get pregnant (N'gwalinda, 2001). This suggests that adolescents in Tanzania are suspects of partial knowledge on reproductive health.

2.5.2 The Provision of Reproductive Health Information and Counseling to Adolescent

Counseling is a professional, confidential and private conversation between counselor and client for the purpose of helping client to explore difficulties he or she is facing, dissatisfaction or experience BACP, (2002). In helping adolescent in Tanzania counseling has been done to explore need, and difficulties of adolescents.

FHI (2010) conducted semi-structured interviews, counseling and testing services for young people where various topics were discussed such as correctness using of condoms, other contraceptives than condoms, how to avoid STI and AIDS, and types of sexual intimacy that do not end up with transmission of HIV/AIDS. This action was very successful as many youth got the opportunity to give out their difficulties and get education.

2.6 Impact of Inadequate Health Reproductive Knowledge to Adolescent

Inadequate knowledge on reproductive health among adolescents leads to increase of reproductive health complication such as interruption of schooling, increase of adolescents' pregnancy, unsafe abortion, HIV/AIDS and STIs. This chain of problems leads to complex socioeconomic and psychological instability to the affected adolescent, parent and community at large.

2.6.1 Interruption of Schooling

Adolescent pregnant have been among factors that interrupt girls education system. Most of them fail to return in school after delivery and that become the end of their school life. These drop out has increased dependent rate on families (Mmari *et al.*, 2000).

2.6.2 Increased in Sexual Transmitted Diseases

STIs rates have increased among adolescent due to lack of sufficient knowledge about diseases, transmission modes and effect. Basing on gender and age Tanzania proves that three times as many boys as girls under 15 years had contracted a curable STI. Twice as many female adolescent aged 15-19 were reported with STI and young women between ages of 15-19 are four times more likely to contact HIV/AIDS than men counterparts (RCHS, 2004).

2.6.3 Unsafe Abortion

Abortion is among the greatest threat to young women's health. It is also illegal to many African countries and in religious point of view it is considered as going against God's will. Available data from hospitals prove that young women likely to

undergo unsafe abortion possible because of limited resources and ignorance hence resulted to high mortality rates to adolescents than to adults (WHO 2004).

2.6.4 Problem During Pregnancy and Delivery

The risk of having complication during pregnancy and delivery for adolescents aged 15-18 is higher compared to mothers aged 19 and above. Those complications are such as anemia, fox anemia, premature babies, prolonged/obstructed labor, fistula, cervical trauma, low weight babies and still birth. Statistics shows that adolescents are 1.2 times likely to die during neonatal and 1.4 times during postnatal period as compared to older women (Ojo *et al.,* 2004, NBS, 2000).

2.7 Knowledge Gap

Many studies have been conducted for other groups of people such as children, women and elders, while few conducted on adolescents possibly because they are on transition and one fails to immediately classify them as children or adults. Apart from that most of studies on adolescents aim at finding out why adolescent face problems like HIV/AIDS, and early pregnancies and deals with each problem separately without considering that they are both related issues of reproductive health.

For example study conducted by Philemon (2007) on factors contributing to high adolescent pregnancy in Kinondoni municipal come up with the result that inadequate knowledge and poor economic status are main factors. The study was basing only on adolescent pregnancy. Another study was conducted by Wiman and Danas (2010) on preferences and experiences towards HIV/AIDS-Education among

Secondary School Students in Dodoma Tanzania. The study shows that only a half of the informants think they have enough knowledge to protect themselves from being infected by the virus. This proves that there is a lack of sufficient information. The study is also based on HIV/AIDS only and did not involve other components of reproductive health such as use of contraceptive, early pregnancy, STIs and unsafe abortion which are also associated with HIV/AIDS. The researcher who proposes the current study understands that components of reproductive health work together as a whole, that's why she will assess their knowledge ability as one unit. Currently there is not any study conducted in Moshi on adolescents' knowledge relating to the whole package of reproductive health as intended in this study.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is based on research processes and kind of tools and procedures to be used (Babbie, 2002). This chapter provides information concerning materials and methods used in the current study, the location where the p study was carried out, method of data collections and ethical considerations.

3.2 Research Design

I used a mixed method study design (quantitative and partly a qualitative approach). Quantitative method is based on the measurement of quantity or amount while qualitative method is concerned with phenomena relating to quality or kind (Kothari, 2004). Combination of these techniques was used so as to minimize subjectivity of judgment (Kealey and Protheroe, 1996), but also give room for personal experiences by the participants. The qualitative data would assist in obtaining a more realistic of the world that cannot be experienced in the numerical data and statistical analysis used in quantitative research. Use of both designs will allow flexibility in data collection, subsequent analysis, and interpretation of collected information (Matveew 2002).

3.3 Area of Study

The study was conducted in Moshi municipality, Kilimanjaro Region, in Northern Tanzania. The Moshi Municipal Council covers about 59 square kilometers. Administratively it is divided into 21 wards, and there are 27 secondary schools in

the same town. The major economic activities of people in Moshi especially youth is tour guiding. According to Kilimanjaro region's office (2011) secondary school students in Moshi municipality are estimated to be 17,173. The proposed study will therefore focus on assessing knowledge which adolescent students' in the same municipality possess on reproductive health. I decided to choose Moshi Municipality because it is a growing town, where among other activities tourism activities lead to high influx of tourist in the town from various countries, due to this adolescent student in Moshi are exposed to western cultures and practices, as a result they are in great risk of having RH problems compared to other adolescents in the country.

3.3.1 Population of the Study

Population in this study was adolescents attending secondary schools in Moshi Municipality aged 13 to 19 years. Also the study covered adolescents who failed to continue with secondary education due to reproductive health problems such as pregnancy.

3.4 Sampling Technique

In obtaining the sample random sampling and purposive sampling were used. The population of adolescent students was estimated as the number of all students in Moshi Municipality which was is found to be 17,173. I choose a precision of 10% due to time and financial constraints in order to avoid too many questionnaires and interviews. Also due to the fact that this is a mixed study precision of 10% give adequate relevance to the collected data. The confidence level was set at 95% so that the findings provides as highest confidence as possible which means same study can be conducted by another person and come up with more or less the same results.

Hence the equation: $n = N/1+N (e)^2$ *(Yamane 1967:886))*

N = sample size

N=population at 17,173

e=level of precision at 10%=0.1

$n = 17,173/1+17,173(0.1)^2$

n =99

Number of adolescent students involved in the study was 99.

3.5 Sampling Procedure

In random sampling all 21 ward were given numbers and five numbers were selected randomly to get the five wards, thereafter a school found within that ward was selected. If a ward has more than one school the same procedure was applied to get one school. The same applied to selection of students where all students were given numbers, and those numbers were randomly picked where 20 students were selected in four schools and 19 students were selected in the fifth school to make total number of 99 students. Population of adolescents who failed to continue with school due to reproductive health problems was obtained through purposive sampling where five adolescents were selected basing on reliability and accessibility.

3.6 Method of Data Collection

Data is information obtained during the course of an analysis or investigation or study (Pilot and Beck, 2000). In this study questionnaire and semi-structured interview will be used as methods to assess knowledge and the experiences of adolescent on reproduction health.

3.6.1 Questionnaire Method

Questionnaires are number of questions printed or typed in a definite order on a form (Kothari, 2004). This method of data collection is commonly used once a research is dealing with large case of inquiries. In this study I prepared a list of questions, focusing on assessing knowledge of adolescents on reproductive health for the randomly selected students. The questions were prepared in English and translated to Kiswahili by a professional translator so that they can be understandable and comfortable to respondents.

Preliminarily I conducted a pilot study at two randomly selected schools from the rest of schools which were not involved in the study where, five students from each school were given questionnaires so as to test if the prepared questionnaires were well understood by the respondents. Some slight changes were made on ambiguous questions and start data collection. Questionnaire method was used because it can accommodate a wide spread of people geographically. And also gives time for a respondent to think and choose appropriate answer for the question. In consideration of the study sample size questionnaire was the best method.

3.6.2 Semi-Structured Interview

Interview is the conversation in which the interviewer is seeking to understand the meaning of what the respondents is saying about a certain topic (Kvale, 1996). In this study I will use semi-structured interview to assess what adolescent know about reproductive health. Through this method I was in a position of getting the story beyond participant's experience on needs, desire, and feeling about sexual

reproductive health. I was also in a position to ask further questions once there was a need for clarification (Mo Namara, 1999). In conducting this I prepared a set of open ended questions (interview guide) basing on assessment of the adolescents knowledge on sexual reproductive health. Thereafter I met the respondent for the interview section. Respondent who were interviewed were adolescents' student who faced reproductive health problems such as early pregnancy which forced them not to continue with studies to take care of their children. During interview I was having a note pad to collect some information and voice recorder to record the conversations from the respondent.

3.7 Data Analysis

Analysis refers to the computation of certain measures along with searching for patterns of relationship that exist among data-groups (Kothari, 2004). Data obtained from questionnaire, analyzed by using computer software SPSS version 14.0. Before analyzing I go through data and code all the answers to get variables and their after I consult a statistician for analysis. Data obtained through interview was analyzed manually through ordering and listing of all answers, and connected them with the purpose of my study, coding answers, interpretation of codes thereafter to generate categories of information which can be assembled to develop themes.

3.8 Ethical Consideration

I obtained research permission from the Open University of Tanzania where I am registered. However, as a social worker I am aware of the importance of asking for permission, maintaining confidentiality and anonymity of the participants. The respondents were informed about the purpose of the study and ensuring

confidentiality and requested to sign a consent form. The participants were also informed of their right to participate or not as well as that of withdrawal at any point without being intimidated. The transcribed information was locked at all times and destroyed after analysis and compilation of research report.

CHAPTER FOUR

4.0 DATA ANALYSIS AND INTEPRETATION

4.1 Introduction

This chapter presents data analysis and interpretation. The data collected by interview and questionnaire will be presented. Data obtained through questionnaire was analyzed by the statistician by using SPSS software version 14.0The statistics are presented by using frequency, tables and percentage. Relations between variables were recognized using frequency and percentage.

4.2 Quantitative Analysis

4.2.1 Socio-Demographic Characteristics of the Study Population

The study enrolled 99 secondary school students picked from five randomly selected schools within Moshi Municipality. More than half of the participants were girls 58 (59%). The overall mean age of the participants was 15.6 $\pm$ 1.025 years (range= 13 – 18 years). More than half of the participants 56 (57%) were form three students, 17 (17%) form two, 13 (13%) were form one and form 4. Again more than half of the students 53 (54%) lived with both parents, 19 (19%) lived with guardians, 18 (18%) lived only with a mother and only 9 (9%) lived with Father. See table 4.1.

4.2.2 Awareness of Adolescents with the Meaning of Physical Changes they Experience During Puberty

Three quarters of students 75 (76%) knew growth of pubic hair as a physical change that occurs in girls. More than two third 72 (73%) knew Breast development and develop soft voice, followed by 648 (65%) who knew start of menstruation. One than

one third, 45 (46%) knew the desire to have sex as a physical change that occur in girls only 5 (5%) said they did not know any physical change that occur in girls. Table 4.1 describes the level of knowledge on physical changes of girls. Overall, 57 (58%) students were found to have good knowledge on physical changes of girls.

Table 4.1: Socio-Demographic Characteristics of the Study Population (n=99)

Variable	Total	Level of knowledge		χ^2	P-value
		Good No. (%)	Poor No. (%)		
Sex:					
Male	41	18 (44)	23 (56)		
Female	58	39 (67)	19 (33)	**5.357**	**0.017**
Age (years):					
13 – 17	97	56 (58)	41 (42)		
18 +	2	1 (50)	1 (50)	0.048	0.671
School:					
Msaranga	20	11 (55)	9 (45)		
Kiboriloni	20	12 (60)	8 (40)		
Mjimpya	20	10 (50)	10 (50)		
Msasani	20	12 (60)	8 (40)		
Korongoni	19	12 (63)	7 (37)	0.863	0.930
Form:					
Form 1	13	11 (85)	2 (15)		
Form 2	17	8 (47)	9 (53)		
Form 3	56	32 (57)	24 (43)		
Form 4	13	6 (46)	7 (54)	5.360	0.147
Living with:					
Father	9	5 (56)	44 (44)		
Mother	18	10 (56)	8 (44)		
Both Parents	53	33 (62)	20 (38)		
Guardians	19	9 (47)	10 (53)	1.333	0.721

Source: Field Data

Table 4.2: Showing Distribution of Respondents by Knowledge of Physical Changes of Girls (n=99) †

	Level of knowledge n (%)	
Physical changes	**Good**	**Poor**
1. Growth of pubic hair	75 (76%)	24 (24%)
2. Breast develop	72 (73%)	27 (27%)
3. Start menstruation	64 (65%)	35 (35%)
4. Develop soft voice	72 (73%)	27 (27%)
5. Desire to have sex	45 (46%)	54 (54%)
6. I don't know	5 (5%)	94 (95%)
Overall knowledge on physical changes of girls	57 (58%)	42 (42%)

† One respondent could mention more than one physical change

Source: Field Data

Table 4.3 shows the association between level of knowledge on physical changes of girls and social demographic characteristics. There was a significant difference in the knowledge level of physical changes of girls based on sex/gender of the students [$p<0.05$]. Female students were more likely to have adequate knowledge regarding the physical changes of girls [67% vs. 44%]. Other factors, age, sex school, form and who the student lived with were found to be statistically insignificant to physical changes of girls [$p>0.05$].

More than three quarters of students 87 (88%) knew voice change and 81 (82%) knew growth of pubic hair as a physical change in boys. More than half of the students 62 (63%) knew experiencing wet dreams followed by 57 (58%) who knew

body increase as physical change in boys and only 3 (3%) said they did not know anything. See Table 4.3.

Table 4.3: Association between Level of Knowledge on Physical Changes of Girls with Socio-Demographic Characteristics (n=99)

Variable	Total	Level of knowledge		χ^2	P-value
		Good No. (%)	Poor No. (%)		
Sex:					
Male	41	18 (44)	23 (56)		
Female	58	39 (67)	19 (33)	**5.357**	**0.017**
Age (years):					
13 – 17	97	56 (58)	41 (42)		
18 +	2	1 (50)	1 (50)	0.048	0.671
School:					
Msaranga	20	11 (55)	9 (45)		
Kiboriloni	20	12 (60)	8 (40)		
Mjimpya	20	10 (50)	10 (50)		
Msasani	20	12 (60)	8 (40)		
Korongoni	19	12 (63)	7 (37)	0.863	0.930
Form:					
Form 1	13	11 (85)	2 (15)		
Form 2	17	8 (47)	9 (53)		
Form 3	56	32 (57)	24 (43)		
Form 4	13	6 (46)	7 (54)	5.360	0.147
Living with:					
Father	9	5 (56)	44 (44)		
Mother	18	10 (56)	8 (44)		
Both Parents	53	33 (62)	20 (38)		
Guardians	19	9 (47)	10 (53)	1.333	0.721

Source: Field Data

Table 4.4: Showing Distribution of Respondents by Knowledge of Physical Changes of Boys (n=99) †

	Level of knowledge n (%)	
Physical Changes	**Good**	**Poor**
1. Growth of pubic hair	81 (82%)	18 (18%)
2. Body increase	57 (58%)	42 (42%)
3. Experience wet dreams	62 (63%)	37 (37%)
4. Bass voice	87 (88%)	12 (12%)
5. I don't know	3 (3%)	96 (97%)
Overall knowledge on physical changes of boys	67 (68%)	32 (32%)

† One respondent could mention more than one physical change

Source: Field data

4.2.3 Knowledge of Adolescents About Sex

Majority of students 85 (86%) knew STIs/HIV/AIDS as the effect of sexual intercourse. More than two thirds of students 68 (69%) knew becoming pregnant as an effect of sexual intercourse, more than one third 42 (42%) knew failing the examination as an effect, 31 (31%) said despised by the community is an effect only 4 (4%) said no effect and only 1 (1%) said do not know the effects of sex at a tender age. See Table 4.5.

Table 4.5: Showing Distribution of Respondents by Knowledge on the Effects of Sexual Intercourse at a Tender Age (n=99) †

Effects	**Frequency**	**Percent**
Contract STIs/HIV/AIDS	85	86
Become pregnant	68	69
Failing examinations	42	42
Despised by the community	31	31
No effects	4	4
I don't know	1	1

† One respondent could mention more than one effect

Source: Field Data

Table 4.6 shows the association between level of knowledge on the effects of abortion and social demographic characteristics. Sex was independent predictor of knowledge on effects of abortion. By comparison, male participants were more likely to have poor level of knowledge comparatively to female counterpart (73% vs. 52%) and this association was statistically significant [χ^2 = 4.628, P=0.025]. Level of knowledge on effects of abortion was independent of age, school, form and whom the students lived with [P>0.05].

Table 4.6: Association between Level of Knowledge on Effects of Abortion with Socio-Demographic Characteristics (n=99)

Variable	Total	Level of knowledge		χ^2	P-value
		Good No. (%)	Poor No. (%)		
Sex:					
Male	41	11 (27)	30 (73)		
Female	58	28 (48)	30 (52)	**4.628**	**0.025**
Age (years):					
13 – 17	97	39 (40)	58 (60)		
18 +	2	0	2 (100)	1.327	0.365
School:					
Msaranga	20	12 (60)	8 (40)		
Kiboriloni	20	7 (35)	13 (65)		
Mjimpya	20	8 (40)	12 (60)		
Msasani	20	7 (35)	13 (65)		
Korongoni	19	5 (26)	14 (74)	5.245	0.263
Form:					
Form 1	13	4 (31)	9 (69)		
Form 2	17	3 (18)	14 (82)		
Form 3	56	25 (45)	31 (55)		
Form 4	13	7 (54)	6 (46)	5.556	0.135
Living with:					
Father	9	5 (56)	4 (44)		
Mother	18	10 (56)	8 (44)		
Both Parents	53	19 (36)	34 (64)		
Guardians	19	5 (26)	14 (74)	4.594	0.204

Source: Field Data

4.2.4 Knowledge and Attitude Towards Contraceptive

Regarding contraceptives, more than three quarters 77 (78%) of students in this study have heard about contraceptive. Condom was mentioned by three quarters of students 58 (75%), more than two thirds 52 (68%) mentioned pills, 35 (46%) injection, 24 (31%) loop and 23 (30%) mentioned calendar. See Table 4.7.

Table 4.7: Showing Distribution of Respondents by Knowledge on Contraceptives (n=77) †

	Level of knowledge n (%)	
Method	**Good**	**Poor**
1. Condom	58 (75%)	19 (25%)
2. Loop	24 (31%)	53 (69%)
3. Pills	52 (68%)	25 (32%)
4. Injection (Depo provera)	35 (46%)	42 (54%)
5. Calendar	23 (30%)	54 (70%)
Overall knowledge on contraceptives	38 (49%)	39 (51%)

† One respondent could mention more than one method of contraceptive

Source: Field Data

4.2.5 Overall Knowledge On Contraceptive (n=77)

The level of knowledge on contraceptive was based on 5 questions, that is, condom, loop, pills, injection (depo provera) and calendar. The knowledge score on the overall contraceptive had mean score of 2 points (standard deviation $\pm$ 1.5) ranging from 0 – 5 points. On overall, students had inadequate knowledge 39 (51%) on contraceptives, that is scored between 0 – 2 points.

More than half of students 56 (57%) said it is acceptable for them to use contraceptives and out of this, 36 (64%) said they will be able to plan for life, 11 (20%) contraceptives will protect them from HIV/AIDS and STIs, 6 (11%) said it is good to use because they have no effects and 3 (5%) said it is a good way to avoid sexual intercourse. See Table 4.8.

Table 4.8: Showing Distribution of Respondents of Reasons for using Contraceptives (n=56) †

Reasons	Frequency	Percent
They will be able to plan for their life	36	64
Contraceptives will protect them from AIDS and STIs	11	20
Good to use because they have no effects	6	11
Good way to avoid sexual intercourse	3	5

† One respondent could mention more than one reason

Source: **Field DAta**

More than one third of respondents 43 (43%) said it is not the right time for them to use contraceptives and out of 43 respondents, more than half 27 (63%) the reason was too young to use them, 9 (21%) they are not well educated to used contraceptives, 5 (12%) said contraceptives have negative impact on the body and 2 (5%) said contraceptives will stimulate sexual activities among them. See Table 4.9.

Table 4.9: Showing Distribution of Respondents of Reasons for not using Contraceptives (n=43) †

Reasons	Frequency	Percent
They are too young to use them	27	63
They are not well educated to use those contraceptives	9	21
Contraceptives have negative impact to their body	5	12
Contraceptives will stimulate sexual activities among you	2	5

† One respondent could mention more than one reason

Source: Field Data

Table 4.10 shows the association between level of knowledge on contraceptives and social demographic characteristics. Sex was independent predictor of knowledge on contraceptives. By comparison, male participants were more likely to have poor level of knowledge comparatively to female counterpart (61% vs. 41%) and this association was marginally statistically significant [χ^2 = 2.928, P=0.069]. Level of knowledge on contraceptives was independent of age, school, form and whom the students lived with [P>0.05].

Table 4.10: Association between Level of Knowledge on Contraceptives with Socio-Demographic Characteristics (n=77)

Variable	Total	Level of knowledge		χ^2	P-value
		Good No. (%)	Poor No. (%)		
Sex:					
Male	38	15 (39)	23 (61)		
Female	39	23 (59)	16 (41)	**2.928**	**0.069**
Age (years):					
13 – 17	75	37 (49)	38 (51)		
18 +	2	1 (50)	1 (50)	0.000	0.747
School:					
Msaranga	19	14 (74)	5 (26)		
Kiboriloni	15	5 (33)	10 (67)		
Mjimpya	16	7 (44)	9 (56)		
Msasani	18	7 (39)	11 (61)		
Korongoni	9	5 (56)	4 (44)	7.168	0.127
Form:					
Form 1	7	5 (71)	2 (29)		
Form 2	14	4 (29)	10 (71)		
Form 3	45	21 (47)	24 (53)		
Form 4	11	8 (73)	3 (27)	**6.318**	**0.097**
Living with:					
Father	8	4 (50)	4 (50)		
Mother	16	9 (56)	7 (44)		
Both Parents	43	21 (49)	22 (51)		
Guardians	10	4 (40)	6 (60)	0.660	0.882

Source: Field Data

4.2.6 Knowledge about Pregnancy and Abortion

Majority of students 93 (94%) knew about the effects of abortion. More than half of the students 57 (61%) mentioned death as an effect, 25 (27%) said abortion may cause destruction of reproductive organs, 5 (5%) may cause fistula and cancer, 4 (4%) said it is against the will of God and 2 (2%) said people will despise you. See Table 4.11.

Table 4.11: Showing Distribution of Respondents of Effects of Abortion (n=93)

Effects	Frequency	Percent
May cause death	57	61
May cause destructions of reproductive organs	25	27
May cause diseases like fistula and cancer	5	5
It is against God's will	4	4
People will despise you	2	2

† One respondent could mention more than one effect

Source: **Field data**

4.2.7 Knowledge about Pregnancy

Regarding the knowledge as to when the woman is fertile, the correct answer was fourteen (14) days after menstrual and only 19 (19%) answered this correctly as shown on Table 4.12. In this aspect, this suggests that the level of knowledge is very low. See Table 5.12.

Table 4.12: Showing Distribution of Respondents on Time when a Woman is Fertile (n=99) †

Time	Frequency	Percent
14 day before menstrual period	4	4
14 days after menstrual period	19	19
Menstrual period	10	10
Any time	3	3
I don't know	63	64

Source: Field Data

Table 4.13 shows the association between level of knowledge on when is a woman fertile and social demographic characteristics. Age was independent predictor of knowledge on when is a woman fertile. By comparison students above the age of 18 years old were more likely to have good knowledge compared to students below the age of 18 years [100% vs. 17%] and this association was statistically significant [χ^2 = 8.595, P=0.035], although the number of students above 18 years was low. Level of knowledge on when a woman is fertile was independent of Sex, school, form and whom the students lived with [P>0.05].

Table 4.13: Association Between Level of Knowledge on when a Woman is Fertile with Socio-Demographic Characteristics (n=99)

Variable	Total	Level of knowledge		χ^2	P-value
		Good No. (%)	Poor No. (%)		
Sex:					
Male	41	7 (17)	34 (83)		
Female	58	12 (21)	46 (79)	0.203	0.428
Age (years):					
13 – 17	97	17 (17)	80 (83)		
18 +	2	2 (100)	0	**8.595**	**0.035**
School:					
Msaranga	20	4 (20)	16 (80)		
Kiboriloni	20	1 (5)	19 (95)		
Mjimpya	20	5 (25)	15 (75)		
Msasani	20	5 (25)	15 (75)		
Korongoni	19	4 (21)	15 (79)	3.518	0.475
Form:					
Form 1	13	1 (8)	12 (92)		
Form 2	17	2 (12)	15 (88)		
Form 3	56	11 (20)	45 (80)		
Form 4	13	5 (38)	8 (62)	4.833	0.184
Living with:					
Father	9	1 (11)	8 (89)		
Mother	18	4 (22)	14 (78)		
Both Parents	53	8 (15)	45 (85)		
Guardians	19	6 (32)	13 (68)	2.939	0.401

Source: Field Data

4.2.8 Level of Knowledge on Transmission and Prevention of HIV/AIDS and STIs

All the students in this study have heard about HIV/AIDS and STIs. The level of knowledge on transmission was measured based on 4 questions; unprotected sex with infected person, infected mother to child, infected blood transfusion and sharing of sharp instruments. Majority of them, 91 (92%) knew unprotected sex with infected person, followed by 88 (89%) who knew sharing of sharp instruments and more than half of them 55 (56%) knew infected blood transfusion and only 25 (25%) knew infected mother to child. Overall, 67 (68%) of students were found to have good knowledge on how HIV/AIDS is transmitted. See Table 4.14.

Table 4.14: Showing Distribution of Respondents by Knowledge of Transmission of HIV/AIDS (n=99) †

	Level of knowledge n (%)	
Mode of transmission	**Good**	**Poor**
Unprotected sex with infected person	91 (92%)	8 (8%)
Sharing of sharp infected instruments	88 (89%)	11 (11%)
Infected blood transfusion	55 (56%)	44 (44%)
Infected mother to child	25 (25%)	74 (75%)
Overall knowledge on HIV/AIDS method transmission among students	67 (68%)	32 (32%)

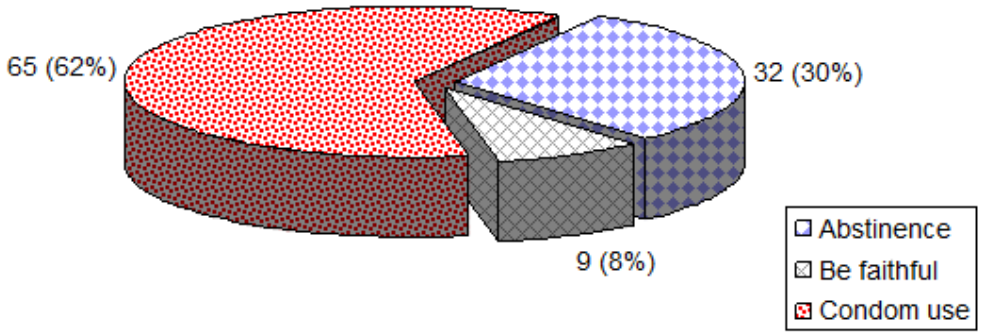
† One respondent could mention more than one mode of transmission

Source: Field Data

4.2.9 Level of Knowledge on Prevention of HIV/AIDS and STIs

This item aimed to know the level of knowledge on prevention against HIV/AIDS in regards to the recommended three (3) prevention methods namely Abstinence, Be

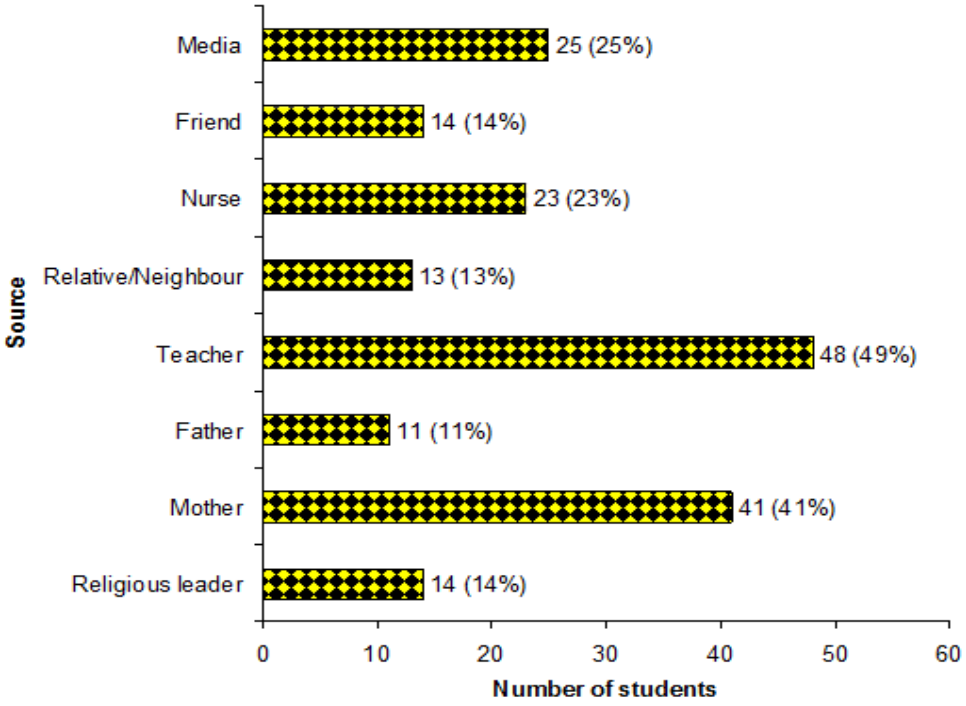
faithful and Condom use (ABC). More than half of the students knew Condom use 65 (62%), 32 (30%) knew abstinence and only 9 (8%) knew to be faithful.



† One respondent could mention more than one method of prevention

Figure 4.1: Showing Distribution of Respondents by Knowledge on Prevention of HIV/AIDS (n=99)

Source: Field Data



† One respondent could mention more than one source

Figure 4.2: Source of Information on Reproductive Health (n=99)

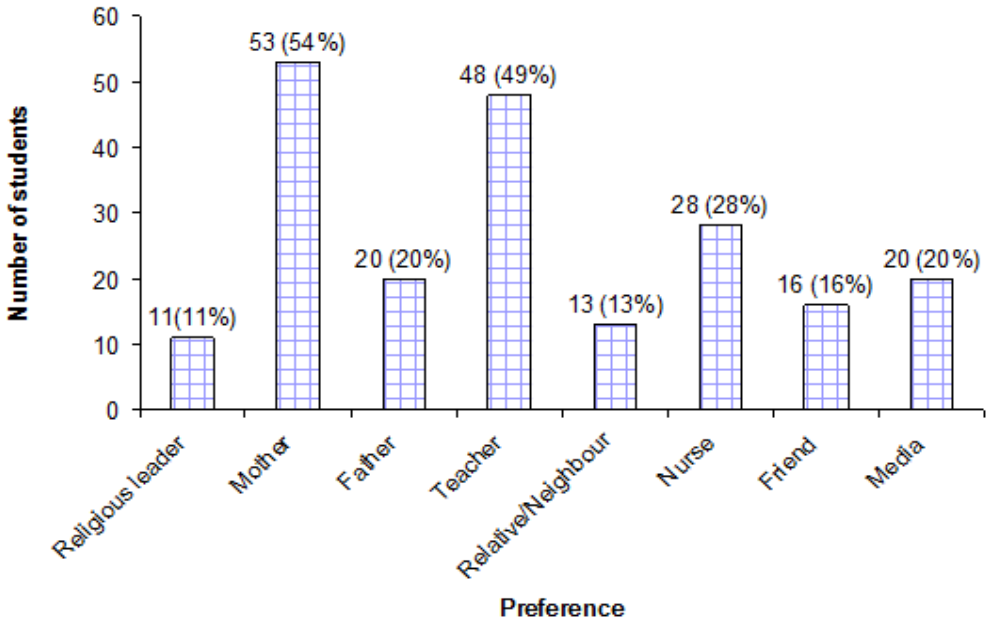
Source: Field Data

4.2.10 Source of Information about Sexual Reproductive Health

Almost half of the students 48 (49%) mentioned teachers as the source of information, 41 (41%) mothers, 25 (25%) media, 23 (23%) nurses, 14 (14%) friends and religious leaders, 13 (13%) relative/neighbors and 11 (11%) mentioned fathers. See Figure 4.2.

4.2.11 Preference from whom Students would like to Receive Information about Sexual Reproductive Health

More than of the students 53 (54%) mentioned mothers as the person to give them information, 48 (49%) teachers, 28 (28%) nurses, 20 (20%) father and from the media, 16 (16%) from friends, 13 (13%) relatives/neighbors and 11 (11%) from religious leader. See Figure 4.3.



† One respondent could mention more than one preference

Figure 4.3: Showing Distribution of Students by Preference of who should give them Information (n=99)

Source: Field data

4.2.12 How Students Want to Receive Sexual Reproductive Health Information

More than three quarters of students 76 (77%) would want to receive reproductive health with friends and only 23 (23%) said alone. See Figure 4.4.

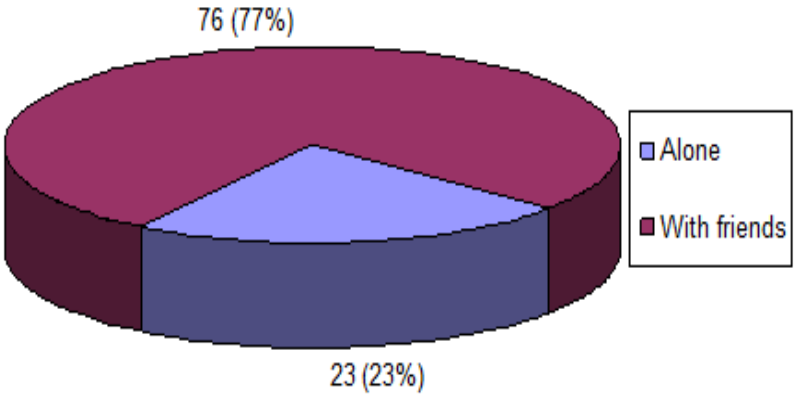


Figure 4.4: Showing Distribution of Students by Preference How they want to Receive RH Information (n=99)

Source: Field Data

4.2.13 Suggestion from the Respondents to Enhance Knowledge

Table 4.15: Showing Distribution of Respondents' Suggestions from respondents Regarding RH (n=99) †

Time	Frequency	Percent
RH education should be provided in school as part of school curriculum.	60	61
Parents should be the one to educate their children once they rich adolescents period	14	14
Mass media like television radio and magazine should be used to educate adolescents on RH.	11	11
Community should be responsible for providing RH knowledge to adolescents.	10	10
Reproductive health knowledge should be provided in health centers by Doctors and Nurses.	4	4

† One respondent could mention more than one mode of transmission

Source: Field Data

4.3 Qualitative Analysis

4.3.1 Definition of Reproductive Health

Under this pre-determined the researcher posed a question to inquire of the participants understands of reproductive health. Only one sub theme emerged which is education and family is planning.

4.3.1.1 Education and Family Planning

Except for one participant who declared not to know the definition of RH the rest connected education and family planning. For example respondent 2 states it is it in a brooder way and say:

> *'Is a kind of education provided to all groups of people about all matters related to reproduction. Example youth are given education on changes that takes place in their body and adult are told about family planning'.*

4.3.3 Knowledge on STIs and HIV/AIDS

Under this pre determined theme participants were asked to state their understanding on HIV/AIDS and STIs. In their explanation sub themes were formed namely causative agent and ways of transmission.

4.3.3.1 Causative Agents

Less than half of the participants indicated that they know HIV/AIDS and STIs by referring to the causative agent as stated below by respondent 2:

> '*This is the virus that attack body and make it vulnerable to diseases'*.

4.3.3.2 Ways of Transmission

This sub theme indicates that most of the participants know how HIV/AIDS and STIs are transmitted as stated by respondent 4:

'Disease spread through sexual intercourse by affected person'

Moreover fewer participants did not end up only talking of causative agent and mode of transmission but also the resulting consequences as stated by respondent 3:

'Low immunity it is caused by sexual intercourse'

4.3.4 Knowledge and Perception on Abortion

Under this category the following themes were observed. Majority states that abortion is not accepted and factors that cause abortion.

4.3.4.1 Not Accepted

More than half of the participants said that abortion is not accepted as clearly stated by respondent 5:

'It is not accepted'

4.3.4.2 Factors that Cause Abortion

Most of the participants said that abortion is caused by poor knowledge on reproductive health and lack of advice from parents once a girl got pregnant in school as stated by respondent 1:

'…majority are forced to do so [abortion] due to poor knowledge on RH'.

However another participant explains on effects of abortion by saying abortion is very dangerous and may cause death:

'…Abortion is not accepted and it is dangerous also may lead to death'.

4.3.5 Opinions on Reproductive Health Knowledge

In finding out adolescent's opinions towards reproductive health knowledge a researcher poses the question which will make participants to give their opinions. The following sub themes were observed first education provided is not enough second it confined to formal sectors and third is that the knowledge has got both positive impacts.

4.3.5.1 RH Education is not Sufficient

More than half participant said that the provided knowledge on RH is not sufficient and it is provided in a short period of time which does not give adolescent chance to discuss in detail and ask questions as stated by respondent 2:

> *'Education provided is not sufficient. It's should be given every day in school syllabus just like other subjects'*

4.3.5.2 Confirmed Under Formal Sector

Under this sub theme half of the participant said current RH is provided basically in formal sectors like schools but those in informal sectors did not get this knowledge hence more problems to both adolescents. They also suggest that RH knowledge should be provided in both places where adolescents are congested as stated by participant:

> *'… Also should be provided in both areas like church market and all places where adolescents are found and not only in schools.'*

Moreover another participant adds that knowledge should not only be provided to adolescent but also to adult.

> *'It should be provided to adults'*

4.3.5.3 RH Knowledge has Positive Impact

Under this sub theme almost half of the respondents said that RH knowledge has positive impact on adolescent's behaviors as it will shape them and make them aware of impact of sex at low age because they practice sexual intercourse. Participant 5 said:

> *'[Adolescents] they should also be educated because some of them practice sexual intercourse.'*

Another participant add that adolescents' in school have poor knowledge in reproductive health until they get into problems like adolescents is where they get that knowledge through attending ant natal clinic but they have already being affected. Participant 2 said this when asked if it is ok to provide RH education to adolescents in school:

'It is ok because they [adolescents] have little knowledge just like me when I was in school.'

4.3.6 What should be Done Regarding the Current Adolescents RH Status

Under this category I posed a question relating to a solution to cure current reproductive health problems. Under this pre-determined theme, I observed emphasis on RH knowledge as the main suggestion.

4.3.6.1 More Emphasis on Providing RH knowledge

Under this sub theme all respondents agreed that education on RH would cure RH problems among youths. In implementing this each participant suggested how that knowledge should be provided by saying it should involve both formal and informal

sector, it should be provided equally to both urban and rural adolescents and lastly the knowledge should be provided throughout the year transparently. Respondent 2 states:

> *'Education should be provided throughout the year also this knowledge should be provided transparently without hiding anything'*

CHAPTER FIVE

5.1 DISCUSSION AND RECOMMENDATIONS

5.1 Discussion on Quantitative Results

5.1.1 Socio-Demographic Characteristics of the Study Population

More than half of the participants were girls this shows that the number of girls enrolled in secondary schools is higher compared to boys. Despite this big number of girls enrolled in school studies show that of girls face a number of challenges like adolescent pregnancy and hence fail to continue with school this is consistent with the results from Mmari *et al.* (2000), TACCAID and UNICEF, (2012) also reported that girls are at high risk of dropping from school due to pregnancy, and they are at high risk of getting HIV and STIs. Therefore much attention should be given to girls so that they get their education as intended.

5.1.2 Awareness of Adolescents with the Meaning of Physical Changes they Experience During Puberty

Generally awareness of physical changes that occur during adolescence is still poor and this is very dangerous as they find themselves difficult to accommodate those changes because they don't know their meaning. For example more than half of participants do not know if desire to have sex is among changes that occurs during adolescence. This may be due to culture of most Africans where discussion about sex is taboo Campbell and MacPhail, (2002). More over female participants were likely to have relatively adequate knowledge on girls changes compared to boys possibly due to the fact that girls are so interactive with their mothers than boys. Despite

being knowledgeable female adolescents are the most victims of RH health complication such as early pregnancy compared to boys WHO (2011).

5.1.3 Knowledge on the Effects of Sexual Intercourse at a Tender Age

More than three quarters of participants know that there is effect of having sexual intercourse at a tender age, the major concern of adolescents was HIV/AIDS, and pregnancy. This knowledge is possibly due to media coverage as well as increase in the number of adolescents who manage to attend formal schools. Still there are 5% of adolescents who do not know if there is any adverse effect of early sex possibly due to the nature of knowledge provided which may be insufficient and not rendered in a manner that is friendly to adolescents Neema *et al.* (2004). More over the mentioned impact of sexual intercourse which are AIDS/STIs and pregnancy have been advocated and how they can be prevented but the other factors like failing examination and lose focus in life has been less prioritized.

5.1.4 Knowledge and Attitude Towards Contraceptive

Overall knowledge on contraceptive use among participants is poor as more than half of participants have poor knowledge, although more than three quarters of participants have heard about contraceptives. Majority mention condom as the most familiar contraceptive than others which can be explained by the fact that condom has been given much priority compared to other methods through advertisement and campaign to us them following the HIV/AIDS epidemic. Female participants were likely to have more knowledge on contraceptive use than male participants. These results are consistent with UNICEF report of (2011) on adolescents in Tanzania

which conclude that female adolescents are knowledgeable about contraceptive compared to males.

5.1.4.1 Attitude on Contraceptive Use

More than half of students said it is acceptable for them to use contraceptives; among other factors they said that contraceptives would help them to avoid sexual intercourse, something which is not true. This indicates poor knowledge on contraceptives. More than one third of respondents said that it was not acceptable for them to use contraceptives. Among other reasons mentioned for not using contraceptives was poor knowledge. These results are similar to the study conducted by Nassoro, (2003) in Dar es Salaam which shows that adolescents have much knowledge on condom use but still not using them. This indicates that adolescents have partial knowledge on contraceptive use and even with the little knowledge possessed there is still a big gap between knowledge and practice.

5.1.5 Knowledge about Pregnancy and Abortion

More than three quarter of the participants knew that abortion may have adverse effects and among them more than half of participants mentioned death as the main effect of abortion as stated elsewhere by WHO, (2004). Other factors like contravening God were of less priority. These may be due to nature of the effects that is not visible like death but have large impact to adolescent's behavior. Once put in to considerations adolescent's behaviors will change because once they are knowledgeable about God's commandments they may not do such sin like killing (abortion). 5% of adolescents mentioned Fistula and cancer as effect of abortion

something which is not true. This shows that still there is insufficient knowledge about effects of abortion.

5.1.5.1 Knowledge about Pregnancy

More than three quarter of the participants have poor knowledge on pregnancy regarding fertility period. This means that if they don't know when the woman is likely to conceive and they are practicing unsafe sex the possibility of having un-planned pregnancy is very high. More over participants aged 18+ were more knowledgeable than those below 18. This is due to experience on reproductive health topics especially through biology study. Studies also show that adolescents lack knowledge about RH and skills to put that knowledge into practice hence early pregnancy (WHO 2012, Philemon 2007, Awusabo-asare K 2004).

5.1.6 Knowledge on Transmission and Prevention of HIV/AIDS and STIs

More than three quarters of the participants have good knowledge on transmission of HIV/AIDS and STIs. This is possibly due to the big campaign on HIV/AIDs and STIS. Still there is more than one quarter of the participants who have poor knowledge on the same issue. Specifically they know sex as the major cause of HIV/AIDS but other factors like mother to child transmission was not known by three quarters of the participants, which is a red light for a population which is at reproductive age in the era of HIV/AIDS pandemic.

These results are consistent with a study conducted in Nigeria which reported that condom use can reduce transmission of HIV//AIDS and STIs by 82% Adegoke, (2011). The same applies to prevention of HIV/AIDS and STIs. More than half of the

participants mention condom use as the way of preventing the disease. This show that there is good knowledge on condom compared to other prevention methods like abstinence and being faithful Kemyt *et al.* (2007). Despite being knowledgeable on condom use, still using condom among adolescents is still a problem Lema *et al.* (2008).

These results differ from another study which concludes that condom use among adolescents has raised from 19% to 28% from 1993 -2003 Bearinger *et al.* (2007). Although there is rise of condom use still there is a big difference between knowledge and practice; therefore much emphasis should be put on using condoms. Moreover the other two methods of preventing HIV/AIDS and STIs should also be encouraged so as to discourage adolescents' behavior of practicing sex.

5.1.7 Source of Information about Sexual Reproductive Health

The item aimed to know sources from which adolescents get information on reproductive health. Almost half of the participants mentioned teachers as their source of information indicating that school is the place where adolescents spend most of their time under care of their teachers. Teachers can play a great role in adolescents behavior change because adolescents trust and learn from them through discussion, imitating and modeling, therefore if teachers will play their role effectively in educating adolescents on RH most of them will be knowledgeable and have good RH as stated by Helleve *et al*. (2009).

Moreover Bearinger *et al.* (2007) recommend that sexual education should be provided by well-trained personnel on sexual issues, and persons from different

disciplines such as psychology, health and education need to be involved accordingly. The involvement of such "other disciplines" seem to miss in the current study and one would question the ability of teachers and parents in dealing with all issues pertaining to adolescent reproductive health.

Less than a quarter of the participants mentioned father as a source of information. This is a very small number compared to the 41% who mentioned their mother as the source of information. This shows that female parents are more helpful in educating children on RH than male parents. It can as well be described by the fact that most of the participants in this study were girls and most likely to seek information from their mothers than their fathers. However this result differs from another study conducted in Ethiopia which comes up with the result that mass media (radio 80.4%) is the main source of RH among adolescents, followed by teachers (Tegegn, *et al.* 2008).

5.1.8 Preference from whom Students would like to Receive Information about Sexual Reproductive Health

More than half of the participants mentioned the mother and teachers as persons they would like to be educated by on RH. This shows that mothers and teachers are the people who are close to adolescents than other groups in the society. Percentage of adolescents who prefer the father to be the source of information has raised to 20%. This shows that although only 11% receive knowledge from the father still there are 9% of adolescents who prefer to be educated by their fathers.

5.1.9 How Students want to Receive Sexual Reproductive Health Information

This category aimed to find out how adolescents want to receive information on RH, either alone or with others. More than three quarters of the participants said they

want to receive knowledge on RH with others; this means that they want to discuss together issues relating to reproductive health and learn from each other. The other quarter of the participants wants to get this knowledge alone since they will feel more comfortable and they will have privacy as they perceived a RH to be confidential knowledge.

According to Ostrander and Snyder (1970) the psychology of youth and adolescents indicates that behaviors are developed and shared in specific groups such as peers, choir, schools, adult friends and drama clubs. These are very important findings which suggest that reproductive health education to the population of this age group would be more successfully delivered through groups and organized social gatherings rather than to individual adolescents. Furthermore Ugandans Ajok and Kabagenyi, (2012) suggest that such environment ought to be non-judgmental, friendly and patient for adolescents to feel comfortable in discussing their concerns.

5.1.10 How to Improve Status of Adolescents RH

Under this category more than half of the participants said that education on RH should be included in the school curriculum rather than teaching it within other subject like biology which does not discuss the details of RH. This suggestion is as the approach recommended in the global perspectives on the sexual and reproductive health of adolescents where they wrote on patterns, prevention, and potential by (Bearinger *et al.,* 2007). Also there should be a conducive environment for privacy as about quarter of the respondents want to be educated alone, which supports the Ugandan report (Ajok and Kabagenyi, 2012). However not all issues can be

discussed in groups. Some of the sexual issues are better dealt with as a personal matter, in which privacy is of utmost importance, and this may account for the fewer number of participants who prefer being educated as an individual. The study conducted by Righeim (2010) also comes up with this solution as the way to improve adolescent's RH status. One must therefore be able to screen the information to be shared and the state of the stakeholders so that the approach can be decided upon.

5.2 Discussion on Qualitative Results

5.2.1 On Definition of Reproductive Health

More than half of the participants connect definition of RH with family planning education. This shows that adolescents have partial knowledge on RH as they think that RH is only for family planning. This finding is consistent with the one found by (Tegegn, A et al 2008). This may be due to high emphasis on family planning during providing RH than other components of RH like diseases. However, this is different from the results in the quantitative part of this study where participants are more aware of condom use and prevention of HIV and STIs more than any other RH related topics.

5.2.2 Knowledge on STIs, HIV and AIDS

Under this category most of the participants seem to know the causative agents and prevention methods of HIV/AIDS and STIs, a more or less similar result as found in the quantitative part of this study. Such findings could suggest that during educating adolescents on RH causative agents and their modes of transmission have been emphasized more than effects. This is commonly witnessed in our community and

extensively covered by mass media. For example on prevention there was ABC campaign which means Abstinence, Be Faithful and Condom use, as the major ways to protect one from HIV/AIDS and STIs in such programs like Fema TV talk show. On effect only few participants mentioned low immunity in HIV but on STIs participants seem to have poor knowledge. This is consistent with another study conducted in Kibaha which show knowledge of HIV transmission and prevention was slight lower among young people of 15-24 years (Lema *et al.,* 2008). This lead to high risk of getting HIV/AIDS and STIs among adolescents (TDHS, 2004-05).

5.2.3 Knowledge and Perception on Abortion

Like the findings in the quantitative section, the majority of the participants said that abortion is not acceptable, but adolescent students are forced to do so due to poor knowledge on RH. This could mean those adolescents are not aware of their menstruation cycle, therefore they don't know when a woman is likely to conceive hence they become pregnant. Once they conceive they are afraid of what may happen in school and action from parents, hence they resort to abortion knowing that abortion is dangerous; this result in high mortality rate among adolescents (WHO, 2004).

5.2.4 Opinions on Reproductive Health Knowledge and what should be Done

The current reproductive health provided seems to base on the formal sector and forgets about informal sectors hence benefits only those in the formal sector. However this is deemed be unsatisfactory. This result relate with the study conducted by Senderwortiz, (2003) which came up with the conclusion that many adolescents

fail to access RH knowledge due to its nature which is full of obstacles in accessing care, timing of service provision, attitudes of service providers, and the limited privacy.

In order to have good RH knowledge participants suggest that serious measures on RH education must be taken to allow frequent provision of education especially by health care givers who are more knowledgeable in RH issues, and a conducive environment during education should be considered.

5.3 Limitation of the Study

In conducting the proposed study I faced a number of challenges which are considered as limitation of the study. These are such as follows:

Redness of respondents to participate in the study also was a limitation especially during interview. Some of the participants were worried that I may ask for their partners and report them to authorities. However as a social worker I understand them and educate them on important of this study to them as the most vulnerable group in the society. I ensure them with confidentiality and respect on their views on RH. There after they fill the consent paper voluntary and participate in this study. Financial constrain was another limitation, as I sponsor myself to peruse this study through distance learning. This force me to narrow my study and base only to adolescent without involving other groups in the society.

Another limitation was time constraint. Because I had to conduct the study after working hours and during weekends. However I worked hard so as to accomplish the task within the required time.

5.4 Summary of Findings

In both quantitative and qualitative results, adolescents seem to have inadequate knowledge on RH. However in some cases, like abortion, qualitative results show that adolescents are more knowledgeable about impacts of abortion, against those in quantitative results, where in qualitative all participants said abortion has impact and it is not accepted while in quantitative less than quarter does not know if abortion has any effect, and others mention diseases like cancer as among the effects which is not true. This proves that adolescents who fail to proceed with education because of pregnancy are more knowledgeable on the effect of abortion compared to those adolescents in school.

Moreover both results suggested that RH knowledge is not satisfactory and it should be improved. During follow-up these participants under interview said that RH knowledge should involve both formal and informal sectors, while participants under questionnaire method said RH should be added in school curriculum (formal sector) as an independent subject. This is because the interviewed participants are now in the informal sector while their fellows are still in the formal sector. This shows that RH knowledge should be provided in both formal and informal sectors.

Moreover majority of participants in this study prefer to be educated by their mothers and teachers rather than other groups in the society.

5.5 Conclusion

Adolescent reproductive health problems are still a great threat to adolescent's warfare not only in Moshi Municipality but in Tanzania, Africa and all over the

world as a whole. This limits adolescents' opportunity to build their future as they find themselves victims of early pregnancy, HIV/AIDS, STIs and early marriage. This study discovers the main source of adolescents' RH problem is inadequate knowledge on RH. Adolescents have partial and sometimes incorrect knowledge on RH as a result they start sexual intercourse at low age something which is the inner core of all RH problems. Also the study discovers that some parents do not play their role effectively in educating their children on RH, instead they react very harshly to them in case of any mistake, this discourages adolescents and make them feel ignored hence they opt for their own life style which has a negative impact on their life.

5.6 Recommendations

Basing on the finding of this study the following are recommendations for improving Adolescent reproductive health.

5.6.1 Ministry of Education and Vocational Training

Knowledge on reproductive health should be emphasized in schools by introducing a RH subject to be taught from primary school to secondary school. This will cover the partial knowledge on RH which has been observed in the study. Teachers as a major source of RH information should be given frequent seminars and workshops concerning RH so that they may provide the required information to adolescents.

5.3.2 Ministry of Health and Social Welfare

The ministry should provide accessible, friendly and affordable RH education service to adolescents on pregnancy, sexual intercourse, and abortion knowledge which seems to be very poor among adolescents.

5.3.4 Social Workers, Nongovernmental Organizations, Parents and Society at Large

Social workers should identify adolescents at risk within the community, discuss with them to understand their problems, provide guidance and counseling and plan for strategies to help them regarding their age and preference. NGOs have played a great role in RH education but still much effort is required such as continue using of mass media to educate adolescents so that to cover each adolescent who can access mass media.

Parents and guardians should take up their position, as the results show that adolescents want to receive knowledge from their mothers but they end up with teachers. This shows that parents are not close to their children, especially male parents. Therefore, parents should make sure that once the child reaches the adolescent age they become closer to them and teach them how to grow up as decent and responsible adults. If this is difficult we can easily regress to the era of our forefathers who took their sons and daughters to elders to be taught good morals (Marealle 2000).

Society is also supposed to take care of the adolescents regardless of who are their parents. The slogan of '*Wanawake na maendeleo'* (WAMA) 'Mtoto *wa mwenzio ni mwanao'* should be applicable in this context. Male parents should stop immediately the behavior of dating students, instead, they should help them build their future through education and consider them as their own daughters.

5.3.5 To Adolescents

Adolescents should seek for information on RH as much as they can so that to be in a position of avoiding RH problems.

5.3.6 Further Research

Further research should be conducted on the following topics.

(i) Role of parent in adolescence reproductive health

(ii) Other factors apart from knowledge that contribute to adolescents' reproductive health problems.

(iii) Application of adolescent RH knowledge provided among adolescents.

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APPENDICES

Appendix I: The Proposed Budget

Activity	Particulars	Units	Costs	Days	Sub Total (Tzs)
Data collection	Respondents and researcher allowances		TZS 15,000.00	7	TZS 105,000.00
Transport fee	Researcher		TZS 8,000.00	7	TZS 56,000.00
Data processing and analysis	Researcher	1	TZS 30,000.00	5	TZS 210,000.00
Writing preliminary research	Typing	100pages	TZS 500.00		TZS 50,000.00
Printing preliminary research	Printing	100pages	TZS 500.00		TZS 50,000.00
Other contingencies (cost 5%)	Researcher				TZS 20,000.00
GROSS TOTAL					**TZS 491,000.00**

WORK PLAN FORCONDUCTING THE STUDY.

The study will be conducted for 8 month supervised by the Open University of Tanzania.

In the 1st and 2nd Months: I will collect the basic information including requesting permission from the Open University, and permission to visit the targeted schools so as to ensure that my study is conducted in a formal and accepted manner.

3rd and 4th Months: Data collection and administration through Questionnaires, interview, documentary review.

5thand 6th Months: data processing and analysis.

7th and 8th Months: Compiling information obtained, writing up the preliminary and final report and lastly submission of the dissertation.

Appendix II: Declaration of Confidentiality

To: The Chief Executive Officer of Ministry of health (District Medical officer) Moshi municipal,

I **Peter, Hannah., (Reg no HD /A/072/T/12)** of the Department of sociology and Social work, Faculty of Arts and Social Science (FASS), Open University of Tanzania, in Kilimanjaro region center declare that, I will maintain secrecy and confidentiality of the obtained information, and so I will not use any data and information obtained from your organization in the course of my research for any purpose other than for my academic purposes.

Signature…… (Student)

Date ……..

Appendix III: Fomu ya Makubaliano kati ya Mtafiti na Mshiriki

IDARA YA USTAWI WA JAMII CHUO KIKUUHURIA CHA TANZANIA

JINA LA MTAFITI: PETER, HANNAH.

NAMBA YA SIMU: 0754 979777

UTAFITI KUHUSU ELIMU YA AFYA YA UZAZI WALIYONAYO WANAFUNZI WA SEKONDARI WALIOKATIKAUMRI WA KUBALEHE KATIKA MANISPAA YA MOSHI MKOANI KILIMANJARO

MANDUMUNI: Kuangalia kiwango cha elimu kuhusu afyaya uzazi walichonacho wanafunzi waliokatika umri wa kubalehe katika manispaa ya Moshi.

UTARATIBU UTAKAOTUMIKA: Kujibu maswali yote kama yatakavyoulizwa nakushiriki katika mahojiano.

FAIDA: Utafiti huu utawasaidia vijanana wanafunzi kupata huduma bora za afya ya uzazi.

MADHARAKWAMSHIRIKI: Hakutakuwa na madhara yoyote kwa mshiriki isipokuwa muda utakaotumika.

USIRI: Taarifa zote zitakazotolewa katika utafiti huu zitakua nisiri na zitatumika kwa madhumuni ya utafiti huu tu.

HAKI YA KUKATAA AU KUJITOA KATIKA USHIRIKI: Ushiriki wangu katika utafiti huu nikwaridhaa yangu mwenyewe nikohuru kushiriki au kutoshiriki.

MAKUBALIANO: Mimi…….baada yakusikiliza nakusoma kwamakini maelezo yautafiti huu nakuelewa madhumuni ya fomuhii nakubali kuwamshiriki katika utafiti huu.

Saini…….

Tarehe……..

Jina……Saini……

Mtafitimkuu……Tarehe……

Appendix IV: Consent Form

DEPARTMENT OF PYSCHOLOGY AND SOCIAL WORK OPEN UNIVESITY OF TANZANIA,

PRINCIPLE INVESTIGATOR: PETER HANNAH

PHONE NUMBER: 0754 -979777

THE PURPOSE OF THE STUDY: To assess knowledge on reproductive health among adolescents attending secondary schools in Moshi municipality, of Kilimanjaro region, Tanzania.

PROCEDURE: I will answer all questions accordingly and participate in interview section.

BENEFITS: There may be no direct benefits to me as a participant in the proposed study but the findings from the study may be beneficial to other adolescents' students.

RISK AND DISCOMFORT: There will be no any risk from the participating in the proposed study apart from time spent.

CONFIDENTIALITY: All information obtained in the proposed study will be considered confidential and used only for research purpose. My identity will be kept confidential in so far the laws allows.

RIGHT TO REFUSE OR WITHDRAW: My participation in the proposed study is entirely voluntary and I am free to refuse to take part or withdraw at any time.

CONSENT

I……..... After considering the explanation of the study and having understood the consent form, I hereby give my informed consent to participate in the study.

SIGNATURE ……..

DATE……

INVESTIGATOR'S SIGNATURE……..

DATE…….

Appendix V: Interview Guide Question for Adolescents who Fail to Continuer with Studies Due to Reproductive Health Problems

1. What is reproductive health?
2. What do you understand in issues like sexual intercourse, HIV/AIDS, STIs pregnancy and abortion?
3. Give your opinions on the current reproductive health knowledge provided to adolescents' students?
4. Do you think it is proper to give adolescents student education on contraceptive use? Give reason for your answer.
5. What should be done so that majority of students receive reproductive health knowledge?

Appendix VI: Maswali ya Usahili kwa Wanafunzi Walioshindwa Kuendelea na Masomo Kutokana na Matatizo ya Afya ya Uzazi

1. Je nini maana ya elimu ya afya ya uzazi?
2. Je unafahamu nini kuhusu mahusiano ya kimapenzi, UKIMWI, Magojwa ya zinaaa mimba na utoaji mimba?
3. Toa maoni yako kuhusu elimu ya afya ya uzazi inayotolewa kwa vijana wanafunzi
4. Je unafikiri nisahihi kuwapatia vijana walioko shuleni elimu kuhusu matumizi ya njia za uzazi wa mpango? Toa sababu yajibu lako
5. Kwa maoni yako nini kifanyike ili wanafunzi wengi wapatiwe elimu ya afya ya uzazi?

Appendix VII: Questionnaire on Assessment of Knowledge on Reproductive Health among Adolescents Attending Secondary Schools In Moshi Municipality of Kilimanjaro Tanzania

INSTRUCTIONS

Answer each question by placing a √ in the appropriate box or write down your response in the space provided. Other questions have more than one answer.

SECTION A: BIOGRAPHIC INFORMATION

1	Your age at last birthday is ……years		
2	Your gender is	F	
		M	
3	Indicate your religion faith 3.1 Muslim		
	Indicate your religion faith 3.2 Christian		
4	What is your tribe?.....		
5	The name of your school is …..		
6	Which class are you?.....		
7	Whom do you live with		
	7.1 Both Parents		
	7.2 Father only		
	7.3 Mother only		
	7.4 Guardian /Relative		
8	Highest level of education of your parents /guardian is		
	8:1 No Formal Education		
	8:2 Primary School		
	8:3 Secondary School		
	8:4 Higher Education		

SECTION B: SEXUALITY AND REPRODUCTIVE HEALTH ISSUES

9	What physical changes do girl notice during puberty		
	9.1 Growth of pubic hair		
	9.2 Breast development		
	9.3 Starting of menstruation		
	9.4 smooth voice		
	9.5 need to have sexual intercourse.		
	9.6. I don't know		
10	What physical changes do boys notice during puberty?		
	10:1 Growth of pubic hair		
	10:2 Growth of muscles		

	10:3 Experiencing wet dreams		
	10.4 strong voice		
	10:5. I don't know		
11	Have you experienced the changes mentioned above?		
	11:1 Yes		
	11:2 No		
	If the answer is **NO** go to the question number 13		

12	What information did you receive regarding Puberty?		
	1. are ready to get married		
	2. You have inters bitter life		
	3. You can be Pregnant or imp regnant someone		
	4. About hygiene		
	5. Avoid Sexual intercourse		
	6. None		
13	Who supplied the information?		
	1. Religious leader.		
	2. Mother		
	3. Father		
	4. Teacher		
	5. Relative		
	6. .nurse		
	7. Friend		
	8. Media		
15	From whom would you like to receive knowledge on reproduction health		
	1. Religious leader		
	2. Mother		
	3. Father		
	4. Teacher		
	5. Relatives		
	6. Nurse.		
	7. Friend		
	8. Media		
15	Do you think you have enough knowledge about reproductive health?		
	1. Yes		
	2. No		
16	What is the risk/danger of involving in sexual intercourse at an early age?		
	1. To fail at school		
	2. Become pregnant		
	3. Contract STI/HIV/AIDS		
	4. Despised by the community		
	5. No any impact		

	6. I don't know		
17	At what time a woman is likely to get pregnancy?		
	1. 14 days before menstruation?		
	2. 14 days after menstruation		
	3. During menstruation		
	4. Any time		
	5. I don't know		
18	Have you ever heard about contraceptives use?		
	1. Yes		
	2. No		
	If the answer is **NO** go to the question number 20		
19	If the answer is yes which type of contraceptive your are familiar with		
	18:1 Pills		
	18.2		
	18:3 Inject able		
	18.4 Condoms		
	18.5 Calendar		
20	Do you think it is accepted for you to use contraceptives?		
	19.1 Yes		
	19.2 No		
	If **YES** why? If **NO** why?		
22	Do you think there is any effect that one may face once she undergone abortion		
	20:1 Yes		
	20:2 No		
	If **YES** why? If **NO** why?		
23	Have you ever heard about HIV/AIDS and STI(S)?		
	1. Yes		
	2. No		
	If the answer is **NO** go to question 25		
24	How HIV/AIDS and STI(S) Transmitted? Give 3 point		
	1.		
	2.		
	3.		
25	How would you prevent sexually transmitted infection an HIV/AIDS?		
	1.		
	2.		
	3.		
25	How would you like to receive reproductive health knowledge?		
	1. Alone		
	2. With others		
26	Do you think all adolescent student knows about reproduction health		

	25:1 Yes		
	25:2 No if the answer is **NO** go to question no. 27		
27	What should be done so that all adolescent student get that knowledge		
28	give your opinion on the current reproductive health knowledge provided		

Appendix VIII: Dodoso la Utafiti Kuhusu Elimu Walionayo Wanafunzi wa Sekondari Kuhusu Afya ya Uzazimanispaa ya Moshi Maelekezo

Jibu maswali yote kwa kuweka alama ya √ katika kisandu kuhusika na jazana fasi zilizoachwa wazi. Maswali mengine yana majibu zaidi ya moja.

SEHEMU A: TAARIFABINAFSI

1	Je unamiaka mingapi kamili sasa…….		
2	Jinsia yako ni	Me	
		Ke	
3	Kabila lakoni……..		
4	Dhehebu lakoni		
	1. Muislamu	1	
	2. Mkristo	2	
5	Je unasoma shule gani?		
6	Uko kidato cha ngapi?		
7	Unaishi na nani?		
	1. Baba		
	2. Mama		
	3. Baba na Mama		
	4. Mlezi		
8	Kiwango cha elimu cha wazazi /waleziwakoni		
	1. Hajasoma		
	2. Elimu ya msingi		
	3. Elimu ya sekondari		
	4. Elimu ya juu		

SEHEMU B: MASUALAYAHUSUYOAFYA YA UZAZI

9	Ni mabadiliko gani yanayotokea kwamsichana wakati wa kubalehe		
	1. Kuota nywele sehemu za siri		
	2. Kuongezeka matiti		
	3. Kuvunja ungo		
	4. Sauti kuwa nyororo		
	5. Kuwa na hamu ya kufanya mapenzi		
	6. Sijui		
10	Je ni mabadilikogani yanayotokea kwa wavulana wakati wakubalehe?		
	1. Kuotanywele sehemu zasiri		
	2. Kuongezeka mwili		
	3. Kupata ndoto nyevu		
	4. Sauti kuwa nzito		
/	5. Sijui		

11	Je umeshabalehe (wav) / kuvunja ungo (was) kama jibu ni hapana nenda swali la 13		
	1. Ndiyo		
	2. Hapana		
	Kama jibu ni **HAPANA** nenda swali la 13		
12	Ulipewa taarifa gani ulipobalehe / kuvunjaungo?		
	1. Upo tayari kuoa au kuolewa		
	2. Umeingia maisha ya mateso		
	3. Unatabia mbaya		
	4. Jitahidiuwemsafi		
	5. Jiepushe na ngono		
	6. Sikupewa		
13	Je naniwanakupa taarifa kuhusu elimu ya afya ya uzazi?		
	1. Kiongozi wa dini		
	2. Mama		
	3. Baba		
	4. Mwalimu		
	5. Mtu mwingine mfano ndugu, jirani nk		
	6. Muuguzi		
	7. Rafiki		
	8. Vyombo vya habari		
14	Je ungependa nani akupe elimu ya afya ya uzazi?		
	1. Kiongozi wa dini		
	2. Mama		
	3. Baba		
	4. Mwalimu		
	5. Mtu mwingine mfano ndugu, jirani nk.		
	6. Muuguzi		
	7. Rafiki		
	8. Vyombo vya habari		
15	Je unadhani unaelimu yakutosha kuhusu afya ya uzazi		
	1. Ndiyo		
	2. Hapana		
16	Je ni athari zipi unazozijua zinatokanana kujiingiza kwenye mapenzi / ngono katika umri mdogo?		
	1. Kushindwa mitihani shuleni		
	2. Kupata mimba		
	3. Kupata magonjwa ya zinaa		
	4. Jamii itakudharau		
	5. Hakuna athari		
	6. Sijui		
17	1. Je ni wakati gani mwanamke anawez akupata mimba?		
	2. siku 14 kabla ya kuingia mwezini		
	3. siku 14 baada ya kuingia mwezini		
	4. Siku za kua mwezini		

	5. Wakati wowote		
18	Je umewahi kusikia kuhusu njia zaku zuia mimba?		
	1. Ndio		
	2. Hapana		
	Kama jibu ni **HAPANA** nenda swali la 20		
19	Je umewahi kusikia njia ipi kati ya hizi?		
	1. Kondom		
	2. Kitanzi		
	3. Vidonge		
	4. Sindano		
	5. Kalenda		
20	Je unadhani nisahihi kwako kutumia njia za uzazi wa mpango?		
	1. Ndio		
	2. Hapana		
	Kama **NDIO/HAPANA** kwa nini?		
21	Je unadhani kuna atharizozote endapo mtu atatoa mimba?		
	1. Ndio		
	2. Hapana		
	Kama **NDIO**/kwa nini?		
22	Je umewahi kusikia kuhusu magonjwa ya zinaa na virusi ya UKIMWI?		
	1. Ndio		
	2. Hapana		
	Kama jibu ni H**APANA** nenda swali la 24		
23	Je ni njia zipi zinachangia maambukizi ya virusi vya UKIMWI na magonjwa ya zinaa? (tajanjiatatu)		
	1.		
	2.		
	3.		
24	Je unawezaje kujiepushana virusi vya UKIMWI na magonjwa ya zinaa? Taja njia tatu		
	1.		
	2.		
	3.		
25	Je ungependa upewe vipi elimu ya afya ya uzazi?		
	1. Ukiwa peke yako		
	2. Ukiwa na wenzako		
26	Je unadhani wanafunzi wote wanafahamu kuhusu afya ya uzazi?		
	1. Ndio		
	2. Hapana kama jibuni **HAPANA** nenda swali la 27		
27	Kwa maoni yako nini kifanyike ili wanafunzi wote wapate elimu ya afya ya uzazi?		

28	Toa maoni yako kuhusu elimu ya afya ya uzazi inayotolewa kwa vijana wanafunzi