FACTORS ASSOCIATED WITH RISK FOR PREGNANCY AMONG SECONDARY SCHOOL GIRLS IN ILALA MUNICIPALITY, DAR ES SALAAM, TANZANIA

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By

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A Dissertation/ Thesis Submitted in (partial) Fulfillment of the Requirements for the School of Public Health and Social Sciences of

Muhimbili University of Health and Allied Sciences
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CERTIFICATION

The undersigned certifies that he has read and hereby recommend for acceptance by Muhimbili University of Health and Allied Sciences a dissertation entitled **‘‘Factors associated with risk for pregnancy among secondary school girls in Ilala Municipality, Dar es salaam, Tanzania’’** in (partial) fulfillment of the requirements for the degree of Master of Public Health of the Muhimbili University of Health and Allied Sciences.

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Dr. Deodatus C.V. Kakoko

(Supervisor)

_____

Date

DECLARATION AND COPYRIGHT

I, Bumi Lwimiko Andulile Mwamasage, declare that this **dissertation** is my original work and it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature:..... **Date:**.....

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Last but not least in priority, I take this opportunity to thank my fellow MPH students for their contributions to the success of this dissertation as through discussion and sharing, I made progress towards adjustment of this dissertation.

DEDICATION

This Dissertation is dedicated to my Son Javan, my Daughter Hellen, my Father Mwl. Daniel Lwimiko Andulile, my Mother Tulinagwe Tonoka and all my Sisters.

ABSTARCT

Background: Adolescent pregnancy is a global public health problem and mainly affecting low income countries. In Tanzania, it is a major cause of drop-outs from schools. However, several factors have been associated with adolescent pregnancy but in general they include individual, home environment and school characteristics in relation to lack of knowledge, negative attitude and low self-efficacy towards pregnancy prevention. This study revealed that adolescents generally have moderate knowledge, negative attitude and low self-efficacy towards pregnancy prevention. Nevertheless, there was observed differences across different socio-demographic characteristics.

Objective: This study was done to assess the magnitude and factors associated with risk for pregnancy in relation to knowledge, attitude and self-efficacy, among secondary school adolescent girls in Ilala Municipality, in Dar es salaam.

Methodology: A cross sectional quantitative study was conducted. The study involved 340 participants. Self-administered structured questionnaires were used for data collection. Simple random sampling was used to select study participants and data analysis was done using SPSS version 23 where descriptive analysis was run to determine frequency and percentages and the degree of association was established using comparison of mean differences and chi squire. A p value of less or equal to 0.05 was used to measure the degree of association

Results:

About 4.4% (15) respondents were observe had exposure to sex and the large proportion were older adolescents. Participants had good knowledge on pregnancy (83.1%)and had low knowledge on pregnancy prevention, as the highest score was 39.1%. The attitude towards pregnancy was negative for (78.2%) as well as pregnancy prevention (64.1%). Lastly, perceived self-efficacy to pregnancy prevention was low (42.1%), with high percentages for the item observed in the neutral and don't know responses.

However, comparison of mean differences was done for the knowledge, attitude and self-efficacy in relation to the socio-demographic characteristics in order to establish the

association between groups. As regards to the knowledge item, there was observed statistically significant association for age (p = 0.007); school grade (p = 0.000) and school composition (p=0.028). Likewise, statistical significant results for the attitude item was observed for the school grade (p=0.003). Comparison of mean differences between socio-demographic characteristics and perceived self-efficacy, revealed statistical significant association for religion (p=0.005); school grade (p=0.000) and school composition (p=0.000)

The last measure was done to compare the mean differences between the risk factor for pregnancy (exposure to sex) and all three items (knowledge, attitude and perception). The knowledge item revealed statistical significant association (p=0.035)

Conclusion:

In this study participants were found to have moderate knowledge about pregnancy prevention, but generally had negative attitude low self-efficacy to pregnancy prevention. Those factors put them in high risk of getting pregnancy, if interventions are not taken to rectify the situation. Therefore; efforts done to address the deficiencies observed in this study so as to alleviate the situation and make girls achieve their education goals.

Recommendations:

There is a need to ensure that sexuality education is strengthened in schools and parents are encouraged to hold open discussion with their adolescents about sexual reproductive health. It is recommended that reproductive health education and services are availed to adolescents in a more convenient way to them, order to prevent them from pregnancy and lastly, strategies should be laid down to address attitude and low self- efficacy towards pregnancy prevention, preferably through peer education.

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ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
BEST	Basic Education Statistics in Tanzania
BSS	Behavioral Surveillance Survey
CSEE	Certificate of Secondary Education Examination
DED	District Executive Director
HIV	Human Immune-deficiency Virus
MoEVT	Ministry of Education and Vocational Training
MSEO	Municipal Secondary Education Officer
MUHAS	Muhimbili University of Health and Allied Sciences
STD	Sexual Transmitted Disease
STI	Sexual Transmitted Infection
TDHS	Tanzania Demographic and Health Survey
THIMS	Tanzania HIV/AIDS and Malaria Indicator Survey
UNICEF	United Nations International Children's Emergency Fund
WEO	Ward Executive Officer
WHO	World Health Organization

DEFINITIONS OF TERMS

Teenage pregnant: refers conception while the girl is a teen and still at school.

Adolescence: refers to period of life extending from10 to 19 years of age (WHO, 2009). In this study an adolescent will refer to a person in the age group between 15 to 19 years attending a secondary school.

Adolescent mother: According to WHO definition, adolescent mother is between the ages of 10 and 19 who become pregnant and *parent* their children.

Contraception: contraception is a "process or technique for the prevention of pregnancy by means of a medication, device, or method that blocks or alters one or more of the processes of reproduction in such a way that sexual union can occur without conception"(1).

Safer sex: the term "safer sex" is used to refer to adopted sexual behaviors recommended by health educators to reduce the risk of HIV and STD transmission. It is mainly based on abstinence from sex, being faithful to one partner and the use of condoms to avoid the exchange of body fluids during sexual intercourse

Unintended pregnancy: In this study, unintended pregnancy refers to pregnancy that is mistimed, unplanned or unwanted at the time of conception.

Risk for pregnancy: In this study "risk for pregnancy" refers to the chances of getting unplanned, mistimed and unwanted pregnancy

CHAPTER ONE

1.0 INTRODUCTION

1.1Background to the study

Adolescence is a fascinating period of life that marks the transition from being dependent child to an independent functioning adult (2). Accordingly, adolescence has widely been documented as a period of increased risk taking and therefore susceptibility to behavioral problems at the time of puberty(3). This arouses the concern of public health professionals because sexuality, being one of risk taking during adolescence is often experienced by means of unsafe sexual practices, which may lead to unwanted pregnancies(4).

According to the UNFPA report (5) about 19 percent of young women in developing countries become pregnant before the age of 18 years, and 95 percent of the world's births to teenagers occur in developing countries. According to a study done in South Africa(6), approximately 30% of teenage girls report of having been pregnant with a devastating impact on their secondary schooling. In Cameroon teenage pregnancy is responsible for 30% gender gap difference in education between boys and girls in secondary schools(7), while in Tanzania 21.9% of 15-19year olds were either pregnant or mothers (8).

Research evidence from various studies across the globe in different fields highlights some of the factors behind teenage pregnancy as associated with individual, home, community, and school environment ((9);(10). Some individual behaviors of secondary school girls are responsible for pregnancy. These include early sexual involvement that results in multiple and concurrent partnerships with boys, which may be transactional in nature due to poverty. Poverty at home affects individual attributes of some girls in the sense that it may force girls into sex for survival (11); and similarly, girls can engage in multiple relations for economic security. Multiplicity of sexual relations reduces the chances that teenagers would use contraceptives to prevent pregnancies hence escalating the problem (6).

Within the school environment a number of factors expose young girls to pregnancy risks. According to Grant and Hallman, poor school performance is a strong marker for

pregnancy(12). Poor performance often leads to repetition, meaning that girls physically mature while still in school and experience a lot of peer pressure to have sex (13). In addition, poorly performing girls have low educational expectations; are not sure if they will graduate, and as such have little motivation to avoid pregnancy.

Lack of comprehensive information on sexuality, either at school or at home, causes teenagers to rely on peer misinformation, and may therefore succumb to peer pressure to have sex that could lead to early pregnancies (9). Another school-based factor that contributes to pregnancy is sexual harassment perpetrated by boys and sometimes teachers; where girls are coerced into having sexual intercourse (14); (6); (15).

1.2 Problem statement

Previous researches have been much focused on family planning, a service that addresses adult women. There is also ample evidence that unplanned and untimed pregnancy is serious threat to the education of the schoolgirls in Tanzania and elsewhere, as it is one of the reasons for girls dropping out of schools

However, very little research efforts have been directed to an assessing the risk for pregnancy among adolescent girls in schools and factors that are associated with such risk. As such, there is paucity of information that would guide interventions to reduce the impact of pregnancy on girls' education. It is important to know what do schoolgirls understand, value and believe about pregnancy and pregnancy prevention. These include their extent of knowledge, attitude and self-efficacy in relation to pregnancy and pregnancy prevention.

Therefore, the study was designed to establish factors associated with risk for pregnancy in relation to the level of knowledge, attitude and self-efficacy towards pregnancy prevention, among secondary school adolescent girls in Dar es Salaam, Tanzania. It is assumed that the high level of knowledge, positive attitude towards pregnancy preventive methods and high self-efficacy towards pregnancy prevention can have a protective effect to woman against unwanted, unplanned and untimed pregnancy.

1.3 Conceptual Framework

This study adopted a conceptual framework derived from the reviewed literature on the effects of teen pregnancy on education of the girl child. The dependent variable in this study is risk for pregnancy. Considered under the independent variable, factors viewed as major contributors to school girl pregnancy include; individual and school based factors.

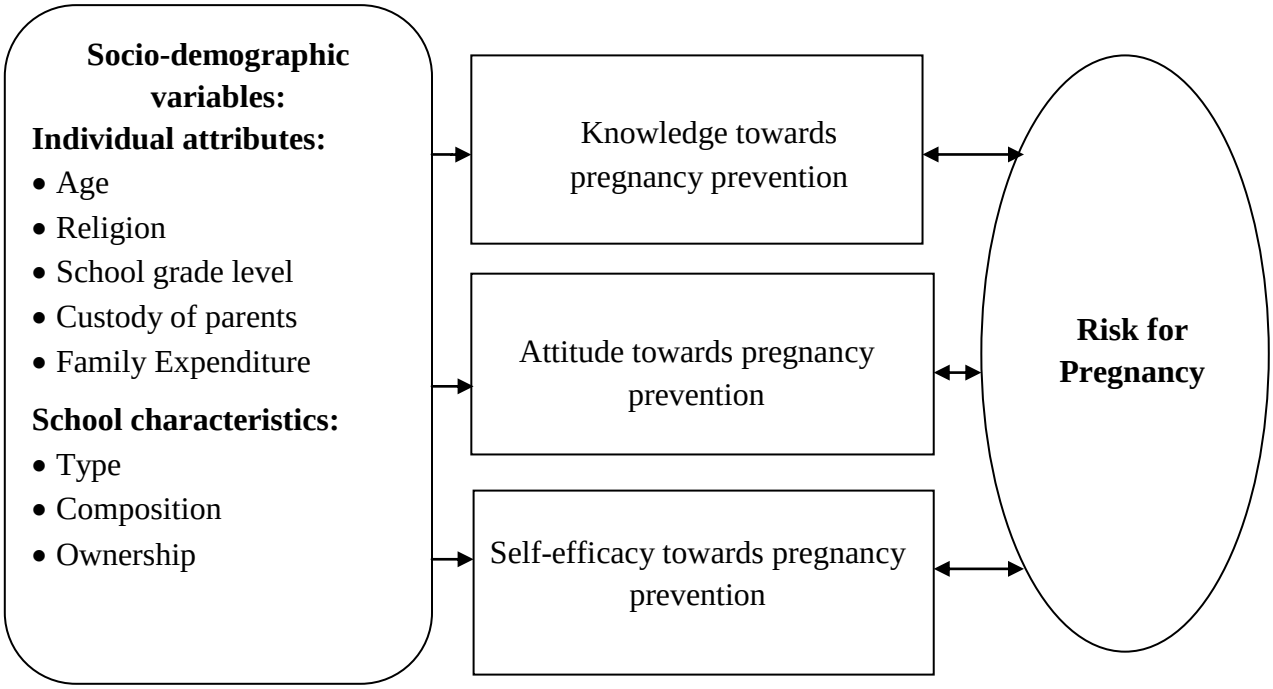


Figure 1: Conceptual framework- developed by the researcher

Narrative

The increase in the number of unwanted, unplanned and untimed pregnancy might be a result of several factors that include socio-demographic factors, poor knowledge on pregnancy prevention, negative attitude to pregnancy prevention and low self-efficacy on pregnancy prevention. The above conceptual framework shows the relationship between various factors displayed in the framework.

1.4 Rationale

This study aimed at contributing to the existing knowledge about pregnancy prevention by determining the factors that are associated with risk for pregnancy in relation to knowledge, attitude and perceived efficacy, among secondary schools girls. Findings of the study could be used in reproductive health interventions aiming at pregnancy prevention among secondary school girls in Tanzania.

Information obtained from this study, will provide important inputs to the current understanding of factors that contribute to increased number of adolescence pregnancy among secondary school girls. The information will be shared with all relevant stakeholders including adolescent girls and policy makers such as MoEVT as well. It is further expected that, responsible stakeholders will use the information to bridge the knowledge gap, address the attitudinal issues and empower adolescents to take appropriate actions towards pregnancy prevention.

1.5 Research Questions

1.5.1 Broad question

What are socio-demographic and psycho-social factors associated with risk for pregnancy among secondary school adolescent girls, in Ilala Municipality?

1.5.2 Specific questions

1. What proportion of secondary school adolescent reporting practices that depict high risk of pregnancy among secondary school girls in Ilala Municipality?
2. What is the level of knowledge about pregnancy prevention among secondary school adolescent girls in Ilala Municipality?
3. What are the attitudes towards pregnancy prevention among secondary school adolescent girls in Ilala Municipality?
4. What is perceived efficacy of pregnancy prevention among secondary school adolescent girls in Ilala Municipality?
5. What is the association between demographic characteristics and knowledge, attitude and perceived efficacy related to pregnancy?
6. What is the association between socio-demographic characteristics and practices that depict high risk of pregnancy among secondary school adolescent girls in Ilala Municipality?

1.6 Objectives of the study

1.6.1 Broad objective

To assess socio-demographic and psychosocial factors associated with risk for pregnancy among secondary school adolescent girls in Ilala Municipality

1.6.2 Specific objectives

1. To determine the proportion of secondary school adolescent girls reporting practices that depicts risk of pregnancy.
2. To determine the level of knowledge about pregnancy prevention among secondary school adolescent girls
3. To determine attitudes towards pregnancy prevention among secondary school adolescent girls
4. To determine perceived efficacy on pregnancy prevention among secondary school adolescent girls.
5. To determine the association between demographic characteristics and knowledge, attitudes and perceived efficacy related to pregnancy.
6. To determine the association between ever having sex and knowledge, attitudes and perceived efficacy related to pregnancy.

CHAPTER TWO

2.0 LITERATURE REVIEW

This chapter involves revisiting literature with the focus on schoolgirls' risk for pregnancy. The review entails searching for information based on studies done about adolescent's level of knowledge, attitude and self-efficacy towards pregnancy prevention, while schooling.

2.1 Adolescent girls reporting practices that depicts high risk of pregnancy

The survey done by THMIS reported that 10 % of women aged 20-49 years had sex before they reach 15 years and 50% had first sex before they were 18 years(16).Tanzania Demographic and Health Survey (TDHS), revealed that by age of 15 – 24 years, 12% of young women, already had sexual intercourse.(17) A cross sectional study done in North Western Ethiopia, that involved 826 secondary school males and female youths, revealed a prevalence of 15.5% females who had exposure to sex (18). The studies done in Tanzania through THMIS and TDHS, provides evidence that more than 10% of adolescents in the general population of Tanzania are exposed to sex before they reach 18 years. Another cross sectional study conducted in nine universities of Hefei in China, which involved 1,500 University students, reported that 8.6 % female students have had sexual exposure before the time of the study(19).

Studies done in Tanzania in the general population and the one done in Ethiopia, resembles the age group found in secondary schools, therefore, the above studies indicate that secondary school students do practice sex and thus, they are not safe from pregnancy. Apart from the pregnancy risk, the practice also makes them vulnerable to contract sexually transmitted diseases, which include but not limited to HIV. Nevertheless, the studies reveals different magnitude of exposure between countries, within the country and among population groups(16)(17)(18)

2.2 Adolescent's Knowledge about pregnancy prevention with association to socio-demographic characteristics.

2.2.1 Adolescents' knowledge on pregnancy prevention

Knowledge is an important factor that makes someone aware of various happenings in his/her environment, which include reproductive health and its related negative effects. It is important for adolescents including those who are in schools to possess such knowledge as it keeps them safe from unwanted, untimed and unplanned pregnancies resulting. However, studies sexual behaviours show that many young people become sexually active at early ages, while having poor knowledge on reproductive health including pregnancy prevention(20). Moreover, their sexual relationship is unplanned and sporadic, and sometimes results from peer pressure or even by force(21)

Ramathuba U.D et al, did a study done in Limpopo, to assess factors affecting the knowledge and prevalence of use of contraceptive methods, among 219 individuals (111 females and 108 males), attending secondary schools. The study findings reveals that 81% of the study participants had sufficient knowledge of contraception for their own sexual lives, while 9% are lacking such knowledge(22)

Furthermore, a descriptive study was conducted in South Africa to assess the knowledge, attitude and practices among 273 secondary school girls, towards contraception. In this study, it was reported that 75% adolescents had good knowledge about different contraceptive methods such as pills (43%), condom (58%), injection (50%), fiefdoms (40%).. Although most of the study participants were found to be knowledgeable about pregnancy prevention methods, more findings regarding this study reported that 17%of the participants could describe when to use such services, 66% didn't know how a female condom looks like and only 10% knew an IUD and less than 3% knew the diaphragm, spermicides and jellies/foam (20)**.**

Studies done in various parts of the world on adolescent's knowledge about pregnancy prevention, reveals different result which could be attributed by socio-cultural differences. In some areas it was reported that there is higher knowledge while in others the coverage is low.

A descriptive study done in Nigeria to assess the knowledge, attitude and practice on contraception among 1,504 in public secondary school students(690 male and 814 female),revealed that 292 (42.3%) and 492 (60%) males and females respectively, had good knowledge of contraception. On the other hand, 206 (29.9%) and 122 (15%) males and females had no knowledge of contraception. While using the same method, a study done in Dar es Salaam region among secondary school girls, reveals that 97% of the girls knew at least one contraception method(23)(24)**.** This magnitude of knowledge on contraceptive found in Dar es salaam is higher compared to the preceded studies.

The findings from survey studies indicate that adolescents have good knowledge on contraceptives. However, they lack the real understanding on how and when to use such methods for pregnancy prevention, which are actually putting them into the risk of getting pregnancy and other sexually transmitted diseases like HIV.AIDS.

2.2.2 Adolescents' knowledge on pregnancy risk factors

Pregnancy risk factors if not determined and well addressed will continue to exert pressure to most of people including adolescents both in and out of schools. Literature from USA and South Asian indicate that risk for pregnancy among adolescents is highly found in disorganized neighborhoods and in families with low socioeconomic status, low educational attainment, adolescents living with single parents, having older sexually active siblings or pregnant/parenting teenage sisters, being a victim of sexual abuse, poor parent/child closeness and poor parental supervision or regulation of children's activities(25).

The risk factors of pregnancy in adolescents differ by regions and countries. For instance, in European Union countries, risk factors to pregnancy affects groups with socioeconomic disadvantage, disrupted family structure, limited education, risky sexual behaviours such as early sexual initiation, multiple partners and non-use of contraceptives, alcohol, drug or tobacco use(25).

Three Medical Colleges of Kerala, Ethiopia did Case–control study over a period of 2 years, to determine the risk factors for pregnancy among adolescents and young adults. Data was

collected from 181 unmarried abortion seekers and 181 unmarried non-pregnant controls. The results showed that 61.9 % of unmarried abortion seekers had poor knowledge about sexuality and reproductive health that may lead to pregnancy, while the unmarried non-pregnant controls were only 18.2 %(26), had no knowledge on the same. Therefore, it has been observed in this study that, poor knowledge about sexuality and reproductive health puts adolescents on a high risk of getting pregnancy.

2.3 Attitudes of adolescents towards pregnancy prevention with association to their socio-demographic characteristics.

Adolescent's attitude towards pregnancy results from various factors that include social, psychological and environmental factors. Atuyambe et al, did a study on adolescents and adults in Wasika district in Uganda, which aimed at determining the health seeking practices during pregnancy for adolescents and first time mothers. He reported that stigmatization and social marginalization of adolescents during pregnancy leads to late booking at ANC clinic and other poor health seeking behaviours. The study further argues that social marginalization, lack of family support and taboos surrounding the pregnant adolescents, also leads to negative attitude to the pregnancy and also they develop social and psychological effects that may lead to abortion and suicide attempts(27). Thus, learning from circumstances that pregnant adolescents are encountering, it is most likely that their peers stands a high chance to negative attitude towards pregnancy.

On the other hand, Psychologists describe attitude as a psychological tendency of evaluating an entity with some degree of favour or disfavor. This has an influence on attention to various issues, objects or utilization of services.

Study done at Makerere University to determine the socio-demographic factors, knowledge and attitude on the use of contraceptive among female students, revealed that 93% among 1,008 females approve the use of contraceptive pills and the high trend was observed in the second year(28). The findings are different from the results obtained from the study done by Shah et al (29), to determine the attitude of adolescent girls towards contraceptive use among female aged 15-19 years, workers and non-workers. In the latter group, the study reports that

only 25.8% approve contraceptive use, and 19.8% prefer condoms. Although in both studies there is preference for contraceptive use, but there is a big difference on the percentage of on the magnitude of preference. There is high rate of acceptability of contraceptive use at the university level and low rate at the workers and non-workers group among the younger age group. Reasons for this difference is yet to be established.

More studies were done in Ethiopia and Mozambique(30)(31). In Ethiopia a cross-sectional study was done to determine the attitude towards sexual and reproductive health services among unmarried health workers aged 18 – 24 years. The researchers found that majority of the respondents had positive attitude towards sexual and reproductive health services, with few having a negative attitude. The findings further reveals that, the health workers with negative attitude were those with low education level, lack of training on sexual and reproductive services and those who are married (30). The study done in Mozambique on the use of contraceptives, portray uncertain results and various interpretations on the non-use of contraceptives. In Mozambique, the social and medical barriers were factors put forward as reasons for hindrance of open discussion about sexuality(31).

Based on the studies done at Makerere, Ethiopia and Mozambique, it is evident that the attitude towards pregnancy prevention methods differs among population groups and is dependent on various factors including education level, social, cultural and medical influences.

2.4 Adolescent's Self - efficacy towards pregnancy prevention with association to their socio-demographic characteristics.

Self-efficacy is important in behaviour change. It entails perception that an individual has required skills to perform a required task. As regards to pregnancy prevention, self-efficacy is about having knowledge and skills that are necessary in the prevention of pregnancy. Krugu JK et al, did a qualitative study in Ghana to determine the adolescent's views' on factors associated with teenage pregnancy. In his study, findings reveals frequent education with parents about sexuality and condom use or abstinence, lead to development of skills on condom use and thus, adolescents were able to negotiate on condom (32). Therefore, the study indicate that, frequent education capacitate adolescents to develop self-efficacy, thus

become capable to negotiate about condom use with their partners, while the opposite leads to lower self-efficacy and hence, inability to negotiate about condom use. Therefore, the study done in Ghana reveals that, those with low education on sexuality and condom use, stands a high chance of having sex without a condom and hence, are predisposed to getting pregnancy.

Epsada postulates that "behaviour skills predicts behaviour"(33). This entails that self-efficacy leads to a specified behaviour practice. Epsada et al did a study in Spain to predict condom use among adolescents by testing cognitive models. The study revealed that cognitive factors including knowledge and skills, leads to frequency use of condoms.

Therefore, studies done in Ghana and Spain supports the idea that self-efficacy is an important factor in practicing the intended behaviour.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Introduction

This chapter provides detailed explanations concerning the study area and the research methods. It includes description of the study area, study design, variables and data collection techniques. Furthermore, the chapter describes the study population, selection criteria, sample size and type of sampling technique applied. It also highlights the data management and analysis, measurements used during data analysis and the way reliability issues were addressed as well as Ethical issues.

3.2 Area of study

The study was conducted in Ilala Municipality. Ilala is among five Municipal Councils of Dar es Salaam City. Ilala Municipal was selected because of its easy accessibility as it is more urbanized than other Municipal Councils of Dar es Salaam, and based on that factor; it was assumed that students in the study area are more prone to temptations as regards to behaviors that put them into risk for pregnancy. Thus the study aimed at revealing their level of knowledge as regards to the risk behavior to pregnancy and their related services, and the magnitude of their inbuilt strength to resist the risk behavior. The study was conducted in day scholar's secondary schools only. However, both type of schools were included in the study, two (2) girls only schools and eight (8) schools that had both sex (Co-education)

3.3Study design

A descriptive cross-sectional study and was effected by the use of structured questionnaires. The study was conducted in July 2017. A cross-sectional design was selected because of its convenience in terms of time and nature of data collected.

3.4Target population

The study involved adolescent girls with the age between 15 and 19 years, who are in secondary schools in Ilala Municipality. This age group was selected because of being sexually active and vulnerable to the risk behaviors, which include sexual behaviour that can lead to early pregnancy and other consequences.

3.5 Inclusion and exclusion criteria

3.5.1 Inclusion criteria

This study involved adolescent girls aged between 15 and 19 years, from both private and public secondary schools of Ilala Municipality.

3.5.2 Exclusion criteria

The subjects who were not able to communicate verbally

3.6Sample Size

The sample size was calculated from the proportion of 27 per cent, which is the proportion of teenage pregnancy in the country (TDHS 2015/2016). The confidence interval of 95% and margin error of 5% were employed.

Therefore, the sample size was calculated as shown below:

$$N = \frac{Z^2 p(100 - p)}{E^2}$$

Where by:

N = Sample size

P = 27 % - Proportion of adolescent pregnancy in the country (TDHS 2015-2016)

Z = Standard normal deviation set at 1.96 for 95% Confidence interval

E = Margin of error set at 5%

$$N = \frac{(1.96)^2 27(100-27)}{5^2}$$

$$N = \frac{3.8416 \text{ x } 27\ x\ 73}{25}$$

$$N = 303$$

By assuming10% non-response,1/R x N was employed to get the final sample size. Where, R is a response rate and N is the sample size.

Therefore, the final sample size (n) = 1/90 x 303 = 303/0.9 = 336.6 ≈ 340.

3.7Sampling process

Simple random sampling was used to get the study units. Balloting technique was employed to get 10 wards and 10 schools, one from each selected ward. The list of all 29 wards was obtained and name of each ward was written on a separate piece of paper, folded and put in a box. Each piece of paper was picked randomly until 10 wards were obtained. The second round of selection involved selecting one school from each ward, whereby, all names of schools from each selected ward were written on separate piece of papers and folded, one piece of folded paper was randomly picked to get a total of 10 schools(namely: Air wing, Chanika, Dar es salaam, Kinyamwezi, Kisutu, Majaniya chai, Nyeburu, Vingunguti, Viwege and Zanaki, secondary schools)

In the last stage, simple random sampling was used to select study participants. Such sampling method was applied because it ensures an equal chance for individuals in the population to be included in the study. Also, the method enhances representativeness and minimizes sampling bias. For each of the sampled schools, girls born between 1998 and 2002werelisted based on school register, one day before data collection. Ballot papers were prepared for each participant to pick one piece of folded paper. The papers were written either **Yes** or **No,** or only 34 papers were written YES. All eligible students were given a chance to pick only one piece of paper and reported the type of paper she picked, whether it was Yes or No. A total of

34 study subjects were random obtained from each of ten schools through this technique, and therefore, a study sample of 340 respondents reached and all were day scholars.

3.8 Methods of data collection

Data were collected using a questionnaire, which consisted of structured questions, and mostly with closed ended questions. The questionnaire was developed in English and translated into Swahili Language. The questionnaire collected information on demographic profiles of participants; knowledge, attitude and perception on pregnancy and pregnancy risk.

3.9 Variables

In this study, the dependent and independent variables were measured as follows:

3.9.1 Dependent Variables

The dependent variable was risk for pregnancy which was measured using three items adopted from Illustrative questionnaire for interview with young people. Respondents were asked whether one ever had sexual intercourse (Yes = 1; No =0); whether used a condom always when having sexual intercourse (Yes = 1; No =0) and whether they use any contraceptive method (Yes = 1; No =0).

3.9.2 Independent Variables

Independent variables included the following:

- *Individual characteristics:* were measured as nominal variables and consisted of age, religion, custody of parents and school grade.
- *School characteristics:* included school ownership and school composition.
- *Knowledge on pregnancy prevention:* was measured using 6 items (statements) measured by three responses either true (=1) or not true (=2) or don't know (=3).
- *Attitude towards pregnancy prevention:* was measured using 9 items measured by using a five point Likert scale scored from 1 to 5. They include; I strongly disagree (=1), disagree (=2), undecided (=3), Agree (=4) and strongly disagree (=5)

- *Perceptions about pregnancy prevention:* was measured using 3 items measured by using a five point Likert scale scored from 1 to 5. The response were; I am not confident at all (=1), I am not confident (=2), I don't know (= 3), I am confident (= 4) and I am very much confident (= 5)

3.10 Validity and reliability issues

3.10.1 Pre-testing

The pre-testing of the questionnaire was conducted prior to data collection, in one of the schools, which was not among those schools that participated in the study. The aim of the pre-test was to check how effective is the tool in collecting the intended information from the target population, as regards to the accuracy and consistency. Review of the questionnaires was done and all the necessary modifications were accommodated for some of the questions, based on the findings of the pre-test. Modifications that were effected in the tools includes; changing of some of the questions in terms of quality, arrangement, as well as correction of topographical errors.

3.10.2 Reliability of measures

3.10.2.1 Reliability analysis for attitudes towards pregnancy prevention

Reliability analysis was conducted to determine formation of attitude scale. The item questions had alpha scale value of 0.75 (6 items) and analysis for specific items are as shown in Table 2.

Table 1: Reliability analysis for attitude items

Attitudinal item:	Cronbach's Alpha if Item Deleted
I would feel secured if my male partner uses a condom when having sexual intercourse when I am still in school	0.761
I would be uncomfortable if a man pulls out his penis before climax to prevent me from pregnancy	0.760
It would be upsetting for me to be compelled to avoid sexual intercourse on when I am likely to become pregnant	0.740
It would be worthless for me to take a contraceptive pill soon after having sexual intercourse to avoid becoming pregnant	0.724
It would be embarrassing if I were to have a contraceptive injection every 2 or 3 months to avoid getting pregnant while I am still in school	0.723
It would be boring if I were to take a contraceptive pills every day to avoid getting pregnant while I am still in school	0.709

3.10.2.2 Reliability analysis for perceived efficacy towards pregnancy prevention

Reliability analysis was conducted to determine formation of scale for perceived efficacy towards pregnancy prevention. The scale had alpha value of 0.71 (3 items) and analysis for specific items are as shown in Table 3.

Table 2: Reliability analysis for perceived efficacy items

Perceived Self-efficacy scale item:	Cronbach's Alpha if Item Deleted
To what extent are you confident that you can insist on condom use every time you have sexual intercourse before you are married?	0.624
To what extent are you sure that you would refuse to have sex with someone who is not prepared to use a condom?	0.592
To what extent are sure that you can resist coerced sex when you know that you are at risk of becoming pregnant?	0.651

3.11 Data Collection Procedures and Management

3.11.1 Recruitment and training of research assistants

The Principal investigator conducted a one day training to three research assistants. The aim of the training was to make research assistants familiar to the questionnaires. Thus capacitating them to make correct recording of the required information, make them aware of research ethics issues, to inform them about the work schedule and other logistics. During data collection, research assistants were close to participants, ready to provide clarification whenever needed. The research assistants were closely supervised by the PI on daily basis, to ensure that procedures and schedule are adhered to.

3.11.2 Data Collection Procedures

Data was collected in the classrooms during school days. Filling of the questionnaires was preceded by explanation about the study and accomplishment of informed consent. Self-administered questionnaires were used for data collection.

3.11.3 Management of data

Questionnaires were collected from study participant son daily basis. The questionnaires were checked for completeness of data as well as the uniformity and consistency and thereafter, they were assigned the numbers serially. Finally, the coded questionnaires were kept in labeled envelopes.

3.11.4 Data Processing and Analysis

Data coding was done before entry and categorization was done after entry so as to prepare data for computer processing and analysis. Data cleaning and analysis was performed using Statistical Package for Social Sciences (SPSS) software Version 23. Descriptive analysis that included frequency tables, comparative analysis of mean differences was performed to determine the association between knowledge, attitude and perceptions in relation to socio-demographic characteristics. Similarly, the association between pregnancy risk behaviour and socio-demographic characteristics was also measured. The age and school grade were re-categorized to facilitate analysis and reporting. A p-value of less or equal 0.05 was considered statistically significant to establish the association between dependent and independent variables. Specifically, data for the proposed study was analyzed as follows:

- Socio-demographic characteristics (age, religion, school grade, school ownership and school composition were analyzed in terms of frequency and percentage.
- Knowledge on pregnancy prevention statements were analyzed first by scoring each of the three responses (depending on correctness of response) as Correct (=1) and Incorrect (=0). Then, all 6 items were added to compose KNOWLEDGE Index that was associated with risk for pregnancy by comparison of means. The score ranged from 0 to 6.
- Attitude towards pregnancy prevention statements were analyzed first in frequencies and percentages of each of 6 items. Then, all 6 items were added to compose ATTITUDE Index that was associated with risk for pregnancy by comparison of mean. The score ranged from 6 to 30.
- Perceived-efficacy towards pregnancy statements were analyzed first in frequencies and percentages of each of 3items.Then, all 3 items were added to compose

PERCEPTION Index that was associated with risk for pregnancy by comparison of mean. The score ranged from 3 to 15.

- Each of socio-demographic characteristic was associated with KNOWLEDGE scale, ATTITUDE scale, PERCEPTION scale as well as risk for pregnancy.

3.12 Ethical Considerations

Ethical clearance was obtained from Institutional Review Board (IRB) of Muhimbili University of Health and Allied Sciences (MUHAS). Permission to conduct the study in the respective areas was obtained from Regional Administrative Secretary down to the District Administrative Secretary and finally, to the Director of Ilala Municipal Council, who wrote an introduction letter to the Municipal Secondary Education Officer. The above cascade was achieved following submission of introduction letter from MUHAS. Municipal Education Officer was briefed about the study by a letter she received from the Municipal Director. Head of schools where the study was conducted were introduced to the study one day before data collection. On the same day, a list of eligible participants was collected form the school as the initial stage of preparing selection of participants. Selected participants were informed about the aim and objectives of conducting the study. Also, participants were educated about their freedom to decide whether to take part or not to participate in the study. It was clearly explained that they were free to withdrawal from participating in the study at any point, and that any participant who decides to withdraw, will not be subjected to any penalty whatsoever**.** Moreover, participants were allowed to ask questions and were assured that their identities will be hidden. Finally, those who were willing to participate in the study, were given a consent form for them to read through and sign and those who were not ready to participate were replaced.

CHAPTER FOUR

4.0 RESULTS

4.1 Introduction

This chapter presents findings of the study. The chapter provides information about the characteristics of study participants, proportion of participants who are practicing sex, which in this study, is regarded as risk behaviours to pregnancy. The chapter also have the findings regarding the association between risk behaviour and knowledge, attitude and perceptions of respondents.

4.2Socio-demographic characteristics of study participants

This study involved a total of 340 participants from 10 secondary schools of Ilala Municipality and all participants were day scholars. Respondents from public schools formed a larger part of the study participants 90% (306) and the study was dominated by those who study in co-education schools 79.7% (271). Participants were girls of the age between 15 and 19 years and the mean age was 17.2 years. The study group covered students from form one to form four. The participants were grouped into two categories for easy description and analysis and majority of the study participants were in the category of the aged between 15-17 years. (Table3)

Table 3: Socio-demographic characteristics of respondents (N=340)

Variable	Frequency	Percentage (%)
Individual Characteristics		
Age		
≤ 17 Years	315	92.6
18 -19 Years	25	7.4
Religion		
Christian	173	50.9
Moslem	167	49.1
Living with Father/Male Guardian		
Yes	240	70.6
No	100	29.4
Living with Mother/Female Guardian		
Yes	298	87.6
No	42	12.4
School grade		
Form One to Three	213	62.8
Form Four	127	37.4
School characteristics:		
School ownership		
Public	306	90.0
Private	34	10.0
School composition		
Co-education	271	79.7
Girls only	68	20.3

4.3 Proportion of secondary school adolescent girls reported to practice behaviour that depict high risk of pregnancy

This objective aimed to identify participants who have been exposed to sexual practice, which is regarded as a behaviour that put them into a high risk of getting pregnancy. In this study, it is has been revealed that 4.4% (15) out of 340 respondents had sex before. Among participants who had sex, 60 % (9) use contraceptive pills and condom, while 13.3% (2) used a condom

only when they had sexual intercourse and the remaining 26.7% (4) neither used a condom nor contraceptive pills before.

4.4Knowledge about pregnancy prevention and its association with socio-demographic characteristics

4.4.1 Knowledge of participants about pregnancy prevention

Table 4 shows participants responses on the knowledge item about pregnancy prevention. The study revealed that 60.3% (205) had the knowledge that if a man put on a condom can avoid impregnating a woman when having sexual intercourse,32.8% (111) knew that proper use of contraceptive injection prevents a woman from pregnancy and 25.3% (86) respondents had the knowledge that if a woman take contraceptive pills daily, she can avoid pregnancy. On the other hand, only 18.5% (63)knew that if a woman uses contraceptives daily, can't get pregnancy even if she practices sex without using a condom and 12.1% (41) knew that if a woman take emergency contraceptive pill soon after sexual intercourse, can avoid pregnancy.

The score range was 0 – 1 and the minimum score was 0 and the maximum score one could get was 6. Overall, the mean for the knowledge item was 3.5(SD=1.9).

Table 4: Participants responses for the item knowledge about pregnancy prevention (N=340)

Knowledge item	True		False		Don't know		% Correct
	n	%	n	%	N	%	
A man who has sexual intercourse with a woman can put a condom on his penis before intercourse to avoid pregnancy	205	60.3	47	13.8	88	25.9	**60.3**
If a woman gets an injection every two or every three months she can avoid becoming pregnant	111	32.8	67	19.7	162	47.6	**32.8**
If a woman takes a contraceptive pill every day she can avoid getting pregnant	86	25.3	98	28.8	156	45.9	**25.3**
When having sexual intercourse, a man can avoid impregnating a woman by pulling out his penis from her vagina before a climax	82	24.1	44	12.9	214	62.9	**24.1**
A woman who practices sex without using a condom can get pregnant even if she uses contraceptives	111	32.6	63	18.5	166	48.8	**18.5**
If a woman takes emergency contraceptive pills soon after intercourse she cannot become pregnant	41	12.1	133	39.1	166	48.8	**12.1**

4.4.2 Association between socio-demographic characteristics and knowledge about pregnancy prevention

Table 5 shows results for the knowledge mean differences between different groups. The study revealed that there are difference in knowledge about pregnancy prevention between groups. Specifically, respondents with the age 18-19, are more knowledgeable about pregnancy prevention that those in the age group 17 years or less. The difference was found to be statistically significant (F=4.137, p=0.007)

The study revealed statistically significant difference(F=9.948, p = 0.000), in knowledge based on school grades. Students in form four were more knowledgeable about pregnancy prevention, than those in form 1 - 3. Lastly, statistical significant difference (F=4.484, p = 0.028), was also found in the type of school, of which students in co-education had more knowledge on pregnancy prevention than those from the girls only schools.

On the other hand, there was no statistical significant difference in knowledge about pregnancy prevention between religious groups and school ownership.

Table 5: Mean differences of knowledge about pregnancy prevention between different socio-demographic groups

Variable	(N)	Mean (SD)	F	p-value
Age				
≤ 17Years	215	3.40 (1.928)	4.136	**0.007**
18 - 19 Years	25	4.00 (1.732)		
Religion				
Christian	173	3.51 (1.955)	0.434	0.511
Moslem	167	3.38 (1.884)		
School grade				
Form One to Three	213	3.08 (1.834)	9.948	**0.000**
Form Four	127	4.07 (1.975)		
School characteristics				
School ownership				
Public	306	3.44 (1.972)	0.006	0.940
Private	34	3.47 (1.376)		
School composition				
Girls only	68	3.90 (1.994)	4.848	**0.028**
Co-education	271	3.33 (1.886)		

**Scale range: 0=No knowledge; 6=fully knowledgeable*

4.5Attitude towards pregnancy prevention with association to socio-demographic characteristics

4.5.1 Attitude towards pregnancy prevention

Table 6 below shows the responses for questions about pregnancy prevention. About 64.1% (218) felt bored to take contraceptive pills everyday in order to prevent pregnancy, and 54.7% (186) revealed a sense of embarrassment to use contraceptive injection.

Participants 60.9% (207), showed a sense of discomfort if a man will be obliged to pull out his penis before climax in order to avoid impregnating a school girl, 50.9% (173) felt that it would be worthless to take emergency pill soon after intercourse in order to avoid pregnancy and 47.4 (167) showed a feeling of upset to compelled to avoid sexual intercourse during the days when they are more likely to become pregnant.

The score index ranged from 1 -5 and the minimum respondents could get was 5, and the maximum was 25. Overall, mean for attitude towards pregnancy prevention for 5items was 28.8.

Table 6: Participants responses for attitude towards pregnancy prevention (N=340)

Attitude item	Disagree		Neutral		Agree	
	N	(%)	n	%	n	%
It would be boring if I were to take a pill every day to avoid getting pregnant while I am still in school	88	(25.8)	34	(10.0)	218	**(64.1)**
It would be embarrassing if I were to have an injection every 2 or every 3 months to avoid getting pregnant while I am still in school	122	(35.9)	32	(9.4)	186	**(54.7)**
I would feel uncomfortable if a man pulls out his penis before climax to prevent me from pregnancy	207	**(60.9)**	65	(19.1)	68	(20.0)
It would be worthless for me to take emergency pill soon after having sexual intercourse to avoid becoming pregnant	131	(38.5)	36	(10.6)	173	**(50.9)**
It would be upsetting for me to be compelled to avoid sexual intercourse on days when I am likely to become pregnant	161	**(47.4)**	35	(10.3)	144	(42.4)

4.5.3 Attitude towards pregnancy prevention and socio-demographic characteristics

Table 7presents results for analysis done to determine the attitude towards pregnancy prevention between different groups based on the socio-demographic characteristics. The study findings revealed statistical significant association (F=8.829, p=0.003), between school grade. Those in higher grades showed a more negative attitude towards pregnancy prevention than those in grade 1 to 3. There was also a significant difference in school composition in which, girls coming from girl's schools only, had a negative attitude towards pregnancy prevention than those from Co-education schools school composition. The findings were also statistically significant (F=8.829, p = 0.053).

Table 7: Mean differences of attitude towards pregnancy prevention between different socio-demographic groups

Variable	N	Mean (SD)	F	p-value
Age				
17 years or less	315	28.62 (7.5)	2.099	0.148
18 – 19 years	25	3084 (5.8)		
Religion				
Christians	173	29.1 (7.3)	0.845	0.358
Moslems	167	28.4 (7.5)		
Living with father			0.012	0.913
Yes	240	28.8 (7.3)		
No	100	28.9 (7.7)		
Living with mother				
Yes	298	28.9 (7.4)	0.504	0.478
No	42	28.0 (7.6)		
School grade				
Form One to Three	213	27.9 (7.9)	**8.829**	**0.003**
Form Four	127	30.3 (6.2)		
School ownership				
Public	306	28.7 (7.5)	0.124	0.725
Private	34	29.2 (6.4)		
School composition			**3.773**	**0.053**
Girls only	68	30.3 (6.3)		
Co-education	272	28.4 (7.6)		

**Score range: 6 unfavorable attitude; 30=favorable attitude*

4.6Perceived Self-efficacy towards pregnancy prevention in relation to the socio-demographic characteristics

4.6.1 Perceived self- efficacy towards pregnancy prevention

Almost39.1% (133) respondents were neutral for the question that tested if they would insist the use of condom every time when they are having sex, before they are married, while 30% (102) were confident that they would insist on the use of condom. Also 38.2% (130) didn't know if they would refuse to have sex with someone who is not prepared to use a condom, but 34.7% (118) were very much sure that they would refuse. Again,42.1% (143) respondents were very much sure that they would resist coerced sex when they know that they are at risk of becoming pregnant, but for the same question 33.8% (115), didn't know if they would resist coerced sex (Table 8).

The score range for self-efficacy item was 1 (little efficacy) to 5 (most efficacy), the minimum score was 3 and the maximum was 15. The overall mean for the self-efficacy item was 10.5 (SD=3.3).

Table 8: Participants percentage in relation to perceived self- efficacy towards pregnancy prevention (N=340)

Perceived efficacy item	n	(%)
To what extent are you confident that you can insist on condom use every time you have sexual intercourse before you are married?		
I am not confident at all	53	(15.6)
Somehow not confident	16	(4.7)
Neutral	**133**	**(39.1)**
Somehow confident	36	(10.6)
I am confident	102	(30.0)
To what extent are you sure that you would refuse to have sex with someone who is not prepared to use a condom?		
I am not sure at all	49	(14.4)
Somehow not sure	12	(3.5)
I don't know	**130**	**(38.2)**
Somehow sure	31	(9.1)
I am very much sure	118	(34.7)
To what extent are sure that you can resist coerced sex when you know that you are at risk of becoming pregnant?		
I am not sure at all	36	(10.6)
Somehow not sure	17	(5.0)
I don't know	**115**	**(33.8)**
Somehow sure	29	(8.5)
I am very much confident	143	(42.1)

4.6.2 Perceived self - efficacy towards pregnancy prevention in relation to the socio-demographic characteristics

The study revealed that Christians were more likely to perceive efficacy than Muslims and the results were statistically significant (F=7.836,p= 0.005). On the other hand, form Four students had more perceived efficacy than those in lower grades (Form 1 to 3) and difference also was statistical significant(F = 34.189, p= 0.000). Lastly, the results revealed higher self-efficacy for girls coming from schools with girls students only, than those from co-education and the difference was statistically significant(F = 22.241, p= 0.000). (Table 9)

Table 9: Mean differences of perceived efficacy towards pregnancy prevention between different socio-demographic groups

Variable	N	Mean (SD)	F	p-value
Age				
17 years or less	315	10.5 (3.2)	0.330	0.856
18 - 19 years	25	10.4 (4.0)		
Religion				
Christians	173	10.9 (3.3)	**7.836**	**0.005**
Moslems	167	9.9 (3.2)		
School grade				
Form One to Three	213	9.7 (3.2)	**34.189**	**0.000**
Form Four	127	11.8 (3.0)		
School ownership				
Public	306	10.4 93.2)	1.769	0.184
Private	34	11.2 (3.6)		
School composition				
Girls only	68	12.1 (2.6)	**22.241**	**0.000**
Co-education	271	10.1 93.3)		

**Scale range: 3=Least efficacy; 15=Most efficacy*

4.7 Association between risk for pregnancy practice with knowledge, attitude and perceived efficacy

Table 10 revealed that girls who reported to had sex before, had higher knowledge mean scores for pregnancy prevention compared to those who had no sex before. The differences were statistically significant (F=4.477, p=0.035), There were no statistically significant differences in mean attitude and perceived efficacy scores between girls who had sex before and those who had never had sex before (Table 10)"

Table 10: Means scores for knowledge, attitude and perceived efficacy by responses to the question "Ever had Sex?"

Variables	Ever had sex		F	p-value
	Yes (n = 15) Means (SD)	No (n = 325) Means (SD)		
Knowledge*	4.5 (1.4)	3.4 (1.9)	4.477	**0.035**
Attitude**	30.7 (8.7)	28.7 (7.3)	0.473	0.492
Perceived efficacy***	10.4 (4.3)	10.5 (3.2)	0.008	0.929

*Scale range (6 items): 0 = not knowledgeable at all to 6 = completely knowledgeable

**Attitude (6 items): 6 = negative attitude to 30 = positive attitude

***Perceived efficacy (3 items): 3 = least efficacy to 15 = most efficacy

CHAPTER FIVE

5.0 DISCUSSION

This chapter discusses findings found in chapter four. Moreover, it focuses on addressing the study objectives in relation to the findings. Furthermore, the intention of having a discussion is also is to be able to compare the current study, with findings revealed in other similar studies in other parts of the world and to provide possible reasons for similarities or differences. Finally, the chapter discusses the public health importance of the prevailing condition**.**

5.1 Proportion of adolescents exposed to sex

In this study, 4.4% of students had exposure to sex by the time of the study, and older students had larger part among those who were exposed than the younger ones. The prevalence observed in this study is low compared to a findings reported in the THMIS. According to the THMIS report, 10 % of women aged 20-49 years had sex before they were 15 years and 50% were reported that they already had first sex before they reached 18 years(16). Tanzania Demographic and Health Survey(TDHS) reported that, by age of 15 – 24 years 12% of young women already had sexual intercourse.(17). The age groups involved in the study, is similar to the one dealt with in the current study. Therefore, it is an indication that adolescents in those age groups, are engaged in sexual practice for almost more than ten percent on average. The lower prevalence reported in the current study, could be attributed by the sample size and the nature of the adolescents involved in the study. The data reported in the THMIS and TDHS, was collected from adolescents in the general population, of which there are differences in characteristics of adolescents, with wider range of background. While the study at hand, interviewed only school girls who share the same background. With this observation, one could say that schooling has a protective effect against pregnancy based on the prevalence observed. However, more studies are required to confirm this observation.

Moreover, the findings obtained in this study indicate that secondary school students do practice the behaviour that predisposes them to the risk for pregnancy. Apart from the pregnancy risk, the sexual practices also make them vulnerable to contract sexually transmitted diseases that include HIV.

5.2 Knowledge about pregnancy prevention

The study revealed that, 60.3% (205) of respondents knew that condom has a protective effect against pregnancy. 32.8% (111) were aware that contraceptive injection prevents a woman from pregnancy and 25.3% (86) respondents had the knowledge that daily intake of contraceptive pills protects a woman from getting pregnant.

On the other hand, in the current study only 18.5% (63) knew that if a woman uses contraceptives pills daily, can't get pregnancy even if she practices sex without using a condom and 12.1% (41) knew that if a woman take emergency contraceptive pill soon after sexual intercourse, can avoid pregnancy. This signifies that there is a problem regarding the knowledge on preventive scope of different contraceptive methods and to prove this, we can look at the percentage of respondents who knew the effect of emergency contraceptive pill, which is even lesser than the former. The current study revealed that many respondents have information about condom use but nevertheless, they are not very familiar with its effect when combined with other contraceptive methods. It could be possible that they knew the effect of condom through HIV prevention teachings and not as a protection against pregnancy.

In comparison to a quantitative descriptive study which was done in South Africa, to determine the knowledge, attitudes and practices towards contraception among 273 secondary school girls, it was reported that 75% of respondents had good knowledge on contraception(20). High percentage of secondary school girls having the knowledge on contraception, was also observed from a cross sectional study done in Limpopo, to assess factors affecting the knowledge and prevalence of use of contraceptive methods, among 219 secondary school girls. The study reveals that 81% of study participants had enough knowledge on contraception (22). The two studies indicates done in other countries, indicate

that adolescents in secondary schools of other countries has higher knowledge on contraceptive methods (South Africa and Mozambique).

Furthermore, observation between groups in the current study, revealed that in the older students group (18 - 19),there were more girls who had the knowledge on pregnancy prevention than the young ones($F=4.137$, $p=0.007$), but unfortunately, sexual debut commences in younger age. Again, there was observed difference in knowledge about pregnancy prevention based on school grade ($F=9.948$, $p = 0.000$) and school composition($F=4.484$, $p = 0.028$). More girls from form four had knowledge than those from lower grades, probably could be due to experience which they gain over time from SRH teachings or from peers; and girls from Co-education schools were more knowledgeable about pregnancy prevention than those found in girl's only schools. However, these observations creates other avenues for further studies to be done.

Low knowledge on contraception observed in this study could be attributed to the nature of family planning services provided. In our set-up, the services are found in hospitals and clinics, of which it is difficult for the adolescents to access them because of lack of privacy and other socio-cultural factors(8).Increased knowledge on contraceptive use could play a very crucial role in prevention of pregnancy in adolescents of Tanzania. However, given the findings of this study it is alarming that there is much more to be done as regards to pregnancy prevention, targeting adolescent girls who are still in schools.

Thus, it is important to ensure that adolescents get the required RH knowledge so as to avoid other consequences like school dropout, increased number of street children and increased number of dependents and consequently expenditure to the family, resulting from unwanted, unplanned and untimed pregnancy.

5.3 Attitude to towards pregnancy prevention

The current study revealed a negative attitude of respondents towards pregnancy prevention. The students felt that it is not appropriate to get pregnancy while still in school, for almost 78.2% (266) of respondents. However, the results of this study concur with findings observed in a cross-sectional, exploratory-descriptive study done among adolescent students of Benin University in Nigeria, which aimed at examining student's attitude towards adolescent pregnancy, their perceptions pertaining to the causes of adolescent pregnancy and their beliefs pertaining to the consequences of adolescent pregnancy. The study observed that 85% felt that it is wrong to become pregnant at adolescent age(34).

Furthermore, it was observed in this study that girls had a negative attitude towards pregnancy prevention to the higher level of 64.1% (218), felt bored to take contraceptive pills and embarrassed to get a contraceptive injection so as to prevent them from pregnancy.

This negative attitude towards pregnancy prevention put the adolescents on the disadvantage side as they become susceptible to unwanted, untimed and unplanned pregnancy once exposed to sexual intercourse. The negativism could be attributed to the poor knowledge on contraception, religious affiliation and socio-cultural behaviours prevailing in the societies.

5.4 Perceived efficacy towards pregnancy prevention

As regards to perceived efficacy pregnancy prevention, the study revealed a mixed picture for self-efficacy. It has been observed in this study this that participants had very low perceived efficacy towards pregnancy prevention. This was reflected by their responses as many had neutral and don't know responses, meaning that there is a big gap in relation to the confidence to stand in their position for defence. By considering their age, the findings of this study are in line with the observation revealed by Reyna that, the adolescents engage in risk behaviours that include sexual behaviours because of

their poor perception of risk, resulting from immature mental processing and rational decision making(35). She further argues that, they values immediate benefit and peer recognition than the consequences of their decision.

Nevertheless, despite of the general low efficacy, there was observed differences in self-efficacy in two groups, which were statistically significant. The study revealed higher efficacy among Christians students in comparison to the Muslims and the differences were statistically significant (F=7.836,p= 0.005). On the other hand, form Four students had high self-efficacy towards pregnancy prevention, than those in lower grades (Form 1 to 3), thus the students in high grades had self-confidence and the difference also was statistical significant(F = 34.189, p= 0.000). The school composition also showed statistically significant results, in the sense that respondents coming from schools with girls only, were reported to have higher self-efficacy than those form co-education (F = 22.241, p= 0.000).There could be reasons behind this but they need to be scientifically identified and proved.

5.5 Study limitations and mitigation

This study involved collecting data, which required recalling of information with respect to the knowledge item which, involved recalling of information and the information collected was sensitive. Therefore, it required high level of confidentiality and trust, so as to ensure that information is guaranteed. Therefore, it was important to make sure that there is a conducive environment for participants to volunteer the information needed and make sure the study objectives are not distorted. The effects were minimized by the use of simple, relevant, and reliable questions; and the principal investigator in collaboration with the school head, ensured maximum privacy and conducive environment for data collection**.**

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

This study observed low prevalence of exposure to sex compared to other surveys done to almost similar group and reported in the THMIS and TDHS. The latter had higher prevalence but the difference could be attributed by the differences in the backgrounds of the study population in terms of other characteristics apart from the age. The former data was collected from the school girls while the latter came from the general population.

The study revealed that the respondents were knowledgeable about pregnancy prevention, though the percentage of those who had the knowledge is not very much impressive compared to the studies done in Mozambique and Ethiopia. However, the fact that few young girls had knowledge on pregnancy prevention has bad consequences to their scope of pregnancy prevention and they stand a high chance of getting pregnancy.

Negative attitude to pregnancy prevention was observed across the socio-demographic scope but with differences. The negativism towards pregnancy prevention was more marked in girls at higher levels despite the fact that a good number of them were knowledgeable about pregnancy prevention. This put them in the risk of pregnancy. Generally, the girls had low self- efficacy, although the differences existed between some groups with some groups having a bit higher self-efficacy than the other.

In view of the information collected from this study, it has been observed that adolescents girls were engaged in sex but, few have reliable knowledge that make them safe from getting pregnancy, majority were note safe. On the other hand, the observation that respondents had negative attitude towards pregnancy prevention and had large group had low self-efficacy, towards pregnancy prevention they are predisposed to pregnancy. In this study, the above factors have been to be the risk factors for pregnancy.

6.2 Recommendations

Based on the findings of the current study in relation to pregnancy prevention, there is a need for school girls to access messages on issues of pregnancy prevention. This can be done through sexual and reproductive health (SRH) teachings in science subjects as well as availing school girls with Information, Communication and Education (IEC) materials such as leaflets, brochures and others.

The school management to hold meetings with parents in order to empower and encourage parents to provide education on sexuality and prevention of pregnancy

A qualitative study should be conducted so as to have an in-depth discussion with school girls, in order to explore the reasons that lead to their negative attitude towards pregnancy prevention. The results the study will enable the responsible parties to lay down specific strategies that will enhance a change of attitude among adolescents. The study should be extensive to cover both parents and students.

REFERENCES

1. Books Download Mosby S Medical Dictionary PDF Download Book details. 2016;10.

2. Jain M, Jain S, Patil S, Bang A. A study on knowledge, attitude and practice of sexually transmitted diseases and HIV in adolescent population in Wardha, Maharashtra, India. Int J Contemp Pediatr. 2016;3(2):367–72.

3. UNFPA. State of world population 2009. Facing a changing world: women, population and climate. Environment. 2009;94.

4. Mendes SS, Moreira RMF, Martins CBG, Souza SPS, de Matos KF. Knowledge and attitudes of adolescents on contraception. Rev Paul Pediatr. 2011;29(3):385–91.

5. UNFPA. Adolescent Pregnancy: A Review of the Evidence. Unfpa [Internet]. 2013;53.

6. Willian S. A Review of Teenage Pregnancy in South Africa – Experiences of Schooling , and Knowledge and Access to Sexual & Reproductive Health Services. Partners Sex Heal. 2013;(April):1–63.

7. Eloundou-Enyegue Pm. Pregnancy-Related Dropouts and Gender Inequality in Education: A Life-Table Approach and Application To Cameroon*. Demography. 2004;41(3):509–28.

8. Mbeba RM, Mkuye MS, Magembe GE, Yotham WL, Mellah AO, Mkuwa SB. Barriers to sexual reproductive health services and rights among young people in Mtwara district, Tanzania: a qualitative study. Pan Afr Med J. 2012;13 Suppl 1:13.

9. Panday S, Makiwane M, Ranchod C, Letsoalo T. Teenage Pregnancy in South Africa - With a Specific Focus on School - Going Learners. Basic education. 2009. 2008 p.

10. O'Brien MP, Zinberg JL, Ho L, Rudd A, Kopelowicz A, Daley M, et al. Family problem solving interactions and 6-month symptomatic and functional outcomes in youth at ultra-high risk for psychosis and with recent onset psychotic symptoms: A longitudinal study. Schizophr Res. 2009;107(2–3):198–205.

11. Muhanguzi FK. Gender and sexual vulnerability of young women in Africa: experiences of young girls in secondary schools in Uganda. Cult Health Sex. 2011;13(6):713–25.

12. Grant MJ, Hallman KK. Pregnancy-related school dropout and prior school performance in KwaZulu-Natal, South Africa. In: Studies in Family Planning. 2008. p. 369–82.

13. Kirby D. Antecedents of adolescent initiation of sex, contraceptive use, and pregnancy. Am J Health Behav. 2002;26(6):473–85.

14. Abuya B a., Onsomu EO, Moore D, Sagwe J. A Phenomenological Study of Sexual Harassment and Violence Among Girls Attending High Schools in Urban Slums, Nairobi, Kenya. J Sch Violence. 2012;11(4):323–44.

15. Sifuna DN. A review of major obstacles to women's participation in higher education in Kenya. Res Post-Compulsory Educ. 2006;11(1):85–105.

16. Tacaids. HIV/AIDS and Malaria Indicator Survey 2007-08. Nature [Internet]. 2008; Available from: http://dhsprogram.com/pubs/pdf/AIS6/AIS6_05_14_09.pdf

17. Survey H, Survey I. Tanzania. 2015;

18. Bogale A, Seme A. Premarital sexual practices and its predictors among in-school youths of Shendi town, west Gojjam zone, North Western Ethiopia. Reprod Health [Internet]. 2014;11(1):49.

19. Chi X, Yu L, Winter S. Prevalence and correlates of sexual behaviors among university students: a study in Hefei, China. BMC Public Health [Internet].

2012;12(1):972.

20. Ramathuba U. D, Khoza B. L, Netshikweta L. M. Knowledge, attitudes and practice of secondary school girls towards contraception in Limpopo Province. Curationis [Internet]. 2012;35(1). v

21. Kakai R. Knowledge , Attitude and Practice of Condom use among Secondary School Students in Kisumu District , Nyanza Province. 2016;(December).

22. Skrzeczkowska A, Heimrath J, Surdyka J, Zalewski J. Knowledge of contraceptive methods among adolescents / young adults. 2015;125(3):144–8.

23. Renjhen P, Kumar A, Pattanshetty S, Sagir A, Samarasinghe CM. A study on knowledge, attitude and practice of contraception among college students in Sikkim, India. J Turkish Ger Gynecol Assoc. 2010;11(2):78–81.

24. Kagashe GAB, Honest G. Knowledge and use of contraceptives among secondary school girls in Dar es Salaam Tanzania. J Appl Pharm Sci. 2013;3(1):66–8.

25. Dulitha F, Nalika G, Upul S, Chrishantha WM, Alwis SR De, Chithramalee DS, et al. Risk factors for teenage pregnancies in Sri Lanka: perspective of a community based study. 2013;7.

26. Sheela M, Devi ANMKC. Pregnancy Among Unmarried Adolescents and Young Adults. 2013;63(February):49–54.

27. Atuyambe L, Mirembe F, Tumwesigye NM, Annika J, Kirumira EK, Faxelid E. Adolescent and adult first time mothers' health seeking practices during pregnancy and early motherhood in Wakiso district, central Uganda. Reprod Health. 2008;5:13.

28. Nsubuga H, Sekandi JN, Sempeera H, Makumbi FE. Contraceptive use, knowledge, attitude, perceptions and sexual behavior among female University students in Uganda: a cross-sectional survey. BMC Womens Health. 2016;16(1):6.

29. HB SCSVM. Attitudes of adolescent girls towards contraceptive methods. TT - . Australas Med J. 2011;4(1):43–8.

30. Tilahun M, Mengistie B, Egata G, Reda A a. Health workers' attitudes toward sexual and reproductive health services for unmarried adolescents in Ethiopia. Reprod Health. 2012;9(1):19.

31. Capurchande R, Coene G, Schockaert I, Macia M, Meulemans H. "It is challenging… oh, nobody likes it!": a qualitative study exploring Mozambican adolescents and young adults' experiences with contraception. BMC Womens Health. 2016;16(1):48.

32. Krugu JK, Mevissen FEF, Prinsen A, Ruiter RAC. Who's that girl? A qualitative analysis of adolescent girls' views on factors associated with teenage pregnancies in Bolgatanga, Ghana. Reprod Health. 2016;13:39.

33. Espada J, Morales A, Guillén-Riquelme A, Ballester R, Orgilés M. Predicting condom use in adolescents: A test of three socio-cognitive models using a structural equation modeling approach. BMC Public Health. 2016;16(1):35.

34. Osaikhuwuomwan JA, Osemwenkha AP. Adolescents' perspective regarding adolescent pregnancy, sexuality and contraception. Asian Pacific J Reprod [Internet]. 2013;2(1):58–62. Available from: http://dx.doi.org/10.1016/S2305-0500(13)60118-9

35. Reyna VF, Estrada SM, DeMarinis J a, Myers RM, Stanisz JM, Mills B a. Neurobiological and memory models of risky decision making in adolescents versus young adults. J Exp Psychol Learn Mem Cogn. 2011;37(5):1125–42.

APPENDICES

Appendix I A: Questionnaire (English)

Questionnaire NO: …….

Name of the School: …….

Date of the Interview: ……

A. INDIVIDUAL AND SCHOOL CHARACTERISTICS:

This section comprises questions that describe you or your school. Circle or fill-in appropriate response for all questions

1. How old are you? …….. (age in years)

2. What is your religion?

1. Christian
2. Moslem
3. Other (mention)……

3. How important is religion in your life?

1. Very much important
2. Somehow important
3. Somehow not important
4. Not important at all

4. Does your father/male guardian live in the same household as you (or when you are on holidays)?

1. I have no father/male guardian
2. Yes
3. No

5. What is the occupation of your father/male guardian?

1. I have no father/male guardian
2. Peasant/farmer
3. Employed
4. Business
5. Others (mention)…….

6. Does your mother/female guardian live in the same household as you (or when you are on holidays)?

1. I have no mother/female guardian
2. Yes
3. No

7. What is the occupation of your mother/female guardian?

1. I have no mother/female guardian
2. Peasant/farmer
3. Employed
4. Business
5. Housewife
6. Others (mention)…….

8. What is your school grade?

1. Form 1
2. Form 2
3. Form 3
4. Form 4

9. Is your school public or private owned?

1. Public
2. Private

10. Is you school single sex or co-education?

1. Single sex
2. Co-education

B. KNOWLEDGEONPREGNANCY PREVENTION:

Each of the following statements, CIRCLE the number corresponding to your response, whether you think the statement is true, or false, or whether you don't know.

11. If a school girl takes a pill every day she can avoid getting pregnant

1. True
2. False
3. Don’t know

12. If a school girl gets an injection every two or every three months she can avoid becoming pregnant

1. True
2. False
3. Don’t know

13. A man who has sexual intercourse with a school girl can put a condom on his penis before intercourse to avoid impregnating such a girl

1. True
2. False
3. Don’t know

14. If a school girl takes pills soon after intercourse she cannot become pregnant

1. True
2. False
3. Don’t know

15. When having sexual intercourse, a man can avoid impregnating a school girl by pulling out his penis from her vagina before a climax

1. True
2. False
3. Don't know

C. ATTITUDE TOWARDS PREGNANCY PREVENTION:

Please read each statement carefully and put a circle around the number of your choice from a list of responses on the extent to which you agree or disagree with the statement.

16. It would be boring if I were to take a pill every day to avoid getting pregnant while I am still in school

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

17. It would be embarrassing if I were to have an injection every 2 or every 3 months to avoid getting pregnant while I am still in school

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

18. I would feel secured if my male partner was to use a condom when having sexual intercourse when I am still in school

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

19. It would be worthless for me to take a pill soon after having sexual intercourse to avoid becoming pregnant

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

20. I would feel uncomfortable if a man pulls out his penis before climax to prevent me from pregnancy

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

21. It would be upsetting for me to be compelled to avoid sexual intercourse on days when I am likely to become pregnant

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

D. PERCEPTIONS ABOUT PREGNANCY PREVENTION:

Please read each statement carefully and put a circle around the number of your choice from a list of responses given after each statement.

22. To what extent are you confident or not confident that you can insist on condom use every time you have sexual intercourse before you are married

1. Not confident at all
2. Not confident to some extent
3. Undecided
4. Confident to some extent
5. Very much confident

23. To what extent are you sure or not sure that you would refuse to have sex with someone who is not prepared to use a condom

1. Not sure at all
2. Not sure to some extent
3. Undecided
4. Sure to some extent
5. Very much sure

24. To what extent are you sure or not sure that you can resist coerced sex when you know that you are at risk of becoming pregnant

1. Not sure at all
2. Not sure to some extent
3. Undecided
4. Sure to some extent
5. Very much sure

E. RISK FOR PREGNANCY:

25. Have you ever had penetrative sex?

1. Yes
2. No

If **YES**, answer questions 36 to 38

26. Did a boy or a man ever put his penis inside your vagina?

1. Yes
2. No

27. Did you or he use a condom when he put his penis inside your vagina?

1. Yes
2. No

28. Were you using any contraceptive method when he put his penis inside your vagina?

1. Yes
2. No

Appendix IB: Questionnaire (Kiswahili)

Questionnaire NO: ……

Name of the School:……
Date of the Interview:……..

A. TAARIFA BINAFSI ZA MSHIRIKI:

Sehemu hii ina maswali ambayo yanalenga kupata taarifa zako.Zungushia duara/jaza taarifa sahihi kwa kila swali:

1. Una Umri gani? …….. (Miaka).

2. Dini gani?
   1. Mkristo
   2. Muislam
   3. Nyingineyo (taja)……

3. Je unadhani dini ina umuhimu gani katika maisha yako?
   1. Ni muhimu sana
   2. Kiasi fulani ni Muhimu
   3. Sio muhimu
   4. Sio muhimu kabisa

4. Je unaishi pamoja na Baba/baba mlezi kwenye nyumba moja?
   1. Sina Baba/Baba mlezi
   2. Ndio
   3. Hapana

5. Je baba/Baba mlezi yako anafanya kazi gani?
   1. Sina Baba/Baba mlezi
   2. Mkulima
   3. Mwajiriwa

4. Mfanya biashara
5. Nyingineyo (taja)…….

6. Je unaishi pamoja namama/Mama au Mlezi kwenye nyumba moja?

1. Sina mama/mama mlezi
2. Ndio
3. Hapana

7. Je Mama/Mama Mezi anafanya kazi gani?

1. Sina Mama/Mama mlezi
2. Mkulima
3. Mwajiriwa
4. Mfanya biashara
5. Mama wa nyumbani
6. Nyingineyo (taja)…….

8. Uko darasa la ngapi?

1. Kidato cha 1
2. Kidato cha 2
3. Kidato cha 3
4. Kidato cha 4

9. Je shule yako ni ya serikali au Binafsi?

1. Serikali
2. Binafsi

10. Je shule yako ni ya wasichana tu au mchanganyiko na wavulana”

1. Wasichana
2. Mchanganyiko na wavulana

B. ELIMU KUHUSU KUZUIA MIMBA:

Kwa kila sentensi iliyoainishwa hapa chini, ZUNGUSHIA DUARA namba unayoona inafanana na jibu lako, endapo unafikiri kwamba sentensi hiyo ni kweli, sio kweli au hujui jibu.

11. Msichana akimeza vidonge vya uzazi wa mpango kila siku anaweza kuepuka mimba.

1. KWELI
2. SIO KWELI
3. SIJUI

12. Kama mwanafunzi msichana akichoma sindano kila baada ya miezi miwili au mitatu anaweza kuepuka mimba.

1. KWELI
2. SIO KWELI
3. SIJUI

13. Mwanaume anapojamiiana na mwanafunzi anatakiwa kuvaa komndomu ili kuepuka kumpa ujauzito mwanafunzi.

1. KWELI
2. SIO KWELI
3. SIJUI

14. Mwanafunzi akinywa kidonge cha kuzuia mimba mara tu baada ya tendo la kujamiiana, hawzi kupata mimba.

1. KWELI
2. SIO KWELI
3. SIJUI

15. Mwanaume anapofanya tendo la kujamiiana, anaweza kuepuka kumpa mimba mwanafunzi kwa kutoa nje uume wake kabla hajafikia kilele.

1. KWELI
2. SIO KWELI
3. SIJUI

C. MTAZAMO (ATTITUDE) KUHUSU NJIA ZA KUZUIA MIMBA:

Tafadhali soma kila sentensi kwa uangalifu na zungushia duara namba ya chini yake ambayo umeichagua kutka kwenye orodha ya majibu kuonyesha kuwa UNAKUBALI, AU HUKUBALIANI na sentensi.

16. It would be boring if I were to take a pill every day to avoid getting pregnant while I am still in school

1. SIKUBALIANI KABISA
2. SIKUBALIANI
3. SIKUBALIANI WALA SIKATAI
4. NINAKUBALIANA
5. NINAKUBALIANA SANA

17. Inakuwa ni aibu kama nitatakiwa kuchoma sindano kila baada ya miezi 2 au 3, ili kuepuka kupata mimba nikiwa shuleni.

1. SIKUBALIANI KABISA
2. SIKUBALIANI
3. SIKUBALIANI WALA SIKATAI
4. NINAKUBALI
5. NINAKUBALIANA SANA

18. Nitajisikia niko salama endapo rafiki yangu wa kiume atatumia kondomu wakati wa kufanya tendo la ndoa nikiwa bado mwanafunzi.

1. SIKUBALIANI KABISA
2. SIKUBALIANI
3. SIKUBALIANI WALA SIKATAI
4. NINAKUBALI
5. NINAKUBALIANA SANA

19. Haitakuwa na faida yeyote kwangu kumeza kidonge mara baada ya kufanya tendo la kujamiiana ili kuzuia mimba.

1. SIKUBALIANI KABISA
2. SIKUBALIANI
3. SIKUBALIANI WALA SIKATAI
4. NINAKUBALI
5. NINAKUBALIANA SANA

20. Sitajisikia vizuri endapo mwanaume atalazimika kutoa uume nje kabla ya kufikia kilele, ili kunikinga nisipate mimba.

1. SIKUBALIANI KABISA
2. SIKUBALIANI
3. SIKUBALIANI WALA SIKATAI
4. NINAKUBALI
5. NINAKUBALIANA SANA

21. Sitajisikia vizuri endapo nitalazimika kutofanya tendo la ndoa siku za hatari, kwa kuwa kuna uwezekano wa kupata mimba.

1. SIKUBALIANI KABISA
2. SIKUBALIANI
3. SIKUBALIANI WALA SIKATAI
4. NINAKUBALI
5. NINAKUBALIANA SANA

D. MTAZAMO (PERCEPTIONS) KUHUSU KUZUIA MIMBA:

Tafadhali soma maelezo kwa uangalifu, kisha zungushia duara namba ambayo unafikiri ndio jibu sahihi.

22. Kwa kiasi gani una jiamini au hujiamini kuwaunaweza kusisitiza matumizi ya kondomu kila unapofanya tendo la ndoa kabla hujafunga ndoa.

1. SIJIAMINI KABISA
2. KWA KIASI SIJIAMINI
3. SINA JIBU
4. KWA KIASI NAJIAMINI
5. NAJIAMINI SANA

23. Kwa kiasi gani una uhakika au huna uhakika kwamba utakataa kufanya tendo la kujamiiana na mwanaume ambaye hayuko tayari kutumia kondomu.

1. SINA UHAKIKA KABISA
2. KWA KIASI SINA UHAKIKA
3. SINA JIBU
4. NINA UHAKIKA KWA KIASI
5. NINA UHAKIKA SANA

24. Kwa kiasi gani una uhakika au huna uhakika kuwa unaweza kuzui tendo la kujamiiana kwa lazima wakati ukiwa na uhakika kuwa uko katika hatari ya kupata mimba.

1. SINA UHAKIKA KABISA
2. KWA KIASI SINA UHAKIKA
3. SINA JIBU
4. NINA UHAKIKA KWA KIASI
5. NINA UHAKIKA SANA

E. HATARI YA MIMBA:

25. Je umeishawahi kujamiiana?

1. NDIO
2. HAPANA

Kama NDIO, jibu
swali la 36 hadi 38

26. Je kijana wa kiume au mwanaume aliingiza uume wake ndani ya uke wako?

1. NDIO
2. HAPANA

27. Je ulitumia au yeye alitumia kondomu wakati wa kujamiiana?

1. NDIO
2. HAPANA

28. Je mlikuwa mnatumia njia nyingine yeyote ya kuzuia mimba wakati wa kujamiiana?

1. NDIO
2. HAPANA

Appendix IIA: Informed Consent (English)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES, DIRECTORATE OF RESEARCH AND PUBLICATIONS

ID NO:……..

Introduction

Greetings! My name is …….. I am a Principal investigator in the research, which intends to assess the factors that influence perceived risk of pregnancy among adolescent girls in the urban – Ilala Municipal Council

Purpose of the study

Purpose of the study is to assess the factors that determine girl's perception of pregnancy risk in Ilala Municipal Council. You have been selected to participate in this study because you have the required characteristics of the study population.

What is the participant role in the study?

Participation in this study is optional. You have freedom to participate or not to participate in this study, and both decisions are welcomed. No penalty will be directed to those who have decided. If you decide to participate:

1. You will be given instruction on how to fill in the forms, and you will be given up to 15 minutes, to fill the forms.
2. No information about your identity will be required except your age, religion, education level and family structure

Confidentiality

You are assured that, all the information collected from you will be kept confidential. Only people who are working in this study will have access to the information. The report that will be compiled from your response study shall not contain any of your identity. None of your identification shall appear in the information collected from you.

Risks

You may be asked a question that makes you uncomfortable associated with your sexual behaviour, you may decide not to respond to such question and you are also free to refrain from the interview at any time.

Right to withdraw and alternatives

Participation in this study is depends upon your willingness. If you choose not to participate or decide to stop participating in the study, you will get no harm. You are allowed to stop participating in the study any time even if you have already signed the informed consent. Refusal to participate or continue with the study will not involve any penalty or loss of benefits to which you are entitled.

Benefits

Your information that you will provide to this study will help to increase understanding on the perception of adolescents about pregnancy risk. The gained knowledge will help in strategizing on the appropriate intervention in preventing adolescents pregnancy. However, the individual benefits shall include wide knowledge of the subject matter that emanate from the discussion during data collection.

Participant agreed to participate in the study (check in the box) **Who to Contact**

If you have questions about the study, you are free to contact the ☐ study coordinator or Principal investigator Bumi Mwamasage, Muhimbili University of Health and Allied Sciences (MUHAS), P.O.Box 65,001, Dar es salaam (Tel No. 0754 646304).

Agreement:

Participant disagree to participate in the study (check in the box) ☐

I ……..have read and understood contents written in this form and all my questions and concerns have been answered. I have agreed to participate in this study.

Signature of the participant:……

Signature of the Guardian /Teacher (If participant less than 18 years)……..

Signature of the researcher:…….

Appendix IIB: Fomu ya Ridhaa

CHUO KIKUU CHA TIBA NA SAYANSI SHI RIKI MUHIMBILI,

IDARA YA UTAFITI

Namba ya utambulisho……..

Utangulizi

Habari za leo, Mimi ninaitwa ……ambaye ni mtafiti Mkuu katika utafiti huu wa kuangalia chanzo cha wanafunzi kupata ujauzito wakiwa shuleni, katika shule za Sekondari za Manispaa ya Ilala, Dar es **salaam.**

Lengo la Utafiti

Lengo la utafiti huu ni kuangalia sababu zinazopelekea wanafunzi wa sekondari kuhisi kuwa wako katika hatari za kupata ujauzito, katika shule za Manispaa ya Ilala, Dar es salaam. Hivyo umechaguliwa kushiriki katika utafiti huu kutokana na kukidhi kwako mahitaji ya utafiti huu.

Nini jukumu lako katika utafiti huu?

Kwanza kabisa unatakiwa uelewe kuwa ushiriki wako katika huu ni kutokana na ridhaa yako. Unao uhuru wa kushiriki au kukataa kushiriki katika utafiti na uamuzi wowote unapokelewa. Hakuna adhabu yoyote itakayotolewa kwako, endapo hutaridhia kushiriki katika utafiti huu.Endapo utaridhia kushiriki katika utafiti huu, yafuatayo yatafanyika: .

1. Utapewa maelekezo ya jinsi ya kujaza fomu na utapewa muda wa dakika 15 kukamilisha ujazaji wa fomu ya utafiti.
2. Hakuna aina nyingine ya utambulisho wako utatakiwa zaidi ya umri, dini yako, darasa ulilopo na aina ya familia unayoishi

Usiri

Ninapenda kukuhakikishia kwamba taarifa zozote utakazotoa zitakuwa siri, Watu wanaohusika na utafiti huu ndio pekee watakaoziona taarifa hizi. Taarifa itakayoandikwa kutokana na utafiti huu, haitakuwa na aina yoyote ya utambulisho wako, wala hakuna taarifa zako zozote binafsi zitakazokuwa kwenye taarifa hiyo.

Madhara

Unaweza kuulizwa swali kuhusiana na mahusiano yako kwa jinsia tofauti na yako, swali ambalo linaweza kukufanya ukose amani. Unao uhuru wa kujibu au kutokujibu swali hilo, pia unaweza wakati wowte kusitisha kuendelea na mahojiano.

Haki ya kusitisha ushiriki au Vinginevyo

Ushiriki wako katika utafiti huu ni kutokana na utashi wako. Hakutakuwa na madhara yoyote endapo utaamua kutoshiriki au kusitisha ushiriki wakomkatika utafiti huu. . Unaruhusiwa kusitisha ushiriki wako wakati wowte iwapo utajisikia kufanya hivyo, hata kama tayari umeisha saini ridhaa ya ushiriki. Kukataa kwako kuendelea na utafiti hakutaambatana na adhabu ya aina yoyote, wala kupoteza stahili yoyote ambayo unatakiwa kupata.

Faida ya Ushirki wako

Taarifa utakayotoa katika utafiti huu, itasaidia kuongeza elimu kuhusu uelewa wa kundi la wasichana kuhusu sababu mbalimbali zinazowafanya wasichana kutambua kama wako katika hatari ya kupata ujauzito. Uelewa huo utaiwezesha serikali kupanga mikakati mbali mbali ya kuwawezesha wasichana kuepuka hatari ya kupata ujauzito katika rika hilo. Hata hivyo, faida binafsi itatokana na kuongezeka kuhusiana na eneo hilo, kutakakotokana na majadiliano wakati wa mahojiano.

Mawasiliano

Endapo utakuwa na swali lolote kuhusu utafiti huu, unasahuriwa kuwasiliana Mtafiti Mkuu, Bumi L.A. Mwamasage, Chuo Kikuu cha Afya na Sayansi Shiriki za Afya Muhimbili (MUHAS), S.L.P. 65,001, Dar es Salaam (Simu ya mkononi: 0754 646304).

Makubaliano:

Mshiriki amekubali kushiriki katika utafiti (Weka vema kwenye sanduku) ☐

Mshiriki amekataa kushiriki katika utafiti (Weka vema kwenye sanduku) ☐

Mimi ……..nimesoma na kuelewa yaliyomo katika fomu hii ya makubaliano. Maswali yote na mashaka niliyokuwa nayo yamepatiwa majibu. Hivyo nimekubali kushiriki katika utafiti huu.

Saini ya Mshiriki:……

Saini ya Mwalimu (Endapo Mshiriki ana umri chini ya miaka 18)……..

Saini ya Mtafiti:…….

Appendix III: Ethical Clearance

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR OF POSTGRADUATE STUDIES

P.O. Box 65001
DAR ES SALAAM
TANZANIA
Web: www.muhas.ac.tz

Tel G/Line: +255-22-2150302/6 Ext. 1015
Direct Line: +255-22-2151378
Telefax: +255-22-2150465
E-mail: dpgs@muhas.ac.tz

Ref. No. MU/ PGS/SAEC/Vol. IX/

15th June, 2017

Dr. Bumi L.A. Mwamasage
MPH-Executive Track
MUHAS.

RE: APPROVAL OF ETHICAL CLEARANCE FOR A STUDY TITLED: "FACTORS ASSOCIATED WITH RISK FOR PREGNANCY AMONG SECONDARY SCHOOL GIRLS IN ILALA MUNICIPALITY, DAR ES SALAAM, TANZANIA"

Reference is made to the above heading.

I am pleased to inform you that, the Chairman has, on behalf of the Senate, approved ethical clearance for the above-mentioned study. Hence you may proceed with the planned study.

The ethical clearance is valid for one year only, from 15th June, 2017 to 14th June, 2018. In case you do not complete data analysis and dissertation report writing by 14th June, 2018, you will have to apply for renewal of ethical clearance prior to the expiry date.

Prof. Andrea B. Pembe
DIRECTOR OF POSTGRADUATE STUDIES

cc: Director of Research and Publications
cc: Dean, School of Medicine

Appendix IV: Approval Letter

HALMASHAURI YA MANISPAA YA ILALA

BARUA ZOTE ZIPELEKWE KWA MKURUGENZI WA MANISPAA

P.O. BOX 20950
PHONE NO: 2128800
2128805
FAX NO. 2121486

Ofisi ya Mkurugenzi
Wa Manispaa Ilala
1 Mission Street
11883 – Dar es salaam

Kumb. Na. IMC/LK.6/1/159

30/06/2017

Wakuu wa Shule,
Shule za Sekondari: Chanika, Dar es Salaam, M/chai,
Nyeburu, Vingunguti, Viwege, Kinyamwezi,Kisutu,
S/Robert,Airwing na Zanaki.
Halmashauri ya Manispaa ya Ilala

YAH: KUMTAMBULISHA DR. BUMI L.A. MWAMASAGE

Husika na kichwa cha habari hapo juu.

Halmashauri ya Manispaa ya Ilala imemruhusu mtajwa hapo juu ambaye ni mwanachuo wa **Chuo Kikuu cha Muhimbili** kufanya utafiti katika Shule yako.

Utafiti juu ya **" Factors associated with risk for pregnancy among Secondary School girls in Ilala Municipality, Dar es Salaam.".**

Utafiti utafanyika kuanzia tarehe **03/07/2017** hadi **14/07/2017.**

Tafadhali mpe ushirikiano.

Nakutakia kazi njema.

Eliza M. Ngonyani
K.n.y. MKURUGENZI WA MANISPAA
HALMASHAURI YA MANISPAA YA ILALA

Kny. MKURUGENZI
HALMASHAURI YA MANISPAA YA ILALA

Nakala: Mkurugenzi
Halmashauri ya Manispaa ya Ilala **(aione kwenye jalada)**