

**FACTORS INFLUENCING REPEATED PREGNANCY AMONG
UNMARRIED ADOLESCENT MOTHERS IN KATAVI REGION,
TANZANIA**

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**Dissertation Submitted in (partial) Fulfilment of the Requirements for the
Degree of MSc (Midwifery and Women's Health) of
Muhimbili University of Health and Allied Sciences**

October 2021

Muhimbili University of Health and Allied Sciences

Department of Community Health Nursing



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By

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for examination by Muhimbili University of Health and Allied Sciences a dissertation entitled “**Factors influencing repeated pregnancy among unmarried adolescent mothers in katavi region, Tanzania**” in fulfilment of the requirements for the degree of Midwifery and Women’s Health of Muhimbili University of Health and Allied Sciences.

Dr. Beatrice Mwilike

Supervisor

Date: _____

Ms. Agnes Massae

Co-Supervisor

Date: _____

DECLARATION AND COPYRIGHT

I, Mwajuma Ramadhani Mmbaga declare that this dissertation is my own original work and that 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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Lastly but not least of importance I would like to thank my beloved son FALHUMU ATHUMANI MMBAGA for his tolerance he had in my absence

DEDICATION

I dedicate this dissertation to my supervisor, and my child FALHUMU ATHUMANI MMBAGA. His good wishes, encouragement, Support and prayers has played an important role. I know a great vacuum he felt in my absence or tense times when I could not offer my all love to him.

Thank you all for your kind support.

ABSTRACT

Background: Despite the efforts, the rates of adolescent pregnancy are still high in Tanzania. After the first pregnancy adolescent mothers are more at risk of repeat conception within two years. Repeated pregnancies are associated with an increasing maternal and perinatal outcomes. Katavi is a leading region in the country with 45% adolescent pregnancy. There is a scarcity of studies, on factors influencing repeated pregnancy among unmarried adolescent mothers in the region.

Aim: This study explored factors influencing repeated pregnancy among unmarried pregnancy mothers at Mamba health center in Katavi region

Methodology: An exploratory study adopting qualitative approach was used. **The study was conducted at Mamba health centre in Mlele district - Katavi Region.** Purposive sampling was used to sample the study participants. Sixteen respondents were interviewed. Thematic analysis was done to analyze qualitative data. QSR Nvivo version 14 was used to analyze these data.

Results: The study established individual factors influencing repeated pregnancy which were inadequate sexuality knowledge, individual perceived barriers on contraceptive use, and guarantee for marriage. Furthermore, the social factors identified were power of decision making, peer pressure, and parent-child relationship. The study also identified structural factors influencing repeated pregnancy among unmarried adolescent girls; these included family problems and unfriendly health facilities environments.

Conclusion: **Inadequate** sexuality education is observed as the crucial factor influencing repeated pregnancy. Parents as primary educators should be encouraged to talk with their children especially adolescent girls about sexuality education. Also, health care workers should make friendly environment for adolescents seeking reproductive services including family planning by ensuring privacy and confidentiality.

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LIST OF ABBREVIATIONS

ANC	Antenatal care
WHO	World Health Organization
LMICs	Low- and middle-income countries
MUHAS	Muhimbili University of Health and Allied Sciences
PNC	Postnatal care
RTP	Repeated pregnancy
TDHS	Tanzania Demographic and Health Survey
USA	United States of America
G	Gravida
P	Para
L	Living

DEFINITION OF TERMS

Adolescence	Adolescence refers to the years of transition from childhood to adulthood between, 10-19 years of age.
Family planning	Refers to a conscious effort by a couple to limit or space the number of children they have through the use of contraceptive methods
Modern contraceptive method	A product or medical procedure that interferes with the reproduction from Acts of sexual intercourse (sterilization male/female, intrauterine devices and systems, sub-dermal implants, oral contraceptives, male/female condoms, injectable, Diaphragms and cervical caps, etc.)
Pregnancy	Occurs when a sperm fertilizes an egg after it's released from the ovary during ovulation.
Repeated pregnancy	The incidence of two or more pregnancies before the age of 20 years

CHAPTER ONE

INTRODUCTION

1.0 Background

Repeated adolescent pregnancy is a major reproductive health concern in Tanzania and shows an increasing maternal and perinatal poor outcome. Adolescence refers to the years of transition from childhood to adulthood between, 10-19 years of age. It is a stage of significant growth, increasing independence, vulnerability, experience, and major physical and psychological changes. Physical, emotional, and cognitive maturation influence how individuals experience their adolescent years. Almost 20% of the world's population is made of teenagers (Sik, 2015).

Globally, approximately 16 million young women aged 15 to 19 which is about 11% of all births worldwide, and about 1 million girls under 15 years of age give birth every year. Ninety-five per cent of these births occur in low and middle income countries, almost half of which (49%) are unintended (WHO, 2008). This result is nearly 16 million deliveries and above 3.2 million had delivery below 28 weeks of gestation age yearly. Although the majority of adolescent births occur in low and middle-income countries, there are substantial regional differences with the highest adolescent birth rates in West and Central Africa and the lowest in East Asia. In Sub-Saharan Africa about 20-40% of teenage girls have been found to become pregnant by the age of 18 (Yaa et al., 2013)

Adolescent (teenage) mothers have an elevated risk of repeated pregnancy (RP) within two years of their first pregnancy. Considering the impact of teenage pregnancy and childbirth on maternal deaths and the debilitating effects on neonatal and child health outcomes, especially in low and middle-income countries, RP leads to higher risk of preterm births, mental health issues, and developmental problems among children (Maravilla et al., 2017).

It has been reported that RP among adolescents has higher risk of maternal complications including preterm births, mental health issues, and developmental problems among children

compared to first pregnancy. Several studies reported factors influencing unintended pregnancies amongst adolescents which include early marriages, culture, religion, gender, poor social and economic support, peer pressure, lack of comprehensive sexual education, poor reproductive health services provision, poor attitude of health workers in providing contraceptive services for adolescents. Also, the unmet need for contraceptives by adolescents and fear of contraceptive side effects seems to be a barrier to contraceptive use (Yakubu and Salisu, 2018)

Barriers to contraceptive use among adolescents include inadequate sexual knowledge and risk perceptions, lack of skills and power to negotiate safer sex options, ambivalence towards sex, and negative social norms around premarital sexual activity and pregnancy (Yakubu and Salisu, 2018). Another study reported cause of unintended (and unwanted) pregnancy is sexual violence, which is widespread where more than a third of girls in some countries report that their first sexual encounter was coerced (de Costa, 1985).

Globally, Tanzania is one of the countries with the highest rate of adolescent pregnancy. It is estimated 23% of girls aged 15-19 years beginning childbearing, 39% of adolescent girls by 18 years old are either already mothers or pregnant. Early childbearing places girls' health at risk as adolescents in the 15 to 19 years old age group are twice as likely to die in childbirth, as well as being prone to seek unsafe abortion procedures which have caused death and disability in countries where abortions are illegal, including Tanzania (Sik, 2015).

Under the National Family Planning Costed Implementation Plan (NFPCIP) of 2019–2023, one of the strategic priorities is increasing age-appropriate information about, access to, and use of contraceptives among adolescents and youth ages 10–24. This priority is, in part, dependent on another strategic priority focused on addressing social norms that hinder individuals from using contraception to space or limit births (MoHCDGEC, 2019). Tanzania aims to improve and adopt policies that facilitate adolescent and youth access to contraceptive information and services. Stakeholders identified two opportunities to reach in-school youth, first, reviewing and rolling out an evidence-based national comprehensive sexual education curriculum to ensure that the

content on contraception is strong and evidence-based and second revising the National School Health Programme guidelines and strategy to include family planning information (MoHCDGEC, 2019). On September 15, 2017, Tanzania's Katavi Region announced a new Regional Action Plan to reduce teenage pregnancy. The Plan aimed to reduce the rate to 20% by 2020.

Despite the high rates of adolescents pregnancy in Tanzania, there has not been a documented research exploring factors influencing repeated pregnancy among unmarried adolescent mothers. This study aimed at exploring factors influencing repeated pregnancy among unmarried pregnancy mothers in Mamba Health center, Katavi – Tanzania.

1.1 Problem statement

It is reported that 39% of adolescents in Tanzania are either already mothers or pregnant. According to the survey done by Tanzania Demographic and Health Survey (TDHS) in Tanzania in 2016, as many as 27% of young girls aged from 15-19 give birth (MOHCDGEC [Tanzania Mainland], MOH [Zanzibar], NBS, OCGS, 2016). Possible factors influencing pregnancy among adolescents include early marriages, culture, religion, gender, poor social and economic support, peer pressure and lack of comprehensive sexual education (Michael, 2014).

Whilst there has been decreased rate of adolescents' pregnancy, over the past decades the rate is inadmissibly high. This is despite the efforts to reduced adolescent pregnancy in Tanzania (Pfeiffer et al., 2017). Katavi was reported to have the highest rate of adolescent pregnancy among adolescents aged 15-19 years in the country (45%) (AFP, 2017). Katavi has also been reported to have the lowest modern contraceptive prevalence rate of 18% in the country (MOHCDGEC [Tanzania Mainland], MOH [Zanzibar], NBS, OCGS, 2016).

Number of researches has been exploring and identifying factors associated with adolescents' pregnancy (Adogu *et al.*, 2014; Malisa, 2015; Mphatswe et al., 2016), however, there is a little documentation of factors influencing repeated pregnancy among unmarried adolescent mothers . Also, to the best of my literature such there is no documented research in Tanzania trying to

explore factors influencing repeated pregnancy among unmarried adolescent mothers. Teenage pregnancy is an issue of concern in many developing countries including Tanzania. This study is therefore explored factors influencing repeated pregnancy among unmarried adolescent mothers at Mamba Health Centre in Katavi, Tanzania.

1.2 The conceptual Framework

According to (Flanagan et al., 2013) “The contributing factors for teenage pregnancy can be related to the individual herself, social, structural or environmental factors and the interaction between the individual and her social/structural/environmental situation.” The framework identifies three interrelated components that influence adolescent’s pregnancy. From the diagram, adolescents’ pregnancy depends on individual, social, and structural factors. Individual level factors may be described as factors that are most proximal to sexual behaviors, and include the teenager’s attitude, values, and actions that impinge on his or her sexual related choices. Social factors may include cultural beliefs, parental influences and peer pressure. Furthermore, the structural factors may be described as economic, social, policy, and organizational environments that "structure" the context in which risk production occurs.

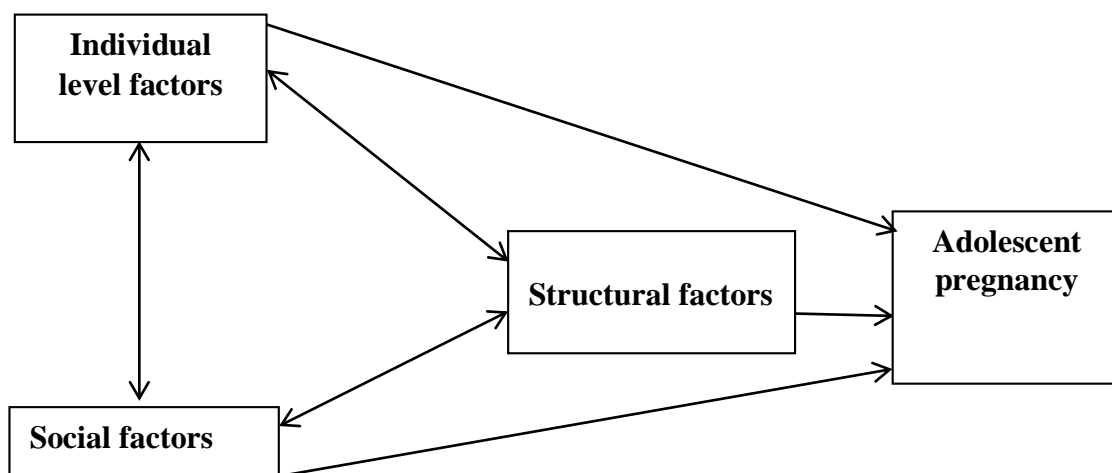


Figure 1: Adopted from (Flanagan et al., 2013) and modified to fit this study

1.3 Rationale of the study

The study aimed to uncover factors influencing repeated pregnancy among unmarried adolescent. Findings of the study may be communicated with the authority of Katavi Regional also may be used by stakeholder dealing with reproductive and child health to make future decision and look on which methods to be used to improve and change practice toward repeated pregnancy among unmarried adolescents. In addition, they may also act as a source of literature for scholars who wish to do further studies about adolescents' pregnancy or in any other fields related to Reproductive and child Health. Also, this study is in line with the sustainable development goal 3 which seeks to ensure good health and well-being, which includes targets related to maternal, infant, and child mortality as well as access to sexual and reproductive health services, including family planning (FP).

1.4 Research questions

1.4.1 Main research question

What are the factors influencing repeated pregnancy among unmarried adolescent mothers at Mamba health Centre?

1.4.2 Specific research questions

1. What are the individual level factors that influence repeated pregnancy among unmarried adolescent mothers at Mamba Health Centre?
2. What are the social factors that influence repeated pregnancy among unmarried adolescent mothers at Mamba Health Centre?
3. What are the structural factors that influence repeated pregnancy among unmarried adolescent mothers at Mamba Health Centre?

1.5 Objectives

1.5.1 Main objective

To explore factors influencing repeated pregnancy among unmarried adolescent mothers at Mamba Health Centre

1.5.2 Specific Objectives

1. To explore individual level factors influencing repeated pregnancy among unmarried adolescent mothers at Mamba Health Centre
2. To identify social factors influencing repeated pregnancy among unmarried adolescent mothers at Mamba Health Centre
3. To explore structural factors influencing repeated pregnancy among unmarried adolescent mothers at Mamba Health Centre

CHAPTER TWO

LITERATURE REVIEW

2.0 Adolescents' repeated pregnancy

Repeat pregnancy (RP) is defined here as the incidence of two or more pregnancies before the age of 20 years (Aslam et al., 2017). Experiencing another birth before 20 years of age (repeat adolescent childbirth) may therefore push the adolescent woman and her offspring into worse outcomes than what she experienced following the first birth (Maravilla et al., 2017).

Globally, adolescent childbearing remains a major public health concern most especially in the low- and middle-income countries (LMICs). Approximately 1 in 8 of the 140 million births annually occurs to adolescent women with 95% of these occurring in LMIC, and 23% in sub-Saharan Africa (WHO, 2020). RTP is known to affect around 18% of adolescent mothers in the United States of America (Centers for Disease Control and Prevention (CDC), 2013), Europe (Rowlands, 2010), and Australia (Lewis et al., 2010).

RP in adolescence is more common in settings of high poverty, low educational attainment or its discontinuation, early union or being in a union, none use of long acting reversible contraceptives and previous abortion or non-live birth, among others (Amongin et al., 2020). The study done in Uganda estimated rapid RP (within 12 months) among women 15–22 years at 37% and 74% within 24 months (Burke et al., 2018). The study assessing the prevalence of repeat pregnancies and associated factors among teenagers in KwaZulu-Natal, South Africa also reported high RTP rates (Mphatswe et al., 2016).

It has been shown that repeated adolescent pregnancy leads to an increase in national health and welfare expenditure as a consequence of the long-term dependency of adolescents and their families on government assistance (Stampfel, 2014). Existing literature states that children born to adolescent mothers face a higher risk of premature birth, blindness, cerebral palsy, chronic respiratory problems, deafness, dyslexia, hyperactivity, cognitive impairments, and death at infancy (Pun and Chauhan, 2011). Children born to adolescent mothers are also likely to have

poor academic performance at school and live under poor socio-economic circumstances (Govender et al., 2019).

Despite the number of studies in LMIC exploring on repeated or subsequent adolescent pregnancy, there is no documented research talking about repeated pregnancy in Tanzania. Studies focus on adolescent pregnancy in general. Therefore, this study is going to explore factors influencing repeated pregnancy among unmarried adolescent.

2.1 Individual level factors influencing repeated pregnancy among unmarried adolescents

Knowledge is crucial when it is coming to decision-making that influences health and development (Shrestha, 2012). Limited knowledge and lack of skills to put knowledge regarding sex and family planning in practice among adolescents has been cited to be a problem in many countries. This is due to the lack of effective sexuality education (WHO, 2012). The study done by (Adogu et al., 2014) in Nigeria reported among the adolescents who engaged in sexual activities, only few used condoms even those with multiple partners. Limited knowledge on safe sex, cultural norms, unfriendly environment for condom accessibility was reported as might be the cause for minimal use of condoms, hence exposing them to unwanted pregnancies (Adogu et al., 2014).

Adolescence promotes exposure to some new health risk behaviors, since it is a period of rapid physical, psychological, and social change (Kim, 2008). A systematic review exploring factors that shape young people's sexual behavior established that in order to hold on their boyfriends adolescent girls agree to sex (Marston and King, 2006). It was found in the quantitative study assessing factors influencing teenage pregnancy rate in Limpopo province, South Africa that; 72.8% of the study participants reported to have engaged in sexual activity despite being aware of the risks (Mushwana et al., 2015).

A qualitative study done in South London reported that each repeat pregnancy was unplanned and accounted for by participants' rejection of Long-Acting Reversible Contraceptives and inconsistent use of non- Long-Acting Reversible Contraceptives. The study also revealed that misinformation about Long Acting Reversible Contraceptives contributed to their rejection and staff delivery of contraceptive advice was influential (Bucknall and Bick, 2019). Furthermore, a qualitative study done in Tunduru district council, Tanzania exploring factors contributing to teenage pregnancies revealed that, many teenagers become sexually active while very young and this poses a risk to them because they become vulnerable to falling pregnant (Malisa, 2015).

2.2 Social factors influencing repeated pregnancy among unmarried adolescents

Not being able to negotiate for safe sexual practices among females, since traditions privilege males and put females under males' control, may result into putting females at risk of pregnancy (Ncitakalo, 2011). Repeated pregnancies may be associated with parents' reluctance in making sex and contraceptive education available to their kids. This is because parents have a fear that their children might interpret this as a permission to engage in sexual activities (Mothiba and Maputle, 2012).

A qualitative study of peer pressure and sexual risk behavior among young adolescents in Cape Town, South Africa revealed that parent-child communication about sex can prevent negative peer pressure to engage in sexual risk behaviors leading to unwanted pregnancy (Selikow et al., 2009). Similar findings were reported in a study done in United States that teenagers with higher levels of parental guidance were less likely to engage in sexual intercourse (Kim, 2008).

The study done in Kinondoni Municipal, Dar es Salaam in Tanzania reported that peer pressure leads adolescent girls to pregnancy. The study reported that adolescent girls engaged in sexual activities in exchange for money, while other reported that they engaged so as they are not seen as old-fashioned (Malisa, 2015). Similar findings were reported from the study done in South Africa on exploring secondary school girls' the knowledge, attitudes and behavior regarding emergency contraception, teenage pregnancy, and sexuality (Ramathuba et al., 2012).

While number of studies has focused on social factors influencing pregnancy among adolescents in general, few studies have focused on repeated pregnancy among unmarried adolescents. Furthermore, from the best of my literature search, not a single study has been documented in Tanzania focusing on social factors influencing repeated pregnancy among unmarried adolescents. Therefore, this study explored these factors to fill the gap.

2.3 Structural factors influencing repeated pregnancy among unmarried adolescents

Globally, economic inequality and poverty among adolescent women have resulted into increased risks of unwanted pregnancy, inaccessible contraception and many others. Common cases of adolescent pregnancy have been reported among adolescent women brought up from poor families with low expectation of education as well as job market. This was revealed in a qualitative study exploring high rate of teenage pregnancy in high schools in the iLembe District, South Africa (Nkwanyana, 2011).

Confidentiality about adolescents accessing sexual and reproductive services and use of contraception has been reported as among the factors influencing repeated pregnancy among adolescent girls. Although the services do not require parents' permission, it has been reported that some nurse staff violate privacy and confidentiality of adolescents by threatening to report them to their parents (MacPhail and Campbell, 2001). Similar findings were revealed in the study assessing Mothers, daughters and sexual agency in one low-income South African community (Lesch and Kruger, 2005).

From the literature search, there has not been a documented research in Tanzania trying to explore structural factors influencing repeated pregnancy among unmarried adolescents. Hence, this study explored this area to get a deep understanding of the subject.

CHAPTER THREE

METHODS AND MATERIALS

3.0 Study design

An exploratory study adopting a qualitative approach was used. Exploratory study is used to explore an area where little is known (Kumar, 2011). This study aimed to explore factors influencing repeated pregnancy among unmarried adolescent mothers at Mamba Health Centre in Katavi region

3.1 Study area

The study was conducted at Mamba health center in Mlele district, Mpimbwe Municipality within Katavi Region. Katavi region was selected because of its highest prevalence of adolescents' pregnancy in the country. Also, in 2015 the region recorded 277 deaths per 100,000 live births. The rate of maternal deaths in the region could be higher since many cases are not reported to relevant authorities (Siyame, 2016). Total population in Mlele district was 282,568 people (census 2012) female are approximately 142,588, (census2012) reproductive age (15-19 years) was 124,270 (Census 2012). The health center serves people from one district which have 33 village, and receives 120,000 patients annually, and 10,000 patients monthly. Total delivery of pregnant mothers is 157 per month. The center has outpatient department, in patient department, reproductive and child health department, operating theater department pharmacy department, and laboratory department, with capacity of 20 bed in antenatal ward and post-natal ward, but also have capacity of 24 bed for the rest of the department.

The study was conducted in the reproductive and child health department for two weeks consecutive from April 2021. Nurses and Doctors are those who conduct the services from Monday to Friday, which are vaccination services, family planning services, counselling and testing of PMTCT and HIV, care and treatment of antiretroviral drugs services, cancer screening services and antenatal clinic services. Up to 40 pregnant mothers per day, 200 pregnant mothers per month, and approximately 2,400 pregnant mothers in a year receive services in the facility.

3.2 Study population

The study population was unmarried adolescent below 20 years who had one child and were pregnant with second child and those who had two or more children. Those participants fitted into the study

3.3 Inclusion and exclusion Criteria

3.3.1 Inclusion Criteria

- Unmarried adolescents' mothers aged 15-19 years
- Currently attending antenatal (ANC) or postnatal care (PNC)
- Residents of Mpimbwe municipality
- Adolescent mothers how have more than one pregnancy
- Adolescent mothers who have more than one child

3.3.2 Exclusion criteria

- Married adolescent mothers aged 15-19 years
- Adolescent mothers who attend hospital but they are sick

3.4 Sampling size and selection

Purposive sampling was used as sampling technique to sample study participants because of their knowledge in the study of interest. Sixteen (16) interviews were conducted among unmarried adolescents' mothers aged 15-19 years. The principle of saturation was applied where there is no new data, no new themes, and no new coding. Moreover, interview questions were structured to facilitate asking multiple participants the same questions,

otherwise one would not be able to achieve data saturation, as it would be a constantly moving target (Fusch and Ness, 2015).

3.5 Data collection procedure

The discussions were moderated by the researcher in Kiswahili with open ended question, and were recorded by audio recorder with permission from participants.

However, discussions were conducted in the convenient, quite room at the RCH clinic. Interview guide was prepared by the researcher to guide the discussion. The prepared question ensured coverage of the issues relevant on subsequence pregnancy, the research assistants took notes and took care of the audio recorder. All the interviews were in audio recorder with permission from participants. At the end of each interview, the data in the local talks were immediately translated into English to identify area that I felt were not covered well

3.6 Pre-testing of data collection tool

Before the study, the researcher and research assistants did pre-testing of the data collection tools to check whether the tools could collect the intended information or not. This was conducted in Usevya Health Center among unmarried adolescents aged 15-19 where five adolescents were included for participation. The interview guide will be revised accordingly based on the pre-test results.

3.7 Data management

Each transcript was analyzed independently. Coding was done manually based on the key words and phrases developed from the data. The codes were grouped together into higher order headings. Accordingly, on a higher logical level of abstractions codes, subcategories, categories and themes were formed. The themes were categorized according to the experiences in relation to pregnancy, child bearing, child care, parental views.

3.8 A research Assistant

The study included a research assistant who has exposure in qualitative research. The assistant was trained on how to conduct this study and was oriented to adherence to ethical principles. He was responsible for arranging a comfortable and quite place for the interviews, and prepared all items required for the session; audio-recorder, interview guide, participant identification

number, notebooks, consent forms and pens. The research assistant was also responsible for note taking during the interview session to highlight particular interest. He was trained prior to commencement of data collection.

3.9 Data collection instruments

Participant's interview guide was used to guide the researcher in the process of data collection. Different questions were designed depending on the specific objectives. Unmarried adolescents aged 15-19 years were purposively selected for participation as they were best to inform the research questions and enhance understanding of the phenomenon under study. Those willing to participate were interviewed using the interview guide and their responses will be recorded using a recorder.

3.10 Data processing and analysis

The audio-recorded from participant were transcribed verbatim and then translated from Kiswahili to English. Thematic analysis was used to analyze the data collected. It is the process of identifying patterns or themes within qualitative data (Maguire and Delahunt, 2017). The analysis was performed as follows; transcripts were read and re-read to identify the sense of the whole interviews. Initial codes were generated. Each segment of data that relevant to or captured something interesting about the research question was coded. Codes were examined to identify some that clearly fit together into a theme. Furthermore, themes were reviewed, modified and preliminary themes were developed. Finally, themes were defined. This aimed to identify the essence of what each theme is about.

Table 4: Example of thematic analysis

VERBATIM	CODE	SUB-THEME	THEME
Individual level factors influencing repeated pregnancy among unmarried adolescents			
<p><i>“I did not expect to hold pregnancy the second time. It was just by bad luck because I did not plan for it. I did not know that I was in my danger days. I thought I would not be able to conceive in those days. Unfortunately, it happened</i></p> <p><i>“I do not know how condoms can be able to avoid pregnancy and by that time I even did not know in which ways it can prevent pregnancy. Although I was taught but still I did not know how it worked”.</i></p>	<p>Did not expect Bad luck Unaware of my danger days</p>	<p>Insufficient sexual education</p>	<p>Lack of sexuality knowledge</p>
	<p>Condom use Did not know Menstrual cycle How condom works Lack right information about family planning</p>	<p>Insufficient knowledge on family planning methods</p>	

3.11 Trustworthiness

To evaluate the trustworthiness of the qualitative study four criteria outlined by (Lincol and Guba,1985) were used. These include credibility, dependability, conformability, and transferability.

Credibility of the Study

To maintain the study’s credibility, prolonged engagement was done. A few distinct inquiries were posed with respect to subjects identified with mastery. Participants were urged to support their assertions with examples, and the interviewer asked follow-up inquiries. The researcher examined the information from their crude interview material until a theory arose to give them

the scope of the phenomenon under examination. This was also done through investing sufficient time to become familiar with the setting and context, to test for misinformation, to build trust, and to get to know the data to get rich data.

Transferability of findings

For the study to be relevant, it has to be able to benefit other people with a similar situation in some other settings. That is one should be able to transfer this information and apply it somewhere else. This was assured by providing evidence and using thick descriptions to show the findings could be used in other contexts, times, situations, and population. This was also done through describing not just the behavior and experiences, but their context as well, so that the behavior and experiences become meaningful to an outsider.

Conformability

Conformability means making sure that only informant responses with no researcher bias are included in the research findings. An audit trail was used, through providing details of the process of data collection, data analysis, and interpretation. Unique and interesting topics were recorded during data collection, writing down thoughts about coding, providing a rationale for why codes were merged, and explain what the themes mean. Research steps were transparently described from the start of a research to the development and reporting of the findings. The records of the research path were kept throughout the study. Reflexivity was also used, trying to see and avoid how the researcher's personal experiences in life might affect the findings of this study.

Dependability

Dependability means study's findings are consistent and repeatable. The researcher aimed to verify that the findings were consistent with the raw data collected. She made sure that if some other researchers were to look over the data, they would arrive at similar findings, interpretations, and conclusions about the data. This is important to make sure that there was

not anything missed in the research study, or that he was not sloppy or misguided in his final report.

3.12 Ethical considerations

Ethical approval from the Muhimbili University of Health and Allied Sciences (MUHAS), Research Ethical Committee (REC) was granted for this study (Ref No.DA.282/298/01.C/). Permission to carry out the study was sought from the office of the Regional Administrative Secretary as well as the District Medical Officer. All participants were well informed about the purpose of the study and an informed consent to participate in the study was obtained from all the participants before being interviewed. For those participants who were under 18 of age the researcher provided an assent form to their parents or guardians. The objectives of the study were explained to the participants. Participation was voluntarily. Those who were willing to participate they signed the informed consent and parents signed the informed consent to allow the teenage mothers under 18 to participate. To ensure confidentiality of teenage mothers were interviewed alone without the presence of guardian or parents. Only age of participant was needed and no names were recorded.

3.13 Dissemination of the findings

Findings of this study will be presented to, School of Nursing, Directorate of Postgraduate MUHAS, International conferences, and will be published in a peer reviewed journal

CHAPTER FOUR

RESULTS

4.0 Introduction

The findings from this study are organized according to the objectives and underlying themes to give a clear picture of the situation depicted. These included inadequate sexuality knowledge, individual perceived barriers on contraceptive use, and guarantee for marriage (individual factors), decision making, peer pressure, and parent-child relationship (social factors), family problems and unfriendly health facilities environments (structural factors). The layout of the findings is derived from the key informants interviews. Supporting quotations from the study participants have been included to illustrate the messages being communicated. Findings are presented based on the identified themes.

Table 5: Thematic analysis

CODE	SUB-THEME	THEME
Individual level factors influencing repeated pregnancy among unmarried adolescents		
Did not expect	Insufficient sexual education	Inadequate sexuality knowledge
Bad luck		
Unaware of my danger days		
Condom use	Insufficient knowledge on family planning methods	
Menstrual cycle		
How condom works		
Lack right information about family planning		
Menstrual bleeding disturbances	Fears of side effects among adolescents	Individual perceived barriers on contraceptive use
Became ill		
Bleeding a whole year		
Never took it serious	Inadequate knowledge on Contraceptives knowledge	
Never received education		
I did not believe		
Keeping a boyfriend	Fear of being dumped by their boy friends	Guarantee for marriage
He promised to marry me		
Trap of love		
Right person to get married		

Believed he was going to marry me	Marriage obsession among adolescent girls	
Luring that he will marry me		
Social factors influencing repeated pregnancy among unmarried adolescent mothers		
Not able to negotiate about sex	Inability to negotiate about sex	Decision making
Did not like		
I was forced		
Unable to resist		
Man resist to use condom		
Men decide	Men are superior	
Whenever a man want		
Force to have sex		
Accused of being infertile	Societal judgment	
Fear of being gossiped		
People will say I am infertile		
Young boys who end up luring her	Peer pressure	Social pressure
Sneak from the houses and go to the cinemas		
Environment makes it very easy to get pregnant		
Parents send them to do business		
Young adolescent do business	Adolescents engagement in business	Parent-child relationship
Getting used to money		
Not attending school	Sexuality and family planning related issues	
Did not take me to family planning program		
I should go alone		
Structural factors influencing repeated pregnancy among unmarried adolescent mothers		
Poverty	Economic inequalities	Family problems
School dropouts		
Lack of money		
Financial problems		
Epilepsy	Diseases and parents irresponsibility	
Father was bewitched		
Drunkard		
Look for food on our own	Lack of confidentiality	Unfriendly health facilities environments
Summoned three or four at the same time		
Others listen	Privacy	
Do not want to be seen		
Not going for the services		
Others listen to your story		

4.1 Socio-demographic characteristics

The study involved 16 unmarried adolescent mothers aged 15 – 19 years as participant. Among them six participants had a primary level of education, only one completed ordinal level of education and the remaining two dropped when they were in primary school. All of them are just staying at home.

Table 6: Socio-demographic characteristics of the study participants

Participants' Reg #	Age	Marital Status	Education level	Gravidity and Parity	# of Home Delivery	Reason for Home Delivery
Participants 01	19	Unmarried	STD 4	G2, P1, L1	None	N/A
Participants 02	19	Unmarried	STD 7	G2, P1, L1	None	N/A
Participants 03	19	Unmarried	STD 7	G3, P2, L2	None	N/A
Participants 04	19	Unmarried	STD 6	G3, P2, L2	None	N/A
Participants 05	18	Unmarried	STD 3	G2, P1, L1	None	N/A
Participants 06	19	Unmarried	STD 6	G2, P1, L1	None	N/A
Participants 07	18	Unmarried	STD 4	G2, P1, L1	None	N/A
Participants 08	18	Unmarried	STD 6	G2, P1,L1	1	Fastened labor
Participants 09	19	Unmarried	STD 4	G2, P1, L1	1	Ignorance
Participants 10	18	Unmarried	STD 7	G2, P1, L1	None	N/A
Participants 11	17	Unmarried	STD 5	G2, P1, L1	None	N/A
Participants 12	18	Unmarried	STD 2	G2, P1, L1	None	N/A
Participants 13	17	Unmarried	FORM 1	G3,P2,L2	None	N/A
Participants 14	19	Unmarried	STD 6	G2,P1,L1	None	N/A
Participants 15	19	Unmarried	Never went to school	G2,P1,L1	None	N/A
Participants 16	18	Unmarried	STD 7	G2,P1,L1	None	N/A

Key: G: GRAVIDA, P: PARA, L: LIVING

4.2 Individual level factors influencing repeated pregnancy among unmarried adolescents

Inadequate sexuality knowledge

Sexuality knowledge is crucial to prevent unwanted or unplanned pregnancies. The study findings revealed lack of sexuality knowledge associated with lack of sexual education, poor

knowledge on family planning methods for example how to use female condoms and understanding of the menstrual cycle influenced repeated pregnancy among unmarried adolescents. One of the participants reported that;

“I did not expect to hold pregnancy the second time. It was just by bad luck because I did not plan for it. I did not know that I was in my danger days. I thought I would not be able to conceive in those days. Unfortunately it happened.” (Participants 01)

Another participant reported that;

“I do not know how condoms can be able to avoid pregnancy and by that time I even did not know in which ways it can prevent pregnancy. Although I was taught but still I did not know how it worked (Participants 04).”

Individual perceived barriers on contraceptive use

The study has identified perceive barriers on contraceptive use characterized by fears of side effects and lacking proper knowledge regarding contraceptives. Some of the participants reported that contraceptives disturbed their menstrual cycle. Some participants also reported that they never believed that contraceptives can pregnancy. None use of contraceptives lead them to repeated pregnancy. One of the participants pointed out that;

“I was very ill such that I was bleeding too much. This led me to have low blood pressure (hypotensive). The bleeding happened for the whole year, so I decided to remove the implant.” (Participants 07)

Regarding knowledge on contraceptives one of the participants reported that;

“I will start making the follow up now. I never took it serious earlier. I never believed that they can prevent one from getting pregnancy. This is because I never have had received education about family planning, and the use of contraceptive methods.” (Participants 09)

Guarantee for marriage

The issue of marriage was posed by participants as one of the factors influencing repeated pregnancy among unmarried adolescents. Some adolescents reported that they were promised to be married if they accepted to have sex with their partners, however, the promises were never fulfilled. Some participants reported that after being impregnated for the second time, men denied the pregnancy. Others thought carrying a man's baby (pregnancy) could keep him that is the baby is the guarantee for marriage. It was pointed out by one of the participants that;

“The first one was due to girl's teenage stage but the second one that man came looking for the right person to get married to. He ended up luring me that he will marry me. We met one day in the video hall at night and it was the day that we also engaged in sex. After impregnating me, he left the place that he had rented and returned to their home.”

(Participant 11)

Another participant reported that;

“That is where I was heading because I believed that he was going to marry me because of that I ended up accepting making love with him. When I got pregnant, he rejected it and said that I was brainless. How could I be so stupid to be put in a trap of love?”

(Participant 05)

4.3 Social factors influencing repeated pregnancy among unmarried adolescent mothers

Decision making

Not being able to make sexual decisions was reported by participants. This was characterized by inability to negotiate that they are willing to have sex with their partners at a particular time or not, and the use of protection (condom). Some of the participants reported that they were forced to have sex by their partners. Moreover, some reported that the men are sometimes not ready to

use condom. All these lead them to have repeated pregnancy. One of the participants pointed out that;

“I didn’t like engaging myself in doing sex because I knew that I will be pregnant. Since he was forcing me and I was unable to resist because he was already my fiancée, lead me to become pregnant later. This is now the second pregnancy I am carrying”.

(Participants 02)

Another participant also added that;

“No, the man is the one who was not ready to use the protection (condom). I was unable to deny him from that. So this made me to get this pregnancy” (participants 15)

Peer pressure

Peer pressure was also revealed as one of the crucial factors influencing repeated pregnancy among unmarried adolescents. This is characterized by being lured, accused of being infertile, and fear of being gossiped that they can conceive only once. Some of the participants reported that adolescents sometimes sneak from their homes and go to watch cinemas, and this is where they meet boys and ultimately end up having sexual intercourse with them. One of the participants reported that;

“We are always told to remain at home. But at night we sneak from the houses and go to the cinemas. This environment makes it very easy to get pregnant. This is because of the types of houses that we have, adolescents have their houses build separate from the parents’ houses.” (Participants 16)

Another participant reported that;

“I can’t stop conceiving because people will say that the child of a certain person is infertile or start asking what problem she has. It is very painful sometimes when they see you with one child they will say that she has an ability of conceiving once.”

(Participants 14)

Parent-child relationship

Poor relationship between adolescents and their parents emerged as one of the important factors influencing repeated pregnancy. This was characterized denial of the parents to take their children to family planning programs, not having time to discuss sexual related issues with children, and sending children to do business instead of going to school. One of the participants pointed out that;

“No, I asked my mother to take me to the family planning program but she did not do so. Despite not knowing where the family planning centers are, my mother used to tell me to go there alone.” (Participants 13)

Another participant reported that they are requested by their parent to engage in small business for the benefit of the family. This lead to getting used to handle money when young and if they miss it they tend to engage in sexual relationships to earn money.

“When the parents send young children to engage in business, they start getting used with money too early. So when they lack, that is when they start asking themselves on where to get them. This leads in engaging themselves in sexual relationship issues in order to get money.” (Participants 12)

4.4 Structural factors influencing repeated pregnancy among unmarried adolescent mothers

Family problems

Family problems characterized with economic inequalities, school dropouts, poverty and diseases were found to influence repeated pregnancy among unmarried adolescents. The study found that some of the adolescents ended up having repeated pregnancy after their parents separated, whereas they remained with the father whom unfortunately could not take care of them since they are drunkard. One of the participants reported that;

“I dropped school when I was in grade six. This was because of the divorce between my father and mother. So after the divorce my mother left us with our father. Since my father was a drunkard, we used to come back from school feeling very hungry. We ended up going to look for food by our own and even after getting it, our father could forcefully take and use in drinking alcohol. I decided to come to stay with my mother. At the age of 15, I was lured by one person and I ended up getting pregnant.” (Participants 10)

Another participant reported that;

“I used to go with home clothes to school. I stopped going to school when in grade four because my father was suffering from epilepsy which he was bewitched by my cousin, a child of my aunt. So my mother was unable to afford by her.” (Participants 08)

Unfriendly health facilities environments

The participants also reported the issue of health facilities being unfriendly when they go to seek family planning services. This was characterized by lack of confidentiality and fear of privacy as they do not want to be seen. Due to this they end up not going for the services, hence they cannot prevent themselves from unplanned or unwanted pregnancies, which ultimately lead them to repeated pregnancy. One of the participants reported that;

“There is no reason, because you end up finding that you are summoned three or four at the same time. So others end up listening to the side of your story. It becomes very hard for you to get the service you need in private.” (Participant 06)

CHAPTER FIVE

DISCUSSION

5.0 Introduction

This chapter discusses findings about individual, social and structural factors influencing repeated pregnancy among unmarried adolescents.

5.1 Individual level factors influencing repeated pregnancy among unmarried adolescents

The study reported that some of the unmarried adolescents had inadequate sexuality knowledge since they never attended any sexual education related seminar or program and they lacked knowledge on family planning. The study found that some adolescent girls did not have even the knowledge of how to use condoms. Lacking sexuality education led adolescents to repeated pregnancy. These findings are supported by the study done in Nigeria reviewing the problems of adolescent sexual behavior and the role of Millennium Development Goals 4, 5 and 6 as it reported that one of the factors that exposed adolescents to unwanted pregnancy was the limited knowledge on safe sex (Adogu et al., 2014). Lack of comprehensive sexual education was also mentioned in a systematic review of determinants of adolescent pregnancy in sub-Saharan countries (Yakubu and Salisu, 2018). These findings imply the importance of sexual education among adolescents to prevent them from unwanted pregnancy.

In addition, participants reported the issue of fear of contraceptives side effects. It was found that some participants reported change in their menstrual cycle and bleeding longer than usual as barriers to use contraceptive. Not using contraceptive was one of the reasons for repeated pregnancy. The findings of the current study are supported by (Yakubu and Salisu, 2018) in a systematic review as they reported that fear of contraceptive side effects seems to be a barrier to contraceptive use. The study done in Iran also reported that women had inaccurate perception regarding contraceptives (Intrauterine devices) such as fear of pain, of IUDs being larger than the genitalia, and of sexual dysfunction (Vakilian et al., 2018).

While some of these are based on actual health related side-effects, many fears are based on rumors, rather than personal experience.

The results showed that adolescents had to conceive so as to keep their boyfriends because they have been promised that they are going to be married, however, these promises were never fulfilled. These findings are supported by a systematic review exploring factors that shape young people's sexual behavior as it reported that in order to hold on their boyfriends adolescent girls agree to sex (Marston and King, 2006). These findings imply that fear to lose their boyfriends can be the reason for repeated pregnancy, however, since adolescence are sexually active this poses them into a risk of engaging in sex, hence become vulnerable to falling pregnant.

5.2 Social factors influencing repeated pregnancy among unmarried adolescent mothers

It was found that, men were the ones with power to make decisions regarding intimacy issues. When a man wants to have sex, women have no choice but to accept because they seem to have no right to negotiate. Some of the participants reported that they were even forced and they did not use protection. These findings are supported by the study assessing socio-cultural influences in decision making involving sexual behavior among adolescents in Khayelitsha, Cape Town as it revealed that females were not able to negotiate for safe sexual practices (Ncitalalo, 2011). The similarity between these findings may be because of the fact that they are both from Africa, hence similarity in some cultural issues. The findings imply that traditions privilege males and put females under males' control, hence puts female at risk of getting unwanted/unintended pregnancy.

Parent-child relationship was posed as one of the important factors influencing repeated pregnancy among unmarried adolescents. Results established that, some parents denied to take their children to attend family planning programs. Also it was revealed that instead of sending them to school, adolescents were sent to do business which exposed them more at risk of having pregnancy repeatedly. The study exploring factors contributing to teenage pregnancy in the Capricorn district of the Limpopo Province supports the current study as it revealed that repeated

pregnancies may be associated with parents' reluctance in making sex and contraceptive education available to their kids (Mothiba and Maputle, 2012). The study in the United States reported that teenagers with higher levels of parental guidance were less likely to engage in sexual intercourse (Kim, 2008). The findings imply that parents may be interpreting giving sex and contraceptive education to their child, may be interpreted as the permission for them to engage in sexual activities.

5.3 Structural factors influencing repeated pregnancy among unmarried adolescent mothers

Issues of economic inequalities, school dropouts, and poverty were reported as contributing factors to repeated pregnancy. The study reported that adolescent girls had to drop from school because the parents could not manage the expenses. Sometimes they ended finding food for themselves which exposes them to unwanted pregnancy. A qualitative study exploring high rate of teenage pregnancy in high schools in the iLembe District, South Africa support the current study as it reported that adolescent girls brought from poor families are more at risk of getting pregnancy because of low expectation of education as well as job market (Nkwanyana, 2011). These findings imply that economic inequality and poverty among unmarried adolescent girls may have resulted into increased risks of repeated pregnancy and inaccessible contraception.

Unfriendly health facilities environment was also established as one of the crucial factors influencing repeated pregnancy. Adolescents feared to go for family planning services because of the issues regarding confidentiality and privacy. The findings are consistent with the study exploring condom use among adolescents and young people in a Southern African township as it revealed that some nurse staff violate privacy and confidentiality of adolescents (MacPhail and Campbell, 2001). Similar findings were reported by (Lesch and Kruger, 2005). The findings imply that adolescents despite the services not requiring parents' presence adolescents fear to be reported. Not being able to access the services make adolescent girls not being able to access contraceptives, hence increases the chance of repeated pregnancy.

5.4 Study limitation and mitigation

Since the study is qualitative in nature and involves purposive selection of the study sample, its findings cannot be generalized. Readiness of teenage mothers to provide the information about some of the reasons for becoming pregnant since it is normally considered as illegal since some explanations point directly to their relatives or teachers and hence, they might have provided unreliable information. This was achieved by explaining to them that confidentiality is assured, no names were involved and the information may be disclosed only for the purpose of this research.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.0 Conclusion

The study number of individual level factors influencing repeated pregnancy among unmarried adolescents. These included lack of sexuality education (for example the proper knowledge on family planning methods), individual perceived barriers on contraceptives use (fear of side effect and not being educated on contraceptives), and guarantee for marriage as it was reported that some got the second pregnancy since they were promised marriage.

The current study also reported power to make decisions, peer pressure and parent-child relationship as social factors influencing repeated pregnancy among unmarried adolescents. Adolescent girls had no power to say no when their partners wanted to have sex with them even without condoms. Moreover, the pressure from the peers characterized with fear of being gossiped as having fertility problems and going for cinemas at night and not supporting children on family planning issues among parents fueled repeated pregnancy.

The study also identified two main structural factors influencing repeated pregnancy among unmarried adolescents. These were family problems characterized with poverty, diseases, economic inequalities, and divorce as well as unfriendly health facilities environment for adolescents when they want to go for family planning services.

6.1 Recommendations

Based on the study findings the study recommends that:

1. The during local government meeting, community leaders should encourage parents to talk with their children especially adolescent girls about sexuality education since they are primary educators.

2. The campaigns to raise awareness on sexuality education among adolescent girls should be emphasized by the Ministry of Health and other implementing partners dealing with reproductive health and should go along with those involving parents.
3. Peer groups can be set up in schools where adolescent mothers may converse with their peers to give information just as the effect that teen pregnancy has on their lives and the duties that parenthood brings.
4. The Ministry of Health and other implementing partners dealing with reproductive health should strengthen campaigns to encourage gender balance by changing community attitude towards position/status of women in the society as a whole.
5. The health care workers should make friendly environment for adolescents and ensure privacy and confidentiality
6. Unmarried adolescent mothers should abstain from having sex and if not then they use contraceptives in order to prevent unwanted pregnancy. Also, they should be able to say no to unwanted sex.

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APPENDICES

Appendix I: Informed Consent Form (English version)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES (MUHAS)



DIRECTORATE OF RESEARCH AND PUBLICATIONS

MUHAS INFORMED CONSENT FORM

ID NO, HD/MUH/T.490/2019

Consent to participate in a research study

Greetings!

My name is Mwajuma R. Mmbaga I'm second year student pursuing Master of Science in Midwifery and Women at Muhimbili University of Health and Allied Sciences (MUHAS). I am conducting the research with the title **“Factors influencing repeated pregnancy among unmarried adolescent mothers in Katavi, Tanzania”**

Purpose of the Study

The study is conducted as partial fulfillment of the requirement for the degree of masters of Midwifery and Women Health of MUHAS. This study aims to explore Factors influencing repeated pregnancy among unmarried adolescent mothers in Katavi, Tanzanian. The findings will add knowledge on adolescent mothers and will contribute to the designing of appropriate interventions to address these problems of the repeated pregnancy at Mlele district

What Participation Involves

If you agree to participate in the study, you will be interviewed in order to answer a series of questions during interview.

Confidentiality

All information recorded will be entered into computer using identification number. No participant's name will be written anywhere in this document. You will only give your time to participate in the discussion

Risks

There is no risk anticipated while participating in this study.

Rights to withdraw and alternatives

You can decide to stop participating in this study at any time you wish even if you have already given your consent. Refusal to participate or withdrawal from the study will not involve penalty or loss of any benefits to which you are otherwise entitled.

Benefits

If you agree to take part in this study there are no direct benefits that you will get but the information you will provide will contribute to the designing of appropriate interventions to address the factors influencing repeated pregnancy among unmarried adolescent mothers at Mlele district

Compensation

There will be no compensation of any form for participating in this study.

Who to contact:

In case of any question about the study contact the principal investigator **Mwajuma R. Mmbaga**, Muhimbili University of Health and Allied Sciences School of Nursing P.O. Box. 65004 Dar es Salaam, through **Mobile +255757113559**. OR research supervisory **Dr Beatrice Mwilike**, Muhimbili University of Health Allied Science School of Nursing **P.O Box 65004**

Dar es Salaam, Mobile Number +255712620924 if you ever have questions about your rights as a study participant in this study please contact the Director of Research and Publication Committer **Dr Bruno Sunguya** Muhimbili University of Health and Allied Science **P.O B ox 65001** Dar Salaam Tel +255222150302-6/ 2152489 I will be grateful if you willingly agree to participate in this study.

Do you agree..... Participant does not agree.....

I have read the content in this form. My questions have been answered clearly. I agree to participate in this study.

Signature of participant Date.....

Signature of the parent/guardian..... Date.....

Signature of principal investigatorDate.....

Thank you for your cooperation

Appendix II: Fomu ya ridhaa (Swahili version)

CHUO KIKUU CHA AFYA NA SAYANSI SHIRIKISHI MUHIMBILI



KURUGENZI YA TAFITI NA UCHAPISHAJI.

FOMU YA RIDHAA.

Nambari ya usajili: HD/MUH/T.490/2019

Naitwa Mwajuma R, Mmbaga mimi ni mwanafunzi wa mwaka wa pili katika shahada ya uzamili katika Ukunga na Afya ya Wanawake katika chuo kikuu cha Afya na Sayansi Shirikishi Muhimbili. Ninafanya utafiti kuhusu **“Sababu zinazo pelekea mimba za kujirudia kwa vijana wa umri chini ya miaka 20 ambao hawajaolewa**

Umuhimu wa utafiti huu.

Utafiti huu unalenga kuchunguza **“Sababu zinazo pelekea mimba za kujirudia kwa vijana wa umri chini ya miaka 20 katika idara ya Huduma ya mama na mtoto Mahitajio ya malezi kwa wazazi wa watoto”.**

Jinsi ya kushiriki.

Ukikubali kushiriki katika utafiti huu, utasailiwa ili kuweza kujibu maswali kutoka kwenye dodoso lililoandaliwa kwa ajili ya utafiti huu ambapo utaulizwa na mtafiti nae ataandika maelezo yako.

Usiri

Majibu yatahifadhiwa sehemu maalum ambapo wahusika tuu ndio wataruhusiwa kuzipata taarifa hizo. Pia majina hayatumika badala yake itatumika nambari ya utambulisho.

Madhara

Hakuna madhara yeyote kwa kushiriki katika utafiti huu.

Haki ya kutoshiriki au kusitisha kushiriki na mbadala.

Una uhuru wa kukubali au kukataa kushiriki katika utafiti huu. Pia unaweza kusitisha kushiriki katika utafiti huu muda wowote ukiamua kufanya hivyo hatakama umekubali kushiriki. Kukataa kushiriki au kusitisha kushiriki katika utafiti huu hakutakufanya upoteze haki zako za msingi au kupata adhabu yoyote.

Faida

Hakuna faida ya moja kwa moja ambayo utapata lakini tunaamini taarifa utakazotoa zitasaidia kutambua Sababu zinazopelekea mimba za kujirudia kwa vijana wenye umri chini ya miaka 20 Idara ya Huduma ya mama na mtoto KATAVI

Fidia; Hakuna fidia yoyote itakayotolewa katika utafiti huu,

Mawasiliano.

Kama utakuwa na swali lolote kuhusu utafiti huu wasiliana na mkuu wa utafiti huu **Mwajuma R.Mmbaga** Shule ya Uuguzi ya Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili, **S.L.P. 65001**, Dar es Salaam, namba ya simu **+255 757113559**, au unaweza kuwasiliana na msimamizi wa utafiti huu **Dr Beatrice Mwilike** Shule ya Uuguzi Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili, **S.L.P. 65001** Dar es Salaam namba ya simu **+255712620924** Na ukiwa na swali lolote kuhusu haki zako kama mshiriki, unaweza kuwasiliana na Mkurugenzi wa Utafiti wa Chuo Kikuu cha Afya na Sayansi Shirikishi Muhimbili, **Dr Bruno Sunguya S.L.P. BOX 65001**, Dar es Salaam. Tel; **+255222150302-6/ 2152489**.

Nimesoma na nimeelewa maelezo ya fomu hii. Maswali yangu yote yamejibiwa na nakubali kushiriki katika utafiti huu.

Sahihi ya mshirikiTarehe.....

Sahihi ya mzazi /Mlezi.....Tarehe.....

Sahihi ya Mtafiti.....Tarehe

Appendix III: Respondent Interview guide – English version

Interview guide for the unmarried adolescent mothers on factors influencing repeated pregnancy

Demographic characteristics

I would like to begin by you telling me a little about yourself:

1. How old are you at the moment?
2. Can you please tell me about where you live, how long you have lived there and who do you live with?
3. Can you tell me about whether you are at school at the moment or not and if not if you are working or staying at home and how you are finding this?
4. Can you tell me a bit about what kind of things you do for fun/when you have time off?

Pregnancy

I would now like to ask you some questions about your pregnancy:

5. How old were you when you became pregnant for the first time? How many times altogether have you been pregnant?
6. How many children are you now planning to have/would you like to have?
7. Can we speak about your experiences of your pregnancy? Could you tell me about your situation at the time and how you felt? (Probe: *what was type of intimate relationship she was in with the father of the baby; whether it was her own decision to become pregnant or a joint one; did she/they feel pressurized by someone to become pregnant; did it just 'happen' without thinking it would- i.e., was it planned or unplanned; did she have feelings of happiness about being pregnant and why; did she have concerns or fears and why?*)

8. Who did you speak to about being pregnant again? Can you talk about why you decided on this person/people? How did speaking to them about it turn out?
9. What was your personal and family life like before you became pregnant again?
10. What was the economic situation before you became pregnant again?
11. What was your social life (with friends etc.) before you became pregnant again? (Probe: what do you do for recreation etc?)

Intimate relations and pregnancy prevention

12. Thinking about when you had sex on the occasion that led to the repeated pregnancy, what were the circumstances in which it happened? (Probe with this was her choice or whether someone else for e.g., person she has sex with, peers or something else persuaded her to have sex at that time; did it just happen on the spur of the moment or was it planned?)
13. When you became pregnant, did you know about any methods that could prevent a pregnancy? If yes, what methods did you know about? What did you know about these methods and what they do in offering protection?
14. If you knew about methods to prevent a pregnancy, were there any things that made/or would have made it easier or more difficult for you to decide to use a method? Can you talk more about this? [Probe as to where they got information from; did she know where to go for contraception? Where did she go? if they did use contraception: how easy or difficult this was; how was she treated by the health service providers?
15. If you were using a method at the time you became pregnant what happened (if you know) with this method that made you able to become pregnant?
16. What do you think should be done that could improve teenage sexual and reproductive health service?
17. What else can be done to reduce teenage pregnancy among unmarried teenagers in Katavi?

Appendix IV: Respondent Interview guide – Swahili version

Mwongozo wa mahojiano kwa vijana ambao hawajaolewa juu ya sababu zinazoathiri ujauzito unaorudiwa

Taarifa za awali

Ningependa kuanza na wewe kuniambia kidogo juu yako:

1. Una umri gani sasa?
2. Tafadhali naomba uniambie ni wapi unaishi, umekaa muda gani huko na unaishi na nani?
3. Unaweza kuniambia ikiwa uko shuleni kwa sasa au la na ikiwa sio ikiwa unafanya kazi au unakaa nyumbani na unachukuliaje hili?
4. Je! Unaweza kuniambia kidogo juu ya aina gani ya vitu unavyofanya kwa raha / wakati wa kupumzika.

Mimba/Ujauzito

Napenda sasa kukuuliza maswali kadhaa juu ya ujauzito wako:

5. Ulikuwa na umri gani wakati ulipata ujauzito kwa mara ya kwanza? Umekuwa mjamzito mara ngapi?
6. Je! Unapanga kuwa na watoto wangapi / ungependa kuwa nao?
7. Je! Tunaweza kuzungumza juu ya uzoefu wako wa ujauzito? Je! Unaweza kuniambia juu ya hali yako wakati huo na jinsi ulivyohisi? (uliza: *ni aina gani ya uhusiano wa karibu aliokuwa nao na baba wa mtoto; ikiwa ni uamuzi wake mwenyewe kuwa mjamzito au wa pamoja; je! Alihisi ameshinikizwa na mtu kupata mjamzito; bila kufikiria ingekuwa- ilikuwa imepangwa au haikupangwa; alikuwa na hisia za furaha juu ya kuwa mjamzito na kwanini; alikuwa na wasiwasi au hofu na kwanini?*)

8. Ulizungumza na nani juu ya kuwa mjamzito tena? Je! Unaweza kuzungumza juu ya kwanini uliamua juu ya mtu / watu hawa? Je! Kuongea nao juu ya hilo kulitokeaje?
9. Je! Maisha yako ya kibinafsi na ya familia yalikuwaje kabla ya kupata ujauzito tena?
10. Hali ya uchumi ilikuwaje kabla ya kupata ujauzito tena?
11. Maisha yako ya kijamii (na marafiki nk) yalikuwaje kabla ya kupata ujauzito tena? (uchunguzi: unafanya nini kwa burudani nk.)

Mahusiano ya kimapenzi na uzuiaji wa ujauzito

12. Fikiria wakati uliofanya mapenzi ambao ulisababisha ujauzito mwingine, ilikuwa mazingira gani katika hali hiyo? (Chunguza: hii ilikuwa chaguo lake au? ikiwa mtu mwingine, kwa mfano mtu anayefanya naye ngono, rika au kitu kingine kilimshawishi kufanya ngono wakati huo; je! Iitokea tu bahati mbaya au ilikuwa imepangwa?)
13. Wakati ulipata ujauzito, je! Ulijua juu ya njia zozote zinazoweza kuzuia ujauzito? Ikiwa ndio, umejua njia gani? Je! Ulijua nini juu ya njia hizi na zinafanya nini katika kutoa ulinzi?
14. Ikiwa unajua kuhusu njia za kuzuia ujauzito, je! Kulikuwa na vitu vyovyote ambavyo vilifanya / au ingekurahisishia au iwe ngumu kwako kuamua kutumia njia? Je! Unaweza kuzungumza zaidi juu ya hili? [Chunguza ni wapi walipata habari; alijua wapi aende kwa uzazi wa mpango? Alienda wapi? ikiwa walitumia uzazi wa mpango: hii ilikuwa rahisi au ngumu vipi; alihudumiwa vipi na watoa huduma za afya?]
15. Ikiwa ulitumia njia wakati wa kupata ujauzito ni nini kilitokea (ikiwa unajua) na njia hii iliyokufanya uweze kuwa mjamzito?
16. Je! Unafikiri nini kifanyike ambacho kinaweza kuboresha huduma ya afya ya uzazi kwa vijana?
17. Ni nini kingine kinachoweza kufanywa kupunguza ujauzito kwa vijana amabao hawajaoelwa hapa Katavi?

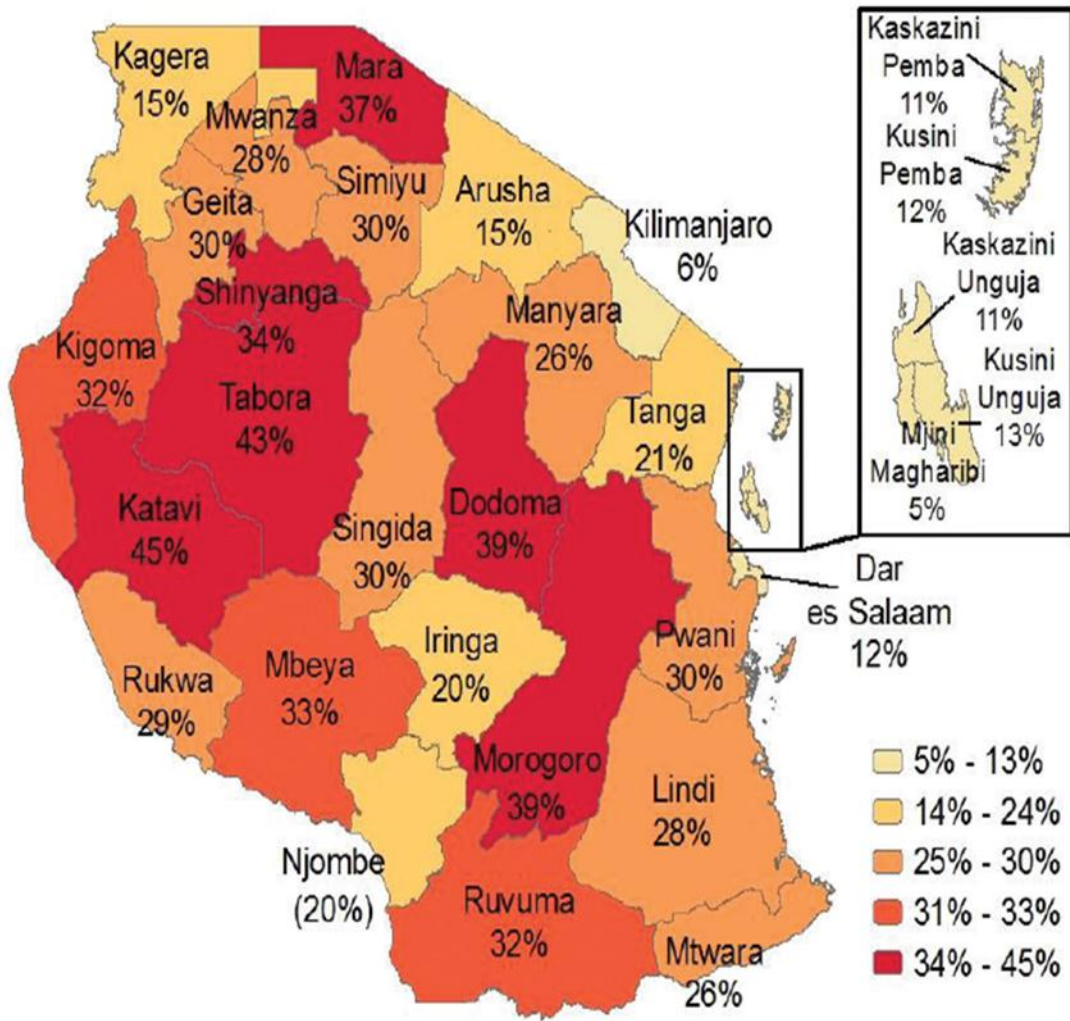


Figure 2: The Map of Tanzania

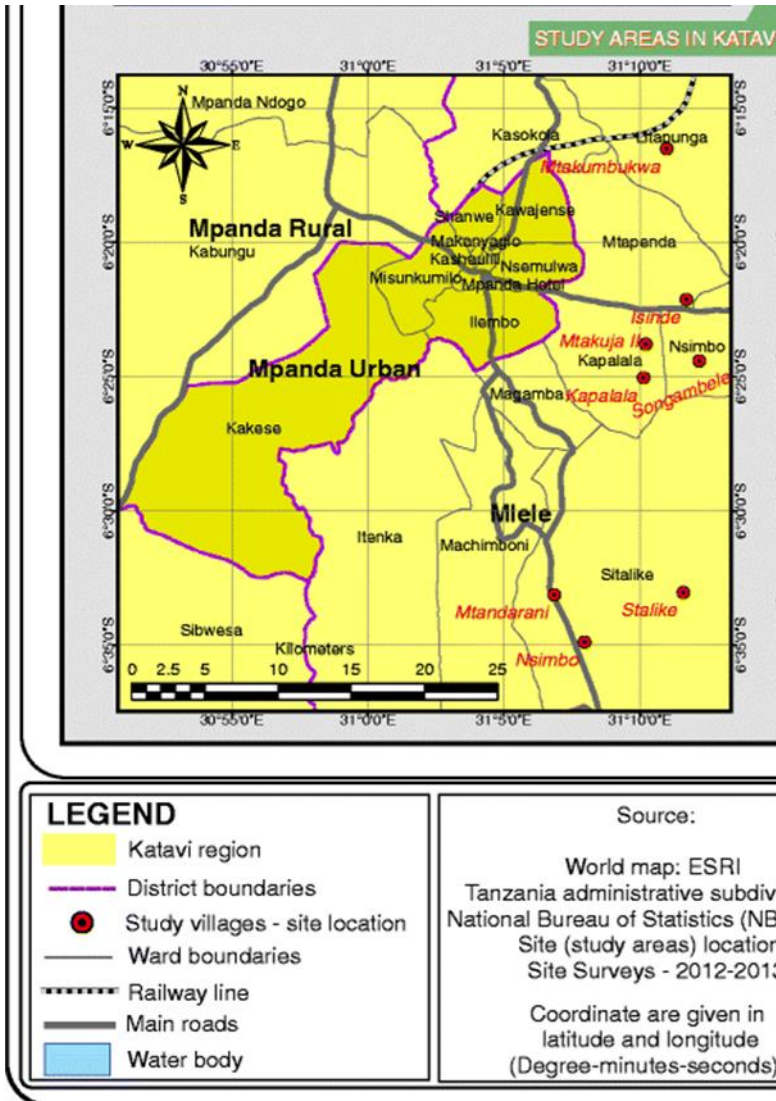


Figure 3: The map of Katavi Region

Appendix Ethical clearance letter



UNITED REPUBLIC OF TANZANIA
 MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
 MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR - RESEARCH AND PUBLICATIONS



Ref. No.DA.282/298/01.C/

Date: 13/05/2021

MUHAS-REC-05-2021-613

Mwajuma Mmbaga
 MSc. Midwifery and Women's Health,
 School of Nursing
MUHAS

**RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED:
 FACTORS INFLUENCING REPEATED PREGNANCY AMONG UNMARRIED
 ADOLESCENT MOTHERS KATAVI, TANZANIA**

Reference is made to the above heading.

I am pleased to inform you that the Chairman has on behalf of the University Senate, approved ethical clearance of the above-mentioned study, on recommendations of the Senate Research and Publications Committee meeting accordance with MUHAS research policy and Tanzania regulations governing human and animal subjects research.

APPROVAL DATE: 13/05/2021

EXPIRATION DATE OF APPROVAL: 12/05/2022

STUDY DESCRIPTION:

Purpose:

The purpose of this observational cross-sectional study is to explore factors influencing repeated pregnancy among unmarried adolescent mothers.

The approved protocol and procedures for this study is attached and stamped with this letter, and can be found in the link provided: <https://irb.muhas.ac.tz/storage/Certificates/Certificate%20-%20663.pdf> and in the MUHAS archives.

The PI is required to:

1. Submit bi-annual progress reports and final report upon completion of the study.
2. Report to the IRB any unanticipated problem involving risks to subjects or others including adverse events where applicable.
3. Apply for renewal of approval of ethical clearance one (1) month prior its expiration if the study is not completed at the end of this ethical approval. You may not continue with any research activity beyond the expiration date without the approval of the IRB. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.
4. Obtain IRB amendment (s) approval for any changes to any aspect of this study before they can be implemented.
5. Data security is ultimately the responsibility of the investigator.
6. Apply for and obtain data transfer agreement (DTA) from NIMR if data will be transferred to a foreign country.
7. Apply for and obtain material transfer agreement (MTA) from NIMR, if research materials (samples) will be shipped to a foreign country,
8. Any researcher, who contravenes or fail to comply with these conditions, shall be guilty of an offence and shall be liable on conviction to a fine as per NIMR Act No. 23 of 1979, PART III section 10 (2)
9. The PI is required to ensure that the findings of the study are disseminated to relevant stake holders.
10. PI is required to be versed with necessary laws and regulatory policies that govern research in Tanzania. Some guidance is available on our website <https://drp.muhas.ac.tz/>.



Dr. Bruno Sunguya
Chairman, MUHAS Research and Ethics Committee




Cc: Director of Postgraduate Studies

Appendix VI: Permission letter

**JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA
HALMASHAURI YA WILAYA YA MPIMBWE**

Barua pepe: ded@mpimbwcdc.go.tz
Tovuti: www.mpimbwcdc.go.tz



S.L.P 245
MPANDA-KATAVI


Unapojibu Taja:
Kumb No.KTV/MPDC/T.40/VOLII /254

20/05/2021.

Mganga mfawidhi,
Kituo cha Afya Mamba
S.L.P 425,
MPANDA-KATAVI.

**YAH: KUMRUHUSU NDUGU MWAJUMA MMBAGA KUFANYA UTAFIGI
KWENYE KITUO CHA AFYA MAMBA .**

- 1.Husika na mada tajwa hapo juu.
- 2.Ofisi ya Mkurugenzi Mtendaji Halmashauri ya Wilaya ya Mpimbwe, imepokea barua ya tarehe 18/05/2021 yenye **Kumb Na HD/MUH/T.490/2019**,lengo la utafiti ni kufahamu sababu zinazopelekea vijana ambao hawajaolewa kupata mimba zinazojirudi.
- 3.Kwa barua hii ofisi inaomba umuruhusu kufanya utafiti kwenye kituo chako.
- 4.Nakutakia utekelezaji mwema.


Kny. MKURUGENZI MTENDAJI
HALMASHAURI YA (W) MPIMBWE

**Dr MARTIN LOHAY
Kny.MKURUGENZI MTENDA(W)
HALMASHAURI YA WILAYA YA MPIMBWE**

Nakala:-
Mkurugenzi Mtendaji (W).
Halmashauri ya wilaya ya Mpimbwe.
S.L.P 245
MPANDA -KATAVI

-Aione kwenye jalada