

**DETERMINANTS OF TEENAGE PREGNANCY PREVALENCE IN
KAKAMEGA COUNTY, KENYA**

ANASTASHA CHEROTICH

**A Thesis Submitted in Partial Fulfilment of the Requirements for the Award of
Master of Science in Public Health Degree of Masinde Muliro University of Science
and Technology**

November, 2024

DECLARATION

This thesis is my original work and it has not been presented for the award of degree in any learning Institution.

Signature..... Date

ANASTASHA CHEROTICH

REG: HPH/G/01-70181/2021

CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance of Masinde Muliro University of Science and Technology a proposal entitled:

“Determinants Of Teenage Pregnancy Prevalence In Kakamega County, Kenya”

Signature..... Date

Dr. Rose Olayo (PhD)

Senior Lecturer, Department of Public Health

Masinde Muliro University of science and Technology

Signature..... Date.....

Dr. Everlyne Akoth otero (PhD)

Lecturer, Department of mathematics

Masinde Muliro University of science and Technology

PLAGIARISM STATEMENT

STUDENT DECLARATION

1. I hereby declare that I know that the incorporation of material from other works or a paraphrase of such material without acknowledgement will be treated as plagiarism according to the Rules and Regulations of Masinde Muliro University of Science and Technology
2. I understand that this thesis must be my own work.
3. I know that plagiarism is academic dishonesty and wrong and that if I commit any act of plagiarism, my thesis can be assigned a fail grade ("F").
4. I further understand I may be suspended or expelled from the University for Academic Dishonesty.

Signature..... Date

ANASTASHA CHEROTICH

REG: HPH/G/01-70181/2021

SUPERVISORS

Signature..... Date

Dr. Rose Olayo (PhD)

Senior Lecturer, Department of Public Health

Masinde Muliro University of science and Technology

Signature..... Date.....

Dr. Everlyne Akoth otero (PhD)

Lecturer, Department of mathematics

Masinde Muliro University of science and Technology

COPYRIGHT

This thesis is copyright materials protected under the Berne Convention, the copyright Act 1999 and other international and national enactments in that behalf, on intellectual property. It may not be reproduced by any means in full or in part except for short extracts in fair dealing for research or private study, critical scholarly review or discourse with acknowledgment, with written permission of the Director of Postgraduate Studies on behalf of both the author and Masinde Muliro University of Science and Technology.

ACKNOWLEDGEMENT

My foremost appreciation goes to the almighty God for giving me knowledge and wisdom to undertake this research. I highly acknowledge the professional support, patience and guidance from my supervisors, Dr. Rose Olayo and Dr. Everlyne Odero, whose close and intellectual guidance enabled me to carry out this research. I acknowledge Masinde Muliro University of Science and Technology – Directorate of Postgraduate Studies, and the County Government of Kakamega for processing all the necessary approvals I needed for this study. I am also grateful to my lecturers and chairperson of the Department of Public Health for their commitment and support throughout my research. My sincere appreciation goes to my family members and friends for their moral support and encouragement throughout the journey of this research. I also thank teenagers from Ikolomani and Butere sub-counties for voluntarily participating in this study.

ABSTRACT

Kenya, through the Ministry of Health has a target to reduce the pregnancy rate among teenage girls to 10% by 2025. It is estimated that approximately 3000 girls drop out of school annually in Kenya due to teenage pregnancy. Kakamega County is one of the counties in Kenya with high teenage pregnancy rate of 15%. The study sought to assess the determinants of teenage pregnancy prevalence in Kakamega County. The specific objectives of the study were: to determine the prevalence of teenage pregnancy in Kakamega County; to determine the economic factors influencing teenage pregnancy prevalence in Kakamega County; to examine the cultural factors influencing teenage pregnancy prevalence in Kakamega County, and to assess the peer group influence on teenage pregnancy prevalence in Kakamega County. The Sexual Script and Symbolic Interaction Theories guided the study. Descriptive cross-sectional study design was adopted for this study. The target population was teenagers between 15-19 years. Purposive sampling was used to select Butere, Ikolomani Sub-Counties, random sampling technique was also used to select two wards in each Sub-County, and systematic sampling was used to obtain participants. Sample size of 438 was arrived at using Yamane (1967). Quantitative data were collected using semi-structured questionnaires while qualitative data were collected using KIIs. Quantitative data was analysed using STATA version 18. Descriptive and analytical statistics (Chi-square and Binary logistic regression test) were carried out. Values were considered significant at P-value <0.05. Content analysis was done on qualitative data. Those from poorest families were 94 times more likely to get pregnant compared to those from middle families (OR=93.563, CI= 26.562- 329.565). Teenage family with monthly income of less than 2500 were 90.1% less likely to be pregnant compared to those with family monthly income of 10,000 and above (OR=0.099, CI= 0.028- 0.346. On the cultural factors, there was a strong association on religious support of sex before marriage ($\chi^2 = 93.78$; $P < 0.001$). On peer pressure, 75.6% of teenagers said peer pressure led to teenage pregnancy, teenagers who desired to experiment based on sex stories were about 3 times more likely to be pregnant (OR=2.809, CI=1.397-5.650) and teenagers who feared losing boyfriends were 2 times more likely to be pregnant than those who did not (OR=2.223, CI= 1.222-4.044). Teenage pregnancy is influenced by wealth Index, monthly income, religious sex support before marriage, sex discussion and peer influence. Multi-sectoral approach in addressing these issues in Kakamega County is important in reducing Teenage pregnancy prevalence.

TABLE OF CONTENTS

TITLE PAGE	i
DECLARATION	ii
PLAGIARISM STATEMENT	ii
COPYRIGHT	ii
ACKNOWLEDGEMENT	ii
ABSTRACT	ii
TABLE OF CONTENTS	ii
LIST OF TABLES	ii
LIST OF FIGURES	ii
LIST OF APPENDICES	ii
OPERATIONAL DEFINITION OF TERMS	ii
ABBREVIATIONS AND ACRONYMS	ii
CHAPTER ONE INTRODUCTION	2
1.1 Background to the Study	2
1.2 Problem Statement	2
1.3 Research Objectives	2
1.3.1 General Objective	2
1.3.2 Specific Objectives	2
1.4 Research Questions	2

1.5 Justification of the Study	2
1.6 Significance of the Study	2
1.7 Scope of the study	2
1.7.1 Limitations	2
1.7.2 Delimitations	2
1.8 Theoretical Model	2
1.8.1 Sexual Script Theory	2
1.8.2 Symbolic Interaction Theory	2
1.9 Conceptual Framework	2
1.10 Assumptions of the Study	2
 CHAPTER TWO: LITERATURE REVIEW	 2
2.1 Introduction	2
2.2 Teenage Pregnancy Prevalence	2
2.3 Economic Factors and Teenage Pregnancy Prevalence	2
2.3 Cultural Factors and Teenage Pregnancy Prevalence	2
2.4 Peer Group Influence and Teenage Pregnancy Prevalence	2
 CHAPTER THREE: MATERIALS AND METHODS	 2
3.1 Introduction	2
3.2 Study Area	2
3.3 Study Design	2
3.4 Study Population	2
3.4.1 Inclusion Criteria	2

3.4.2 Exclusion Criteria	2
3.5 Study Variables	2
3.5.1 Dependent Variable	2
3.5.2 Independent Variable	2
3.6 Sampling Design	2
3.6.1 Sampling Strategy	2
3.7 Sample Size Determination	2
3.8 Data and Information Collection Instruments	2
3.8.1 Questionnaire for Teenagers	2
3.8.2 Key Informants' Interviews	2
3.9 Pre-test	2
3.10 Validity	2
3.11 Reliability	2
3.12 Data Collection Procedures	2
3.13 Data Analysis	2
3.13.1 Quantitative Analysis	2
3.13.2 Qualitative Analysis	2
3.14 Ethical Considerations	2
CHAPTER FOUR: RESULTS	2
4.1 Introduction	2
4.2 Questionnaire Response Rate	2
4.3 Demographic Characteristics of the Respondents	2
4.4 Teen Pregnancy Prevalence	2

4.5 Economic Factors influencing Teenage pregnancy Prevalence	2
4.5.1 Economic Characteristics of Teenagers	2
4.5.2 Association between Economic Factors and Teenage Pregnancy Prevalence	2
4.5.3 Multiple Logistic Regression on economic determinants of Teenage Pregnancy Prevalence	2
4.6 Cultural Factors as determinant of Teenage Pregnancy Prevalence	2
4.6.1 Cultural Characteristics of Teenagers	2
4.6.2 Association between Cultural Factors and Teenage Pregnancy Prevalence	2
4.7 Effect of Peer Pressure Influence on Teenage Pregnancy Prevalence	2
4.7.1 Peer Group Characteristics among Teenage Girls	2
4.7.2 Reasons Peer Pressure Leads to Teenage Pregnancy	2
4.7.3 Modelling of Peer Group Pressure Factors on Teenage Pregnancy Prevalence	2

CHAPTER FIVE: DISCUSSION 2

5.1 Introduction	2
5.2 Teenage pregnancy Prevalence	2
5.3 Economic Factors and Teenage Pregnancy Prevalence	2
5.3 Cultural Factors and Teenage Pregnancy Prevalence	2
5.4 Peer Group Pressure and Teenage Pregnancy Prevalence	2

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS 2

6.1 Introduction	2
6.2 Conclusions	2

6.2.2 Economic Factors as determinant of Teenage Pregnancy Prevalence 2

6.2.3 Effect of Cultural Factors on Teenage Pregnancy Prevalence 2

6.2.4 Peer Group Influence on Teenage Pregnancy Prevalence 2

6.3 Recommendations 2

6.3.1 Recommendations for Practice 2

6.3.2 Recommendation for Policy 2

6.3.3 Recommendations for Further Research 2

REFERENCES 2

APPENDICES 2

LIST OF TABLES

Table 3.1: Data Analysis Tests	45
Table 4.1: Demographic Characteristics of the Teenage Respondents	49
Table 4.2: Descriptive Statistics on Economic Factors	54
Table 4.3: Association between Economic Factors and Teenage Pregnancy Prevalence	55
Table 4.4: Modelling of Economic Factors on Teenage Pregnancy Prevalence	58
Table 4.5: Cultural Characteristics of Teenagers	62
Table 4.6: Effect of Cultural Factors on Teenage Pregnancy Prevalence	64
Table 4.7: Multiple logistic Regression on Effects of Cultural Factors on Teenage Pregnancy Prevalence	67
Table 4.8: Peer Group Factors Characteristics among Teenagers	70
Table 4.9: Effect of Peer Group Pressure Influence on Teenage Pregnancy Prevalence	73

LIST OF FIGURES

Figure 1.1: Conceptual framework[17](#)

Figure 4.1 Teen pregnancy Prevalence.....51

Figure 4.1: Age at first sex[63](#)

Figure 4.2: Reasons why peer group pressure leads to teenage pregnancy[72](#)

LIST OF APPENDICES

Appendix I: Consent Form.....	90
Appendix II: Questionnaire.....	92
Appendix III: Key Informant Interview for CHVs.....	99
Appendix IV: Key informant Interview for Gender Based Violence Coordinator.....	100
Appendix V: Key Informant Interview for Children Officer.....	101
Appendix VI: MMUST Directorate of Postgraduate Studies Approval.....	102
Ref: MMU/COR:509099.....	102
Appendix VII: MMUST IERC Approval.....	103
Appendix VIII: NACOSTI Research License.....	104
Appendix IX: County Government of Kakamega Research Authorization.....	105
Appendix X: Map of Kenya Kakamega County showing Study Areas (Ikolomani and Butere).....	106

OPERATIONAL DEFINITION OF TERMS

Cultural factors: The respondents' way of life and how it influences teenage pregnancy.

The respondents' beliefs and taboos and how they influenced teenage pregnancy. In this study, it also included social factors rooted in the respondents' cultural background, such as early marriage.

Disco matanga: Also known as disco funerals; these are events in western Kenya in which community members, including teenagers, gather at the home of the deceased for several days participating in commemorations of the dead accompanied by music and dancing.

Economic factors: Parental financial ability to provide basic necessities for their girl-child so that she is not involved in sexual activities to meet those very needs; sexual activity that could result to early age pregnancy due to desperation. Factors that shaped the wealth index of the family or household, such as employment and levels of education, were also included in economic factors in this study.

Family size: How many people resided in the household of the research participants and, for married individuals, how many people lived in the household before marriage

Health: A condition of total health, including mental, social, and physical aspects, as opposed to only the absence of sickness.

Peer pressure: Teenagers' influence among themselves to engage in activities that leads to teenage pregnancy.

Prevalence: The proportion of teenage pregnancy.

Risk: A situation involving exposure to danger.

Teenage: Girls between the ages of 15 and 19 years.

Teenage pregnancy: Girls between the ages of 15 and 19 years who are pregnant or have ever been pregnant. It is assumed from the demographic point of view that giving birth begins at age 15 and ends at 49.

ABBREVIATIONS AND ACRONYMS

AOR	Adjusted Odds Ratio
AFIDEP	African Institute for Development Policy
CI	Confidence Interval
CHUs	Community Health Units
CHVs	Community Health Volunteers
DALYs	Disability Adjusted Life Years
DHS	Demographic Health Survey
GDP	Gross Domestic Product
KNBS	Kenya National Bureau of Statistics
MDG	Millennium Development Goals
MMUST	Masinde Muliro University of science and Technology
NGO	Non-Governmental Organization
SDG	Sustainable Development Goals
SPSS	Statistical Package for social Sciences
SRH	Sexual Reproductive Health
SSA	Sub-Saharan Africa
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Adolescent pregnancy continues to be a substantial and intricate issue in both industrialized and developing nations. Approximately 21 million adolescents between the ages of 15 and 19 from low- and middle-income countries become pregnant each year on a global scale. Out of these pregnancies, 50% are unplanned, resulting in approximately 12 million births (Sully et al., 2020). According to the 2019 data, approximately 55% of unplanned pregnancies result in abortions, which are frequently characterized as hazardous (Sully et al., 2020). Although fertility rates are declining worldwide, almost 18 million girls who are under 20 years old give birth annually. Out of the total number of females who give birth annually, which is 18 million, around 2 million are below the age of 15 (Keteve et al., 2020). The majority of these births, exceeding 90%, take place in countries with low and intermediate incomes, as reported by the World Health Organization in 2011. The regions of West and Central Africa, East and Southern Africa, South Asia, Latin America, and the Caribbean are the areas that experience the highest rates of teenage pregnancies, as stated by Keteve et al. (2020).

Teenage pregnancy is influenced by various factors, including societal pressure to get married and have children, limited availability of contraceptives, laws and policies that restrict access to contraceptives based on age or marital status, instances of child sexual abuse (World Health Organization, 2020), and cases of sexual violence (World Health Organization, 2021).

The United States of America (USA) has the highest rate of teenage pregnancy among developed nations. It accounts for around 60% of all reported cases, which is four times the number of cases recorded in the entire European Union (EU) (Sedgh et al., 2015). According to Kirchengast (2016), Ukraine, Macedonia, Russia, Romania, Bulgaria, United Kingdom, and Belarus are the European Union countries most affected by teenage pregnancy. China has a significant number of documented incidents of teenage pregnancy. A study conducted in China has identified teenage pregnancies as a significant public health issue, primarily occurring inside the towns (Wang et al., 2005). The incidence of teenage pregnancy has increased from 35.1% in 1996 to 44% in 2006. The significant causes of these health consequences are primarily linked to various issues related to teenage pregnancy, including pregnancy-related illnesses, a high rate of infant mortality, low birth weight babies, maternal mortality, and exposure to sexually transmitted diseases (McIntyre and World Health Organization, 2006). Teenage pregnancy leads to an increase in a country's population, which puts additional strain on other sectors of the economy, thus hindering the economic and social development of such nations (Aoyama, 2001). This can exacerbate extreme poverty levels, particularly in low-income countries (Agbemenu and Schlenk, 2011). The World Health Organization considers teenage pregnancy to be a health risk for both the child and the mother (World Health Organization, 2014). Childbearing teenagers not only experience physical and mental challenges, but also have a higher risk of stillbirth, neonatal death, postpartum hemorrhage, depression, and anxiety. Additionally, they often have to make decisions that can have long-term consequences, such as dropping out of school, which can affect their personal life, family, and community (Moisan et al., 2016).

Teenage pregnancy is widely recognized as the primary factor contributing to high rates of child and mother death in underdeveloped nations (Kassa, Belay, & Ayele, 2021). In 2013, sub-Saharan Africa had the greatest occurrence of adolescent pregnancy among developing countries. This accounted for over half of all births in the region (Odimegwu and Mkwanaenzi, 2016). The majority of adolescent mothers, specifically those between the ages of 20 and 24, resided in the sub-Saharan Africa region, as reported by Gunawardena, Fantaye, and Yaya in 2019.

Prior research has demonstrated a significant correlation between teenage pregnancy and factors such as engaging in sexual activity at a young age, getting married early, being an older teenager, being a married woman, level of education, age at first sexual encounter, household wealth, family structure, exposure to media, community poverty level, and use of contraceptives (Brahmbhatt et al., 2014). Teenage pregnancies are common in impoverished areas and are linked to issues such as economic deprivation, limited access to education, and limited employment prospects (UNICEF, 2014). Sustainable Development Goal (SDG) 3.1 aims to eliminate maternal fatalities that can be avoided. The objective is to decrease the maternal mortality rate to below 70 deaths per 100,000 live births. In order to accomplish this objective, it is crucial to address teenage pregnancy by the year 2030, as it is linked to adverse mother and child health outcomes, as well as heightened chances of mortality during pregnancy and childbirth (Kalipeni, Iwelunmor, & Grigsby-Toussaint, 2017).

Teenage pregnancy in Kenya has significant implications for both reproductive health and the socio-economic well-being of women, both in the present and in the future (International Centre for Reproductive Health [ICRH], 2022). According to Barmao-

Kiptanui, Kindiki, and Lelan (2015), around 3000 girls in Kenya leave school every year because of teenage pregnancy.

Teenagers in Kenya are more likely to have teenage pregnancy due to poverty, as stated by the Kenya National Bureau of Statistics (2022). According to KNBS, teenagers from the poorest households have a 21% higher likelihood of experiencing teenage pregnancy and motherhood compared to teenagers from the wealthiest backgrounds, who have an 8% likelihood. This can be ascribed to the impact of poverty on the achievement of education and the daily means of subsistence at the home level.

Research has also indicated that the primary causes of teenage pregnancy include a lack of accessible services specifically designed for teenagers, insufficient comprehensive education on sexuality, limited availability and high cost of contraceptives, a shortage of healthcare professionals, service providers with a judgmental attitude, and inadequate counseling (Yakubu and Salisu, 2018c). Kearney and Levine contend that addressing the fundamental structural and economic issues is necessary in addition to promoting abstinence and contraceptive use (Kearney and Levine, 2012). The Ministry of Health Kenya (2015) has set a goal to decrease the adolescent pregnancy rate among girls aged 15-19 years to 10% by the year 2025. The Ministry recognizes the significance of consistent monitoring to determine if the country is making progress towards reaching this objective. However, despite attempts to decrease adolescent pregnancies, maternal diseases remain the primary cause of mortality among teenage females between the ages of 15 and 19.

Despite the widespread belief that teenage pregnancies significantly impede girls' education in Kenya, there has been a lack of thorough examination of the root causes, especially in rural areas where the problem is more prevalent. Many governments have made improvements to their policies since the 1994 International Conference on Population and Development (ICPD) in order to tackle the issue of teenage pregnancy. However, the problem still persists at a high rate (Odimegwu and Mkwanaenzi, 2016). Many treatments have failed to take into account the impact of cultural, economic, and peer group factors that can influence the behavior of teenagers and contribute to teenage pregnancy. Thus, the objective of this study was to assess determinants that contribute to the prevalence of teenage pregnancy in Kakamega County, Kenya.

1.2 Problem Statement

Teenage pregnancy is a global concern of both social and medical significance that demands attention. The syndrome increases the likelihood of adverse health consequences for both women and their offspring during childbirth. Despite a decline in the birth rate per 1000 women from 65 to 47 between 1990 and 2015, adolescent pregnancies remain common in sub-Saharan Africa, Latin America, and the Caribbean (Treviño-Montemayor, 2018).

Teenage pregnancy is a significant health and economical issue faced by countries worldwide (Akella and Jordan, 2015). Presently, the population of young individuals in poor nations stands at 1.59 billion, but in developed countries, it is a modest 212 million (UNFPA, 2016). Therefore, difficulties that impact teenagers have a substantial effect on a significant segment of the population, particularly in developing countries. In 2015, the

global adolescent birth rate for girls aged 15 to 19 was 44.1. In terms of regional performance, Africa has the highest score of 100.3 according to the UNFPA in 2016. Approximately 20% of girls aged 15 to 19 in Kenya are documented to be either pregnant or have previously given birth. The prevalence of this tendency has been relatively stable for over twenty years, as evidenced by the consistent findings of the national Demographic and Health Surveys conducted between 1993 and 2014 (AFIDEP/UNFPA, 2019). Although the Kenyan government implemented the Adolescent Sexual Reproductive Health (ASRH) policy in 2015 and the Population and National Development policy in 2012, the prevalence of teenage pregnancy remained elevated. A strategy implemented in education systems is the incorporation of adolescent sexual and reproductive health (ASRH). The objective of this initiative is to address the deficiency in reproductive health education (Atuyambe et al., 2015).

The prevalence of teenage pregnancy in Kakamega County stands around 15% according to the Kenya National Bureau of Statistics (KNBS, 2022). The Kakamega County Policy Brief 2020 states that teenage pregnancy primarily occurs due to inadequate utilization of contraception. If not properly dealt with, teenage pregnancy can significantly hinder the achievement of the SDGs and the Kenya Vision 2030. This is because, from an economic standpoint, it is predicted that the long-term cost of teenage pregnancy in Kenya might reach as high as 17 percent of the yearly GDP (AFIDEP/UNFPA, 2019). Hence, the present study sought to assess determinants that contribute to the teenage pregnancy prevalence Kakamega County.

1.3 Research Objectives

1.3.1 General Objective

To assess determinants of teenage pregnancy prevalence in Kakamega County

1.3.2 Specific Objectives

- i. To determine the prevalence of teenage pregnancy in Kakamega County
- ii. To determine the economic factors influencing teenage pregnancy prevalence in Kakamega County
- iii. To examine the cultural factors influencing teenage pregnancy prevalence in Kakamega County
- iv. To assess the peer group influence on teenage pregnancy prevalence in Kakamega County

1.4 Research Questions

- i. What is the prevalence of teenage Pregnancy in Kakamega County?
- ii. What are the economic factors influencing teenage pregnancy prevalence in Kakamega County?
- iii. What are the cultural Factors influencing teenage pregnancy prevalence in Kakamega County?
- iv. Do peer group influence affect teenage pregnancy prevalence in Kakamega County?

1.5 Justification of the Study

Teenage pregnancy in Kenya is one of the factors that contributes to major health complications as well as schoolgirl drop out. Kakamega being the second county with high teenage pregnancy after Nairobi draws scholarly concern on determinants of this teenage pregnancy. Young populations face unique challenges in their day-to-day life as they transit to adulthood; the determinants of teenage pregnancy are diverse within social cultural and economic situations. Determinants of teenage pregnancies are poorly understood due to limited researches done in this county. Conditions of extreme poverty, limited access to quality education, health reproductive services and amenities as well as high levels of sexual activities are presumed to be contributing to teenage pregnancy prevalence in the County. Research has shown that teenagers living in rural areas are at greater risk of pregnancy than their counterparts in the urban environment (Mkwanaenzi *et al.*, 2022). Health and other social risks associated with early sexual activity and pregnancy raise urgent need for interventions and programmes to enhance teenage SRH and support pregnant teenagers and teenage mothers. It is, therefore, vital to address determinants of teenage pregnancies to come up with possible strategies. Since teenage pregnancy is a worldwide challenge, the current study shed light on the appropriate interventions to strengthen school policy frameworks on sexual reproductive health education. It also informs policy formulation by shedding light on how economic, cultural and peer factors shape teenage pregnancy, which could facilitate the development of best approaches to reduce teenage pregnancy in Kakamega County.

1.6 Significance of the Study

This study examined the factors that influence the occurrence of teenage pregnancy in Kakamega County. The objective was to assess determinants of teenage pregnancy, with the aim of informing strategies to decrease teenage pregnancy rates. This involved developing suitable policies, implementing effective practices, and identifying areas for further research. The study findings will assist many stakeholders, including parents, schools, religious organizations, and the government, in comprehending how economic, cultural, and peer group factors influence the prevalence of teenage pregnancy. Therefore, these individuals who have an interest or concern in the matter will have the ability to start plans or actions to tackle the influence of economic, cultural, and peer group variables in order to decrease the occurrence or frequency of teenage pregnancy. The government will implement policies and initiatives to improve the household wealth index, restrict regressive cultural ideas and behaviors, and regulate peer group influences that contribute to teenage pregnancy. Schools can devise strategies to support economically disadvantaged adolescents in staying in school, thereby reducing their exposure to risk factors associated with teenage pregnancy. In addition to relevant community stakeholders, religious institutions, and non-governmental organizations, schools can utilize the research findings to develop and execute community awareness programs aimed at reducing the influence of cultural and peer group influences on the occurrence of teenage pregnancy. Gaining comprehension and recognizing strategies to tackle the unfavorable reproductive health results among adolescents and young individuals is crucial for achieving the Millennium Development Goals (MDGs) and other development benchmarks in Kenya and other sub-Saharan African nations. An

analysis of the factors influencing teenage pregnancies will equip teenages, parents, healthcare practitioners, teachers, and others with the knowledge needed to address these factors through health education and information dissemination at social events, schools, healthcare facilities, and media outlets. Alternatively, strategies can be developed and implemented in collaboration with the government, non-governmental organizations (NGOs), the corporate sector, key stakeholders, and other cooperating agencies and institutions that support health and development initiatives in Kakamega County and the rest of Kenya.

1.7 Scope of the study

The study was conducted among teenagers in the two selected wards in Butere and Ikolomani sub-counties. The respondents were teenagers between ages of 15 and 19 from the selected households. The key Informants were also interviewed to complement quantitative data collected. The study aimed at assessing determinants influencing teenage pregnancy prevalence in Kakamega County. This assessment involved determining effect of economic, cultural and peer group factors on teenage pregnancy prevalence. Economic factors assessed include parental level of education as it relates to their employment, family wealth index, monthly income of the family, family size and personal needs provider. Among the cultural factors assessed were marital status, sex discussion among parents and within community, religious sex support before marriage, age at first sex, parental strictness, polygamy and *disco matanga*. Among the peer Group pressure factors assessed were sex stories impact, pressure from boyfriend and desire to experiment based on sex stories.

1.7.1 Limitations

The study was carried out in Butere and Ikolomani Sub-Counties of Kakamega County, which represent relatively rural settings that are less developed. Therefore, the study findings may not be applicable to all rural and urban areas. Generalization of the study findings was limited to population with similar characteristics as the study area. Teenage pregnancy is a stigmatising experience for some young mothers. As such, many were unwilling to participate in the study, even though their experiences as teenage mothers might have enriched the study findings. Sample selection was on voluntary basis because only those willing to participate were included in the study. Over-reporting from the participants was common, which tended to delay the data collection process. This is because the participants perceived the study as accompanied by donations and support.

1.7.2 Delimitations

The findings of the study were delimited to areas with similar characteristics. Confidentiality of the respondents to increase participation in the study minimized volunteer bias. It helped more of the reluctant teenage mothers to gain confidence to participate in the study. Use of simple and understandable language helped to ensure that participants could accurately interpret and respond to questions. To ensure clarity of the questions, pre-test was done. Assuring the participants that the research had no direct gain but further improvement in policies and ways of dealing with teenage pregnancy, informing teenagers that the study was voluntary and no direct gain from the study minimized over reporting.

1.8 Theoretical Model

1.8.1 Sexual Script Theory

Gagnon and Simon introduced the sexual scripting theory in 1973. They developed the theory of scripting as a response to the dominant biological understanding of sexuality. Sexual behavior in this biological paradigm is regulated by innate biological instincts. Gagnon and Simon (1973) expressed dissatisfaction with the limited scope of purely biological theories in explaining sex and argued that social factors play a significant role in shaping sexuality. Sexual activity takes place within a certain social context that shapes what is considered sexual and how sexual acts are carried out. They use theatrical lingo to explain how scripts work. Individuals are active participants who use stories to understand and shape their sexual experiences. Sexual scripts function as a framework for individuals to identify and comprehend sexual circumstances and behaviors. Additionally, they offer advice regarding the appropriateness of participating in particular actions, including the usual order in which these actions take place. Sexual scripts display cultural and individual divergences, leading to distinct scripts for each individual. Nevertheless, persons belonging to a specific culture should be provided with equitable access to sexual scripts that are reasonably similar (McCormick, 2010). Simon and Gagnon devised a comprehensive model that encompassed multiple analytical levels to fully understand the implications of these scripts. This approach includes social, interpersonal, and individual scripts. Social scripts contain a range of social conventions, such as those related to culture, religion, and social hierarchies. The interpersonal script is highly specific and can vary greatly among groups, based on elements such as sub-culture, social network, and the dynamics of communication between individuals. The

development of individual scripts is shaped by both social and interpersonal scripts (Simon and Gagnon, 2003).

Simon and Gagnon (2003) propose that scripts operate at three discrete levels. Cultural scripts refer to the prescribed gender roles in heterosexual relationships and the expected norms for sexual behavior (Simon and Gagnon, 1986). Interpersonal scripts are developed through the process of socialization and acquisition within certain circumstances. They define the precise way in which sexual interactions occur in certain circumstances, including the actions that are regarded typical in heterosexual dating conventions and their specific order, as well as how they are mixed with other activities (Simon and Gagnon, 1986). At the individual level, gender roles are influenced by internalized scripts that include sexual fantasies and desires. According to Whittier and Simon (2001), there are three layers of scripts that work together to create various expressions of sexuality and help us understand the patterns of sexuality throughout different cultures and social groupings.

The field of scripting theory became well recognized, particularly in the 1980s and 1990s, among scholars who adhered to a post-positivist perspective and mostly employed quantitative research methods. Lately, researchers that embrace a social constructionist viewpoint have begun employing scripting theory and mostly rely on qualitative research methodologies. Research undertaken using a post-positivist approach has examined dating scripts, with a particular focus on gender roles within these scripts (Laner and Ventrone, 2000).

Sexual scripts are the established norms and expectations regarding sexuality that people absorb, internalize, and reinforce through socialization (Simon and Gagnon, 1986). Simon and Gagnon (1986) state that scripts are often employed as frameworks for comprehending and responding to sexual situations. Sexuality is developed through the assimilation of cultural signals that form standards and anticipations regarding sexual conduct and activities (Frith and Kitzinger, 2001). Maticka-Tyndale et al. (2005) utilized scripting theory to obtain a thorough understanding of how Kenyan teenagers perceive and engage in sexual activities, as well as to examine the socio-cultural contexts in which these experiences occur. The researchers found that sexual interactions were described as routine and inevitable, and followed a predetermined scripted sequence of events and exchanges in which young women and men took on complementary roles (Maticka-Tyndale et al., 2005). The concept clarifies the essence of sexuality and sexual desires, which stem from the inclination to partake in experimenting. This concept lays the groundwork for teenage pregnancy, which occurs when individuals try to express and fulfill their physical desires. The inadequacies in this concept motivated the examination of factors that contribute to the incidence of adolescent pregnancy in Kakamega County.

1.8.2 Symbolic Interaction Theory

This theory highlights the social mechanisms that occur during human interactions. People shape their own perceptions of the world by assigning significance to events and societal frameworks (Blumer, 1969). Blumer (1969) argues that the experiences of teenage pregnancy can be analyzed using three key concepts of symbolic interaction theory: meaning, language, and thought. The concept of meaning asserts that human behavior towards others and objects is determined by the significance attributed to them.

For instance, an adolescent who is pregnant may hide her pregnancy or postpone or completely avoid visiting a prenatal care facility due to the negative connotations she associates with pregnancy, which include feelings of shame for herself and her family within society. The second principle pertains to language. Language serves as a means of communication, allowing individuals to express their emotions, desires, facts, or opinions through the use of symbols. Naming is the act of assigning significance or purpose to something. Adolescents who are pregnant share their experiences by engaging in contact with others. The final principle is cognition. Thought shapes the way individuals comprehend symbols and is influenced by language.

Pregnant adolescents express their experiences by means of their cognitive processes (Blumer, 1969). The study of teenage pregnancy can be analyzed using two key concepts from symbolic interaction theory. The first concept is the looking glass self, which was developed by Charles Horton Cooley in 1936. The second concept is role, as proposed by Mead in 1934. The concept of "the looking glass self" is introduced through three distinct phases. Initially, individuals prioritize their own thoughts and considerations while engaging with others. Secondly, they take into account the perceptions these individuals hold about them. Ultimately, individuals generate their own concepts and emotions by utilizing the preceding stages as a mirror or a reflection. Given this information, the adolescent who is expecting a child contemplates the experience of being pregnant and becoming a mother, as well as how she engages with individuals in society. This notion reflects the prevailing societal trend of parents avoiding conversations about sexual matters with their children. Additionally, several cultures also prohibit any discourse or education related to sexuality. However, teenagers are reluctant to discuss their sexual

experiences with their parents due to the stigma, fear, and societal norms prevalent in their community. This hypothesis was used to evaluate the causal elements that contribute to teenage pregnancy.

1.9 Conceptual Framework

The study's conceptual framework describes the relationship of three components, namely the dependent variable, independent variables and intervening variable. The dependent variable was teenage pregnancy prevalence and the independent variables were economic factors, cultural factors and peer group pressure. Intervening variables were social context and social processes. The study assessed the influence of these variables on teenage pregnancy prevalence in Kakamega County, Kenya. Figure 1.1 demonstrates the interplay of the variables in this study.

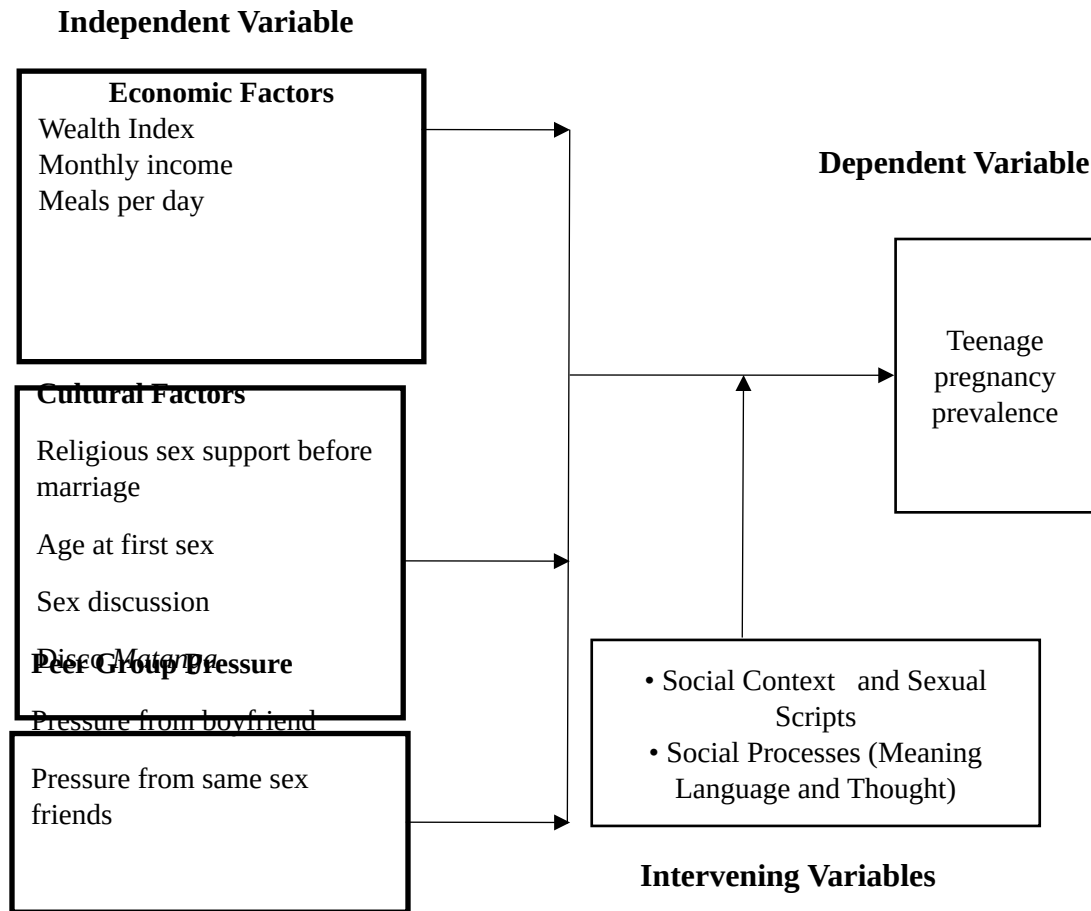


Figure 1.1: Conceptual framework

1.10 Assumptions of the Study

The study was undertaken under the following assumptions:

Determinants of teenage pregnancy prevalence in Kakamega County can be known and measured to provide empirical data, Economic factors determine teenage pregnancy prevalence in Kakamega County. Cultural factors determine teenage pregnancy prevalence in Kakamega County. Peer group factors determine teenage pregnancy prevalence in Kakamega County.

prevalence in Kakamega County. The study also assumed that teenage pregnancy begins from age 15 to 19 based on Demography. Only girls give birth.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter consists of a review of previous studies on teenage pregnancy prevalence as they relate to the present study. The chapter also identifies gaps on existing literature, which the present study sought to fill. Further, the chapter provides a review of the various theories relevant to the study.

2.2 Teenage Pregnancy Prevalence

Teenage pregnancy remains a significant public health issue across the globe, with profound implications for health, education, and socio-economic development. The consequences of teenage pregnancy extend beyond immediate health concerns. Young mothers often face challenges related to education and employment, which can have long-lasting effects on their socio-economic status and that of their children (Macleod et al., 2020).

Global statistics indicate that approximately 16 million teenagers give birth annually, accounting to 11% of all births worldwide, with the highest rates being reported in low- and middle-income countries (LMICs) (World Health Organization, 2020). In the United States, for instance, the Centres for Disease Control and Prevention (2020) reports that, in 2020, the rate of teenage pregnancies showed a notable decline, continuing a trend observed over the previous decade. According to CDC, the birth rate for females aged 15-19 years reached an all-time low of 16.7 births per 1,000 females in this age group, representing a significant decrease from earlier years (CDC, 2020). Similarly, in the United Kingdom, the conception rate for under-18s fell to 16.7 conceptions per 1,000

females, marking a significant decrease from previous years (Office for National Statistics, 2020).

Several factors contribute to the decline in teenage pregnancy rates in the developed world. Increased access to contraception and comprehensive sex education programmes have been identified as key elements in reducing unintended pregnancies among adolescents. Studies indicate that states with more comprehensive sex education curricula tend to have lower rates of teenage pregnancies (Kearney & Levine, 2015). Additionally, social media and digital platforms have become vital tools for disseminating information about sexual health, empowering teenagers to make informed choices (Benson et al., 2020).

Despite the overall decline, however, disparities persist among different demographic groups, especially in the US and the UK. For instance, teenage pregnancy rates remain higher among minority populations and those from lower socioeconomic backgrounds. Research highlights that systemic issues such as poverty, lack of access to healthcare services, and educational inequalities play significant roles in these disparities (Hoffman et al., 2020). Therefore, addressing these social determinants is crucial for further reducing teenage pregnancy rates across all demographics.

WHO (2020) further estimates that, in the LMICs, at least 21 million girls aged 15-19 become pregnant every year, with about 12 million giving birth. According to WHO, there is an overall decline in adolescent birth rates globally. Yet, the rate of reduction is slower in countries in the global south compared to the rates in the developed world. WHO specifically cites regions such as the sub-Saharan Africa and Latin America as ones reporting persistent high rates of teenage pregnancies.

Studies show that teenage pregnancy rates in sub-Saharan Africa are among the highest globally, with significant variations across countries. According to WHO (2020), approximately 23% of young women aged 15-19 in this region have begun childbearing. Factors such as poverty, lack of education, cultural norms, and limited access to reproductive health services contribute to these high rates (Kumar et al., 2020). Therefore, it is important to undertake continuous research into factors that account for teenage pregnancy prevalence to facilitate evidence-based interventions, which is one of the reasons the current study was conducted.

Notably, the COVID-19 pandemic exacerbated existing challenges, leading to increased vulnerability among adolescents (UNFPA, 2020). In populous African countries like South Africa, Tanzania, Nigeria and Kenya, the COVID-19 pandemic saw a spike in teenage pregnancy prevalence. In South Africa, a study by Ngoda et al. (2020) the prevalence of pregnancy has been reported to be between 17.6% and 19.9%, which is attributed to COVID-19. A study by Maharaj (2022) also reveals that Nigeria has one of the highest rates of adolescent pregnancies globally, with estimates indicating 106 births per 1,000 population among adolescents in 2021. Tanzania also reported a pooled prevalence of pregnancy at 23.36% as per recent demographic health surveys (Asmamaw et al., 2023).

The COVID-19 pandemic has had profound implications for adolescent sexual and reproductive health, particularly in Kenya, where lockdown measures led to a reported 40% increase in teenage pregnancies, affecting approximately 152,000 girls (Global Citizen, 2020). This spike can be attributed to several factors, including school closures and diminished access to reproductive health services. Morrison et al. (2021) underscore

that the interruption of educational environments not only curtailed learning opportunities but also removed critical support systems that help mitigate risks associated with adolescent pregnancy. Schools often serve as safe havens where girls receive education on reproductive health and have access to counselling services. The absence of these resources during lockdowns has left many young girls vulnerable to early sexual activity and unintended pregnancies, exacerbating existing inequalities in sexual and reproductive health outcomes (Zulaika et al., 2022).

The high teenage pregnancy prevalence in the sub-Saharan Africa poses significant health risks, including higher rates of maternal mortality and morbidity on adolescents. A systematic review by Olufunmilayo et al. (2020) found that adolescents face greater health complications during pregnancy and childbirth compared to older women, emphasizing the need for improved healthcare access and education. This literature underscores the importance of research into teenage pregnancy prevalence so as to define appropriate mitigation measures.

In Kakamega County, which is the focus of the current study, a report in 2023 indicated that over 7,000 girls were impregnated between January and July, with projections suggesting this number could reach 12,000 by year-end (Shilitsa, 2023). Of these, Butere Sub-County had the highest rate at 29%, followed by Ikolomani (28%) and Mumias West (26%). In contrast, Lurambi has the lowest incidence at 16%, attributed to better access to reproductive health services. According to Shilitsa, the Kakamega County government has launched initiatives such as the Sexual Gender-Based Violence Policy and back-to-school programs for pregnant girls. Despite these efforts, teenage pregnancy continues to

be a pressing challenge in the County, necessitating an in-depth analysis of causes to inform responsive policy and practices.

From the reviewed literature, there is a lack of localized data that specifically addresses the prevalence and contributing factors of teenage pregnancy in Kakamega County, Kenya, hindering the development of targeted interventions. Additionally, the socio-cultural influences, such as early marriage and gender norms, remain underexplored, as do the barriers to educational access that may contribute to higher pregnancy rates among adolescents. Furthermore, the impact of healthcare accessibility and the availability of sexual and reproductive health services in Kakamega County have not been adequately examined. Addressing these gaps is essential for developing effective strategies to reduce adolescent pregnancy and support young mothers in the region.

2.3 Economic Factors and Teenage Pregnancy Prevalence

There is a considerable association between the economic level of parents and the prevalence of teenage pregnancy. Teenage pregnancy has become a significant public health issue in South Asian countries. In their study, Sarder et al. (2021) aimed to ascertain the risk variables linked to adolescent pregnancy in South Asian nations. They employed a systematic review methodology and utilized material from the internet. The selection criterion consisted of English-language publications accessible in the United Kingdom that focused on the topic of teenage pregnancy in South Asia. The survey revealed that Nepal, Bangladesh, India, and Sri Lanka were the countries that were most frequently studied among the seven countries in Asia. Teenage pregnancy is regularly associated with socio-economic conditions, low educational achievement, cultural

influences, and family structure. The majority of teenage girls impacted possessed rudimentary knowledge about sexual health. Nevertheless, only a small fraction of them had actually applied the acquired information in practical situations. The majority of research consistently identified both the social and medical effects of young pregnancy. The utilization of health services, which acts as a protective factor, remained consistently low. The study determined that numerous variables contributing to teenage pregnancy can be traced back to economic and cultural influences. The systematic review was constrained by the quantity and caliber of published publications on factors linked to adolescent pregnancy. Hence, Acharya et al. (2010) suggested that forthcoming studies should employ consistent metrics and approaches to elucidate the observed fluctuations in pregnancy rates (Sarder et al., 2021). The present study aimed to address the existing knowledge gap by presenting empirical evidence on the factors linked to teenage pregnancy.

A recent study conducted in sub-Saharan African countries has revealed that adolescent females who lack employment opportunities face a much greater chance of experiencing teenage pregnancy compared to their counterparts who are employed (Asmamaw, Tafere, & Negash, 2023). The elevated risk of pregnancy can be attributed to the limited access to contraception among unemployed teenagers, which often leads them to engage in early sexual activity for financial gain. In addition, the majority of adolescent girls who have jobs reported that they provide financial support to their impoverished families. Consequently, they tend to delay marriage and are less likely to face the hazards associated with early pregnancy. The study under consideration demonstrates that economic variables have a significant role in shaping various personal and social

decisions that impact the occurrence of teenage pregnancy. The present study conducted a comprehensive investigation on the impact of economic factors on the prevalence of teenage pregnancy in Kakamega County, Kenya.

A research conducted in Northeast Ethiopia investigated the frequency and determinants of adolescent pregnancy (Ayanaw Habitu, Yalew, and Azale Bisetegn, 2018). The study especially examined the frequency and contributing variables of adolescent pregnancy in Wogedi, a region in northeast Ethiopia. A cross-sectional study was conducted in Wogedi, northeast Ethiopia, from April to May 2017. The survey included 514 teenagers from the local community. A meticulously designed questionnaire was employed to gather data, which was subsequently inputted and subjected to statistical analysis. The logistic regression model yielded the Odds Ratio along with the corresponding 95% Confidence Interval and P-values. In Wogedi, the occurrence rate of teenage pregnancy was 28.6% with a 95% confidence interval ranging from 24.9% to 32.5%. The study indicated that age (AOR=2.10; 95% CI: 1.55, 2.88), living in a rural area (AOR=3.93; 95% CI: 1.20, 12.83), not using contraception (AOR=10.62; 95% CI: 5.28, 21.36), and having divorced parents (AOR=1.98; 95% CI: 1.13, 3.93) were all significantly associated with teenage pregnancy. The study determined that there was a significant occurrence of adolescent pregnancy in the region. Statistically significant associations were observed between age, residence, contraceptive non-use, and parental divorce. The study proposed enhancing contraceptive utilization by focusing on rural residents and illustrating the societal repercussions of divorce. The previous study did not address the economic aspects that contribute to teenage pregnancy. However, this gap has been addressed in the current study.

Teenage pregnancy is primarily caused by poverty. On an individual level, poverty is linked to a lack of education, unequal treatment based on gender, and an inability to engage in safe sexual practices. A quantitative descriptive technique was employed in a study conducted in the Sekhukhune District of the Limpopo Province, South Africa, to investigate the factors that contribute to adolescent pregnancy (Sekopa, Risenga, & Mboweni, 2024). The population comprised only of pregnant teenagers who were receiving prenatal treatment at a specific clinic. 10 pregnant teenagers who met the inclusion criteria were selected using purposive sampling. The data was gathered through interviews and analyzed using Tesch's inductive descriptive coding methodology. The study found that factors such as peer influence, low contraceptive usage, parental carelessness, freedom, and family separation were contributing factors to the occurrence of teenage pregnancy in the area. Sekopa et al. advocate for the implementation of pregnancy prevention techniques, including educational programs targeting teenagers at the school, family, and state levels. The study under consideration identifies several factors that contribute to the occurrence of teenage pregnancy in Limpopo, South Africa. Nevertheless, the study does not establish a direct correlation with economic conditions, which is the gap that the current study aimed to address. This study investigated many economic factors that contribute to teenage pregnancy in the specific setting of Kakamega County, Kenya.

A research conducted in East Africa examined the frequency and determinants of adolescent pregnancy (Worku et al., 2021). The study utilized the latest Demographic Health Survey statistics from 12 countries in East Africa. A total of 17,234 adolescent females who reported a history of sexual activity were included in the study. A multilevel

binary logistic regression analysis was conducted to discover the factors that are significantly associated with teenage pregnancy. The study produced the Odds Ratio (OR) along with a 95% Confidence Interval (CI) to identify the factors that are statistically linked to teenage pregnancy. Worku et al. discovered that teenage girls who had completed secondary education or higher had a lower likelihood of teenage pregnancy. Additionally, initiating sexual activity at ages 15 to 14 (OR = 0.69; 95% CI: 0.63, 0.75) and 18 to 19 (OR = 0.31; 95% CI: 0.27, 0.35), being unmarried (OR = 0.25; 95% CI: 0.23, 0.28), having exposure to media (OR = 0.85; 95% CI: 0.78, 0.92), and belonging to affluent households (OR = 0.64; 95% CI: 0.58, 0.71) were all associated with decreased odds of teenage pregnancy. The study determined that adolescent pregnancy continues to be a prevalent healthcare issue in East Africa. Teenage pregnancy was found to be connected with factors such as age, contraceptive utilization, marital status, working status, family wealth status, community-level contraceptive utilization, age at commencement of sex, media exposure, educational level, and relation to the household head. Worku et al. suggest that public health interventions should be developed to specifically target adolescent girls who are at a higher risk of teenage pregnancy, particularly those from the most economically disadvantaged households. These programs should focus on improving maternal education and empowerment in order to effectively reduce the incidence of teenage pregnancy. The study under consideration had a broad scope and was based on an examination of current material. Thus, this study focused specifically on Kakamega County to conduct a thorough examination of the factors linked to teenage pregnancy, using empirical data as evidence.

Saba and Almas (2018) assert that education gives girls the ability to make significant daily decisions. Sexual health education empowers individuals to make informed choices regarding family planning and the timing of marriage. Research has indicated that there is an inverse relationship between the level of education attained by girls and their reliance on parents and relatives, as demonstrated by studies conducted by Saba and Almas in 2018. Consequently, providing girls with education delays the age at which they get married and engage in socially accepted sexual interactions. According to reports, adolescent females who have completed secondary and tertiary education have a reduced likelihood of early pregnancy. Education enhances autonomy and decision-making abilities, as well as promotes economic self-sufficiency, resulting in delayed marriage and decreased fertility rates (Saba and Almas, 2018). The perspectives of Saba and Almas highlight the correlation between education, individual decisions, and socio-economic factors in the occurrence of teenage pregnancy. These insights have been valuable for the current study.

Okello, Otengah, and Akuno (2023) conducted a study on the factors that influence teenage pregnancy in Narok South Sub-County. The study gathered data from 165 adolescents who were chosen using snowball sampling and key informants who were picked purposively. The obtained data was analyzed using descriptive statistics, Person correlation, and thematic analysis to determine the factors influencing teenage pregnancy. The investigation revealed that adolescents partook in perilous sexual endeavors in order to acquire funds for their individual necessities. This can be attributed to the fact that economically disadvantaged families are unable to afford fundamental necessities such as education, nutrition, healthcare, housing, and clothes. In this particular culture, where

there is a cultural norm of promoting early weddings, families facing financial difficulties often choose to marry off their teenage girls. This is done in order to ease their economic obligations by receiving a dowry, which may then be used to support the needs of their other children. The second primary factor contributing to teenage pregnancy is societal influences, particularly the prevalence of early marriages. The study under consideration illustrates the interaction between economic and cultural factors in influencing the prevalence of teenage pregnancy, which provided valuable insights for the current investigation. The current study gathered up-to-date and factual information on the factors that contribute to the prevalence of teenage pregnancy in Kakamega County. These elements include cultural, economic, and peer group influences, which were analyzed and compared.

2.3 Cultural Factors and Teenage Pregnancy Prevalence

Cultural elements encompass the collective values, beliefs, customs, artifacts, and practices that exist within a society or group and influence the behaviors, perceptions, and interactions of individuals (Iriowen, 2023). These factors impact the frequency of adolescent pregnancy. Teenage pregnancy is mostly influenced by early marriage, which is a prominent societal element. Statistical data indicates that marriages tend to take place at a younger age in developing regions compared to developed regions worldwide (UNFPA, 2016; Suhariyati, Haryanto, & Probowati, 2019). UNFPA reports that worldwide, almost 60 million moms who are currently between the ages of 20 and 24 were married before they turned 18. The prevalence of early marriage varies across different regions. According to Suhariyati et al. (2019), girls who are at the most risk of being married at a young age are those who come from impoverished households, reside

in rural areas, and have low or minimal levels of education. Moreover, when girls are married at a young age, they are more likely to have a significant age difference with their spouses. This also leads to them having more power and independence in their marriage, which increases the chances of getting pregnant (Lee-Rife et al., 2012). Moreover, according to Farvid and Saing (2022), a significant proportion of married women, including minors, experience coerced sexual intercourse against their will, with some engaging in it out of fear of their husbands. In numerous conventional civilizations that rely on kinship relationships, such as those found in Asia, the Middle East, and North Africa, it is customary for girls to be married shortly after they experience their first menstruation, and they typically start delivering children soon after (Suhariyati et al., 2019). Historically, early marriage has been culturally accepted, intentionally planned, and not perceived as a concern for the young woman or her children. Young women who were married and became pregnant early, even if the pregnancy was unplanned, were not seen as worrisome (Farvid and Saing, 2022).

The aforementioned evidence demonstrates that early marriages are a contributing factor to the prevalence of teenage pregnancy. Nevertheless, the existing studies lack empirical data on this matter. To address this gap, the present study aimed to investigate the influence of cultural factors on the prevalence of adolescent pregnancy in Kakamega County, Kenya.

A research conducted in Juba, South Sudan, investigated the factors that contribute to and impact teenage pregnancy (Vincent and Alemu, 2016). The study employed a descriptive cross-sectional study design. The study revealed that cultural views, such as the

anticipation of early marriage, played a substantial role in the occurrence of teenage pregnancy. The report suggested the implementation of legislation that forbids the practice of early marriages, rape, and kidnapping of females. The current study utilized these criteria to broaden the scope of analysis in investigating the cultural influences on the prevalence of teenage pregnancy in Kakamega County, Kenya.

A study conducted in Ethiopia aimed to assess the perceived impact of socio-cultural elements on the sexual behaviors of teenagers (Baraki and Thupayagale-Tshweneagae, 2023). This study was a qualitative descriptive study that involved the deliberate selection of health professionals and teenagers in Addis Ababa, Ethiopia. The study identified several factors that were thought to influence the sexual behavior of teenagers. These factors included limited school engagement, prevailing social norms about sexual behavior, low utilization of contraceptives among the general population, financial difficulties, and inadequate law enforcement measures. It is advisable to implement age-appropriate comprehensive sexuality education for teenagers, together with additional treatments at several levels, in order to reduce the hazards associated with teenage sexual behaviors. The study under consideration examined the sexual behaviors of adolescents, which serve as a precursor to pregnancy. It proved valuable in examining the socio-cultural elements that contribute to the high rate of teenage pregnancy in Kakamega County, Kenya.

Certain cultures exhibit a level of acceptance for early motherhood (McCall et al., 2015). They view it as unintentional and see no reason to reprimand them. Adolescents raised in societies, families, and environments that are accepting of teenage pregnancy are more likely to engage in early sexual activity without concern for the consequences, therefore

increasing their risk of becoming pregnant (Nguyen, Shiu, & Farber, 2016). Parents provide support and accept the actions of young moms, thereby promoting adolescent motherhood. Adolescents who are not yet married are often perceived as a source of financial or emotional strain on their families in many societies (McCall et al., 2015). These adolescents are compelled to depart from their homes, often by means of marriage. These studies demonstrate that cultural perceptions towards adolescence as a phase in the development of young girls contribute to the likelihood of teenage pregnancy. The objective of this study was to analyze the different aspects of cultural influences that influence the occurrence of teenage pregnancy in Kakamega County, Kenya. A study conducted by Akanbi et al. (2021) regarding the influence of socio-economic determinants on adolescent pregnancy in Nigeria revealed that certain communities consider it culturally inappropriate to openly talk about sexual matters. This is because the mention of sex suggests a level of sexual experience, which is associated with immorality and the potential for reputational harm. Thus, without adequate education and awareness about adolescent and sexual reproductive health, teenage pregnancy is a prevalent phenomenon that is accompanied by significant social disapproval in many communities. Teenage moms have the dual hardship of both the pregnancy itself and the associated social disapproval, which can hinder their capacity to effectively care for their kid. Akanbi et al. (2021) offer an extensive insight into the socio-economic factors influencing teenage pregnancy in Nigeria. Based on the reviewed research, this study investigated the influence of cultural factors on the occurrence of teenage pregnancy in Kakamega County, Kenya.

According to Chase's (2019) research, several religions discourage conversations about sex because they associate it with moral impurity and immorality. Girls in these communities have a deficiency of knowledge regarding sexual reproductive health, which hinders their ability to make informed choices about their sexuality. Inside religious institutions, the dissemination of information about contraception is prohibited due to the belief that sexual activity should only be engaged in for the purpose of reproduction inside the confines of marriage (Chase, 2019). Chase's article is largely theoretical as it lacks actual facts. Consequently, it does not consider the underlying issues that contribute to the existence of religious prohibitions on discussing sex. This study aimed to address this knowledge gap by investigating the impact of cultural factors, such as religious beliefs and doctrines, on the prevalence of teenage pregnancy in Kakamega County, Kenya.

Adolescence is a period of substantial cognitive, emotional, behavioral, and physical transformations for young people. They acquire a greater degree of autonomy and investigate a variety of life experiences. The act of experimentation may involve the consumption of alcohol or narcotics, smoking, and engaging in sexual activity. These behaviors are often linked to hazards related to sexual and reproductive health, such as unexpected teenage pregnancy and sexually transmitted infections (STIs) (Mamo, Siyoum, & Birhanu, 2021). Teenagers who are married have a higher likelihood of becoming pregnant at a young age compared to teenagers who are not married. Mamo et al. discovered that married teenagers have a more than twofold increased likelihood of becoming pregnant. This phenomenon occurs due to the fact that in numerous countries, the institution of marriage intensifies the expectation and obligation to have offspring

(Mamo et al., 2021). The study under consideration identifies early marriage as a causal element in adolescent pregnancy. Based on the reviewed literature, this study investigates the economic factors that contribute to the vulnerability of teenage females to pregnancy in Kakamega County, Kenya.

Three sets of data from the National Demographic Health Survey were used in a study that examined the patterns and causes of teenage pregnancies in Kenya. The data was collected between 2003 and 2014 (Mutea et al., 2022). The data targeted women in the age range of 20-24 years who reported having been pregnant between the ages of 15 and 19 years. The study employed binary logistic regression and pooled regression analysis. The study identified a significant correlation between teenage pregnancy and factors such as educational attainment, marital status, religious affiliation, and wealth quintile. An examination of trends revealed a consistent decline in teenage pregnancy from 2003 to 2014. The present study examined these parameters in relation to the prevalence of teenage pregnancy in Kakamega County, Kenya.

2.4 Peer Group Influence and Teenage Pregnancy Prevalence

Adolescents frequently experience peer pressure. It causes children to temporarily reject the standards of their parents and instead adopt the standards of their peers. Peer pressure leads to peer influence, which entails modifying one's behavior to align with the expectations of others (Hu et al., 2021).

A systematic analysis of published journals conducted in Zambia between 2000 and 2022 examined the frequency of teenage pregnancies and identified the factors associated with them. The study aimed to determine the specific factors that contribute to teenage

pregnancy (Malunga et al., 2023). The review comprised six research papers conducted in Zambia, consisting of two quantitative studies, two qualitative studies, and two investigations that used mixed methodologies. The study uncovered that peer pressure was one of the primary factors that contributed to the occurrence of teenage pregnancy. Furthermore, the elevated rates of teenage pregnancy were mostly influenced by a confluence of factors at the individual, interpersonal, environmental, and legal/policy levels. Experts advised implementing complex and multisectoral initiatives to reduce the rate of teenage pregnancy. These interventions should focus on improving access to education, promoting economic empowerment, and addressing gender and socio-cultural norms. This study offers empirical evidence on the impact of peer pressure on the prevalence of teenage pregnancy, which can be used to inform public health interventions.

In a study conducted by Loto and Isuku (2016) in Ibadan, Nigeria, it was discovered that peer pressure had a substantial impact on teenage pregnancy among secondary school females. The study indicated a significant correlation between peer pressure and teenage pregnancy, with an R^2 value of 0.407. The influence of peer groups as a socialization agent can have ambiguous repercussions on the behavior of teenagers, particularly in relation to sexual activity. However, peer pressure significantly impacts teenagers' views on sexuality, leading them to comply to the accepted norms of sexual behavior within their peer group. The study revealed that peer pressure had a substantial impact on the occurrence of teenage pregnancy. Consequently, the study advised parents and guardians to be attentive to the nature of their children's friendships in order to reduce the likelihood of teenage pregnancy. The study that was examined provided a context for understanding

how individuals respond to peer pressure within the home environment. This understanding was then used in the present study to create strategies for preventing the influence of peer pressure on the prevalence of teenage pregnancy in Kakamega County, Kenya.

Njagi and Mokua (2021) did a study on the psychological factors that affect the occurrence of adolescent pregnancies among high school students in Embu County. The study sought to determine the impact of psychological factors on adolescent pregnancies among high school students in Mbeere North Sub-County, Embu, Kenya. The study was guided by the psychosocial development theory and a mixed method approach was employed. A study revealed that 82.8% of guidance and counseling teachers linked peer influence to a significant increase in adolescent pregnancies among high school students. Njagi and Mokua determined that peer pressure causes youth to adopt behaviors from their peer groups and encourages social influence, making them more susceptible to engaging in unsafe sexual activities, ultimately leading to a high rate of early pregnancies. They suggested that educational trainers should implement courses that are more pertinent, ongoing education, and workshops to equip guidance and counseling teachers with skills that can assist girls and other high school students in receiving age-appropriate instruction on healthy relationships.

Nyangaresi, Injendi, and Majanga (2021) conducted a study in Kakamega Central Sub-County to investigate the underlying factors contributing to adolescent pregnancy. Data collection for the study was carried out at 17 public secondary schools using standardized questionnaires and interviews. According to the findings, peer pressure and poverty were identified as the primary factors contributing to teenage pregnancy, with a majority of

63%. The study suggests the regular promotion of awareness about peer pressure and sexual education, both in schools and at home, in order to ensure that children are adequately informed about the dangers associated with engaging in sexual behaviors at a young age. The study under evaluation was carried out in Kakamega, which is comparable to the ongoing research. Nevertheless, it appears that the advice provided in the reviewed study has not been followed, given the continued high prevalence of teenage pregnancy in the region. Hence, it was imperative to carry out a study to ascertain supplementary elements that contribute to the occurrence of teenage pregnancy in the specified region.

CHAPTER THREE

MATERIALS AND METHODS

3.1 Introduction

This chapter provides a detailed description of the materials and methods employed in carrying out the investigation. The researcher has characterized the study area using the existing geographic and demographic data. The researcher has provided a comprehensive description of the study population, study variables, study design, inclusion and exclusion criteria, and the sampling techniques employed. The methods for gathering data, analyzing data, and addressing ethical concerns have also been outlined.

3.2 Study Area

The research was conducted in the Sub-Counties of Butere and Ikolomani, as these areas exhibit a significant occurrence of teenage pregnancy, with rates of 29% and 28% respectively (Kakamega County Government, 2021). There have been few research undertaken in the area to investigate the factors that contribute to teenage pregnancy. The area of Ikolomani Sub-County is 143.6 square kilometers. The Constituency population was reported to be 104,669 persons according to the Kenya National Bureau of Statistics (KNBS) 2019 Census report. The area is divided into four wards: Idakho South, Idakho East, Idakho North, and Idakho Central. The geographical extent of Butere Sub-County spans across 210.6 square kilometers. Based on the 2019 Census report by KNBS, the population of the Constituency was recorded as 139,780 individuals. The city is divided into five wards: Marama West, Marama Central, Marenyo-Shianda, Marama North, and Marama South.

3.3 Study Design

The study employed descriptive cross-sectional research design because it sought to investigate, expose and provide useful insights into a population's characteristics in a defined area, at a specific point or period in time without attempting to draw any inferences. Both probability and non-probability sampling was used to select the participants from community health units in Butere and Ikolomani Sub-Counties.

3.4 Study Population

For this study, the population comprised teenagers between the ages of 15 and 19 years. From demographic perspective, child birth begins at age 15. The study also targeted key stakeholders in public health, namely Community Health Volunteers, Children Officer of the County, and Gender Based Violence Coordinator of Kakamega County.

3.4.1 Inclusion Criteria

For inclusion in the study, one was required to be a female within the age range 15-19 years, either pregnant, teenage mother or just a teenager, was ready to sign consent or assent form and has been a resident of the area for not less than six months.

3.4.2 Exclusion Criteria

Any teenager who did not give a written consent to participate in the study, and non-resident of Ikolomani and Butere Sub-Counties was excluded from the study.

3.5 Study Variables

Study variables are factors that a researcher uses to determine cause effect relationship.

3.5.1 Dependent Variable

Teenage pregnancy prevalence was the dependent variable in this study. Intervention targeted female teenagers and this outcome was determined by the independent variables.

3.5.2 Independent Variable

Independent variable is a variable that can be manipulated or varied in a study to explore its effects. In this study, the independent variables were economic factors, cultural factors and peer pressure. Among the economic factors were: education level, wealth index, employment status. Cultural factors included sex discussion in the community, age at first sex, peer pressure were sharing sex stories, desire to experiment and fear of losing boyfriend. These variables explained the link with teenage pregnancy prevalence.

3.6 Sampling Design

3.6.1 Sampling Strategy

Purposive sampling was used to select Butere and Ikolomani among sub-counties in Kakamega County because of high prevalence of teenage pregnancy and limited studies have been conducted in these two areas. Simple random sampling was used to select two wards in the two Sub-Counties that is Marama Central and North, Idakho South and East. To obtain the community health units required per selected wards, simple random sampling method was also used because it reduces the potential for human bias in the selection of cases to be included in the sample. Each community health unit had approximately 250 teenagers. Within the sampled community health units, teenagers who met the inclusion criteria were identified by name and place (household) were selected

using systematic sampling. The sampling interval k was obtained by dividing the total number of teenagers in the two wards by the sample size.

$$K = \frac{1250}{438}$$

$$= 3$$

Purposive sampling was used to select 8 Community Health Volunteers (four from each Sub-County), 1 Children Officer of the County, and 1 Gender Based Violence Coordinator of Kakamega County.

3.7 Sample Size Determination

Yamane (1967) formula was used to determine the sample size of the participants. This is because it allows a researcher to sample the population with a desired degree of accuracy.

$$n = \frac{N}{1+N(e^2)}$$

Where:

n = number of Samples

N = Total population

e = Error tolerance (level); was taken to be 5%.

$$n = \frac{80,695}{1+(80695*(0.05^2))}$$

$$= 398$$

$$398+ (10\% \text{ Attrition}) = 438$$

Therefore, the sample size for this study was 438.

3.8 Data and Information Collection Instruments

Data was collected using a semi-structured questionnaire for teenagers and Key Informant's Interviews.

3.8.1 Questionnaire for Teenagers

Semi-structured questionnaire was used to collect data from teenagers between the ages of 15 and 19 years. The questionnaire was divided into four sections. Section A was used to obtain information on demographic characteristics, including age, education level and household size. Section B was used to obtain information on economic factors affecting teenage pregnancy prevalence. Section C was used to gather data on cultural factors in teenage pregnancy prevalence. Lastly, Section D was used to obtain information on peer group factors leading to teenage pregnancy prevalence. The questionnaire had both closed- and open-ended items.

3.8.2 Key Informants' Interviews

The key informants, namely the 8 community health volunteers (CHVs), 1 Children Officer of the County, and Gender Based Violence Coordinator of Kakamega County, were interviewed. The interview schedule contained questions on demographics of the KIIs and items on the research objectives.

3.9 Pre-test

Pre-test of data collection tools was carried out in Kakamega Central Sub-county. 10% of the sample size were chosen to test validity and reliability of the research tool. The aim of pre-test was to educate research assistants and determine validity and reliability of the

instrument. Flow of the questions, reconstruction and clarity of the questions were considered based on feedback.

3.10 Validity

Construct validity is the degree to which a measurement accurately reflects the intended concept it is designed to measure (Drost, 2011). To determine validity of the items, experts were engaged to review the items and establish the relevance of the variables in the questionnaire. These experts included the university supervisors and lecturers of Public Health. Content validity was ensured where the domain of the concept was made clear and the expert reviewer determined that the measures fully represented that domain. A pilot study was done to test the validity of and clarity of language in the instruments. The piloting was done in Kakamega Central Sub-County, which was not included in the main study. In total, 10% of the study sample size was used to test the tool, which was equivalent to 44 participants.

3.11 Reliability

Reliability pertains to the consistency of measurement across different settings under which the desired outcomes should be achieved (Nunnally and Bernstein, 1978). An instrument is considered trustworthy if it consistently produces the same result when the same procedures are used in the same circumstances. Reliability was established by providing training to research assistants and including them in a pre-test study. The test-retest approach was utilized to determine the dependability of the questionnaires. The technique entails administering the identical instrument on two separate occasions to the identical group of subjects (Gregory, 2004). Pearson Product Moment Correlation refers to a statistical measure that quantifies the strength and direction of the linear relationship

between two variables. A coefficient was computed for each questionnaire. The Pearson Product Moment Correlation Coefficient (r) is calculated when the variables being associated are represented as continuous scores. The coefficient r is utilized because to its ability to produce continuous scores and its low standard error (Gall, Borg, & Gall, 1996). The acceptable range for the dependability coefficient is 0.6 or higher.

3.12 Data Collection Procedures

Data collection was done within a period of two months with the help of research assistants. Selection of research assistants was based on qualification, that is, diploma and above, in any health-related field. They were conversant with both Swahili and English languages and had experience in data collection. A two-day training of research assistants was conducted and the main areas covered were data collection procedures, ethics in research, confidentiality in research and data collection tools familiarity. They were then inducted on the specific aims of the current study. Thereafter, the research assistants went ahead to administer questionnaires to the sampled teenagers and collect them once filled. The lead researcher conducted interviews with the key informants in person. The procedure began with first booking appointments with the key informants, setting a location of the meeting and then conducting interviews. Each interview lasted 30-45 minutes. With the consent of the key informants, the researcher tape-recorded the interview sessions.

3.13 Data Analysis

3.13.1 Quantitative Analysis

Once the questionnaires were received, they were examined for errors and completeness. Thereafter, they were coded into the SPSS version 26. The data was then imported to STATA version 18 for further data cleaning and management. Inspection of all the variables was done to identify errors and outliers. Descriptive analysis was done to generate frequencies, means and percentages. Data was then presented in form of tables and graphs. Chi-square and binary logistic regression were carried out to relate the effects of economic factors on teenage pregnancy prevalence. Chi-square test of association was carried out to find the association between cultural factors and teenage pregnancy prevalence. Binary Logistic Regression was used to find out the association between peer group pressure and teenage pregnancy. P-value of less than 0.05 was considered significant.

3.13.2 Qualitative Analysis

Data from the interviews were transcribed into Microsoft Word, and then content analysis based on themes was carried out.

Table 3.1: Data Analysis Tests

Specific Objectives	Measurable Variables/Indicators	Methods of Analysis
a) To determine the prevalence of teenage pregnancy in Kakamega County	Teenage pregnancy status	Descriptive statistics
b) To determine the economic factors influencing teenage pregnancy prevalence in Kakamega County	Family size, Wealth index, Monthly income	Descriptive statistics, Chi-square Multiple Logistic Regression Content Analysis
c) To examine the cultural factors influencing teenage pregnancy prevalence in Kakamega County	Religion, Marital Status, Age at first marriage, Sex before marriage, Contraceptive use, Community sex education	Descriptive statistics Chi-Square test Content analysis Logistic Regression
d) To assess the peer group influence on teenage pregnancy prevalence in Kakamega County	Pressure from boyfriend, Sex stories, Pressure	Descriptive statistics Multiple Logistic Regression Content Analysis

3.14 Ethical Considerations

Permission to carry out this research was acquired from University Ethics and Research Committee, School of Post-Graduate Studies (SGS) at Masinde Muliro University of Science and Technology. Subsequently, permission to conduct the research was sought from the National Commission of Science, Technology and Innovation (NACOSTI),

thereafter, submitted an application for official authorization from the County Government of Kakamega, the location where the study took place. Further,. During the research, the following medical and scientific research ethics were observed:

Beneficence – Benefits and harms of the study were disclosed to the respondents before carrying out the study to ensure they were aware that research has no direct benefit but future betterment. They were informed in advance of the possible harm of the study and that there would be some uncomfortable questions being asked.

Informed written consent and assent - Consent was sought from the participants voluntarily and those who did consent or assent to the study and did not meet the inclusion criteria were excluded from the study.

Privacy and Confidentiality – This was ensured by not indicating the names, or any other personally identifying information, of the participants on the research tools. The respondents were instead assigned codes for identification. Moreover, the respondents were assured that their responses were purely for academic research purposes only. Confidentiality of the data was ensured by entering data in password protected computers and storing questionnaires in a sealed envelope.

Informed consent – The respondents participated on the basis of informed decision. This was achieved by providing the participants with sufficient information about the research stating the aim and objectives of the study. Once they understood the research purposes, they were then requested to volunteer to participate by signing informed consent forms.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the findings and results of the study. The results are presented as per the research objectives. The section begins with a description of the questionnaire response rate. This is followed by a presentation of data on the demographic characteristics of the respondents. Thereafter, the chapter presents the results of the inferential analysis of the study variables.

4.2 Questionnaire Response Rate

A total of 438 questionnaires were distributed to the sampled teenagers in the two sub-counties under study. The questionnaires that were duly filled and returned were 401. This represented 91.6% response rate, which was sufficient to provide valid and reliable interpretation of data and to draw conclusions on the study topic.

4.3 Demographic Characteristics of the Respondents

The demographic information of the respondents sought in this study included age category, religion, highest level of education and employment status. Table 4.1 presents a summary of the demographic characteristics of the teenage respondents.

Table 4.1: Demographic Characteristics of the Teenage Respondents

Characteristics	Frequency (n)	Percentage (%)
Age Category (N=401)		
15-17	165	41.2
18-19	236	58.9
Religion (N=401)		
Catholic	138	34.4
Protestant	188	46.9
Islam	75	18.7
Level of Education (N=401)		
Never Went to school	59	14.7
Primary level	161	40.2
Secondary level	177	44.2
Tertiary	4	1.0
Employment Status (N= 401)		
Student	144	35.9
Employed	14	3.5
Unemployed	181	45.1
Housewife	62	15.5

Source: Field data (2024)

Table 4.1 shows that majority of the respondents, 236 (58.9%), were aged between 18 and 19 years while 165 (41.2%) were between 15 and 17 years old. As such, most of the teenage respondents were aged 18-19 years. All the respondents were affiliated to

different religions, with majority, 188 (46.9%), being protestants, 138 (34.4%) being Catholics and the least group being Muslims, 75 (18.7%). As such, the dominant religious group in the study area was Christian Protestants. Of the 401 teenagers who responded to the question on level of education, 177 (44.1%) had secondary level education, 161 (40.2%) had primary as their highest education level, 59 (14.7%) never went to school while 4 (1%) were at tertiary level. As such, most of the teenagers involved in the study had secondary level education. Employment status varied among the respondents with majority, 181 (45.1%), being unemployed while 144 (35.9%) were still students. Those who were housewives were 62 (15.5%) while a few, 14 (3.5%), were employed. It was interesting to note that a majority of the teenagers were in employment. This cohort must have been those aged above 18, who were the majority. Otherwise, going by the age and education standards in Kenya, teenagers below 18 years should still be pursuing education at different levels.

4.4 Teen Pregnancy Prevalence

Teenagers were asked to indicate whether they were pregnant or teen mothers. Table 4.2 summarizes their feedback.

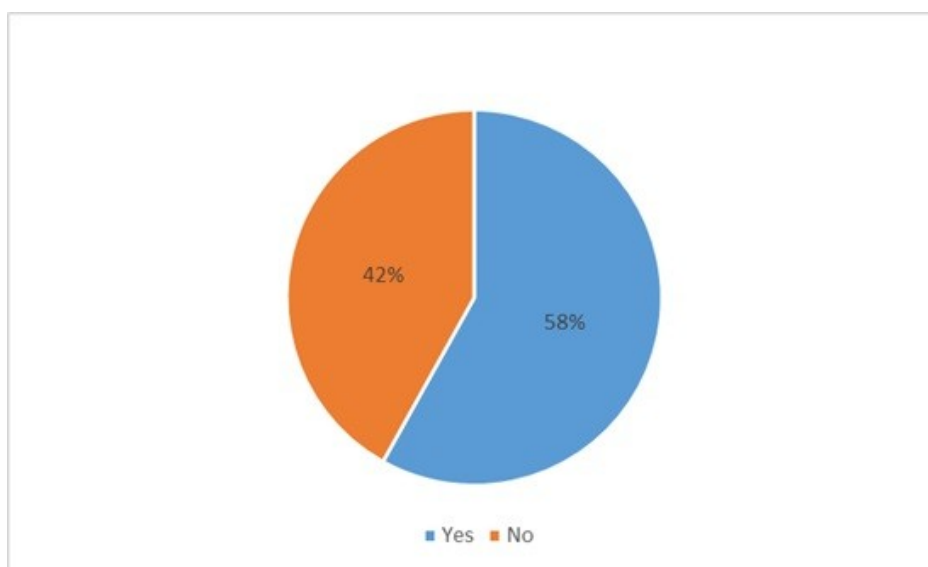


Figure 4.2 Teen pregnancy Prevalence

Figure 4.1 shows that the prevalence of teenage pregnancy was 58%.

4.5 Economic Factors influencing Teenage pregnancy Prevalence

4.5.1 Economic Characteristics of Teenagers

Poverty is a measure of deprivation from basic needs. Among the poverty parameters used in the study were Resources (income and assets), Capabilities (skills and Knowledge) or both. Majority 140 (34.9%) of teenage girls said they came from poorer families, 131 (32.7%) were from poorest families and 118 (29.4%) came from middle-class families, 11 (2.7%) were from richer families and 1 (0.3%) came from the richest family. From the KIIs conducted, the respondents pointed out that poverty was a major factor contributing to teenage pregnancy. They said that poverty forces some teenagers to engage in sexual activities to cater for basic needs and that some poor parents were, in fact, happy to see their teenagers come home with money for food and other basic needs. The interviewees also noted that teenagers from poor families could hardly afford school

fees. As such, they were often sent home from school to collect fees compared to their counterparts from the middle-class or rich families. These regular trips exposed teenagers to unrestricted life outside the home and school environment, which rendered them vulnerable to sexual exploitation. As explained by one of the participants:

“Yes, it contributes. You find that if they are poor, teenagers have to find other means to get needs. Also, those who are poor find difficulty in paying school fees, catering for basic needs for their children while those who are in middle class or rich easily afford to take their children to boarding and they only appear at home during holiday hence exposure to teenage pregnancy is very low” (CHV Butere Sub-County, KII, 2024).

The teenage respondents were further asked to indicate the number of meals they ate per day. Majority, 166 (41.4%), had two meals per day, 129 (32.2%) had one meal per day while 106 (26.4%) had three meals per day. From the KIIs, food insecurity emerged as one of the factors pushing teenagers to risky life choices, including sexual intercourse with the risk of pregnancy.

“Food insecurity is another factor. Some families cannot afford to buy food sometimes. During Covid pandemic, most families were affected because everyone was to go on quarantine hence hustling to get money was a challenge. Teenagers therefore engaged in sexual activities in exchange of money” (Children Officer, KII, 2024).

The findings in Table 4.3 also show that the monthly income for families as reported by the teenagers varied. Families that earned below 2500 shillings represented the highest,

293 (73.1%), which indicates that most families in the study area struggle financially. Meanwhile, 72 (18%) had monthly incomes of 2500-5000 shillings, 22 (5.5%) had monthly incomes between 5000 and 10,000 shillings, and 14 (3.5%) had monthly incomes of 10,000 and above.

The interviewees further explained that despite the parents struggling to provide for them, teenagers tended to desire more than could be provided. The KIIs attributed this to peer pressure that pushes teenagers to aspire to economic classes their parents could not afford. Such desperation for higher economic status pushed some teenagers to engage in sexual activities for extra economic favours. This was expressed by one of the participants thus:

“Yes parents do provide children’s personal needs. When you wake up at 5.30 am in the morning, you will find most parents going for various hustles to support their children but I do not know what is happening with current generation, they will still hang out with boys to get money to cater for things that are beyond their class. It’s only a few parents who doesn’t provide” (CHV Ikolomani Sub-County).

Table 4.2: Descriptive Statistics on Economic Factors

Economic factors	Frequency (n)	Percentage (%)
Wealth Index (N=401)		
Poorest	131	32.7
Poorer	140	34.9
Middle	118	29.4
Richer	11	2.7
Richest	1	0.3
Meals Per Day (N=401)		
One	129	32.2
Two	166	41.4
Three	106	26.4
Monthly Income (N=401)		
Below 2500	293	73.1
2500-5000	72	18.0
5000-10,000	22	5.5
10,000 and Above	14	3.5

Source: Field data (2024)

4.5.2 Association between Economic Factors and Teenage Pregnancy Prevalence

A cross-tabulation was carried out to determine association between economic factors and teenage pregnancy prevalence. Table 4.3 below shows that teenage pregnancy was observed to be related with household wealth index and meals per day. Majority (79.4%) of those who came from poorest families were teenage pregnant followed by those who came from poorer families (64.3%). Most (68.7%) of those who were not pregnant/teenage mothers came from middle-class families. On the other hand, 71.3% of those had one meal a day were pregnant while those who had two meals and three meals a day were 57.1% and 43.4%, respectively. The largest proportion (56.6%) of those who were not pregnant had three meals per day and 42.9% had two meals. From these findings, it was concluded that poverty was a strong predictor of teenage pregnancy prevalence. Since the *P*-value was less than 0.05, the association was statistically significant ($\chi^2 = 76.45$; $P < 0.001$; $\chi^2 = 18.74$; $P < 0.001$).

Table 4.3: Association between Economic Factors and Teenage Pregnancy

Prevalence

Factor	Pregnant/Teenage Mother	Chi-square	P-value
--------	-------------------------	------------	---------

	Yes (%)	No (%)		
Wealth Index				
Poorest	104(79.4%)	27(20.6%)		
Poorer	90(64.3%)	50(35.7%)		
Middle	36(31.3%)	79(68.7%)	76.45	<0.001
Richer	0(0.0%)	11(100%)		
Richest	1(100%)	0(0.0%)		
Meals Per Day				
One	92(71.3%)	37(28.7%)		
Two	93(57.1%)	70(42.9%)	18.74	<0.001
Three	46(43.4%)	60(56.6%)		
Monthly Income				
Below 2500	171(59.0%)	119(41.0%)		
2500-5000	42(58.3%)	30(41.8%)	2.98	0.395
5000-10,000	9(40.9%)	13(59.1%)		
10,000 and Above	9(64.3%)	5(35.7%)		
<i>Source: Field data (2024)</i>				

4.5.3 Multiple Logistic Regression on economic determinants of Teenage Pregnancy Prevalence

To further determine the economic factors that strongly contributed to teenage pregnancy prevalence, modelling of these factors was done. Multiple Logistic regression with robust standard errors was fitted to model factors that leads to outcome. Odds Ratio, P-values and 95% confidence intervals were tabulated. A factor was said to be significant contributing factor if it had a P-value less than 0.05. As shown in the table below, whom the teenager lived with has impact on teenage pregnancy.

The study found that wealth index of teenagers' family had a significant relationship with teenage pregnancy, so that those from poorest families were 94 times more likely to get pregnant compared to those from middle families (OR=93.563, CI= 26.562- 329.565). Similarly, those from poorer families were 42 times more likely to get pregnant relative to those from middle class families (OR=42.05, CI= 15.050-117.495). Richer and richest wealth indexes were not included due to collinearity. Furthermore, teenage family with monthly income of less than 2500 were 90.1% less likely to be pregnant compared to those with family monthly income of 10,000 and above (OR=0.099, CI= 0.028- 0.346).

Table 4.4: Multiple Logistic Regression on Economic Factors influencing Teenage Pregnancy Prevalence

Factor	OR	P-value	Lower 95%CI	Upper 95%CI
Wealth Index				
Middle	Ref	Ref	Ref	Ref
Poorest	93.563	<0.001	26.562	329.565
Poorer	42.05	<0.001	15.050	117.495
Meals Per Day				
Three	Ref	Ref	Ref	Ref
One	1.007	0.991	0.327	3.101
Two	1.805	0.230	0.688	4.735
Monthly Income				
10,000 and Above	Ref	Ref	Ref	Ref
Below 2500	0.099	<0.001	0.0280	0. 346
2500-5000	0.862	0.838	0. 208	3.570
5000-10,000	3.452	0.215	0.487	24.468

Source: Field data (2024)

4.6 Cultural Factors as determinant of Teenage Pregnancy Prevalence

4.6.1 Cultural Characteristics of Teenagers

Table 4.5 below presents the descriptive statistics for cultural characteristics of teenagers. Among the 401 teenage respondents, 191 (63.5%) of those who had sex discussion with their parents were not pregnant while 57 (58.8%) of those who did not have sex discussion with their parents were pregnant. The key informants affirmed that most parents find it shameful to talk to their teenagers about sex. They fear that initiating such conversations might make teenagers wonder if the parent had noticed tendencies of sexual misdemeanour. As one of the respondents put it:

“Not really, they find it awkward and something shameful to initiate sex topic to their teenagers” (CHV Ikolomani, KII, 2024).

Majority, 135 (83.3%) of the teenagers who used contraceptives were pregnant while only a few 27 (16.7%). Among those who did not use contraceptives, 168 (76.7%) of those who gave the reason of having infrequent sex were pregnant and 70 (84.3%) of those who did not use due to religious prohibition were not pregnant. Therefore, it was noted that contraceptive use was low among teenagers, despite majority of them being sexually active. The low use of contraceptives was associated with a range of factors, from personal preference to socio-cultural and religious restrictions.

Further, 148 (88.1%) of those who said sex discussion was allowed in the community were pregnant while on the other hand 146 (64.3%) of those who said it was not allowed were not pregnant. Therefore, as earlier indicated, very few parents and adults in the community discussed sex with teenagers. Parents' strictness level varied among respondents with majority 168 (76.7%) of teenagers whom parents were not strict being

pregnant while 70 (84.3) of those who had very strict parents were not pregnant. Parental strictness was related with teenage girls' freedom to engage in sex. Furthermore, majority, 43 (72.9%) of the teenagers who said their religion supported sex before marriage where else 133 (43.0%) of those whom their religion did not support sex before marriage were not pregnant. Most religions teach that sex is for procreation in the context of marriage. The key informants affirmed that sex before marriage was not allowed; however, teenagers often found ways to engage in pre-marital sex. According to the KIIs, teenagers hardly adhere to religious and societal norms on the value of sexual purity and chastity. One of the informants had this to say:

“It is not allowed yes but teenagers are stubborn. They have believed that sex is something normal” (CHV Butere, KII, 2024).

Concerning parents' reaction to their teenage daughters' pregnancy, most, 43 (63.2%) of the respondents whom parents were happy about teenage pregnancy were pregnant while 129 (40.8%) of those whom parents' reaction was sad were not pregnant. On the other hand, 50 (69.4%) of the respondents whom siblings were happy about teenage pregnancy were pregnant while 132 (42.3) of those whom siblings' reaction was sad were not pregnant. The reactions of family members to a teenage girl's pregnancy is important as it shapes the extent of the stigma that the teenager experiences due to pregnancy.

Other cultural factors mentioned by the KIIs as predictors of teenage pregnancy included *disco matanga* (funeral parties or disco) and polygamous marriages. According to the KIIs, despite the banning of *disco matanga* in Kakamega County, some communities still practice it silently and teenagers like such night activities. One of the CHVs described what is happening in her community as follows:

“Disco matanga is one of the factors. It’s so common in Kakamega. The people here prolong mourning period and during disco matanga, young girls and boys engage in sexual activities” (CHV, KII, 2024).

It was pointed out that polygamy is considered normal mostly among those who have enough resources like *shamba* (land). The KIIs noted that polygamy makes it difficult for fathers to be close to their children from both families hence the mother takes much of the responsibility of child upbringing. They further argued that raising a girl-child was the responsibility of both parents, and, often, single mothers struggle to raise their children where the father is not taking responsibility. One of the respondents explained thus:

“Since the availability of the other parent is irregular, teenagers of polygamous family might lack parental teachings on good morals and teenage girls mostly doesn’t listen to their mothers. It’s the fathers who can control them and guide them accordingly” (Children Officer, KII, 2024).

Table 4.5: Cultural Characteristics of Teenagers

Cultural Characteristics	Pregnant/Teenage mother	
	Yes(%)	No(%)
Sex Discussion with parents (N=401)		
Yes	40(41.2)	191(63.5)
No	57(58.8)	110(36.5)
Contraceptive Use (N=394)		
Yes	135(83.3)	27(16.7)
No	95(41.5)	134(58.5)
Contraceptive Non-Use Reason		
Infrequent Sex	168(76.7)	51(23.3)
Not sexually Active	50(52.6)	45(47.4)
Religious Prohibition	13(15.7)	70(84.3)
Sex discussion in the community		
(N=398)		
Allowed	148(88.1)	20(11.9)
Not allowed	81(35.7)	146(64.3)
Religious sex support before Married		
(N=400)		
Yes	43(72.9)	16(27.1)
No	176(57.0)	133(43.0)
Not sure	12(41.4)	17(58.6)

Source: Field data (2024)

The respondents were further asked to indicate their ages at first sex. Majority (85%) of the teenage girls who had first sex at 17 years were pregnant followed by those who had first sex at 18 years (83%). On the other hand, 75% of those who had first sex at the age of ten were pregnant and 74% of those who had first sex at age 19 were pregnant. Among those who had their first sex at age 9, none of them was pregnant and 92% of those who had first sex at age 14 were not pregnant as illustrated in Figure 4.1 below.

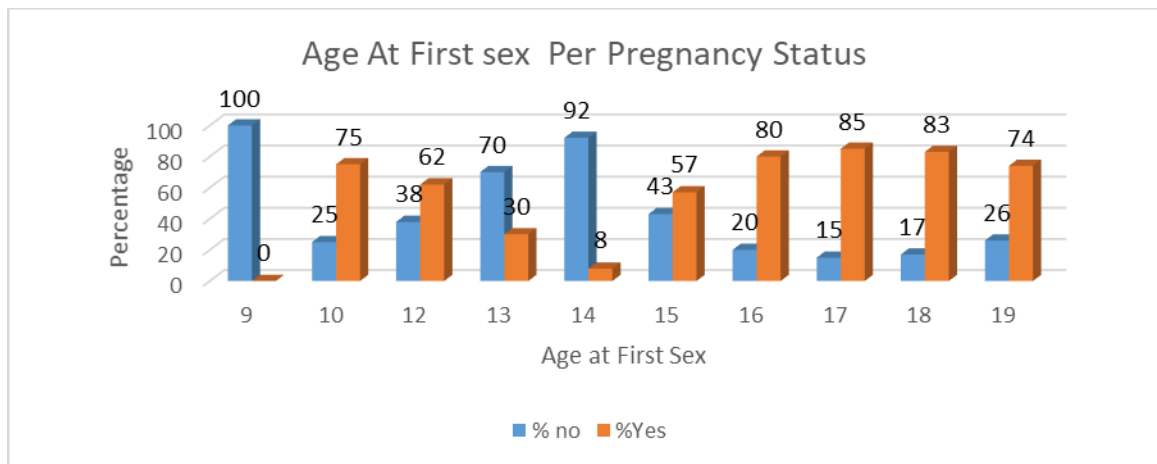


Figure 4.2: Age at first sex

Source: Field data (2024)

4.6.2 Association between Cultural Factors and Teenage Pregnancy Prevalence

Chi-square test of association was done to determine association between cultural factors and teenage pregnancy prevalence in the study area. Table 4.6 shows that 63.5% of those who had had sex discussions with their parents were neither pregnant nor teenage mothers while 58.8% of those who had never had sex discussions with their parents were pregnant/teenage mothers. Interestingly, 83.3% of those who used contraceptives were pregnant. This begs the question on the nature and effectiveness of contraceptives used by these teenagers. Those who did not use any contraceptives and were neither pregnant

nor teenage mothers were 58.5%. Sex discussions with parents and contraceptive use were associated with teenage pregnancy since the P-value was less than 0.05 ($\chi^2 = 14.87$; $P < 0.001$; $\chi^2 = 68.60$; $P < 0.001$).

Majority (88.1%) of those who said it was allowed were teenage pregnant while 35.7% said it was not allowed. On the other hand, 64.3% of those who said it was not allowed were neither teenage pregnant nor teenage mothers while 11.9% were. Clearly, allowing sex discussions at community level reduces the prevalence of teenage pregnancy. Decision-maker of the marriage and sex discussion in the community had a P-value of less than 0.05, hence significantly associated with teenage pregnancy ($\chi^2 = 6.01$; $P = 0.05$); ($\chi^2 = 108.86$; $P < 0.001$).

Religious sex support before marriage was asked among respondents and 72.9% of those who said they support were pregnant/teenage mother while 58.6% of those who were not pregnant were not sure. On the other hand, 57% of those who said it was not allowed were pregnant while 43% were not. Religious sex support before marriage had a P-value of less than 0.05 hence statistically significantly associated with teenage pregnancy prevalence ($\chi^2 = 8.80$; $P = 0.012$). The reactions of both parents and siblings towards pregnancy were not significantly associated with teenage pregnancy.

Table 4.6: Effect of Cultural Factors on Teenage Pregnancy Prevalence

Factor	Pregnant/Teenage	Chi-	P-value
--------	------------------	------	---------

	Mother		square	
	Yes	No		
	n (%)	n (%)		
Sex Discussion with parents (N=401)				
Yes	40(41.2)	191(63.5)	14.87	<0.001
No	57(58.8)	110(36.5)		
Contraceptive Use (N=394)				
Yes	135(83.3)	27(16.7)	68.60	<0.001
No	95(41.5)	134(58.5)		
Sex discussion in the community (N=398)				
Allowed	148(88.1)	20(11.9)	108.86	<0.001
Not allowed	81(35.7)	146(64.3)		
Religious sex support before Marriage (N=400)				
Yes	43(72.9)	16(27.1)		
No	176(57.0)	133(43.0)	8.80	0.012
Not sure	12(41.4)	17(58.6)		
<i>Source: Field data (2024)</i>				

4.6.3 Multiple logistic Regression on effects of Cultural Factors on teenage pregnancy prevalence

Multiple Logistic regression with robust standard errors was fitted to determine cultural factors that strongly affected teenage pregnancy. Odds Ratio, P-values and 95% confidence intervals were tabulated. A factor was said to be significant contributing factor if it had a P-value less than 0.05. Teenagers who had sex discussion with their parents were 54.6% less likely to be pregnant as compared to those who never had discussion with their parents on sex (OR=0.454, CI= 0.212-0.975). Contraceptive use had effect on teenage pregnancy such that those who used contraceptives were 5 times more likely to be pregnant as compared to those who did not (OR=5.373, CI=2.876-10.039). The study also found that respondents who said sex discussion was allowed in the community were 18 times more likely to be pregnant as compared to those who said it was not allowed (OR=18.111, CI=8.393-39.077).

Table 4.7: Multiple logistic Regression on Effects of Cultural Factors on Teenage Pregnancy Prevalence

Factor	OR	P-value	Lower 95%CI	Upper 95%CI
Sex Discussion with parents (N=401)				
No	Ref	Ref	Ref	Ref
Yes	0.454	0.043	0.212	0.975
Contraceptive Use (N=394)				
No	Ref	Ref	Ref	Ref
Yes	5.373	<0.001	2.876	10.039
Sex discussion in the community (N=398)				
Not allowed	Ref	Ref	Ref	Ref
Allowed	18.111	<0.001	8.393	39.077
Religious sex support before Marriage (N=400)				
No	Ref	Ref	Ref	Ref
Not sure	0.940	0.911	0.320	2.760
Yes	1.192	0.677	0.520	2.733

Source: Field data (2024)

4.7 Effect of Peer Pressure Influence on Teenage Pregnancy Prevalence

The research also sought to describe the peer group pressure characteristics as a precursor to determining how peer pressure affects teenage pregnancy prevalence in the Kakamega County.

4.7.1 Peer Group Characteristics among Teenage Girls

Table 4.7 presents the research findings on the peer group characteristics of the teenage girls. Majority of the respondents, 77 (58.3%) of the teenagers who said they were influenced by peers to engage in sex were pregnant while 116 (46.4%) of those who were not influenced to engage in sex activities were not pregnant. On the other hand, 96 (65.8%) of those who were pressurized for sex were pregnant. Meanwhile, among those who desired to experiment based on sex stories, 97 (71.3%) were pregnant.

These statistics underscore that sex stories and experiences among peer encourage engagement in sexual activities. This finding was corroborated by the key informant interviewees, who reported that majority of the teenagers were pressurized to experiment with sex through sex stories shared by their friends who had had sex.

“Yes, it contributes. During half term, they exchange ideas on their experiences like sex styles. This makes them want to experiment new sex styles and in the process leads to teenage pregnancy. They also discuss new love songs and various pornographic movies hence encourages them to engage in sexual behaviours”
(GBV Coordinator, KII, 2024).

Nevertheless, 77 (70.6%) of the teenagers who feared losing boyfriend were pregnant while on the other hand, 132 (46.3% of those who did not fear losing boyfriends were not pregnant. Teenagers who said peer pressure lead to teenage pregnancy and were pregnant were 193 (64.3%) while only 38 (38.8%) of those who said peer pressure did not lead to teenage pregnancy were pregnant. These studies demonstrated that, for teenage girls, having a boyfriend contributed to increased pressure to engage in sex. From

the KIIs, it was affirmed that peer pressure contributed to teenage pregnancy, as illustrated by the following comment:

“When they meet they talk about boyfriend and what they do to them so the one who doesn’t have feel the pressure to get one so that she experience what her colleagues experience” (CHV Ikolomani, KII, 2024).

Table 4.8: Peer Group Factors Characteristics among Teenagers

Factor	Pregnant/Teenage Mother	
	Yes (%)	No (%)
Peers influence to engage in sex		
Yes	77(58.3)	55(41.7)
No	153(58.4)	109(41.6)
Pressurized for sex		
Yes	96(65.8)	50(34.3)
No	134(53.6)	116(46.4)
Sharing sex stories		
Yes	113(65.7)	59(34.4)
No	117(52.2)	107(47.8)
Desire to experiment based on Sex stories		
Yes	97(71.3)	39(28.7)
No	45(29.4)	108(70.6)
Fear of losing Boyfriend		
Yes	77(70.6)	32(29.4)
No	153(53.7)	132(46.3)
Peer group pressure lead to Teenage pregnancy		
Yes	193(64.3)	107(35.7)
No	38(38.8)	60(61.2)

Source: Field data (2024)

4.7.2 Reasons Peer Pressure Leads to Teenage Pregnancy

The researcher sought teenagers and key informants' perspectives on why peer pressure tended to contribute largely to teenage pregnancy prevalence. The teenage respondents who agreed that peer group pressure led to teenage pregnancy were further asked to give explanations on the same. Majority, 100% of those who said alcohol use drives one to engage in sex unconsciously were pregnant. This reason was associated closely with that of peers attending night activities, like *disco matanga*. Those who said it's a way of gaining money of which 87.5% of those who said so were pregnant followed this.

Nevertheless, 80% of those who mentioned watching pornographic movies with friends as a key predictor of irresponsible sexual activities, and subsequently teenage pregnancy were pregnant while only 20% were not. Other reasons given included peer discussions on the pleasure of sex without protection and effects of contraceptive use, normalization of teenage pregnancy and wrong advice that one cannot survive without a boyfriend. These findings were corroborated by the key informants, as one of them said:

“Yes because the way teenages decide to do their things makes their fellows to follow their trend hence teenage pregnancy. You find teenages between age of 17 and 18-using bhang and it makes them engage in bad behaviours like sex. Also since gold mining is the main economic activity most young boys engage here and they get a lot of money, teenage girls are therefore attracted to the money these boys get hence contributing to teenage pregnancy” (CHV Ikolomani, KII, 2024).

This is summarized in Figure 4.2 below.

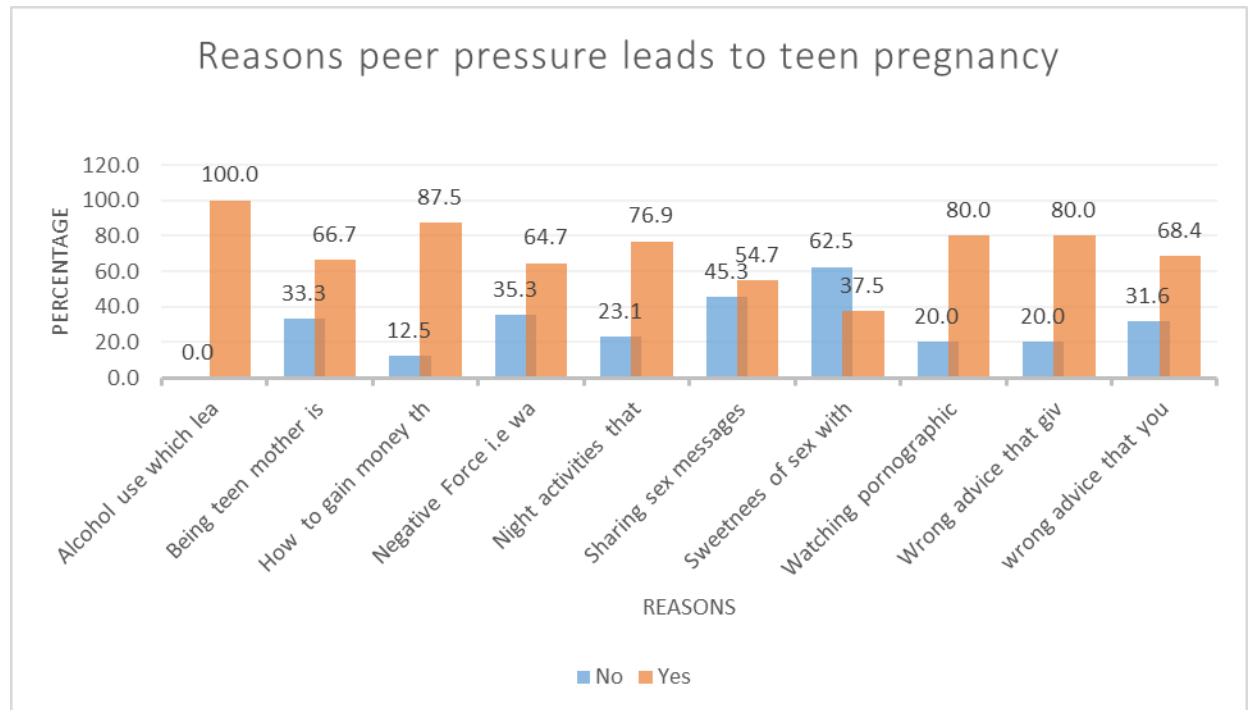


Figure 4.3: Reasons why peer group pressure leads to teenage pregnancy

Source: Field data (2024)

4.7.3 Modelling of Peer Group Pressure Factors on Teenage Pregnancy Prevalence

Logistic Regression with robust standard errors were fitted to model peer group pressure factors that contributed to teenage pregnancy prevalence in the study area. A factor was considered significant contributor to teenage pregnancy if it had a P-value less than 0.05. The outcome of the model shows that those who desired to experiment based on sex stories were 3 times more likely to be pregnant as compared to those who did not (OR=2.809, CI=1.397-5.650). On the other hand, those who feared losing boyfriends were 2 times more likely to get pregnant as compared to those who did not fear (OR=2.223, CI= 1.222- 4.044) as shown in Table 4.8 below.

Table 4.9: Peer Group Pressure Influence on Teenage Pregnancy Prevalence

Factor	OR	P-value	Lower 95%CI	Upper 95%CI
Peers influence to engage in sex				
No	Ref	Ref	Ref	Ref
Yes	0.781	0.395	0.442	1.380
Pressurized for sex				
No	Ref	Ref	Ref	Ref
Yes	1.287	0.406	0.710	2.333
Sharing sex stories				
No	Ref	Ref	Ref	Ref
Yes	1.822	0.054	0.989	3.355
Desire to experiment based on sex stories				
No	Ref	Ref	Ref	Ref
Yes	2.809	0.004	1.397	5.650
Fear of losing Boyfriend				
No	Ref	Ref	Ref	Ref
Yes	2.223	0.009	1.222	4.044
Peer group pressure lead to Teenage pregnancy				
No	Ref	Ref	Ref	Ref
Yes	1.576	0.102	0.913	2.719

Source: Field data (2024)

CHAPTER FIVE

DISCUSSION

5.1 Introduction

Teenage pregnancy in Kenya has been one of the greatest challenges for decades. Kakamega County registers a high teenage pregnancy prevalence of 15.1% of teenage pregnancy (KNBS, 2022), which is slightly higher than the national prevalence. This chapter presents a discussion of the study findings as per the research objectives. This discussion situates the findings of the current study within existing literature.

5.2 Teenage pregnancy Prevalence

Teenage pregnancy prevalence in this study was 58%. This finding differed with findings from a study done in NorthEast Ethiopia which found a prevalence of 28.6%(Ayanaw.*et. al* 2018). The same difference is in Sub-Saharan Africa which has teenage pregnancy Prevalence of 23% (WHO,2020).This finding was nearly in line with prevalence of Teenage pregnancy in Samburu 50% (KDHS 2022). This is explained by cultural beliefs and practices between the two regions.

5.3 Economic Factors and Teenage Pregnancy Prevalence

Teenage pregnancy was more prevalent among girls from the poorest economic families compared to those from middle and high economic origins. This discovery is consistent with the findings of Akanbi et al. (2021), which showed that teenage pregnancy was more prevalent among females from economically disadvantaged households. On the other hand, the findings were in line with a study on factors influencing teenagers' pregnancy in Africa 2017, which found that teenage pregnancies are contributed to by poverty (Yadufashije, Sangano, & Samuel, 2017). With a mean of 3.87, the respondents agreed

that girls from poor families were at higher risk of becoming pregnant than girls from rich families. This finding reiterated a finding by Kiarie (Kiarie, 2015).

It further found that 21% of women aged 15-19 in the lowest wealth quantile reported to have been pregnant, as compared to 8% in the highest wealth quantile. This is because teenagers from poorest families lack basic needs like food and sanitary towels hence engaging in sexual activities to vend their needs. Number of meals per day the family afforded was found to be a contributing factor to teenage pregnancy with the highest number of those who were pregnant getting only one meal per day. This was a result of poverty, hence inability to afford three meals a day. Relating to Symbolic Interaction Theory, which emphasizes on three principles, that is, meaning, language and thought, whereby the first principle (meaning) implies that teenagers' inability to obtain three meals a day has been given negative connotation because of inability of parents to afford. Because of this negative meaning, the teenagers justify to themselves the reason behind having back-up for other meals from boyfriends or sponsors hence teenage pregnancy. The principle of language states that people use language to convey feelings needs and information. Teenagers who get one meal per day express their frustration and anger through communication, which exposes them to sexual exploitation by those who can afford meals for them. The principle of thought modifies each individual interpretation of symbols and is based on language also relates to meals that teenager gets per day.

Overall, concerning economic factors, parents have greater role in putting more efforts to meet their children's daily needs to avoid predisposing them to early sexual debut, which leads to teenage pregnancy. On the other hand, the government has not taken full responsibility to curb teenager marriages before the legal age of 18 years. Besides, few

parents embrace family planning for proper spacing and limiting of the number of children per family. As such, large family sizes still contribute to poverty and exposes teenagers to sexual exploitation and teenage pregnancy.

5.3 Cultural Factors and Teenage Pregnancy Prevalence

With regard to cultural factors and teenage pregnancy prevalence, the study found that majority of those who did not have sex discussion with their parents were pregnant or teenage mothers. The same was depicted in a study on determinants of teenage pregnancy in the sub-Saharan Africa, which found that lack of parental counselling and guidance was a risk factor for teenage pregnancies (Yakubu & Salisu, 2018). Communicating with their teenagers enables parents to address challenges that teenagers face. On their part, teenagers opening up to their parents on their day-to-day experience helps to reduce teenage pregnancy. This is in line with Symbolic Interaction Theory, which explains the concept of ‘looking-glass self’ as developed by Charles Horton. The concept explains that individuals think about themselves when they interact. Therefore, interacting with parents helps them to think about their future, hence avoid risks of getting pregnant.

Contraceptive use was negatively associated with teenage pregnancy, so that most of those who used contraceptives were pregnant or teenage mothers. This was attributed to improper use of contraceptives due to lack of knowledge. Among the reasons that teenagers gave for non-use of contraceptives were religious prohibitions, sexual inactiveness and not having regular sex with boyfriends. In accordance with Sexual Script Theory, Ross-Bailey et al. (2014) assert that women may adhere to the sexual script which dictates that they should adopt a feminine role by displaying submission towards their male partners. Consequently, women are deficient in the confidence and

abilities required to commence the acquisition and utilization of condoms and other forms of contraception. The prevailing sexual norm in heterosexual interactions is that men are expected to take responsibility for delivering condoms during sexual activity. Girls who believe this sexual script are unlikely to carry condoms and are at greater risk of teenage pregnancy and STIs (Ross-Bailey, Moring, Angiola, & Bowen, 2014). This finding was slightly different from Thobejane's (2015) that found that about 80% stated they have been using contraceptive (condoms) to prevent pregnancy but they did not continue with this practice because of peer pressure.

Sex discussions at community level were not allowed as stated by many. This was contrary to a study done by Zulu *et al.* (2022), which found that guardians or parents perceived community dialogue to be relevant approach for addressing social and cultural norms regarding early pregnancy, marriage and school dropout (Zulu *et al.*, 2022). Sex discussion findings mimicked the postulates of Sexual Script Theory, which explains the social scripts like culture, religion and social positions. On the other hand, interpersonal script which varies between groups according to subculture social network and interaction limits sex discussion within community which could be a source of education on sexual reproductive health among teenagers.

Religious sex support before marriage played a crucial role in encouraging teenage pregnancy. Majority of those for whom their religion allowed sex before marriage were pregnant or teenage mothers. This aligns with the results of a study conducted by Yakubu and Salisu (2018b), which identified religion and early marriages as influential variables in the prevalence of teenage pregnancies. A similar phenomenon was observed in a research conducted in Zambia, where it was discovered that pregnant adolescent girls

were not stigmatized based on religious beliefs or perceived moral transgressions. Instead, they were assessed for the strain they had on their families and the negative impact on their educational pursuits and future prospects. The lack of moral censure can be interpreted as a practical approach to religious instruction (Svanemyr, 2020).

The cultural phenomenon of *disco matanga* is a funeral activity practiced in Kakamega County. It is a conventional move held after the death of a member of the community. Teenage pregnancy is greatly linked to this night activity. The same was depicted in a study done in Kenya by Wamalwa (2019) who found that in *disco matanga* dances are held around areas where it is simple for teenagers to stow away and engage in sexual relations that are mostly unprotected. Looking at religious sex support before marriage and *disco matanga* as factors influencing teenage pregnancy prevalence, Simon and Gagnon (1986) from Sexual Script Theory explain the social context whereby communities use scripts to explain context of events. These scripts vary by culture and by individual such that people within a specific culture should have access to scripts that are reasonably similar. Relating it to this finding, communities in Kakamega County uphold the *disco matanga* culture because it is in their social scripts. Religions have less power in controlling teenagers from engaging in sex before marriage because of similar scripts of normalizing sex before marriage. They do not encourage teenagers to avoid sex before marriage; neither is there any form of punishment for teenage sex. This has encouraged teenage pregnancy prevalence greatly.

Polygamy was also associated with teenage pregnancy prevalence in this study. The same has been reported in a study done in Nigeria, which found that the proportion of teenage

pregnancy was higher among teenagers from polygamous families than those from monogamous families. This is explained by the fact that large families may lack parental guidance (Envuladu, Agbo, Ohize, & Zoakah, 2014).

Overall, despite the negative effects that certain cultural beliefs and practices have on teenage pregnancy, communities still uphold these cultures because they are part of their social script. Parents still find it difficult to have sex discussions with their children because of shame. This means there is still a gap in parental child communication on sexual and reproductive health. Parents are too soft on their children; they allow them much freedom to do as they please, including attending *disco matanga* events and cavorting with ill-mannered friends. Communities have as well normalized teenage pregnancy, which is quite alarming, and a setback in achieving sustainable development goals on education and health. On its part, the government has not fully enforced its ban on retrogressive cultural factors such as *disco matanga*.

5.4 Peer Group Pressure and Teenage Pregnancy Prevalence

Peer influence is a factor as far as teenage pregnancy prevalence is concerned. Most of the teenage pregnancies in the study area resulted from peer pressure. Three-quarters of the teenagers agreed that peer group pressure had led to teenage pregnancy. These findings align with the research conducted by Malunga et al. (2023) and Yakubu and Salisu (2018b), which concluded that peer pressure significantly contributes to the occurrence of teenage pregnancy. Peer groups have a substantial impact as socialization agents, shaping the lifestyle choices, including sexual behaviors, of teenagers. These groups exert pressure that influences youngsters to conform to the sexual behavior norms that are considered acceptable (Isuku, 2015). According to Symbolic Interaction Theory,

society may be seen as the collective result of the interactions between individuals and groups. Behaviour is acquired through social contact and is influenced by how individuals interpret and understand their circumstances, which in turn shapes their actions (Kendall, 2013). This promotes sexual behaviors, hence contributing to the occurrence of teenage pregnancy.

Multiple logistic regression outcomes showed that those who desired to experiment based on sex stories shared among peers were 3 times more likely to be pregnant as compared to those who did not. The same views have been underlined Blumer in Symbolic Interaction Theory, that individuals create their realities by attaching meaning to situations and social constructs. The concept of social processes that presents within human interactions in Symbolic Interaction Theory shows that from teenagers' sex stories sharing, social processes occurs like dating and having boyfriends, which in one way or another translates to sexual activities hence teenage pregnancy. As teenagers interact with their peers, the dress code and individual behaviours change to suit their peer groups. Such changes drive teenages to begin relationships with boys/men and have sex debuts, which increase risks of pregnancy. Additionally, Simon and Gagnon (1986) stated in Sexual Script theory that sexuality is biologically driven. In the process of sharing sex stories among peers, biological reaction forces teenager to experiment hence teenage pregnancy. This study's findings contradicted with one that reports that negative behaviour of their peers will have no effect on sexual behaviour that will lead to teenage pregnancy (Budiharjo, Theresia, & Widyasih, 2018). However, the findings were in line with those of another study which found that peers influence the risk of teenage pregnancy (Meriyani, Kurniati, & Januraga, 2016).

Those who feared losing boyfriends by refusing to have sex with them were two times more likely to get pregnant compared to those who did not fear. These findings supported those from a research in Tanzania, which found that teenagers had to conceive to keep their boyfriends because they have been promised that they are going to be married (Mpimbi, Mmbaga, El-Khatib, Boltana, & Tukay, 2022). These findings suggest that the fear of losing boyfriend drives teenagers to engage in sexual activity that leads to teenage pregnancy. The same findings were depicted in a study done by Svanemyr who found that teenagers could not dictate what the boyfriends say because of the support they provide to them in terms of basic needs. They are doing what they observe or believe others do even if such acts or behaviours conflict with injunctive norms of sexual conduct (Svanemyr, 2020). Relating to individual script model in Sexual Script Theory, which is created in relation to both social and interpersonal scripts, it explains how sex plays out in particular circumstances like boy girl relationship. Sex is treated as a way of bonding hence teenagers find themselves engaging to sexual activities with their boyfriends as a means of bonding to avoid being left.

Peer group influence underlines teenagers' lack of independence of mind to follow their own principles. This is a sign of immaturity in age and development. These teenagers still need parental guidance, which was found to be lacking in the study area. The environment where teenagers are brought up determines how they navigate risks of teenage pregnancy. Interestingly, in an environment where many teenagers get pregnant, there seems to be a greater multiplication of teenage pregnancy.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter presents conclusions from the study findings and discussion. It also articulates the recommendations for policy and practice as well as suggestions for further research.

6.2 Conclusions

6.2.1 Teenage Pregnancy Prevalence

The study showed that there is high prevalence of Teenage Pregnancy. Factors contributing to high prevalence are wealth index, Family monthly income, Sex discussion in the community, Disco matanga and Peer influence.

6.2.2 Economic Factors as determinant of Teenage Pregnancy Prevalence

From the findings, teenagers from poorest families were about 94 times more likely to be pregnant as compared to those from rich families. Coming from poor family means accessing basic needs is hard hence forcing teenagers to engage in sexual activities to vend their needs.

Affordability of basic needs greatly depends on wealth index of the family. Being poor limits the family from attaining the three meals a day. From the findings, Majority of those who had one meal a day were pregnant. There was a significant association between the number of meals per day and teenage pregnancy prevalence and this equates to teenagers engaging in activities that makes them get meals. This increases risks of teenage pregnancy.

6.2.3 Effect of Cultural Factors on Teenage Pregnancy Prevalence

Parents still find it shameful or uncomfortable to discuss sex with their children. There was a significant association between sex discussion with parents and teenage pregnancy with those who never had sex discussion with their parents being pregnant. Lack of such parental conversations and guidance promote risky sexual behaviours.

Parents are no longer strict on their children. They have given them much freedom to do what they want. From the findings it's observed that of those who had non-strict parents were pregnant. *Laissez-faire* parents had majority of their teenagers pregnant. Association between parental strictness and teenage pregnancy prevalence was significant. This is because of too much freedom that they get to engage in various activities without much questioning. On the other hand, religion has failed to uphold its virtues such that majority of those who were pregnant said that their religion supported sex before marriage. This has contributed to high rate of teenage pregnancy. There is a dominant culture called *disco matanga*, which promotes teenage pregnancy. Despite the banning of it, people still practice it silently. From the findings, one of the Key Informant said “*Disco matanga is one of the factors. It's so common in Kakamega. The people here prolong mourning period and during disco matanga, young girls and boys engage in sexual activities*”. Since it is a night activity involving dancing and other activities, the environment is favourable to teenagers to engage in sexual activities and others are raped hence teenage pregnancy. Polygamy is another cultural factor which contributes to teenage pregnancy prevalence from the findings, one of the key Informant said “*Since the availability of the other parent is irregular, teenagers of polygamous family might lack parental teachings on good morals and teenage girls mostly doesn't listen to their mothers. It's the fathers*

who can control them and guide them accordingly". Coming from polygamous family increases the odds of teenager being pregnant due to lack of parental guidance.

6.2.4 Peer Group Influence on Teenage Pregnancy Prevalence

Peer pressure is an agent of socialization, which influence lifestyle choices and behaviours. Teenagers desire to fit their peer groups in terms of social life. This has resulted in high prevalence of teenage pregnancy. Those who desired to experiment based on sex stories shared among their peers were about 3 times more likely to be pregnant than those who did not. On the other hand, teenagers are driven by attachment and need to have specific type of life like having a boyfriend that is why those who feared losing boyfriend by denying sex were 2 times more likely to be pregnant as compared to those who did not fear.

6.3 Recommendations

6.3.1 Recommendations for Practice

Recommendations based on Economic Factors

Parents should stay with their children for ease of monitoring and parental guidance. Most teenagers get pregnant due to poor parenting or lack of parental guidance. Family planning should be practiced among families for proper spacing and limiting the number of children. This will help in getting time to attend all the children and be in a position to provide for all of them. Parents should as well put more effort in providing basic needs for their children to avoid their teenagers from getting other source of money from boyfriends or sponsors. Government should as well hold *barazas* to teach parents on how to guide their children on sexual and Reproductive Health.

Recommendations based on Cultural Factors

Parents should never be ashamed to have sexual discussion with their children. This can be achieved by parents having good relationship and friendly environment with their children, which makes them to open up. Communities should stand tall in rebuking *disco matanga*. This will help the teenagers from falling in the pit of teenage pregnancy as a result of early sexual exposure during *disco matanga*. Religions should teach teenagers that sex is sacred and is only meant for married couples hence they should abstain until marriage. Parents should be strict but friendly so that their children grow morally upright. Since polygamy might be inevitable, parents should balance their responsibilities to their children.

Recommendations based on Peer Group Influence

Engaging teenagers in productive activities like football competitions, singing, contests and computer packages limits them from being idle. Idleness makes them engage in risky behaviours with their fellow peers that leads to teenage pregnancy. Teenagers should take precautions by themselves on whom they should befriend so that they can avoid being swayed off.

6.3.2 Recommendation for Policy

Teenage pregnancy is determined by economic factors, cultural factors and peer pressure. The county government of Kakamega needs to adopt multi-sectoral approach in addressing the issue in Ikolomani and Butere sub-counties. To implement the various interventions, County government ministries have to collaborate to curb teenage pregnancy.

Policy Recommendation based on Economic Factors

The Ministry of Agriculture should educate community on best farming practices to reduce food insecurity. They should also educate communities on crop rotation, different seasons for planting and how to increase production rate.

The Ministry of Education at National and County level should enhance free sanitary pads distribution mostly among rural schools and communities so as to limit vulnerable teenagers from engaging in sex in exchange of money for pads.

The Ministry of Education should strengthen guidance and counselling in schools and incorporation in the school curriculum. They should also identify teenagers who come from poor families and support them by offering scholarship to reduce teenagers from poor families being send home for school fees every day.

Policy Recommendation based on Cultural Factors

Ministry of Health Services should strengthen education on teenage pregnancy and sexual Reproductive health in various sub-counties in Kakamega County through the sub-county in-charge of teenage and young people and community health assistants.

The Ministry of Interior and National Coordination should completely ban *disco matanga* and take serious measures on those who break the law. This will limit teenagers from engaging in sexual activities by taking advantage of these activities. Government should also take into consideration the effect of religion on policies to combat teenage pregnancies

Policy Recommendation based on Peer Group Influence

The Ministry of Youth and Social Affairs, both at County and National level, should organize meetings with different age groups to address different challenges and how to overcome them among teenagers. It should organize forums for youth empowerment and social services. Most of the teenagers pay attention to what their peers tell them than other people hence this forum will enable teenagers to share their experiences without fear and get solutions.

The Ministry of Labour should come up with holiday programmes for teenagers like computer programming, skill enhancement activities and tournaments to keep them busy during holidays. This will limit peer group influence that results from idleness.

6.3.3 Recommendations for Further Research

The current study was carried out at community level. It greatly contributed in assessing the economic factors, cultural factors and peer group influence that contributed to teenage pregnancy prevalence. The study went ahead to determine the magnitude to which each of them affected teenage pregnancy.

The study therefore recommends a similar study in urban areas for comparison regarding environment and different lifestyle. There is need for further research to determine other factors contributing to teenage pregnancy like individual factors and government policies. Further research should also be carried out to establish the role of parents and teachers in

reducing teenage pregnancy. Governmental initiative to reduce teenage pregnancy should be scrutinized to identify the achievements and downfalls, which helps in making the necessary amendment of the policies.

REFERENCES

APPENDICES

Appendix I: Consent Form

Participant's Code

Title of the study **Determinants of teenage pregnancy prevalence in Kakamega county, Kenya**

Investigator: Anastasha Cherotich

Institution: Masinde Muliro University of Science and Technology

You are kindly requested to take part in this study on Determinants of Teenage pregnancy prevalence Kakamega County.

Purpose of the study

The study helped us find out determinants of teenage pregnancy among girls aged 15-19 years in Kakamega County. This study will help in coming up with interventions on how to prevent Teenage pregnancy.

Procedure

Participants in this study will be given questionnaire to fill. They will be required to follow instructions and fill the questionnaire.

Voluntarism

This study is voluntary. You will not be paid to participate in the study. You have a right to refuse to participate in the study or fail to respond to a question you are not comfortable with.

Risks

The study will not pose any risk to you. There will be no cost to you for taking part in this study.

Ethical Consideration

Confidentiality: Information obtained about you for this study will be kept confidential and will be used only for purpose of the study. Questionnaires will be kept safely and private.

Contact Information

If you have any question concerning the study, please contact me at 0705724195 or via email anastashacherotich36@gmail.com

Participant's statement.

I have been explained to what the study is all about and I am willing to participate in the study

Signature.....

Date

Appendix II: Questionnaire

I am a student of Masinde Muliro University of Science and Technology undertaking Master's in Public Health. I am carrying out a research on **Determinants of Teenage Pregnancy Prevalence in Kakamega County, Kenya**. The information I will obtain will be kept confidential.

INSTRUCTIONS

1. Do not write your name in the questionnaire.
2. Answer the questions by ticking in the boxes and where necessary give your opinion if it's not captured among the choices.
3. Any information obtained is strictly confidential and for study purpose.
4. Read the questions carefully.

PART A: DEMOGRAPHIC DATA

a). Age in years?

ii)15-17 ☐

ii) 18-19 ☐

b) Religion

i) Catholic

ii)Protestant

iii) Islam

c) Highest Education Level

i) Never Went to school

ii) Primary

iii) Secondary

iv) Tertiary

d) Employment status

i) Student []

ii) Employed []

iii) Unemployed []

iv) House Wife []

PART B: ECONOMIC FACTORS ASSOCIATED WITH TEENAGE PREGNANCY

a) Whom do you live with?

i) Both Parents []

ii) Either Parent []

iii) Alone []

iv) Husband []

b) What is your family size?

i) Three/ less []

ii) 4-6 []

iii) 7- Above []

c) Fathers Education Level

i) Never Went to school []

ii) Primary []

iii) Secondary and Above []

iv) Not known []

d) Mothers Education Level

- i) Never Went to school []
- ii) Primary []
- iii) Secondary and Above []
- iv) Not known []

e) What is your family wealth index?

- i) Poorest []
- ii) Poorer []
- i) Middle []
- ii) Richer
- iii) Richest

f) How many meals per day do your family afford?

- i) one meal []
- ii) Two meals []
- iii) Three meals []

g) What's the monthly income of the family?

- i) Below 2500
- ii) 2500-5000
- iii) 5000-10,000
- iv) 10,000 and Above

h) Who usually cater for your toiletries?

- i) Parents []
- ii) Siblings []

iii) Boyfriend []

iv) Other (specify).....

i) Do you take alcohol/drug substances?

i) Yes []

ii) No []

j) If yes who buy for you?

i) Myself []

ii) Friends []

k) If friends, where do you/ friends get money for alcohol/drug substances?

.....

l) Do you communicate with parents on sexual life /relationship?

i) Yes []

ii) No []

m) Are you sexually Active?

i) Yes []

ii) No []

n) Are you pregnant/ teenage mother?

i) Yes []

ii) No []

o) If yes, did you plan for the pregnancy?

i) Yes []

ii) No []

p) Have you ever used /currently using any contraceptive?

i) Yes []

ii) No []

q) If yes, which one?

i) Injectable

ii) Emergency Pills

iii) Intrauterine Contraceptive device

iv) Implants

v) Condom

vi) Others (specify).....

r) If no, what makes you not to use?

i) Not sexually active []

ii) Infrequent sex []

iii) Religious prohibition []

iv) Others (specify).....

i) How long do you take to reach nearby health facility?

i) One hour or below []

ii) More than one hour []

PART C: CULTURAL FACTORS CONTRIBUTING TO TEENAGE PREGNANCY

a) At what age did you first have sex?

b) Are you married?

(i)Yes []

- (ii) No []
- c) If yes, who made the decision of marriage?
 - iv) Myself []
 - v) Parents []
 - vi) Boyfriend []
- d) In your community, is sex discussion allowed?
 - i) Yes []
 - ii) No []
- e) Do your parents talk to you about sex?
 - i) Yes []
 - ii) No []
- f) How can you describe Level of strictness of rules and regulations in your family?
 - i) Not strict []
 - ii) Strict []
 - iii) Very strict []
- g) Does your religion support sex before marriage?
 - i) Yes []
 - ii) No []
 - iii) Not sure []
- h) Do your peers influence you to engage in sexual behaviours?
 - i) Yes []
 - ii) No []
- j) What is the reaction of your parents towards pregnancy?

i) Sad []

ii) Happy []

k) What is the reaction of your siblings towards Pregnancy

i) Sad []

ii) Happy []

PART D: PEER GROUP PRESSURE AND TEENAGE PREGNANCY

a) Have you been pressurized to have sex by your friends?

i) Yes []

ii) No []

b) Do you share sex stories with your friends?

i) Yes []

ii) No []

c) If yes, do these stories make you have the desire to experiment?

i) Yes []

ii) No []

d) Would you be afraid of losing a boyfriend by not having sex?

i) Yes []

ii) No []

e) Does peer group pressure lead to teenage pregnancy?

i) Yes

ii) No

Explain.....

- f) What measures can be put in place to reduce incidence of teenage pregnancy? (in your opinion)

THANK YOU FOR PARTICIPATING IN THIS STUDY

Appendix III: Key Informant Interview for CHVs

1. Is teenage pregnancy common in this community?
2. What are the Factors that you think are the contributing factors to teenage pregnancy?
3. Do you think Economic Factors i.e. family background, economic activity of the parents and social class contribute to teenage pregnancy?
4. In your community, do parents talk to their children about sexual life?
5. Is sex before marriage allowed in this community?
6. Do you think peer pressure contribute to teenage pregnancy? In what ways?
7. Do you think parents are concerned on who are friends to their teenage girls, what they discuss and do when they meet?
8. In your own understanding, what are the impacts of teenage pregnancy
9. In your own opinion, what do you think can be done to improve on teenage pregnancy?

Appendix IV: Key informant Interview for Gender Based Violence Coordinator

1. What is the role of social service department as far as teenage pregnancy is concerned in Kakamega County?
2. Is teenage pregnancy a problem in Kakamega County? Why?
3. Which programs do you run that deals with teenage Pregnancy?
4. What are some of the economic Factors that contribute to teenage pregnancy?
5. What are the cultural factors that contribute to teenage pregnancy in Kakamega County?
6. Do you think parents talk to their children about sexual life?
7. Is sex topics and awareness meetings allowed in the various communities of Kakamega County?
8. Do you think peer pressure contribute to teenage pregnancy? In what ways?
9. What are the impacts that of teenage pregnancy both at individual, community and county level?
10. In your own opinion, what do you think can be done to improve on teenage pregnancy?

Appendix V: Key Informant Interview for Children Officer

1. What is the role of children department as far as teenage pregnancy is concerned in Kakamega County?
2. Is teenage pregnancy a problem in Kakamega County? Why?
3. Which programmes do you run that deals with teenage Pregnancy?
4. What are some of the economic Factors that contribute to teenage pregnancy?
5. What are the cultural factors that contribute to teenage pregnancy in Kakamega County?
6. Do you think parents contribute to teenage pregnancy? Why?
7. Is sex topics and awareness meetings allowed in the various communities of Kakamega County?
8. Do you think peer pressure contribute to teenage pregnancy? In what ways?
9. What are the impacts of teenage pregnancy both at individual, community and county level?
10. In your own opinion, what do you think can be done to improve on teenage pregnancy?

Appendix VI: MMUST Directorate of Postgraduate Studies Approval

Ref: MMU/COR:509099



MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY (MMUST)

Tel: 056-30870
Fax: 056-30153
E-mail: directordps@mmust.ac.ke
Website: www.mmust.ac.ke

P.O Box 190
Kakamega – 50100
Kenya

Directorate of Postgraduate Studies

Ref: MMU/COR: 509099

2nd October 2023

Anastasha Cherotich
HPH/G/01-70181/2021,
P.O. Box 190-50100,
KAKAMEGA.

Dear Ms. Cherotich

RE: APPROVAL OF PROPOSAL

I am pleased to inform you that the Directorate of Postgraduate Studies has considered and approved your Masters Proposal entitled: *“Determinants of Teen Pregnancies Among Girls Aged 15-19 Years in Kakamega, Kenya”* and appointed the following as supervisors:

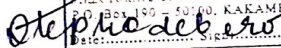
- | | |
|--------------------------|---------|
| 1. Dr. Rose Olayo | - MMUST |
| 2. Dr. Everlyne A. Odera | - MMUST |

You are required to submit through your supervisor(s) progress reports every three months to the Director Postgraduate Studies. Such reports should be copied to the following: Chairman, School of Public Health, Biomedical Sciences and Technology Graduate Studies Committee and Chairman, Public Health Department. Kindly adhere to research ethics consideration in conducting research

It is the policy and regulations of the University that you observe a deadline of three years from the date of registration to complete your Master's thesis. Do not hesitate to consult this office in case of any problem encountered in the course of your work.

We wish you the best in your research and hope the study will make original contribution to knowledge.

Yours Sincerely,


Prof. Stephen Odebero, PhD, FIEEP
DIRECTOR, DIRECTORATE OF POSTGRADUATE STUDIES

Appendix VII: MMUST IERC Approval

REF: MMU/COR: 403012 Vol 6(01)



MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY
Tel: 056-31375
Fax: 056-30153
E-mail: ierc@mmust.ac.ke
Website: www.mmust.ac.ke
P. O. Box 190,
50100,
Kakamega,
KENYA

Institutional Scientific and Ethics Review Committee (ISERC)

REF: MMU/COR: 403012 Vol 6 (01)

Date: October 11th, 2023

To: Ms. Anastasha Cherotich,

Dear Ms.

RE: DETERMINANTS OF TEEN PREGNANCIES AMONG GIRLS AGED 15-19 YEARS IN KAKAMEGA COUNTY, KENYA

This is to inform you that the *Masinde Muliro University of Science and Technology Institutional Scientific and Ethics Review Committee (MMUST-ISERC)* has reviewed and approved your above research proposal. Your application approval number is MMUST/IERC/194/2023. The approval covers for the period *October 11th, 2023 to October 11th, 2024*.

This approval is subject to compliance with the following requirements;

- i. Only approved documents including informed consents, study instruments, MTA will be used.
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by **MMUST-ISERC**.
- iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **MMUST-ISERC** within 72 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to **MMUST-ISERC** within 72 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days upon completion of the study to **MMUST-ISERC**.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke> and also obtain other clearances needed

Yours Sincerely,

A handwritten signature in blue ink, appearing to read 'Gordon Nguka'.

Prof. Gordon Nguka (PhD)

Chairperson, Institutional Scientific and Ethics Review Committee

Copy to:

- The Secretary, National Bio-Ethics Committee
- Vice Chancellor
- DVC (PR&I)

Appendix VIII: NACOSTI Research License

REF NO: 332257

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 332257	Date of Issue: 03/November/2023
RESEARCH LICENSE	
	
This is to Certify that Miss.. ANASTASHA CHEROTICH TIGIRER of Masinde Muliro University of Science and Technology, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kakamega on the topic: Determinants of Teen Pregnancies among Girls aged 15-19 years in Kakamega County for the period ending : 03/November/2024.	
License No: NACOSTI/P/23/31223	
332257	
Applicant Identification Number	Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code
	
NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.	
See overleaf for conditions	

Appendix IX: County Government of Kakamega Research Authorization

REF NO: CGK/OCS/GEN.CRR/04/VOL3/38

REPUBLIC OF KENYA
COUNTY GOVERNMENT OF KAKAMEGA



OFFICE OF THE GOVERNOR
COUNTY SECRETARY AND HEAD OF PUBLIC SERVICE

Telephone: 056-31850/31852/31853
Website: www.kakamega.go.ke
E-mail: countysecretary@kakamega.go.ke

County Government of Kakamega
P.O. Box 36-50100
KAKAMEGA

When replying please Quote

Ref No: CGK/OCS/GEN.CRR./04/VOL.4/38

Date: 5th January, 2024

Anastasha Cherotich Tigirer
Masinde Muliro University of Science & Technology
P. O. Box 190-50100
KAKAMEGA

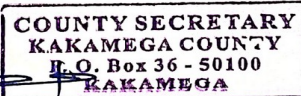
RE: RESEARCH AUTHORIZATION

The above subject matter refers.

Following your authorization letter Ref. No.NACOSTI/P/23/31223 dated 3rd November, 2023 by NACOSTI to undertake research on "**Determinants of Teen Pregnancies among girls aged 15-19 years in Kakamega County**" for the period ending 3rd November, 2024, I am pleased to inform you that you have been authorized to carry out the research on the same in Kakamega County.

It is therefore expected that you shall forward a copy of the thesis to this office.

Thank you.



Dr. Lawrence Omuhaka, CBS
County Secretary and Head of Public Service

Copy to: H.E. the Governor

Appendix X: Map of Kenya Kakamega County showing Study Areas (Ikolomani and Butere)

