

**THE ROLE OF SEX EDUCATION IN ADDRESSING TEENAGE PREGNANCY IN
MUKONO DISTRICT: CASE STUDY NAKIFUMA SUB-COUNTY**

SANDRA NAKITTO

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Declaration

I, NAKITTO SANDRA, hereby declare that this is my own work, is not plagiarized, and has not been submitted to any institution for any award.

Signature.......... Date.....04/05/2026.....

NAKITTO SANDRA

Dedication

To my mother, Nazziwa Rose, father, Kakande Frank, and Aunt, Winnie Nalukenge, this dissertation is dedicated to your continuous support, encouragement, and guidance since childhood up to now.

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First and foremost, I would like to offer thanks and appreciation to the almighty God for His strength, guidance, and wisdom in conducting this research. I would like to offer my heartfelt thanks to my supervisor, Mr. Mwije Solomon, for his guidance and insightful feedback right from the start till the completion of this study. Finally, to my colleagues, Naggayi Aquinus and Mugarura Simon for the zeal I've got from them up to now, I am forever grateful.

Approval

This is to certify that NAKITTO SANDRA has written this work under my supervision and has submitted it for the award of a Bachelor's degree in Social Work.

Supervisor

Solomon Mwije

A handwritten signature in black ink, appearing to read 'Solomon Mwije', written in a cursive style.

Date: 04/05/2026

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ABSTRACT

Teenage pregnancy was a major public health and social issue in Uganda, especially in rural communities where there was a lack of quality sex education. This research examined the impact of sex education on teenage pregnancy among 15-19 year old adolescents in Nakifuma Sub-County, Mukono District. The researchers sought to assess the adolescents' understanding of sex education, to determine the impact of sex education on sexual behaviour and teenage pregnancy, and to understand the cultural and socioeconomic determinants that influenced sex education in the region.

The study used a descriptive cross-sectional design, with quantitative and qualitative methods. Adolescents responded to standardised questionnaires, with additional information obtained from parents/guardians, teachers and health professionals through key informant interviews. Random sampling was adopted to select the adolescents and purposive sampling was adopted to select key informants. Descriptive and inferential statistics were used to analyse the quantitative data, while the qualitative data were analysed thematically to enrich the quantitative data.

The study showed while many adolescents were knowledgeable about sex education, there were still gaps in the quality, content, and delivery of sex education information. The study also revealed the impact of effective sex education on adolescents' sexual behaviour in terms of delaying sexual debut and using contraceptives, which in turn prevented teenage pregnancy. But cultural and parental perceptions and communication difficulties, as well as socioeconomic factors, such as poverty and lack of access to youth-friendly health services, limited the effectiveness of sex education.

The study established that effective implementation of comprehensive sex education was very important in preventing teenage pregnancy in adolescents. It developed strategies to improve school-based and community-based sex education, enhance parent-child communication on sexual health issues, and overcome cultural

and socioeconomic barriers to accessing accurate sexual health information. The study offered insights for policy makers, teachers, social workers and health professionals in the design and implementation of culturally relevant interventions to enhance adolescent reproductive health and reduce teenage pregnancy in Mukono District and Uganda in general.

CHAPTER ONE

1.0 Introduction

This chapter provided an overview of the background and context of the study on the impact of sex education on teenage pregnancy for the adolescents in Nakifuma Sub-County, Mukono District. It provided the problem statement, purpose of the study, research objectives and questions, scope, rationale and importance of the study. It also presented the theoretical and conceptual models that underpinned the study to inform the nature of the study variables and the relationships among them.

1.1 Background of the Study

Teenage pregnancy continues to be a significant global public health and socioeconomic issue impacting millions of young people globally. Teenage pregnancy is defined as pregnancy among girls aged 10-19 years and it is known to be a major hindrance to social and economic progress due to interruption in education, health risks and poverty cycles (WHO, 2023; UNFPA, 2022; UNICEF, 2023). Worldwide, it is estimated that around 21 million girls aged between 15-19 years fall pregnant annually in developing countries with about 12 million giving birth (WHO, 2023; UNFPA, 2022; Neal et al., 2020). Adolescent girls continue to experience high levels of maternal mortality due to pregnancy complications because of the lack of reproductive health services and poor knowledge regarding contraception and sexual health (WHO, 2023; Chandra-Mouli et al., 2019; UNICEF, 2023). Research has also shown that teenage pregnancy is associated with school drop-out, poorer job prospects and social exclusion of young women (UNESCO, 2023; UNFPA, 2022; Wodon et al., 2018).

As a result, sex education has been recognised as a significant strategy in curbing teenage pregnancy around the world. Comprehensive sexuality education provides young people with information on reproductive health, contraception, sexually transmissible diseases and skills for making healthy decisions about sexual relationships (UNESCO, 2018; Kirby & Laris, 2019; Haberland & Rogow, 2015). Studies in a number of countries have demonstrated that young people who have access to comprehensive sexuality education are less likely to initiate sex at an early age, use

contraception, and engage in risky sexual practices that can result in unintended pregnancy (Chandra-Mouli et al., 2019; UNESCO, 2018; Santelli et al., 2017). Moreover, sex education has been found to enhance adolescents' knowledge and attitudes related to gender equality, healthy relationships and sexual responsibility (Kirby & Laris, 2019; Haberland & Rogow, 2015; WHO, 2023). Consequently, many nations have incorporated sex education into their school curriculum and youth health programs as part of their efforts to improve adolescent reproductive health and prevent teenage pregnancy (UNESCO, 2018; UNFPA, 2022; WHO, 2023).

Teenage pregnancy is more prevalent in Africa than elsewhere. Sub-Saharan Africa has the highest adolescent fertility rates in the world, in part because of poverty, cultural practices encouraging early marriage, gender inequality and lack of reproductive health services (UNICEF, 2023; WHO, 2023; Yakubu & Salisu, 2018). The United Nations Population Fund reports that over 5 million adolescent girls in Sub-Saharan Africa give birth annually, making up a large part of the global adolescent births (UNFPA, 2022; WHO, 2023; Neal et al., 2020). Low education, lack of access to sexual health information, and lack of access to youth-friendly health services are often associated with teenage pregnancy in Africa (Yakubu & Salisu, 2018; Atuyambe et al., 2020; Chandra-Mouli et al., 2019). In many African societies, parents are reluctant to discuss sexuality with their children because it is viewed as a taboo, hindering the dissemination of sexual health information to young people (UNESCO, 2018; UNICEF, 2023; Wamoyi et al., 2020). As a result, teens may seek sexual health information from their friends or the media, which can contribute to the spread of inaccurate information and risky sexual practices that may result in teenage pregnancy (Yakubu & Salisu, 2018; Chandra-Mouli et al., 2019; WHO, 2023).

At the regional level, East Africa continues to grapple with the problem of teenage pregnancy. High rates of fertility among adolescents persist in countries like Uganda, Kenya and Tanzania, despite efforts to enhance adolescent reproductive health knowledge (African Union Commission, 2021; UNESCO, 2023; UNFPA, 2022). Studies show many adolescents in East Africa begin sexual relationships before the age of 18 years and lack sufficient information on contraception and reproductive health (Neal et al., 2020; WHO, 2023; Yakubu & Salisu, 2018). Furthermore, poverty, gender inequality, peer pressure and lack of parental oversight are among the factors that

contribute to the high rates of adolescent pregnancy in East Africa (Atuyambe et al., 2020; UNICEF, 2023; UNESCO, 2023). School-based sexuality education programs have proven to be effective in enhancing reproductive health knowledge and safe sexual practices among adolescents in East Africa (UNESCO, 2018; Santelli et al., 2017; Chandra-Mouli et al., 2019). But these programs have been implemented with varying degrees of success due to cultural barriers, lack of teacher training and policy support in many settings (African Union Commission, 2021; UNFPA, 2022; UNESCO, 2023).

Teenage pregnancy is one of the major issues facing adolescents and the education system in Uganda. The Uganda Demographic and Health Survey reveals that 24% of girls aged 15-19 years have started childbearing, suggesting the high rate of teenage pregnancy in the country (Uganda Bureau of Statistics [UBOS] & ICF, 2016; UBOS, 2022; UNICEF, 2023). Various factors contribute to teenage pregnancy in Uganda, including poverty, early marriage, peer pressure, sexual exploitation and lack of reproductive health education and services (Atuyambe et al., 2020; UBOS, 2022; Ministry of Health, 2021). A lack of knowledge about contraception and reproductive health is common among adolescents due to inadequate sexuality education in schools and at home (UNESCO, 2018; UNICEF, 2023; WHO, 2023). Research has also indicated that teenage pregnancy is a major contributor to school dropout in girls in Uganda given that many pregnant girls are often forced to withdraw from school due to stigma, financial constraints and lack of support (Wodon et al., 2018; Ministry of Education and Sports, 2020; UBOS, 2022). Consequently, the government of Uganda and its development partners have increasingly made sexuality education a priority to prevent teenage pregnancy and improve adolescent reproductive health (Ministry of Education and Sports, 2020; UNESCO, 2018; UNFPA, 2022).

At the district level, Mukono District has consistently reported relatively high rates of teenage pregnancy. Accounts from local government and health authorities show that teenage pregnancy continues to be a prevalent issue among adolescent girls in many communities in the district (Mukono District Local Government, 2021; UBOS, 2022; UNICEF, 2023). Teenage pregnancy in Mukono District has been linked to a range of socio-cultural factors including poverty, peer pressure, lack of parental support and lack of comprehensive sexuality education (Atuyambe et al., 2020;

Mukono District Local Government, 2021; UNESCO, 2018). Many young people have sex without having sufficient information about reproductive health and contraception, which makes them vulnerable to unintended pregnancy (WHO, 2023; Yakubu & Salisu, 2018; UNICEF, 2023).

Nakifuma Sub-County, a sub-county of Mukono District, shares similar issues to the rest of the district about teenage pregnancy and reproductive health among adolescents. Young people in this community have socio-economic and cultural constraints in accessing reliable sexual health information and reproductive health services (Mukono District Local Government, 2021; UBOS, 2022; UNICEF, 2023). Further, cultural practices that limit communication about sexuality between parents, school teachers and adolescents often hinder young people's access to sexual and reproductive health information (UNESCO, 2018; Wamoyi et al., 2020; WHO, 2023). As a result, young people may turn to peers or informal sources of information, which could lead to inaccurate information and unsafe sexual practices (Yakubu & Salisu, 2018; Chandra-Mouli et al., 2019; UNICEF, 2023). As such, exploring the impact of sex education on teenage pregnancy in Nakifuma Sub-County is crucial in understanding how reproductive health education can assist young people make decisions and prevent teenage pregnancy in Mukono District.

1.2 Problem Statement

Teenage pregnancy is a significant global health and social issue, especially in the developing world, where young people have little access to reproductive health education and services (WHO, 2023; UNICEF, 2023; UNFPA, 2022). Every year, nearly 21 million girls between the ages of 15 to 19 fall pregnant and many of these pregnancies result in adverse health effects, school dropout, forced early marriages, and poor economic prospects for young women (Chandra-Mouli et al., 2019; Neal et al., 2020; UNESCO, 2018). Therefore, comprehensive sexuality education has been advocated by many countries to prevent teenage pregnancies and promote healthy sexual behaviours among adolescents (Kirby & Laris, 2019; Santelli et al., 2017).

Teenage pregnancy rates are the highest in Sub-Saharan Africa due to high levels of poverty, early sexual debut, cultural practices, and lack of reproductive health education (Yakubu & Salisu, 2018; Atuyambe et al., 2020; UNICEF, 2023). This is also the case in Uganda where some 24% of girls between the ages of 15-19 have initiated child bearing, leading to high school dropout and low socio-economic status for young girls (UBOS & ICF, 2016; UBOS, 2022; Ministry of Education and Sports, 2020).

In Mukono District, teenage pregnancy continues to be a major issue, especially in rural areas such as Nakifuma Sub-County where poverty, peer pressure, and lack of comprehensive sex education play a role in the issue (Mukono District Local Government, 2021; Atuyambe et al., 2020). Although schools and other stakeholders in the community have been delivering sex education, the problem of teenage pregnancy continues to exist, suggesting a need for more effective sex education. As such, this study aims to explore the impact of sex education on teenage pregnancy in the Nakifuma Sub-County in Mukono District.

1.3 Purpose of the Study

The purpose of this study is to examine the role of sex education in addressing teenage pregnancy among adolescents in Nakifuma Sub-County, Mukono District.

1.4 Research Objectives

- i. To assess the level of awareness and knowledge of sex education among adolescents in Nakifuma Sub-County.
- ii. To examine the factors contributing to teenage pregnancy among adolescents in Nakifuma Sub-County.
- iii. To analyse the role of sex education programs in preventing teenage pregnancy among adolescents in Nakifuma Sub-County.

1.5 Research Questions

- i. What is the level of awareness and knowledge of sex education among adolescents in Nakifuma Sub-County?

- ii. What factors contribute to teenage pregnancy among adolescents in Nakifuma Sub-County?
- iii. What role does sex education play in preventing teenage pregnancy among adolescents in Nakifuma Sub-County?

1.6 Scope of the Stud

1.6 Scope of the Study

The scope of the study defines the boundaries within which the research will be conducted in terms of content, geographical area, and time frame (Creswell, 2014; Saunders et al., 2019). This study will focus on examining the role of sex education in addressing teenage pregnancy among adolescents in Nakifuma Sub-County, Mukono District. The scope of the study will be presented in terms of content scope, geographical scope, and time scope.

Content Scope

The study will focus on examining the role of sex education in addressing teenage pregnancy among adolescents. Specifically, the study will assess the level of awareness and knowledge of sex education among adolescents, examine the factors contributing to teenage pregnancy, analyse the role of sex education programs in preventing teenage pregnancy, and identify the challenges affecting the effectiveness of sex education in addressing teenage pregnancy. The study will concentrate on issues related to sexual and reproductive health education, adolescents' knowledge and attitudes toward sexuality, and the influence of sex education on reducing risky sexual behaviours that lead to teenage pregnancy (UNESCO, 2018; WHO, 2023; UNFPA, 2022).

Geographical Scope

Geographically, the study will be conducted in Nakifuma Sub-County located in Mukono District in the Central Region of Uganda. The area will be selected because it has experienced cases of teenage pregnancy among adolescents, which has raised concerns among parents, schools, and community leaders. The study will target adolescents, teachers, parents, and community stakeholders within Nakifuma Sub-

County in order to obtain relevant information regarding sex education and teenage pregnancy in the area.

Time Scope

The study will focus on information and data related to teenage pregnancy and sex education within the period 2019-2025. This time period will be considered appropriate because it will enable the researcher to examine recent trends and interventions related to adolescent reproductive health education and teenage pregnancy in Mukono District.

1.7 Significance of the Study

The findings of this study will be significant to several stakeholders including adolescents, parents, teachers, policymakers, and future researchers.

The study will benefit adolescents by providing information on the importance of sex education in helping them make informed decisions about their sexual and reproductive health. The findings will help young people understand the risks associated with early sexual activity and the importance of responsible behaviour in preventing teenage pregnancy.

The study will also benefit parents and guardians by highlighting the importance of parental guidance and communication about sexuality and reproductive health. The results will encourage parents to play an active role in providing accurate sexual health information and support to their children.

Teachers and school administrators will benefit from the study because the findings will provide insights into how sex education can be effectively delivered in schools to address teenage pregnancy. The study will help educators understand the challenges affecting the implementation of sex education programs and identify strategies for improving reproductive health education among adolescents.

The study will also be useful to policymakers and government agencies, particularly those responsible for education and health programs. The findings will provide evidence that will inform the development and improvement of policies and

programs aimed at strengthening sex education and reducing teenage pregnancy among adolescents in Uganda.

Additionally, the study will contribute to the existing body of knowledge on adolescent reproductive health and teenage pregnancy. Future researchers will use the findings as reference material for further studies related to sex education and adolescent reproductive health in Uganda and other developing countries.

1.8 Justification of the Study

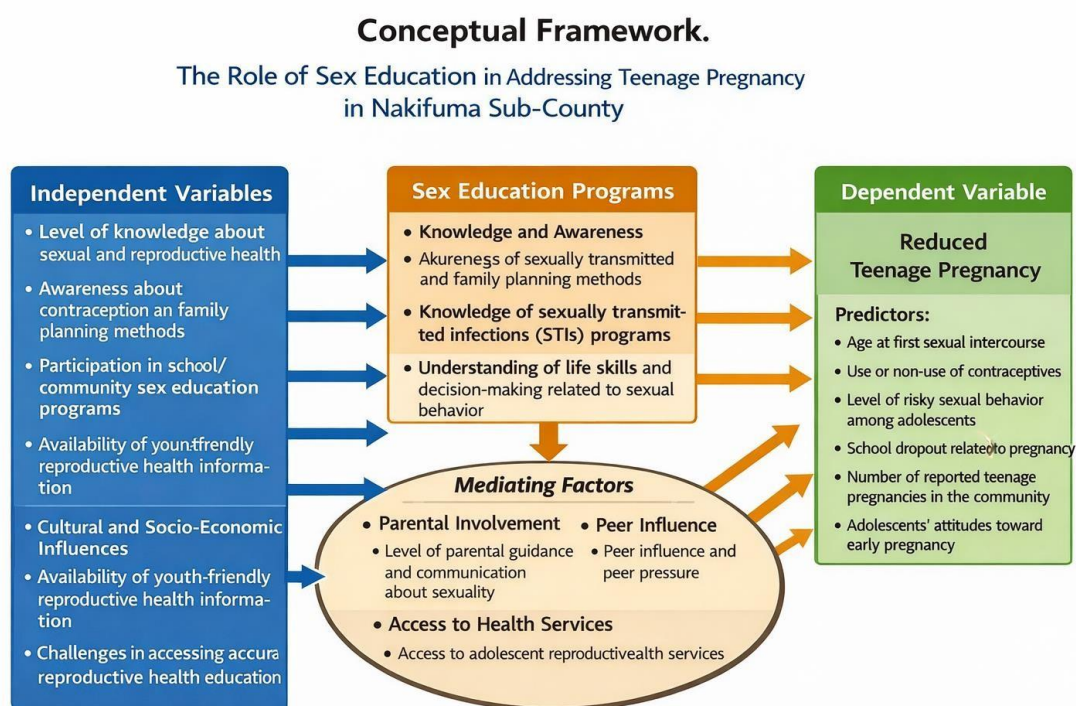
Teenage pregnancy continues to be a major social and public health challenge in Uganda, particularly among adolescents in rural and semi-urban communities. Despite efforts by the government, schools, and health organizations to promote sexual and reproductive health education, teenage pregnancy rates remain high among adolescents. This situation creates the need for further research to understand the effectiveness of sex education in addressing teenage pregnancy.

The study is justified because it will provide a deeper understanding of how sex education influences adolescents' knowledge, attitudes, and behaviours regarding sexual and reproductive health. Understanding this relationship will help identify gaps in the current sex education programs and suggest appropriate strategies for improving their effectiveness.

The study will also be important because limited research has specifically examined the role of sex education in addressing teenage pregnancy in Nakifuma Sub-County in Mukono District. Conducting this study will generate empirical evidence that will help stakeholders understand the extent to which sex education contributes to reducing teenage pregnancy in the area.

Furthermore, the study will support efforts by schools, community leaders, and health institutions to strengthen adolescent reproductive health education programs. The findings will help identify practical interventions that will improve access to accurate sexual health information and promote responsible behaviour among adolescents. Ultimately, the study will contribute to the reduction of teenage pregnancy and the promotion of the wellbeing of young people in Nakifuma Sub-County and Uganda as a whole.

1.11 Conceptual Framework



The conceptual framework illustrates the relationship between sex education (independent variable) and teenage pregnancy (dependent variable), while also showing the influence of mediating factors that may affect this relationship. The framework assumes that effective sex education plays an important role in reducing teenage pregnancy among adolescents in Nakifuma Sub-County, Mukono District.

Sex education is the independent variable in this study because it is the main factor expected to influence teenage pregnancy. Sex education provides adolescents with knowledge and awareness about sexual and reproductive health, contraception, family planning methods, and sexually transmitted infections. When adolescents receive adequate sex education, they are more likely to develop a better understanding of the consequences of early sexual activity and the importance of responsible decision-making. In addition, sex education programs provide life skills

such as self-control, communication, and decision-making skills that help young people avoid risky sexual behaviours. Therefore, improved knowledge and awareness about reproductive health are expected to reduce the likelihood of teenage pregnancy.

The dependent variable in this study is teenage pregnancy. Teenage pregnancy refers to pregnancies that occur among girls aged between 13 and 19 years. The level of teenage pregnancy in the community can be reflected through indicators such as age at first sexual intercourse, use or non-use of contraceptives, level of risky sexual behaviour among adolescents, school dropout due to pregnancy, and the number of reported teenage pregnancies in the community. The study assumes that when adolescents are well informed through sex education, they are more likely to delay sexual activity, use contraceptives correctly, and avoid behaviours that may lead to unintended pregnancy. As a result, the level of teenage pregnancy is expected to decline.

The framework also includes mediating factors that may influence the relationship between sex education and teenage pregnancy. These factors include parental involvement, peer influence, and access to health services. Parental involvement plays a critical role because open communication between parents and adolescents about sexuality can reinforce the knowledge gained from sex education programs. Peer influence may either encourage responsible behaviour or expose adolescents to risky behaviours depending on the nature of peer relationships. Access to adolescent reproductive health services is also important because it enables young people to obtain accurate information, counselling, and contraceptive services that support the knowledge acquired through sex education.

The framework assumes that sex education can reduce teenage pregnancy by increasing adolescents' knowledge about reproductive health and promoting responsible sexual behaviour. However, the effectiveness of sex education may depend on mediating factors such as parental guidance, peer influence, and access to health services, which can either strengthen or weaken the relationship between sex education and teenage pregnancy.

The conceptual framework represents the link between sex education (independent variable) and teenage pregnancy (dependent variable), and the impact of other

factors that can mediate the relationship. The model presumes good sex education has a significant impact on decreasing teenage pregnancy in Nakifuma Sub-County, Mukono District.

In this study, sex education is the independent variable because it is the variable that is expected to affect teenage pregnancy. Sex education helps young people to become aware and knowledgeable about sexual and reproductive health issues, methods of contraception, family planning and sexually transmitted infections. Adolescents who receive sex education are likely to have improved knowledge and awareness about the risks of early sexual initiation and decision-making skills. Sex education programs also teach adolescents life skills such as self-control, communication and decision-making skills which enable them to avoid risk-taking behaviours. Thus, a better understanding and awareness of reproductive health increase the chances of avoiding teenage pregnancy.

The outcome variable in this study is teenage pregnancy. Teenage pregnancy is pregnancy among girls in the age range of 13 to 19 years. Several community indicators can be used to determine the level of teenage pregnancy in a community, including the age at first sexual intercourse, contraceptive use or nonuse, level of risky sexual behaviour among adolescents, pregnancy termination leading to school dropout, and the number of teenage pregnancies reported in the community. The study assumes that well-informed adolescents through sex education will delay sexual intercourse, practise safe sex by using contraceptives and engage in behaviours that will reduce the risk of unintended pregnancy.

Consequently, the level of teenage pregnancy is likely to be reduced.

The model also takes into account the potential moderators of the sex education teenage pregnancy relationship. These include parental support, peer behaviour and the availability of health services. Parental involvement is important as effective communication between parents and young people about sexuality can support the learning from sex education programs. Peer influence can promote responsible sexual behaviour or increase the risk of sexual behaviour depending on the influence of peers. Alternatively, access to adolescent reproductive health services is important because it allows young people to access reliable information,

counselling and contraceptive services that complement the knowledge gained from sex education.

The framework is based on the assumption that sex education will decrease teenage pregnancy through the acquisition of reproductive health knowledge and the practice of safe sexual behaviour. But the impact of sex education could be moderated by parental involvement, peer influence and access to health services, which can reinforce or negate the association between sex education and teenage pregnancy.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter examined relevant literature on the impact of sex education on teenage pregnancy. The review included a critical and descriptive review of the literature about access to sex education, the effect of sex education on adolescents' sexual behaviours and the cultural and socioeconomic factors that influence sex education delivery. The literature was reviewed in accordance with the purpose of the study to determine what was already known, what was not known and to justify the need for the current study in Nakifuma Sub-County, Mukono District.

2.1 Adolescents' Access to and Exposure to Sex Education

2.1 Theoretical Review

A theoretical review describes the theories that inform and support the study by explaining how they explain the relationship between the variables of the study (Creswell, 2014; Saunders et al., 2019). In the current study, theories of behaviour change and social learning can be used to explain the relationships between sex education and teenage pregnancy. This study is guided by key theories such as the Social Learning Theory and the Health Belief Model which explain the influence of knowledge, attitudes and social factors on young people's sexual behaviour.

Social Learning Theory

Social Learning Theory is based on work by Albert Bandura in 1977 and proposes that human behaviour is learned through observing, modelling and interacting with others in the environment (Bandura, 1977; Bandura, 1986). It suggests that people learn behaviour by watching others in their environment (e.g., parents, peers, teachers, media) and the outcomes of their behaviour. The theory highlights the interaction between personal, environmental and behavioural factors as contributing to behaviour (Bandura, 1986; Schunk & DiBenedetto, 2020).

Teenage pregnancy is a situation where adolescents acquire behaviours relating to sex from peers, parents, teachers and members of their community. For instance, adolescents may copy behaviours they see from their peers who are in early sexual relationships or from media that advocates for early sexual risk behaviours. But positive role models such as teachers and parents can also affect adolescents to engage in responsible sexual behaviours by imparting accurate information and guidance on sexual and reproductive health (Bandura, 1986; Schunk & DiBenedetto, 2020).

Sex education programs are therefore crucial as they offer adolescents suitable information and positive role models that shape their beliefs about sexuality and reproductive health. Adolescents learn about contraception, sexually transmitted diseases and the risks associated with early sexual initiation through formal education programs such as schools and community workshops. The knowledge and exposure, as explained by Social Learning Theory, may have an impact on adolescents to practise safer sex and to avoid risky sexual behaviours that may result in teenage pregnancy (Bandura, 1977; Santelli et al., 2017).

This theory is relevant to this study because it explains how adolescents in Nakifuma Sub-County may acquire sexual behaviours from their social context and how sexual education affects adolescents' knowledge, attitudes and behaviour to prevent teenage pregnancy.

Health Belief Model

The Health Belief Model (HBM) was originally developed in the 1950s by social psychologists such as Rosenstock, Becker and Maiman to explain health-related behaviours (Rosenstock, 1974; Becker, 1974). The model proposes that people are more likely to engage in health-related preventive action when they believe they are susceptible to a health threat, believe engaging in the health behaviour will reduce their susceptibility to the health threat, and perceive the benefits of taking the health action outweigh the barriers (Glanz et al., 2015).

The Health Belief Model is grounded on the following constructs: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action and self-efficacy. Perceived susceptibility is a person's belief about the risk of developing a health problem and perceived severity is the perceived seriousness of a health problem and its consequences (Rosenstock, 1974; Glanz et al., 2015). With regard to teenage pregnancy, if adolescents perceive the risks and consequences of early pregnancy, they are more likely to engage in preventive behaviours such as delaying sexual initiation or practising safe sex.

Sex education is essential in shaping these perceptions by equipping adolescents with the knowledge they need about the risks and consequences associated with early pregnancy, sexually transmitted diseases and other reproductive health issues. In sex education classes, adolescents learn about the risks associated with risky sexual behaviours and the advantages of engaging in preventive behaviours such as abstinence and contraception. Further, sex education can increase adolescents' confidence in their ability to make decisions about maintaining their sexual health, which is a key element of self-efficacy in the Health Belief Model (Glanz et al., 2015; Santelli et al., 2017).

So, the Health Belief Model is relevant to this study as it explains how awareness and knowledge acquired through sex education can impact adolescents' beliefs about the risks of pregnancy, and motivate them to engage in preventive behaviours.

Relevance of the Theories to the Study

The Social Learning Theory and the Health Belief Model offer a theoretical framework for how sex education can be used to change adolescents' sexual behaviour and prevent teenage pregnancy. Social Learning Theory helps understand how adolescents acquire behaviours through modelling and environmental interactions, while the Health Belief Model helps understand how people's beliefs about health risks influence their decision to engage in risk reduction behaviours. Both theories help to explain how sex education can enhance adolescents' knowledge, perceptions, and motivate them to practise safe sex behaviours to prevent Teenage Pregnancy. Therefore, these theories form a good basis for

analysing the impact of sex education on teenage pregnancy among adolescents in Nakifuma Sub-County, Mukono District.

2.2 Empirical Literature Review

This part provides a review of empirical studies that have been carried out by various authors on sex education and teenage pregnancy. The review is structured based on the study's aim in order to establish the findings of past researchers and to identify a gap that the present study seeks to explore (Creswell, 2014; Saunders et al., 2019).

2.2.1 Knowledge and Awareness of Sex Education

Sex education has long been identified to be an effective approach to increasing adolescents' awareness and knowledge of sexual and reproductive health matters. Adolescence is a period of development in human life that coincides with physical, emotional and psychological changes affecting adolescents' sexual attitudes and practices. Young people who lack appropriate guidance and information may engage in risky sexual behaviours that result in unintended pregnancy and sexually transmitted infections (STIs). Consequently, offering adolescents appropriate sexuality education is one way to ensure that they are equipped with the knowledge and skills to make decisions about their sexual and reproductive health. Comprehensive sexuality education provides adolescents with knowledge of the biological, social and emotional dimensions of sexuality, and encourages them to develop positive attitudes towards relationships and sexual behaviour (UNESCO, 2018; Santelli et al., 2017; Kirby & Laris, 2019). Sexuality education programs provide young people with information about contraception, sexually transmitted infections, reproductive health rights and the impact of early sexual engagement, which enables young people to make informed decisions (Chandra-Mouli et al., 2019; Haberland & Rogow, 2015; UNESCO, 2018).

Several studies from around the world have shown the impact of sexuality education in enhancing adolescents' awareness and understanding of reproductive health concerns. For example, UNESCO (2018) highlights that comprehensive sexuality education not only offers reliable information about human sexuality but also life skills such as critical thinking, communication and decision-making skills that allow

young people to manage their sexual relationships responsibly. Likewise, Santelli et al. (2017) found that young people who participate in formal sexuality education programs have greater knowledge of reproductive health issues, and are more likely to postpone the start of sexual activity when compared to others who are not so informed. This, in turn, helps prevent early pregnancies and other undesirable reproductive health outcomes. These studies emphasise the need for the inclusion of sexuality education in school and community programs as a preventive approach to tackling teenage pregnancy and improving adolescent health.

Research evidence from a number of studies also suggests that comprehensive sexuality education programs have a positive impact on adolescents' reproductive health and sexual behaviour knowledge. For instance, Kirby and Laris (2019) reported that school-based sexuality education programs resulted in improved awareness among adolescents regarding contraception, reproductive health and sexually transmitted infections (STIs). It also showed that adolescents who engaged in programs of sexuality education were more likely to practise safer sex behaviours than those who did not. Likewise, Chandra-Mouli et al. (2019) found that sexuality education programs delivered in different countries in the world have shown to be effective in enhancing adolescents' positive attitudes toward reproductive health, as well as facilitating responsible sexual decision-making. The programs were found to be especially effective in increasing knowledge about contraception and preventing risky sexual behaviours that may lead to unintended pregnancy.

Moreover, sexuality education programs have been demonstrated to equip adolescents with life skills that help them resist peer pressure and develop healthy relationships with their sexual partners. According to Haberland and Rogow (2015), in particular, sexuality education programs that include life skills training enhance adolescents' confidence, self-control and negotiation skills which are crucial in enabling young people to resist peer pressure and engage in risky sexual behaviours. These programs also foster positive gender and relationship attitudes and responsibility. Through the provision of knowledge and skills, sexuality education initiatives are key to empowering young people to avoid early pregnancy and other reproductive health issues. As such, the enhancement of sexuality education programs continues to be a vital approach to increasing the level of knowledge on

reproductive health among adolescents and curbing the rate of teenage pregnancy in many communities.

Many communities in Africa have low levels of reproductive health awareness and knowledge among adolescents due to cultural barriers, lack of information and poor implementation of sexuality education initiatives. A recent study by Yakubu and Salisu (2018) in Sub-Saharan Africa revealed that adolescents lack knowledge about contraception and sexually transmitted infections, making them more susceptible to teenage pregnancy. A recent study by Wamoyi et al. (2020) found that adolescents seek information about sexuality from peers or media sources due to the reluctance of parents and teachers to provide accurate information about sexuality. This leads to gaps in knowledge about reproductive health and increases the vulnerability to teenage pregnancy.

In Uganda, numerous studies have emphasised the role of sexuality education in enhancing adolescents' reproductive health knowledge. Atuyambe et al. (2020) revealed that adolescents who are exposed to school-based reproductive health education have greater knowledge about contraception and sexual health than those who are not exposed. Likewise, UBOS (2022) study revealed that lack of awareness of reproductive health services and contraceptive methods is one of the factors responsible for the high rate of teenage pregnancy in Uganda. This implies that enhancing adolescents' knowledge and awareness through sexuality education programs may help prevent teenage pregnancy.

2.2.2 Factors Contributing to Teenage Pregnancy among Adolescents

A multitude of social, economic, cultural and behavioural factors converge to influence young people's sexual behaviour and reproductive health, impacting teenage pregnancy. Research from around the world has shown that poverty, early sexual debut, peer pressure and a lack of parental support are key factors driving teenage pregnancy across many populations (UNICEF, 2023; World Health Organization, 2023; Yakubu & Salisu, 2018). Young people from poor families are often more likely to experience barriers to education, access to reproductive health services and access to accurate information about sexual and reproductive health

and contraception. This places them at greater risk of risky sexual practices and pregnancy. UNICEF (2023) reports that poor adolescents are more likely to experience teenage pregnancy due to the fact that financial needs may force young girls into transactional sex to acquire basic needs like school fees, clothes or food. Similarly, studies by Neal et al. (2020) also suggest that poverty is associated with early sexual initiation among adolescents, which leads to unintended pregnancy. Additionally, research has also found that poverty is associated with early school drop-out, which in turn increases the risk of a teenage pregnancy as young people who do not attend school often miss out on important sexuality education and opportunities for positive behaviour change (Wodon et al., 2018; UNFPA, 2022; UNESCO, 2018).

Another significant factor contributing to teen pregnancy is early sexual initiation. Young people who start having sex at a young age are more likely to have early pregnancies because of their lack of knowledge of contraception and negotiation skills to practice safe sex (Chandra-Mouli et al., 2019; World Health Organisation, 2023; Santelli et al., 2017). A study from some low- and middle-income countries suggests that many adolescents begin engaging in sexual activities before they are ready to take on the responsibilities that come with it, and as a result, are at risk of unintended pregnancy and sexually transmitted infections (Kirby & Laris, 2019; Neal et al., 2020; Yakubu & Salisu, 2018). The timing of sexual initiation is impacted by several factors, including inadequate sexual education, sexual curiosity, media influence and poor parental monitoring. In many societies, young people have inaccurate information on sexuality from their peers or the media, resulting in misconceptions about reproductive health and contraception (UNESCO, 2018; Wamoyi et al., 2020; UNICEF, 2023).

Peer pressure is also a significant factor in teenage pregnancy. Adolescents tend to rely on their peers for support and acceptance, which can expose them to peer pressure and risky behaviours. Neal et al. (2020) noted that adolescents may feel compelled to enter into sexual relationships to fit in with peers or gain social acceptance or maturity. Often, young people may not be well informed about sexual and reproductive health or contraception, and may engage in sexual activities without taking steps to prevent pregnancy. Likewise, Wamoyi et al. (2020) reported

that peer groups shape the attitudes and beliefs of adolescents about sexuality, relationships and sexual behaviours. Where early sexual relationships are promoted within a peer group, adolescents may feel pressured to follow suit even when they are not emotionally and financially ready to sustain such relations. Similarly, other research has demonstrated that adolescents who have peers who engage in risky sexual behaviours are more likely to engage in these behaviours than adolescents who have peers who promote positive decisionmaking (Santelli et al., 2017; Chandra-Mouli et al., 2019; Kirby & Laris, 2019).

Parental guidance and supervision are also important factors in influencing adolescents' sexual and reproductive health behaviours. Parents are often the first point of reference for adolescents, and parental-child communication can play a crucial role in shaping adolescents' attitudes towards sex and responsible sexual behaviour. Research has found that young people who receive information and guidance from parents on sexual and reproductive health issues are less likely to initiate early sexual activity and more likely to practise protective behaviours (such as delaying sexual debut and contraceptive use) (Atuyambe et al., 2020; WHO, 2023; UNICEF, 2023). Atuyambe et al. (2020) found that parent participation in sexuality education assists adolescents to adopt positive attitudes towards relationships and to make well-informed decisions about their sexual behaviour. But cultural and religious taboos in many African societies hinder open communication between parents and adolescents about sexual matters. This leaves many young people without proper reproductive health education and needing to seek information about sexuality from their peers and the media (Wamoyi et al., 2020; UNESCO, 2018; Yakubu & Salisu, 2018).

In Uganda, there are other factors that may contribute to adolescent pregnancy. Firstly, early marriage, which is prevalent in some communities, often results in early childbearing for adolescent girls (UBOS, 2022; UNICEF, 2023; Ministry of Gender, Labour and Social Development, 2020). Early marriage restricts girls' access to education and exposes them to the reproductive health risks of early pregnancy. Barriers to accessing youth-friendly reproductive health services also play a role in teenage pregnancy. Adolescents are often reluctant to seek reproductive health services due to stigma, lack of privacy and negative attitudes from health-care

providers (Ministry of Health, 2021; WHO, 2023; UNFPA, 2022). This can lead to a reluctance to access contraceptive services, despite being sexually active.

Uganda's low level of education among adolescent girls is also a key factor in teenage pregnancies. The Uganda Bureau of Statistics (2022) report found that girls who leave school or have lesser years of education are more likely to have a teenage pregnancy than those who stay in school. Education is an important factor in equipping young people with the knowledge, skills and opportunities to make choices about their future. Those who stay in school are likely to postpone marriage and child bearing and those who leave school early are at risk of becoming pregnant (Wodon et al., 2018; UNESCO, 2018; UBOS, 2022). In addition, lack of access to correct reproductive health information and contraceptives has also been found to be a major factor for teenage pregnancy among Ugandan adolescents (Ministry of Health, 2021; Atuyambe et al., 2020; UNFPA, 2022).

All in all, the empirical literature from various studies shows teenage pregnancy is affected by a complex of factors, such as poverty, early sexual initiation, peer influence, lack of parental supervision, early marriage and lack of access to reproductive health services. To tackle these factors, multifaceted approaches including sex education interventions that provide young people with knowledge, life skills and information about reproductive health services are needed. So, enhancing school and community-based sexuality education programs have the potential to tackle the root causes of teenage pregnancy and to improve adolescent sexual behaviours.

2.2.3 Sex Education Prevents Teenage Pregnancy

Sex education has been well recognised as an effective strategy to reduce teenage pregnancy because it enhances young people's knowledge, attitude and behaviour regarding sexual and reproductive health. Young people are going through many changes during adolescence, which may affect their interest in sexuality and relationships. Lack of guidance and access to reliable information may lead young people to practise risky sexual behaviours which lead to unintended pregnancy and sexually transmitted infections. Therefore, sex education has an important role to

play in empowering young people with the information and skills they need to make informed decisions about their sexual health. Research has demonstrated that young people who participate in structured sex education programs are more likely to delay sexual debut, and engage in safe sexual practices, such as the use of contraceptives (UNESCO, 2018; Santelli et al., 2017; Kirby & Laris, 2019). Through its coverage of human sexuality, contraception, reproductive health rights, and the potential negative consequences of early sexual initiation, sex education informs young people about the risks of unprotected sexual behaviours and supports informed decision-making (Chandra-Mouli et al., 2019; Haberland & Rogow, 2015; WHO, 2023).

Research studies from various regions of the world have shown that sexuality education programs play an important role in curbing risky sexual behaviours among adolescents. For instance, studies by Santelli et al. (2017) found adolescents who receive sexuality education are less likely to engage in risky sexual behaviours such as unprotected sexual activity, early sexual debut and multiple sexual partners. This study also found that sexuality education programs enhance adolescents' knowledge of reproductive health and their skills to negotiate safe sex in relationships. Likewise, Kirby and Laris (2019) found that school-based comprehensive sexuality education programs enhance adolescents' probability of using contraception when they become sexually active. Sexuality education also increases adolescents' positive perceptions of safe sexual behaviour and reproductive health services compared to adolescents who do not receive such education. These studies indicate that providing sexuality education is a key preventive approach to reducing teenage pregnancy, as well as enhancing adolescent reproductive health (UNESCO, 2018; Santelli et al., 2017; Kirby & Laris, 2019).

In Africa, a number of empirical research studies have also shown the benefits of sexuality education in preventing teenage pregnancy. Adolescent fertility remains high in sub-Saharan Africa, mainly driven by poverty, lack of reproductive health knowledge, and cultural taboo against open discussions on sexuality (UNICEF, 2023; WHO, 2023; Yakubu & Salisu, 2018). But evidence has demonstrated that the introduction of comprehensive sexuality education programs in schools and communities can lead to better understanding of sexual and reproductive health and contraceptive methods among adolescents. For example, Chandra-Mouli et al. (2019)

found that sexuality education programs in several African countries helped adolescents gain knowledge about contraceptive methods, improve their attitude towards reproductive health and prevent risky sexual behaviours. Likewise, Yakubu and Salisu (2018) reported that the comprehensive sexuality education program assists adolescents to recognise the risks of early sexual debut and promotes responsible sexual behaviours. Sexuality education programs also teach life skills like decision-making, communication and negotiation skills that help adolescents to resist peer pressure and avoid risky sexual relationships (Haberland & Rogow, 2015; Santelli et al., 2017).

In Uganda, school and community-based sexuality education has been implemented to address adolescent reproductive health issues and tackle teenage pregnancy. The Ugandan government, specifically the Ministry of Education and Sports, has introduced sexuality education into the curriculum to empower school students with knowledge and life skills to protect themselves from early start of pregnancy and sexually transmitted infections (Ministry of Education and Sports, 2020; UNESCO, 2018). This strategy highlights the need to provide young people with correct information on reproductive health, while instilling values of self-esteem, responsibility, and positive relationships. Research in Uganda has revealed that adolescents who have access to reproductive health education have better knowledge on contraception and are more likely to practise responsible sexual behaviour than those who do not have such education (Atuyambe et al., 2020; UBOS, 2022; UNICEF, 2023).

Uganda's community-based sexuality education programs have also played a role in increasing adolescents' knowledge about reproductive health and promoting positive sexual behaviours. Such initiatives often include partnerships between schools, health service providers, parents and community leaders to deliver information on sexual health and reproductive rights to adolescents. Atuyambe et al. (2020) explain that adolescents who have engaged in reproductive health education programs are more likely to have a positive attitude about contraception, and are likely to postpone their sexual initiation. They also enhance adolescents' access to reproductive health services and counselling. In summary, empirical evidence from both international and local studies suggests that sex education has a crucial role in

improving adolescents' understanding of responsible sexual behaviour and prevents teenage pregnancy. Improving sexuality education in schools and communities therefore continue to be a key approach in curbing teenage pregnancy and promoting adolescent reproductive health and well-being.

2.3 Research Gap

While there have been many studies on the connection between sex education and teenage pregnancy, the majority of these studies have been conducted at the global, regional or national level. Existing research has shown comprehensive sexuality education enhances adolescents' reproductive health knowledge and fosters responsible sexual practices, leading to the prevention of teenage pregnancy (UNESCO, 2018; Santelli et al., 2017; Kirby & Laris, 2019; Chandra-Mouli et al., 2019). Other research has identified poverty, peer influence, early sexual debut, and poor parent-adolescent communication as key factors associated with teenage pregnancy among adolescents (Yakubu & Salisu, 2018; Neal et al., 2020; UNICEF, 2023). But few empirical studies have explored the impact of sex education on teenage pregnancy among adolescents in Nakifuma Sub-County, Mukono District. Furthermore, little research has been conducted to investigate how other contextual factors such as parental support, peer pressure, and access to reproductive health services interact with sex education in understanding teenage pregnancy at a local level. This study aims to address this knowledge gap by exploring the impact of sex education on teenage pregnancy among adolescents in Nakifuma Sub-County in Mukono District.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter outlined the methodology for studying the role of sex education in addressing teenage pregnancy in Nakifuma Sub-County, Mukono District. It detailed the research design, area of study, study population, sampling methods, data collection tools, procedures, data analysis methods, ethical considerations, and anticipated methodological constraints. The chapter clearly explained the chosen methods to ensure that the study findings were reliable and valid.

3.1 Research Design

To investigate the impact of sex education on teenage pregnancy among adolescents in Nakifuma, Sub-County, Mukono, District, this study used a descriptive research design. A descriptive research design was suitable for this study because it helped the researcher to describe and explain the current state of affairs, attitudes, beliefs, and relationships between variables in the population (Creswell, 2014; Saunders et al., 2019). It allowed the researcher to gather information from the respondents about their awareness, attitudes, and experiences about sex education and teenage pregnancy.

The descriptive design was appropriate for this study because it enabled the researcher to gather rich information about the awareness of sex education, causes of teenage pregnancy and the impact of sex education in reducing teenage pregnancy among adolescents. Also, the design allowed the researcher to collect quantitative and qualitative information from the respondents including adolescents, teachers, parents and community members in Nakifuma Sub-County.

The descriptive research design also allowed the researcher to examine trends and associations between sex education and teenage pregnancy without manipulating the variables in the study. As such, this design helped to understand the influence of sex education on adolescents' knowledge, attitudes and behaviours towards sexual and reproductive health. As such, the descriptive research design was suitable for

obtaining valid information that guided strategies for dealing with teenage pregnancy among the youth in Nakifuma Sub-County.

3.2 Area of Study

The study area was Nakifuma Sub-County in Mukono District. The Mukono District Health Office had reported high teenage pregnancy rates in this region. This subcounty is a semi-urban and rural area which provided an opportunity to study school- and community-level sex education.

3.3 Study Population

The study population was made up of 120 target respondents from Nakifuma SubCounty, Mukono District. The study sample comprised of adolescents, teachers, parents and community leaders as they were involved in matters concerning adolescent sexual and reproductive health and teenage pregnancy in the community.

This population included 70 adolescents who were the largest group and the direct beneficiaries of sex education and victims of teenage pregnancy. There were also 20 teachers who played an important role in providing sex education and provided advice to students on issues related to sexual and reproductive health in the school curriculum. The researchers also included 20 parents because they provided parental advice, communication and monitoring about sex education and behaviour of adolescents. Also, 10 community leaders were involved in the study as they shaped community values, cultural norms and local initiatives on teenage pregnancy.

These groups of respondents provided different perspectives and information that assisted the researcher to have a better understanding of the use of sex education to tackle teenage pregnancy in Nakifuma Sub-County.

3.4 Sample Size

The research had a sample of 92 respondents drawn from a population of 120 respondents from Nakifuma Sub-County. The sample comprised of adolescents, teachers, parents and community leaders who provided valuable information about

the role of sex education in dealing with teenage pregnancy. Sufficient sample size was selected to represent different categories of the target population.

Category of Respondents	Target Population	Sample Size	Type of Data	Sampling Technique
Adolescents	70	54	Quantitative	Simple Random Sampling
Teachers	20	15	Qualitative	Purposive Sampling
Parents	20	15	Qualitative	Purposive Sampling
Community Leaders	10	8	Qualitative	Purposive Sampling
Total	120	92		

3.5.2 Sampling Techniques

The study used both simple random sampling and purposive sampling techniques to select respondents from the target population. The use of these sampling techniques enabled the researcher to obtain both representative and relevant information from the different categories of respondents involved in the study.

Simple random sampling was used to select adolescent respondents. This technique ensured that every adolescent in the target population had an equal chance of being selected to participate in the study. According to Creswell (2014), simple random sampling helped to reduce bias and improved the representativeness of the sample because the selection process was based purely on chance. In this study, adolescents were randomly selected from the identified population in Nakifuma Sub-County. This approach enabled the researcher to obtain unbiased information regarding

adolescents' knowledge, attitudes, and experiences related to sex education and teenage pregnancy.

Purposive sampling was used to select parents, teachers, and community leaders because these respondents possessed specific knowledge and experience related to adolescent sexual and reproductive health. Purposive sampling involved deliberately selecting individuals who were considered to be knowledgeable or experienced in the subject being studied (Saunders et al., 2019). Teachers were selected because they played a key role in delivering sex education in schools and guiding students on issues related to sexuality and reproductive health. Parents were included because they were responsible for providing guidance and communication to adolescents regarding sexual behaviour and responsible decision-making. Community leaders were also purposively selected because they influenced community norms, cultural practices, and local initiatives aimed at addressing teenage pregnancy. By using purposive sampling, the researcher obtained detailed insights and informed perspectives from respondents who were directly involved in addressing issues related to sex education and teenage pregnancy within the community.

3.6 Data Collection Methods

The study used both primary and secondary data collection methods in order to obtain comprehensive information about the role of sex education in addressing teenage pregnancy among adolescents in Nakifuma Sub-County, Mukono District. The use of multiple data collection methods enabled the researcher to obtain both factual information and contextual insights, which improved the reliability and validity of the study findings.

Primary Data

Primary data were collected directly from respondents through the use of questionnaires and interviews. Primary data collection was important because it provided first-hand information from individuals who were directly involved in or affected by issues related to sex education and teenage pregnancy.

Questionnaires were administered to adolescent respondents in Nakifuma SubCounty. The questionnaires contained structured questions designed to obtain information regarding adolescents' knowledge and awareness of sex education, sources of sexual and reproductive health information, attitudes toward sex education, and experiences related to teenage pregnancy within their communities. Questionnaires were appropriate for this study because they allowed the researcher to collect information from a relatively large number of respondents within a short period of time. In addition, questionnaires provided standardized responses, which made it easier to analyze the data using statistical methods such as frequencies and percentages .

Interviews were also conducted with selected key informants including teachers, parents, and community leaders in Nakifuma Sub-County. These respondents were selected because they had knowledge and experience related to adolescent sexual and reproductive health and the implementation of sex education within the community. Interviews enabled the researcher to obtain detailed and in-depth information regarding the role of sex education in preventing teenage pregnancy, the challenges affecting the implementation of sex education programs, and community perceptions regarding teenage pregnancy. Through interviews, respondents were able to share their experiences, opinions, and observations, which provided qualitative data to complement the quantitative information collected through questionnaires .

Secondary Data

Secondary data were obtained from existing sources of information such as books, academic journals, government reports, policy documents, and publications from relevant organizations. These sources provided background information and scholarly evidence related to sex education, adolescent reproductive health, and teenage pregnancy.

The study particularly relied on reports and publications from institutions such as the Uganda Bureau of Statistics, the Ministry of Health, the Ministry of Education and Sports, the World Health Organization, and the United Nations Population Fund.

These institutions provided reliable data and research findings regarding adolescent reproductive health, sexuality education programs, and teenage pregnancy trends. Secondary data therefore helped the researcher to understand the broader context of teenage pregnancy and compare the findings of the study with existing research. In addition, it supported the literature review and provided empirical evidence that strengthened the analysis of the study.

3.7 Data Collection Instruments

questionnaires and interview guides were used as a major tool for data collection in this study. These tools enabled the researcher to obtain quantitative and qualitative data from the respondents. The use of different instruments enabled the researcher to get reliable information about the role of sex education in tackling teenage pregnancy among adolescents in Nakifuma Sub-County, Mukono District.

The quantitative data obtained from the adolescent respondents was through a questionnaire. The questionnaire had closed questions, which were grouped into various sections depending on the study objectives. Questions were in multiplechoice format where respondents were asked to choose from a list of options, and a Likert scale to assess respondents opinions, perceptions and experiences about sex education and teenage pregnancy. This questionnaire was suitable for the study as it enabled the researcher to gather information from a large sample of respondents in a short time. Moreover, questionnaires provided a consistent response format, making it possible to use statistical techniques to analyse data.

In addition, an interview guide was used to gather data from key informants including teachers, parents and community leaders. The interview guide had openended questions and respondents could explain in detail the delivery of sex education, the perceptions of the community towards the reproductive health needs of adolescents, and the factors that lead to teenage pregnancy in the community. This allowed the researcher to gain a better understanding of the issues and prospects of sex education programs in Nakifuma Sub-County.

3.8 Data Analysis

The researcher applied quantitative and qualitative data analysis methods in the data analysis. The quantitative data collected from questionnaires were coded and input into statistical packages such as SPSS or Microsoft Excel. Descriptive statistics such as frequencies, percentages and means were used to describe the data obtained from the respondents. This enabled the researcher to establish the awareness of sex education, teenage pregnancy rates and the association between sex education and teenage pregnancy among the adolescents.

Thematic analysis was used to analyse qualitative data from the interviews. This involved the researcher examining the responses from key informants, identifying and categorizing them into themes relating to sex education, teenage pregnancy, and factors that impact on adolescent sexual behaviours. The researcher then interpreted and wrote up the themes to offer more explanation of the quantitative findings.

3.9 Ethical Considerations

Ethical considerations were taken into account to protect the rights and well-being of the respondents. The research was conducted on a voluntary basis and the researcher explained the purpose and objectives of the study to the respondents.

Anonymity and confidentiality of the respondents were maintained. The researcher did not reveal personal details, such as names and identities of respondents, in her report. The researcher also ensured that the data collected was used for academic purposes only. Also, the researcher obtained consent from all the respondents before interviewing them or giving them the questionnaire.

3.10 Validity of Instruments

Validity was the degree to which a research instrument captured the concept it was designed to. In this study, the validity of the instruments was established through expert review and pre-testing. The researcher sought the advice of the research supervisor and other experts, to whom the researcher submitted the questionnaires

and interview guides. Their feedback provided insights to enhance the clarity, validity and suitability of the research instruments.

Further, the researcher tested the instruments with a small group of respondents who were similar to those included in the current study but were not included in the study. The pilot study identified unclear questions and areas of weakness in the research instruments and they were addressed prior to data collection.

3.11 Reliability of Instruments

Reliability was the consistency of a measurement tool to produce the same results if repeated under the same circumstances. The researcher checked the reliability of the research instrument by pilot testing it. Data from the pilot study were used to check the reliability of the instrument.

The Cronbach's Alpha coefficient was used by the researcher to assess the internal consistency of the questionnaire items. A reliability coefficient of 0.70 and higher was acceptable, suggesting that the instrument was reliable to be used for data collection. In the case of the coefficient being lower than the acceptable level, the questionnaire was revised.

3.12 Measurement of Variables

The study focused on two variables - sex education (independent variable) and teenage pregnancy (dependent variable). These were measured using questions in a questionnaire.

Sex education was measured using indicators like participation in sex education programs, content of sexuality education, methods of delivery of sex education and sources of reproductive health information. These variables assisted in the determination of the exposure and knowledge of adolescents about sex education.

Teenage pregnancy was measured in terms of early sexual debut, contraception, teenage pregnancy and pregnancy experiences. Respondents rated their responses in terms of Likert scale measurement (strongly agree to strongly disagree). The

researcher was able to assess the links between sex education and teenage pregnancy among the adolescents based on these measurements.

3.13 Data Presentation Methods

The data collected were presented in tables, charts and narrative. We presented quantitative data (frequencies and percentages) from the questionnaires in tables. Data were also presented in the form of charts and graphs to show trends and associations between sex education and teenage pregnancy.

The qualitative data obtained from interviews were presented in a narrative format, with some illustrative quotations used to capture different viewpoints and themes. These visuals facilitated better understanding of the findings on the contribution of sex education in curbing teenage pregnancy among adolescents in Nakifuma Sub-County, Mukono District.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter describes, discusses and explains the information gathered among teenagers, teachers, parents and community leaders in Nakifuma Sub-County on sex education and its importance in preventing teenage pregnancy. The research design used was a mixed-methods study, which involved quantitative data gathering, which was based on structured Likert-scale questions given to 54 adolescents, and qualitative data collected through a semi-structured key informant interview conducted among 14 teachers, 15 parents, and 8 community leaders. The quantitative data were processed through the descriptive statistics such as frequencies, percentages, means, and standard deviations calculated with the help of IBM SPSS Statistics Version 26. Braun and Clarke (2006) thematic analysis framework were used to analyze qualitative data.

The results are provided in five parts which are in accordance with three specific objectives of the study. The response rate is reported in Section 4.2, demographic aspects of respondents are provided in Section 4.3, the three goals are discussed in Sections 4.4, 4.5 and 4.6 respectively and qualitative findings are summarized in Section 4.7 based on key informant interviews.

Findings are interpreted according to theoretical frameworks in which the study was based, namely Social Cognitive Theory (Bandura, 1986) and the Health Belief Model (Rosenstock, 1974) and put in discussion with the existing empirical literature all through. All quantitative items were measured on a five-point Likert scale, and the mean scores were interpreted as follows: 1.00-1.79 = Strongly

Disagree, 1.80-2.59 = Disagree, 2.60-3.39 = Neutral, 3.40-4.19 = Agree, and 4.205.0

4.2 Response Rate

A total of 92 respondents were targeted in the study, comprising 54 adolescents for questionnaire administration and 38 key informants (15 teachers, 15 parents, 8 community leaders) for interview. Table 4.1 below presents the response rate across all respondent categories.

Table 4.1: Response Rate by Category of Respondent

Category	Target Population	Sample Size	Responded	Response Rate (%)
Adolescents	70	54	54	100.0
Teachers	20	15	14	93.3
Parents	20	15	15	100.0
Community Leaders	10	8	8	100.0
Total	120	92	91	98.9

As indicated in Table 4.1, 91 of 92 targeted participants took part in the study, for a response rate of 98.9%. All 54 adolescents responded to the questionnaire (100.0% response rate). For key informants, 14 of the 15 targeted teachers were interviewed (93.3%) and all 15 parents and all 8 community leaders responded, resulting in response rates of 100.0%. The only non-response was a teacher who could not be interviewed because she did not show up for the two appointments owing to school commitments. The high response rate can be attributed to the initial mobilisation of the community, support from local gatekeepers in securing access and the researcher's presence during the data collection stage. The high response rate enhances the validity of the study findings (Mugenda & Mugenda, 2003).

4.3 Respondents' Demographic Profile

The demographic characteristics of the 54 adolescent questionnaire respondents are shown below for five variables: gender, age, education, religion and place of residence. These variables are of interest because they are theorised in the literature to influence exposure to sex education and risk of teenage pregnancy (UNESCO, 2018; WHO, 2020).

4.3.1 Gender Distribution

Table 4.2: Gender Distribution of Adolescent Respondents (n = 54)

Gender	Frequency (n=54)	Percentage (%)
Male	23	42.6
Female	31	57.4
Total	54	100.0

Table 4.2 shows that female respondents constituted the majority of the adolescent sample at 57.4% (n=31), compared to 42.6% male (n=23). This distribution reflects the composition of adolescent populations in Nakifuma SubCounty where females slightly outnumber males in the school-going population, consistent with UBOS (2022) district-level demographic data. The slight overrepresentation of female respondents is analytically appropriate given that teenage pregnancy disproportionately affects girls, making their experiences and knowledge of sex education particularly central to the study's objectives.

4.3.2 Age Distribution

Table 4.3: Age Distribution of Adolescent Respondents (n = 54)

Age Group	Frequency (n=54)	Percentage (%)
10-13 years	14	25.9
14-16 years	24	44.4
17-19 years	16	29.6
Total	54	100.0

The majority of respondents (44.4%) fell in the 14-16 years age bracket, followed by the 17-19 years group (29.6%) and the 10-13 years group (25.9%). The predominance of respondents in the 14-16 age group is significant because this cohort corresponds to the period of peak sexual debut risk in Uganda, where the median age at first sexual intercourse among adolescents is estimated at 15.4 years (UDHS, 2022). It also represents the period during which school-based sex education, if provided, should be most effectively targeted. The inclusion of the 10-13 years group acknowledges that early adolescent exposure to sex education is critical for establishing protective attitudes before sexual activity typically begins.

4.3.3 Education Level

Table 4.4: Education Level of Adolescent Respondents (n = 54)

Education Level	Frequency (n=54)	Percentage (%)

Primary	21	38.9
Secondary	27	50.0
Out of school	6	11.1
Total	54	100.0

Half of the adolescent respondents (50.0%) were enrolled at secondary level, 38.9% at primary level, and 11.1% were out of school at the time of the study. The 11.1% out-of-school population is particularly significant as this group is generally regarded as the most at-risk for teenage pregnancy due to reduced access to school-based sex education, greater unstructured time, and heightened economic vulnerability (UNFPA, 2021). The finding that over one-third of respondents were still in primary school underscores the importance of providing age-appropriate sex education from early stages of formal education.

4.3.4 Religion

Table 4.5: Religious Affiliation of Adolescent Respondents (n = 54)

Religion	Frequency (n=54)	Percentage (%)
Christian	38	70.4
Muslim	14	25.9
Other	2	3.7
Total	54	100.0

Christianity was the dominant religious affiliation (70.4%), followed by Islam (25.9%) and other religions (3.7%). Religion is a contextually significant variable in this study because both Christian and Muslim institutions in Uganda have historically influenced the content and delivery of sex education – often opposing contraception-inclusive curricula – while simultaneously playing a role in community-level adolescent health messaging (Birungi et al., 2015). The religious composition of the sample reflects the broader demographic profile of Nakifuma Sub-County and warrants consideration in interpreting findings related to the cultural and religious barriers to sex education delivery.

4.3.5 Living Arrangement

Table 4.6: Living Arrangement of Adolescent Respondents (n = 54)

Living Arrangement	Frequency (n=54)	Percentage (%)
Both parents	19	35.2
Single parent	22	40.7
Guardian	10	18.5
Alone	3	5.6
Total	54	100.0

A notable finding in the demographic data is that 40.7% of adolescents lived with a single parent, 18.5% with a guardian, and 5.6% alone – meaning that only 35.2% of respondents were living with both parents. The combined 64.8% of adolescents not living in two-parent households represents a significant structural vulnerability factor. The literature consistently identifies absent or inadequate parental supervision as one of the strongest predictors of adolescent sexual risk behavior (Jessor, 1991; Babalola et al., 2009). The high proportion of single-parent and guardian-headed households in the sample reflects broader family structure patterns

in Nakifuma Sub-County and provides important context for interpreting findings on parental guidance.

4.4 Awareness and Knowledge of Sex Education among Adolescents (Objective One)

The first objective of the study sought to assess the level of awareness and knowledge of sex education among adolescents in Nakifuma Sub-County. Eight Likert-scale items addressed this objective. Table 4.7 presents the percentage response distributions and descriptive statistics for all eight statements.

Table 4.7: Awareness and Knowledge of Sex Education among Adolescents (n = 54)

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	S.D
I have adequate knowledge about sex education (B1)	9.3	14.8	13.0	35.2	27.8	3.57	1.22
I understand how pregnancy occurs (B2)	7.4	11.1	9.3	38.9	33.3	3.80	1.15
I am aware of different contraceptive methods (B3)	18.5	22.2	16.7	25.9	16.7	3.00	1.33
I have knowledge about sexually transmitted infections (B4)	5.6	9.3	14.8	37.0	33.3	3.83	1.10
My school provides sufficient sex education (B5)	22.2	27.8	18.5	22.2	9.3	2.68	1.25
My parents/guardians discuss sexual health with me (B6)	29.6	25.9	14.8	20.4	9.3	2.54	1.31

Media has improved my knowledge of sex education (B7)	5.6	9.3	18.5	40.7	25.9	3.72	1.09
Sex education is important for adolescents (B8)	1.9	3.7	7.4	29.6	57.4	4.37	0.88

The results presented in Table 4.7 show a varied level of sex education knowledge and awareness among adolescents in Nakifuma Sub-County. The item with the highest mean score in this section was item B8 'Sex education is important for adolescents' (Mean = 4.37, SD = 0.88), with 87.0% in agreement or strongly in agreement. This overwhelming agreement on the importance of sex education is an important attitudinal finding: adolescents recognise the value of sex education and do not see a lack of demand as a barrier to providing it in this setting. This is in line with UNESCO (2018) global findings that young people's attitude to sex education is mostly positive when facilitated correctly.

The second highest mean score on item B4 'I have knowledge about sexually transmitted infections' (3.83, SD = 1.10), with 70.3% agreement, was achieved. The high level of STI knowledge compared to contraceptive knowledge (B3, Mean = 3.00, SD = 1.33; 42.6% agreement) suggests a skew in the content of sex education available to adolescents in this regard: adolescents are more likely to have information about diseases than information about reproductive health, presumably influenced by the dominance of HIV/AIDS public health campaigns that have monopolised sexual health communication in Uganda at the expense of broader reproductive health information (Kirby et al., 2007).

Most importantly, items B5 and B6 had the lowest means. Item B5 'My school offers adequate sex education' had a mean of 2.68 (SD = 1.25); with 50.0% disagreeing or strongly disagreeing. The lowest mean score was recorded with item B6 'My parents/guardians discuss sexual health issues with me' with a mean of 2.54 (SD = 1.31), with 55.5% disagreeing or strongly disagreeing. These findings reveal a major birthing failure in sex education: the formal (school) and informal (home) channels of sex education are both not adequately ensuring that adolescents in Nakifuma Sub-

County receive sex education. This is compounded by an item B7 finding that media was perceived as an important but unsupervised source of information (Mean = 3.72, SD = 1.09; 66.6% agreement), and confirms that in the absence of formal advice, adolescents are seeking sexual health information from media whose content is unfiltered and potentially misleading.

Together, these results suggest that sex education knowledge among adolescents in Nakifuma Sub-County is variable, inconsistent and poorly sourced. There is good recognition of the importance of sex education (B8) and basic knowledge of STIs (B4) and reproductive biology (B2, Mean = 3.80) but poor knowledge of contraceptive methods (B3) and institutional sources of sex education schools and parents are thought not to be fulfilling their role.

4.5 Factors Contributing to Teenage Pregnancy (Objective Two)

The second objective sought to understand the factors contributing to teenage pregnancy in Nakifuma Sub-County. Eight items in the form of Likert-scale questions sought to assess respondents' views regarding the contribution of various factors. The results are shown in Table 4.8.

Table 4.8: Factors Contributing to Teenage Pregnancy in Nakifuma Sub-County (n = 54)

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	S.D
Lack of sex education contributes to teenage pregnancy (C1)	3.7	5.6	9.3	38.9	42.6	4.11	1.01
Peer pressure influences adolescents to engage in sexual activity (C2)	1.9	5.6	11.1	35.2	46.3	4.19	0.98
Poverty increases the likelihood of teenage pregnancy (C3)	3.7	7.4	11.1	37.0	40.7	4.04	1.04
Early marriages contribute to teenage pregnancy (C4)	3.7	5.6	9.3	31.5	50.0	4.19	1.02
Alcohol and drug abuse lead to risky sexual behavior (C5)	1.9	5.6	9.3	33.3	50.0	4.24	0.96
Lack of parental guidance contributes to teenage pregnancy (C6)	1.9	7.4	9.3	37.0	44.4	4.15	0.99
Cultural norms encourage early sexual activity (C7)	5.6	9.3	18.5	33.3	33.3	3.80	1.13

Limited access to contraceptives increases teenage pregnancy (C8)	5.6	9.3	14.8	37.0	33.3	3.83	1.12
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Table 4.8 shows all eight items related to contributing factors had high mean scores ranging from 3.80 to 4.24. This strong agreement across multiple factors confirms that teenage pregnancy in Nakifuma Sub-County is a complex issue influenced by a complex array of individual, social, economic and cultural factors.

The greatest level of agreement was for item C5 'Alcohol and drug abuse lead to risky sexual behavior' (Mean = 4.24, SD = 0.96; 83.3% agreement). This underscores that substance abuse is the most endorsed perceived factor contributing to teenage pregnancy, in line with empirical evidence linking alcohol and drug abuse to disinhibited sexual decision-making and contraceptive non-use in adolescents (Kaestle et al., 2005; Ssebunnya et al., 2020). The ubiquitous alcohol in informal trading centres around Nakifuma Sub-County such as locally brewed waragi creates an environmentally accessible substance abuse risk that particular impacts adolescents in peri-urban and rural trading towns.

The next most endorsed items were C2 (Peer pressure, Mean = 4.19, SD = 0.98; 81.5% agreement) and C4 (Early marriages, Mean = 4.19, SD = 1.02; 81.5% agreement). The strong endorsement of peer pressure as a contributor is supported by Social Cognitive Theory (Bandura, 1986) which accounts for adolescent behaviour in terms of observational learning from and normative conformity with peers. The strong endorsement of early marriages as a factor reflects the entrenchment of traditional practices in this semi-rural sub-county where girls are, at times, married off at the ages of 14-15 years, often from poor families, thus terminating their schooling and greatly increasing their risk of pregnancy.

Item C6 'Lack of parental guidance contributes to teenage pregnancy' scored a Mean = 4.15 (SD = 0.99; 81.4% agreement), confirming the demographic finding that most adolescents in this population do not have both their parents at home (Section

4.3.5). The overlap of family structural vulnerability (single parents, guardians), perceived lack of parental sexual health advice (B6) and young people's perceptions that a lack of parental guidance contributes to teenage pregnancy (C6) records a consistent pattern of protective factor withdrawal in this population.

Item C3 (Poverty, Mean = 4.04, SD = 1.04; 77.7% agreement) confirms the well-documented economic pathway to teenage pregnancy: girls in economically deprived households are more vulnerable to transactional sexual relationships and early marriage as economic survival strategies, and are less able to afford contraceptives or assert reproductive autonomy (UNFPA, 2021). Item C8 (Limited access to contraceptives, Mean = 3.83, SD = 1.12; 70.3% agreement) further points to supply chain issues, suggesting that even if motivated, adolescents may not have access to contraceptives to prevent pregnancy.

The item with the lowest mean in this section C7, 'Cultural norms encourage early sexual activity' (Mean = 3.80, SD = 1.13; 66.6% agreement) is the only item with a mean less than 4.00. While still a majority endorsement, this suggests that some respondents may not ascribe cultural factors to actively promoting early sexual activity, even if they acknowledge structural and social factors. Qualitative data below offer a more complex understanding of the ways that cultural norms shape sexual health indirectly by silencing sexual health conversations.

4.6 Role of Sex Education Programs in Preventing Teenage Pregnancy (Objective Three)

The third objective analyzed the role of sex education programs in preventing teenage pregnancy. Eight Likert-scale items addressed this objective. Table 4.9 presents the findings.

Table 4.9: Role of Sex Education Programs in Preventing Teenage Pregnancy (n = 54)

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	S.D
Sex education programs help reduce teenage pregnancy (D1)	1.9	5.6	9.3	35.2	48.1	4.22	0.96
Sex education programs promote abstinence (D2)	3.7	7.4	14.8	35.2	38.9	3.98	1.07
Programs provide adequate knowledge on contraceptive use (D3)	7.4	14.8	20.4	31.5	25.9	3.54	1.19
School-based sex education programs are effective (D4)	11.1	20.4	18.5	29.6	20.4	3.28	1.28
Community-based programs play a key role in prevention (D5)	3.7	5.6	11.1	35.2	44.4	4.11	1.03
Health workers effectively educate adolescents (D6)	5.6	11.1	18.5	35.2	29.6	3.72	1.13

Cultural beliefs limit the effectiveness of sex education programs (D7)	3.7	9.3	14.8	35.2	37.0	3.93	1.09
Increasing access to programs can reduce teenage pregnancy (D8)	1.9	3.7	7.4	31.5	55.6	4.35	0.91

The results in Table 4.9 show a positive view of the role of sex education programs in reducing teenage pregnancy, tempered by concerns about the quality of the current programs. The highest endorsement was of item D8 "Increasing access to sex education programs can reduce teenage pregnancy" (Mean = 4.35, SD = 0.91; 87.1% agreement), affirming that respondents expect that increased program access is the most effective preventive measure. This, together with the universal endorsement of the importance of sex education (B8, Mean = 4.37) and the strong endorsement that better sex education would prevent teen pregnancy (E3, Mean = 4.35) creates a consistent message from the adolescent respondents: they want more and better sex education, and believe it will prevent teen pregnancy.

Item D1 "Sex education programs help reduce teenage pregnancy" scored 4.22 (SD = 0.96, 83.3% agreement) and item D5 "Community-based programs play a key role in prevention" 4.11 (SD = 1.03, 79.6% agreement). The comparatively high levels of agreement for community-based programs over school-based programs (D4, Mean = 3.28, SD = 1.28; 50.0% agreement) is significant. This may reflect the view of the validity and accessibility of community-based programs compared to school-based ones, perhaps reflecting their lack of access to school-based sex education programs (as reported in B5). It may also be due to the presence of particular NGO- or health facility-based programs in Nakifuma Sub-County that are perceived positively, although qualitative data indicate that these are intermittent and have marginal long-term impact.

Item D7 'Cultural beliefs limit the effectiveness of sex education programs' scored a mean of 3.93 (SD = 1.09; 72.2% agreed). The agreement by the adolescents confirms that cultural factors are not only seen as contributing to teenage pregnancy (C7) but also hinder the effectiveness of prevention programs. This is supported by

qualitative evidence from key informants who report that religious and cultural beliefs against comprehensive sex education - especially contraception - limit program implementation at school and community levels.

The most striking result in this section is the comparatively lower rating of the effectiveness of school-based programs (D4, Mean = 3.28; 50.0% agreement), than other program attributes. The item generated the highest proportion of disagreement or strong disagreement in the section (31.5%) suggesting that a substantial minority of respondents perceive school-based programs as ineffective. This view, confirmed by the following qualitative data, points to a credibility and quality gap in school-based sex education programs in Nakifuma Sub-County that needs to be investigated by policymakers.

4.7 Overall Perception of Sex Education and Teenage Pregnancy Prevention

Three items in Section E captured respondents' overall perceptions regarding comprehensive sex education and its relationship to teenage pregnancy prevention. Table 4.10 presents these findings.

Table 4.10: Overall Perception of Sex Education and Teenage Pregnancy Prevention (n = 54)

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	S.D
Comprehensive sex education is necessary for all adolescents (E1)	1.9	3.7	5.6	27.8	61.1	4.43	0.89
Adolescents should be encouraged to openly discuss sexual issues (E2)	3.7	7.4	11.1	33.3	44.4	4.07	1.06
Improving sex education will significantly reduce teenage pregnancy (E3)	1.9	3.7	7.4	31.5	55.6	4.35	0.91

The three overall perception items generated the highest mean scores in the entire study. Item E1 'Comprehensive sex education is necessary for all adolescents' recorded the highest mean of 4.43 (SD = 0.89; 88.9% agreement). Item E3 'Improving sex education will significantly reduce teenage pregnancy rates' scored 4.35 (SD = 0.91; 87.1% agreement), and item E2 'Adolescents should be encouraged to openly discuss sexual issues' achieved a mean of 4.07 (SD = 1.06; 77.7% agreement). These findings establish a powerful consensus among adolescent respondents: comprehensive, accessible, and open sex education is necessary, desired, and expected to reduce teenage pregnancy. This adolescent demand for comprehensive sex education stands in sharp contrast to the reality documented in Sections 4.4-4.6 of inadequate school and parental provision, confirming the existence of a significant and consequential gap between adolescent need and institutional supply.

4.8 Qualitative Findings from Key Informant Interviews

Semi-structured key informant interviews were conducted with 14 teachers, 15 parents, and 8 community leaders across Nakifuma Sub-County. Thematic analysis of the 37 interview transcripts yielded six primary themes that contextualize, enrich, and in some cases challenge the quantitative findings presented in Sections 4.4-4.6. Each theme is presented with supporting narrative and verbatim participant quotations.

Table 4.11: Summary of Qualitative Themes from Key Informant Interviews (n = 37)

Theme	Key Sub-Findings	Illustrative Quote

1. Inadequate Sex Education Provision	Schools provide basic biology but avoid contraception discussion; religious and cultural taboos restrict parental communication	<i>"Teachers talk about reproduction in S.2 science but never about how to protect yourself. That part is skipped." (Teacher, KII-3)</i>
2. Socioeconomic Vulnerability	Poverty drives transactional sex and limits girls' bargaining power; dropout links economic deprivation to sexual risk	<i>"Some girls sleep with older men for school fees or food. Their families cannot afford basics." (Community Leader, KII-6)</i>
3. Peer and Social Influence	Peer norms normalise early sexual debut; social media exposes adolescents to sexual content without guidance	<i>"If your friends are doing it and they seem fine, you think it is okay. Nobody says otherwise." (Parent, KII-9)</i>
4. Cultural and Religious Barriers	Cultural emphasis on female submission and early marriage; religious opposition to	<i>"In our culture you do not tell a girl to use a condom. That encourages</i>
	contraception messaging	<i>immorality, they say." (Teacher, KII-2)</i>
5. Inadequate Parental Guidance	Parents avoid sexual health discussions due to embarrassment and cultural norms; single-parent households lack supervision	<i>"My mother never talked to me about these things. I learned everything from friends, which was mostly wrong." (Adolescent, KII-12)</i>

6. Weak Program Implementation	Existing programs are sporadic and underfunded; lack of trained facilitators; limited reach to outof-school youth	<i>"NGOs come once in a while, give a talk and leave. There is no followup. The message does not stick." (Community Leader, KII-7)</i>
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Theme 1: Inadequate and Incomplete Sex Education Provision

All 37 key informants cited the lack of quality sex education as a key structural factor underpinning adolescent pregnancy in Nakifuma Sub-County. Teachers universally reported that the national curriculum covers biological reproduction in Science and Biology classes but fails to include information on contraception, consent, gendered power dynamics and reproductive health advice. Teachers felt uncomfortable with the current curricula gaps, but also their own reluctance to teach topics that they considered outside their remit.

Teacher, KII-3: "We talk about reproduction in S.2 science but not how to protect yourself. We skip that. We're supposed to teach the syllabus and the syllabus is not enough. If we go more, then the parents complain and the head teacher comes to us."

Likewise, parents reported a near-universal reluctance to discuss sexual health at home, largely because of parental shame and the taboo nature of sexual discussions, particularly with one's own children. The fact that only 29.7% of adolescents agreed their parents talked to them about sexual health (B6) is dramatically supported by admissions from parents.

Parent, KII-11: "I know I should talk to my daughter about these things but I do not know how to start. My own mother never talked to me. It feels shameful. So I hope the school does it, but the school also does not do it properly."

This generational continuity of non-communication where neither the current generation of parents nor the school system are adequately teaching sexual health leaves an information gap that adolescents fill in through their peers and media, as shown in the quantitative results (B7).

Theme 2: Poverty as a Pathway to Teenage Pregnancy

Poverty was identified by both community leaders and teachers as the most influential structural factor driving teenage pregnancy in Nakifuma Sub-County, acting on several fronts. Sex-for-food or money relationships in which girls trade sexual acts for cash or in-kind goods (such as food, school fees, or presents) were identified as common, accepted, and related to family economic hardship.

Community Leader, KI-6: "There are girls who sleep with men to get school fees and food. Their parents are poor. The man gives them a little and they believe he loves them. But then they get pregnant and he leaves them. The future of the girl is lost."

We also heard about the impact of poverty-related school dropout: when girls are forced to leave school because they can't afford school fees, not only are they deprived of the opportunity for education but they also lose the protective environment and social support of the school, as well as any limited sex education they may have received. A number of community leaders identified the vulnerability of orphaned and guardian-headed adolescent girls without economic or parental support.

Theme 3: Peer and Social Media Influence

All three groups of informants identified that peers are a key social influence in the sexual initiation of adolescents without adequate preparation. Parents and teachers described peer cultures in which sexual activity is seen as a rite of passage and a

rite of adulthood and in which adolescents who haven't become sexually active feel pressure to follow their peers.

Parent, KII-9: "If your friends are doing it and they seem fine, you think it is okay.

Technology - social media and mobile phones - was also identified in interviews as a secondary, but increasingly important influence, with several teachers describing how adolescents view sexually explicit material online without being taught how to interpret and understand its meaning. This supports the quantitative finding that the media is an important but uncontrolled source of sex education information (B7, Mean = 3.72).

Theme 4: Cultural and Religious Barriers to Sex Education

A recurring sub-theme across all respondent groups was the influence of cultural and religious beliefs in limiting the provision of comprehensive sex education, including information on contraception and safe sex. Teachers noted cultural and management pressure to provide abstinence-only sex education, while community leaders and parents expressed tensions between their acknowledgement of teenage pregnancy as a problem and their opposition to the educational responses to this.

Teacher, KII-2: "In our culture you do not tell a girl to use a condom. That encourages immorality, they say. So we are stuck. We know abstinence alone is not working the pregnancies are there to prove it but the community will not accept anything beyond abstinence."

Informants identified Christian and Islamic religious leaders as influential gatekeepers of sexual health messages in the community, who typically reject contraception-inclusive sex education but also offer some positive messages around abstinence and responsible sexual behaviour. This disconnect between the cultural and epidemiological realities presents one of the biggest barriers to sex education interventions in Nakifuma Sub-County.

Theme 5: Parental Neglect and Family Disintegration

Parents' failure to counsel both in terms of conversations about sexual health and in terms of supervision of their children was one of the most emotional themes in the qualitative data. Adolescent key informants (recruited from community sources other than schools) spoke about the impact of parental silence in particularly graphic terms.

Adolescent, KII-12: "My mother never told me anything about this. I learned it from friends and it was mostly lies. I got pregnant when I was 16 and I did not even know how it happened. I wanted someone to have told me the truth."

Teachers and community leaders placed this parental silence in the context of the household structure finding: with more than 60% of adolescents in the study sample not living with both parents, many adolescents do not have access to a consistent adult supervision and guidance relationship in which they can have sexual health conversations. Long working hours of single mothers in informal trading, absent or unknown fathers, and stressed guardians were factors that restricted the family's ability to provide sex education.

Theme 6: Limited and Inconsistent Program Delivery

The eight community leaders and 14 teachers interviewed were frustrated by the scope, scale and continuity of the existing sex education programs in Nakifuma Sub-County. Several NGOs and health centres were identified as offering some form of sex education but this was universally reported to be weak and intermittent, delivered in one-off events, and largely failed to reach those most at risk such as out-of-school youth.

Community Leader, KII-7: "NGOs come sometimes, they give a talk and they leave. There is no follow-up. The message is not going in. And they are targeting schools. The ones who are supposed to get it are the ones who have left schools."

Local health workers at the health centre were noted as potential but untapped resource. Community leaders and parents indicated that health workers were trusted by adolescents but their role and workload did not allow for continued engagement in community sex education beyond seeing patients. The absence of a

coordinated, multi-stakeholder sex education implementation framework for Nakifuma Sub-County was identified as the underlying reason behind these fragmented approaches.

4.9 Chapter Summary

This chapter has discussed the quantitative (54 adolescents) and qualitative (37 key informants) findings of the study on the three study objectives. On Objective One, knowledge on sex education among adolescents is found to be inadequate and poorly sourced, demand for sex education is high but supply (particularly through schools and parents) is severely lacking. On Objective Two, teenage pregnancy is revealed as a complex interplay of factors that include drug abuse, peer influence, child marriage, poverty, lack of contraception and poor parenting. On Objective Three, there is general recognition of the high preventive capacity of sex education programs, but current arrangements, especially in schools are judged as insufficient with community and health worker-led programs being favoured. Key informant interviews enrich the findings on all three objectives by highlighting the role of poor sex education provision, socioeconomic vulnerability, cultural factors and poor program implementation as the underlying structural factors contributing to teenage pregnancy in Nakifuma Sub-County. The findings are discussed in relation to evidence and theories in Chapter Five.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

In this chapter, we explore the findings discussed in Chapter Four in relation to past research and the two theories that underpin this study: Social Cognitive Theory (Bandura, 1986) and the Health Belief Model (Rosenstock, 1974). The discussion is

structured in three sections in line with the three research objectives: knowledge of sex education (Section 5.2); teenage pregnancy (Section 5.3); and sex education programs as prevention (Section 5.4). This chapter draws on quantitative and qualitative data to produce a cohesive, evidence-based understanding of the provision of sex education and teenage pregnancy in Nakifuma Sub-County, and ends with a critical theoretical reflection (Section 5.5) and a chapter summary (Section 5.6).

5.2 Awareness and Knowledge of Sex Education among Adolescents

The finding that adolescent sex education awareness in Nakifuma Sub-County is incomplete, uneven, and inadequately sourced is consistent with a substantial body of evidence from Uganda and the broader sub-Saharan African context. The low endorsement of school-based (B5, Mean = 2.68) and parental (B6, Mean = 2.54) sex education provision aligns with findings from the Uganda Ministry of Health (2020) National Adolescent Health Policy, which identifies inadequate sex education provision in both formal and informal settings as a primary structural vulnerability for Ugandan adolescents. Similarly, Nalwadda et al. (2010) found in a study in Wakiso District, Uganda, that while adolescents demonstrated reasonable awareness of STIs, knowledge of contraceptive methods and reproductive health rights was consistently low, particularly among younger and out-of-school adolescents a pattern closely mirrored in this study.

The asymmetry between relatively higher STI knowledge (B4, Mean = 3.83) and substantially lower contraceptive knowledge (B3, Mean = 3.00) reflects the well-documented skew in Uganda's sexual health education towards HIV/AIDS and disease prevention at the expense of comprehensive reproductive health content. Kirby et al.'s (2007) global review of sex education program effectiveness found that curricula focusing exclusively on disease prevention without addressing contraception, sexual coercion, and healthy relationship dynamics were systematically less effective in reducing adolescent pregnancy rates than comprehensive approaches. The data from Nakifuma Sub-County suggest that this curriculum imbalance is reproduced at the local school level, with predictably incomplete outcomes for adolescent sex education knowledge.

The Health Belief Model (Rosenstock, 1974) is useful in interpreting the knowledge gap around contraception. HBM posits that health behavior change requires perceived susceptibility to a health threat, perceived severity of the threat, perceived benefits of action, and perceived barriers to action. The low contraceptive knowledge documented in this study means that even adolescents who perceive themselves as susceptible to teenage pregnancy may lack the knowledge of available protective behaviors (perceived benefits of contraception) needed to act protectively. The barriers construct of HBM is also relevant: cultural and parental barriers to discussing contraception (documented in qualitative Theme 4) actively prevent adolescents from acquiring this knowledge even when motivated to do so.

The finding that media is a significant source of sex education (B7, Mean = 3.72) in the absence of adequate formal and parental provision is cause for concern. Social Cognitive Theory (Bandura, 1986) posits that individuals learn behaviors through observation and modelling including media-based models. Unregulated media exposure to sexual content without critical media literacy guidance provides adolescents with behavioral models that may normalize risky sexual behavior, early sexual debut, and non-use of contraception. This dynamic is exacerbated in Nakifuma Sub-County by the rapid expansion of mobile phone access among adolescents, which increases both the volume and variety of sexual content they can access without adult mediation.

5.3 Factors Contributing to Teenage Pregnancy

The finding that teenage pregnancy in Nakifuma Sub-County is driven by a multifactor cluster rather than any single dominant cause is consistent with the existing literature's characterization of adolescent pregnancy as a complex social phenomenon with biological, psychological, social, economic, and structural determinants (UNFPA, 2021; WHO, 2020). The strong endorsement of substance abuse (C5, Mean = 4.24) as the leading perceived contributor is consistent with Kaestle et al.'s (2005) longitudinal evidence that alcohol use is among the strongest individual-level predictors of early sexual debut and unprotected intercourse among adolescents, operating through mechanisms of disinhibition, impaired judgment, and reduced capacity for protective decision-making.

The high endorsement of peer pressure (C2, Mean = 4.19) is directly interpretable through Social Cognitive Theory (Bandura, 1986). SCT's concept of observational learning and normative modelling explains how adolescents in social networks characterized by early sexual activity and non-use of contraception develop the same behavioral patterns through exposure to and emulation of peer norms. Babalola et al.'s (2009) study across five sub-Saharan African countries found peer normative pressure to be consistently among the top three predictors of adolescent sexual risk behavior, with the strength of the peer effect amplified in contexts such as Nakifuma Sub-County where school and family protective factors are weak.

The high endorsement of early marriage as a contributor (C4, Mean = 4.19) is consistent with evidence of a pattern in rural and peri-urban areas of Uganda where girls married before age 18, and sometimes as young as 14 or 15 is a cause and consequence of school dropout, poverty and cultural practices that devalue girls' education (UNICEF Uganda, 2019). According to the Uganda Demographic and Health Survey (UDHS, 2022), 34% of Ugandan girls are married before the age of 18, more so in rural areas, data that give this finding its local salience.

The endorsement of poverty as a contributor (C3, Mean = 4.04) and the qualitative data on transactional sex as a poverty coping mechanism resonate with UNFPA's (2021) global analysis of adolescent pregnancy that recognises economic disadvantage as a direct (through transactional sex and early marriage) and indirect (through limited access to education, health services, and birth control) contributor to teenage pregnancy. The overlap between poverty and other factors (such as peer pressure, family instability, and limited access to contraception) compound girls' vulnerability in ways that cannot be explained by a single variable.

The comparatively lower, but still significant endorsement of cultural norms (C7, Mean = 3.80) relative to individual and economic factors is interesting. The qualitative data (Theme 4) show that cultural barriers are not directly encouraging early sexual activity but are contributing indirectly by silencing the prevention discourse (forbidding talk about contraception, limiting girls' sexual decisionmaking power, and accepting early marriage as an option for girls who are thought to be sexually active). This indirect role of culture is more difficult to capture in Likert-

scale items, but is well documented in the qualitative data and in the wider literature on gender norms and teenage pregnancy in Uganda (Birungi et al., 2015).

5.4 Sex Education Programs to Prevent Teenage Pregnancy

The high level of agreement that expanding access to sex education programs can prevent teenage pregnancy (D8, Mean = 4.35; E3, Mean = 4.35) is supported by the strong global evidence that comprehensive sex education programs are effective in reducing teenage pregnancy. UNESCO's (2018) major review of 50 comprehensive sex education programs found that well-implemented programs delay sexual initiation, reduce numbers of sexual partners, increase condom and contraceptive use and reduce pregnancy and STIs in adolescents. The catch is that they need to be "well-implemented" - something that evidence from Nakifuma Sub-County suggests is not happening.

The comparatively low level of assessed effectiveness of the school-based sex education program (D4, Mean = 3.28) in relation to community-based programs (D5, Mean = 4.11) is echoed in other studies. Keogh et al.'s (2012) assessment of school-based sex education in Uganda found that teacher discomfort, limitations in the curriculum and pressure from the community to limit the content to abstinence-only messages undermined program effectiveness. This is consistent with the qualitative data in Nakifuma Sub-County, where teachers described being "bound" by the limited curriculum and pressures from communities to focus on abstinence, rather than "empowered" to deliver sex education.

The approval of health workers as sex education providers (D6, Mean = 3.72) and community-based programs (D5, Mean = 4.11) indicates that community-based and health system linked sex education programs may be more effective and acceptable in the context of Nakifuma Sub-County than school-based sex education alone. This is consistent with Hardee et al.'s (2014) model for effective adolescent sexual and reproductive health programming which supports that school-based approaches should be integrated with community-based and health facility-based approaches to reach all adolescents including the out-of-school population that schools cannot reach.

The positive endorsement that cultural beliefs restrict program effectiveness (D7, Mean = 3.93) affirms that culture is not a passive variable, but an influential factor that mediates program impact. The Social Cognitive Theory (Bandura, 1986) notion of observational learning and vicarious reinforcement is applicable here: programs that are counter to cultural norms of behaviour will encounter resistance to behavioural change despite successful message delivery. Thus, program design must not only convey information but also work with cultural norms and gender power issues that hinder adolescents' capacity to use information to enact protection behaviours a programming aspect that, according to our qualitative data, is currently missing in Nakifuma Sub-County.

5.5 Theoretical Reflection

The findings of this study support the use of both the Social Cognitive Theory and the Health Belief Model as fruitful approaches to understanding sex education and teenage pregnancy in Nakifuma Sub-County, but also reveal the limitations of each approach on its own.

Social Cognitive Theory (Bandura, 1986) helps to explain processes of peer influence (C2), media influence (B7) and reproduction of cultural norms that affect the delivery of sex education: these are essentially processes of observational learning, vicarious reinforcement, and normative modelling. But its individual and social focus has limited ability to explain the structural economic determinants of teenage pregnancy such as poverty (C3), early marriage (C4), and lack of access to contraception (C8), which are not dependent on cognitive and social learning.

The Health Belief Model (Rosenstock, 1974) is useful to explain why adolescents who see teenage pregnancy as a risk that they are susceptible to, but don't protect themselves: barriers (cultural taboo, lack of contraceptive availability, peer norms) are too strong to translate beliefs about susceptibility and severity into action. But HBM's focus on individuals equally de-emphasizes the structural determinants that create barriers that individuals cannot change through cognitive change.

HBM and SCT thus offer complementary but not comprehensive explanations. A more holistic theoretical model that might inform future research and programs in this area might draw on both SCT and HBM in combination with a structural determinants approach - such as the Social Ecological Model (Bronfenbrenner, 1979) that takes into account the complex interaction between individual, family, peer, community, institutional and policy level factors influencing adolescent sexual health.

5.6 Chapter Summary

The chapter has explored the study's findings from the three objectives in the context of current literature and theories. The discussion confirms that adolescent sex education awareness in Nakifuma Sub-County is limited and poorly resourced; that teenage pregnancy is a result of a multi-factorial cluster that includes alcohol and drug abuse, peer pressure, poverty, early marriage, lack of parental guidance and lack of access to contraceptives; and that sex education programs have the potential to prevent teenage pregnancy but are currently hampered by a lack of curriculum development, cultural sensitivities, inconsistent implementation and limited penetration to out-of-school youth. The chapter has also suggested a theoretical framework extension of the study's two main frameworks to account for structural determinants. The study's conclusions and recommendations are discussed in Chapter Six.

CHAPTER SIX

CONCLUSIONS, RECOMMENDATIONS AND AREAS FOR FURTHER RESEARCH

6.1 INTRODUCTION

This chapter brings together the findings and discussion of the study to draw a set of conclusions, offers evidence-based recommendations targeted at the stakeholders identified in the study, and recommends areas for future research. This chapter is divided into five sections: study findings (6.2), conclusions (6.3), recommendations (6.4), areas for future research (6.5) and chapter summary (6.6). The conclusions are presented in response to the three specific research objectives, and the recommendations are targeted, practical and tailored to the various stakeholder

groups, as recommended by the Uganda Christian University research manual on the practical significance of research outcomes.

6.2 Summary of Findings

Objective One: Awareness and Knowledge of Sex Education

Adolescent sex education awareness in Nakifuma Sub-County was found to be selective and inequitable. Although nearly universal agreement was found for the importance of sex education (88.9%), practical knowledge about sex education, especially on contraception (42.6%) was significantly lower than knowledge of STIs (70.3%). School and parental sex education were rated as poor by most adolescents and media was identified as the main but unfiltered source of information. Interviews corroborated that schools limit sex education to biological reproduction information, parents are unwilling to discuss sexual health with their children for fear of embarrassment and that adolescents therefore turn to unregulated peer and media sources for sexual health information.

Objective Two: Teenage Pregnancy

The causes of teenage pregnancy in Nakifuma Sub-County were found to be multifaceted, with the highest endorsements on substance abuse (83.3%), peer pressure (81.5%), early marriages (81.5%) and lack of parental support (81.4%). Poverty (77.7%), lack of access to contraceptives (70.3%) and cultural beliefs (66.6%) were also highly endorsed. Qualitative data contextualised these findings within the broader context of the sub-county: poverty (driving transactional sex), family structure changes (reducing parental oversight), cultural norms (reducing parental protective communication) and drug availability (in the trading centres) were identified as specific risks.

Objective Three: Sex education programs as prevention

Sex education was rated as a promising prevention strategy, with 87.1% endorsing the belief that more programs prevent teenage pregnancy. But school-based programs were rated lower for effectiveness (50.0% agreement) than communitybased programs (79.6%). 72.2% agreed that there were cultural factors

preventing program delivery. Lack of facilitator training, event-based and intermittent implementation, restriction of curriculum to abstinence-only messages and absence of out-of-school youth were the key areas in which program implementation was weak and affected program effectiveness.

6.3 Conclusions

From the findings and analysis, this study concludes that:

Nakifuma Sub-County has low adolescent sex education awareness and a poor source of information. Despite strong demand, the primary institutional sources of sex education (schools and parents) are both not supplying adequate, accurate and timely sex education. The supply-demand mismatch places adolescents at the mercy of unregulated media and peer sources that may have inaccurate, incomplete or even malevolent information.

Adolescent pregnancy in Nakifuma Sub-County is a complex issue involving individual, social, economic, cultural and structural factors. There is no dominant factor, drug abuse, peer pressure, poverty, early marriage, poor parent-child communication and lack of contraception play important and intersecting roles in compounding-risk for adolescents. This cannot be tackled with single-factor approaches.

Cultural and religious norms represent a major structural impediment to the provision of sex education in Nakifuma Sub-County, acting primarily as an impediment to protective communication about contraception, reproductive rights and positive relationships, rather than as an inducement to sexual engagement. Programming to address this communicative silence must be part of the solution.

Household structure - the large number of adolescents living in single parent, guardian and unsupervised households - substantially weakens the protective role of the family in sex education and in guiding behaviour. Programs that use parents and guardians as sex education partners are unlikely to reach most vulnerable adolescents without addressing the household structure vulnerabilities that constrain parental effectiveness.

Nakifuma Sub-County's sex education programs show promise but are limited by weak content, intermittent implementation, limited facilitator training and exclusion of out-of-school adolescents. The higher rating of community-based interventions over school-based delivery suggests that the current school-based approach needs to be complemented with long-term, multi-faceted communitybased interventions.

6.4 Recommendations

6.4.1 Recommendations for the Ministry of Education and Sports (MoES)

The MoES should update and incorporate comprehensive, age-appropriate sex education in the national school curriculum from upper primary (Primary Five) to secondary, not just focusing on biological reproduction, but also contraception, STIs, consent, healthy relationships, gender equality and reproductive rights. The current curriculum's focus on biological reproduction leaves important protective knowledge gaps that lead to adolescent pregnancy.

The MoES should create and distribute standardised teacher training modules on sexuality education, to ensure teachers have the content knowledge, teaching strategies and confidence to teach comprehensive sex education inside and outside the formal curriculum. Teacher training should incorporate compulsory sexuality education competency training.

The MoES should develop a policy framework to protect teachers from official and community interference when implementing a comprehensive sex education curriculum based on the approved curriculum, so that teacher discomfort and community resistance cannot limit the delivery of the curriculum.

6.4.2 Recommendations for the Ministry of Health (MoH)

The MoH should scale up and institutionalise the role of community health workers and Village Health Teams (VHTs) in delivering community-based, evidence-based, ongoing adolescent sexual and reproductive health education, with a specific mandate to reach out-of-school adolescents, young mothers, and adolescents living in female-headed and guardian-headed households.

Facility-based sexual and reproductive health services in Nakifuma Sub-County should offer youth-friendly services for contraceptives, STI testing, and reproductive health education and counselling, with no barriers to help-seeking due to stigma, cost or the requirement for parental consent.

The MoH should expand community-based contraceptive procurement programs such as social marketing of condoms and injectable contraceptives through VHTs, to overcome documented supply side barriers to contraceptive access identified in both quantitative (C8) and qualitative data.

6.4.3 Recommendations for Nakifuma Sub-County Local Government and Community Leaders

The Sub-County should devise and execute a comprehensive, multi-sector Adolescent Sexual and Reproductive Health (ASRH) action plan involving school and health facilities, local NGOs, churches and mosques and community leaders with shared prevention goals, consistent messaging and optimal service delivery roles.

Local Council officials and Religious leaders should be mobilised as sex education allies through sensitisation workshops that provide evidence about the efficacy of comprehensive sex education, dispel myths about the moral acceptability of sex education and garner community support for a more honest approach to adolescent sexual health.

The Sub-County should develop targeted programming for out-of-school adolescents through community learning centres, church/mosque youth groups and vocational training institutes to reach the most vulnerable adolescent population with sex education outside school environments.

6.4.4 Recommendations for Schools in Nakifuma Sub-County

School administrators should ensure effective sexuality education delivery by trained teachers or school-based health educators, in a safe non-judgemental space with non-comprehensive reproductive health topics such as contraception and STI prevention, consent and healthy relationships.

Schools should implement peer education programmes where adolescent peer educators provide age-appropriate sex education to their peers - harnessing the high peer influence highlighted in the study's findings as a protective factor.

Schools should establish confidential referral pathways to health facilities, counselling services and social welfare services for at-risk adolescents and pregnant students and adopt non-prejudicial policies to allow pregnant students to remain at school rather than being expelled.

6.4.5 Recommendations for Parents and Guardians

Parents and guardians should be engaged through Parent Teacher Association meetings, community awareness-raising meetings and school-provided family communication programs to build capacity to communicate with their children about sexual and reproductive health. The finding that the silence of parents was linked to cultural embarrassment rather than unwillingness suggests that support for parents' communication skills would enhance their willingness to conduct sex education with their children.

Single parents and guardians identified as a sub-group of structural vulnerability in this study should be targeted with social welfare and community interventions to build their capacity to provide supervision, guidance and protective communication strategies to their adolescent children.

6.4.6 Recommendations for NGOs and Development Partners

NGOs in Nakifuma Sub-County should move from one-off, occasional sex education programming to long-term, multiple-session programming with periodic follow up, integrated behaviour change communication strategies and monitoring of the knowledge, attitude and behaviour change of adolescents.

Development partners and NGOs should focus specifically on engaging out-of-school adolescents through mobile and community-based sexual health education

approaches, given that this is the group at highest risk that cannot be reached through school-based approaches.

NGOs should fund the development and distribution of culturally appropriate sexual health education materials in local languages such as Luganda that can be disseminated through school and community channels and address the identified cultural barriers and peer challenges identified in this study.

6.5 Areas for Further Research

The study has provided valuable evidence on sex education and teenage pregnancy in Nakifuma Sub-County but also highlights key areas for further study that would build on, expand and apply the findings:

A longitudinal study that follows cohorts of adolescents over 3-5 years would provide more causal evidence of the association between sex education participation and teenage pregnancy outcomes, and would capture how and whether sex education knowledge translates into protective behaviour change over time. This study is cross-sectional and provides a snapshot of the situation.

A comparative study of sex education provision and teenage pregnancy rates across multiple sub-counties in the District of Mukono or urban, peri-urban, and rural areas would determine whether there are district-wide impacts of the Nakifuma Sub-County findings and highlight context-specific factors that mediate the relationship between sex education and teenage pregnancy.

An intervention study examining the impact of a targeted multi-faceted comprehensive sex education program to address the curriculum, facilitator training and out-of-school gaps identified in this study would deliver the evidence of programme effectiveness to inform the decision-making of MoES, MoH and NGO partners for scale-up.

A qualitative study examining the experiences of adolescent mothers in Nakifuma Sub-County in terms of what led to their pregnancy, what they knew or did not know at the time they were pregnant and what social and economic consequences they

faced would provide survivor-focused evidence critical for the development of prevention and support programs in response to realities, rather than perceived vulnerabilities.

6.6 Chapter Concluding Statement

Eight conclusions, based on the study's integrated empirical findings, and specific recommendations to six stakeholder groups: the Ministry of Education and Sports, the Ministry of Health, Nakifuma Sub-County local government and community leaders, schools, parents and guardians, and NGOs and development partners have been provided in this chapter. We have also recommended four areas for future research.

The conclusion of this study is diagnostic and prescriptive: teenage pregnancy in Nakifuma Sub-County can be prevented, and evidence suggests that the way to do so is through comprehensive, ongoing and culturally sensitive sex education delivered through coordinated channels of school, local community and health facilities. The adolescents who participated in this study state this conclusion most succinctly: 88.9% agree that comprehensive sex education is necessary for all adolescents, and 87.1% believe that improving sex education will significantly reduce teenage pregnancy rates. Responding to this adolescent demand with quality provision, effective facilitators, family support and social safety nets for the most vulnerable is the key institutional, policy and community responsibility that this study's findings reveal, and demand.

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QUESTIONNAIRE

Introduction

This questionnaire is designed to collect primary data for a study examining the relationship between sex education and teenage pregnancy among adolescents in Nakifuma Sub-County. Teenage pregnancy remains a significant public health and socio-economic concern, particularly in developing countries, where it is associated with school dropout, early marriages, health complications, and limited economic opportunities for young people (World Health Organization, 2022; UNICEF, 2023). In Uganda, despite various interventions aimed at improving adolescent sexual and reproductive health, the prevalence of teenage pregnancy remains high, especially in rural and semi-urban areas (UBOS, 2022).

The purpose of this instrument is to assess adolescents' level of awareness and knowledge of sex education, examine the factors contributing to teenage pregnancy, and analyze the role of sex education programs in addressing this challenge. The questionnaire is structured into sections that capture demographic characteristics, knowledge and awareness levels, perceived contributing factors, and the effectiveness of sex education interventions.

All information provided by respondents is treated with strict confidentiality and is used solely for academic purposes. Participation in this study is voluntary, and respondents are free to withdraw at any point without any consequences.

SECTION A: DEMOGRAPHIC INFORMATION

1. Age

10-13 years

14-16 years

17-19 years

2. Gender

Male

Female

3. Education level

Primary

Secondary

Out of school

4. Religion

Christian

Muslim

Other (Specify) _____

5. Living arrangement

Both parents

Single parent

Guardian

Alone

SECTION B: AWARENESS AND KNOWLEDGE OF SEX EDUCATION

Instruction:

Please indicate your level of agreement with each statement using the scale below on each section:

Scale	Description
1	Strongly Disagree (SD)
2	Disagree (D)
3	Neutral (N)
4	Agree (A)
5	Strongly Agree (SA)

(Objective one: To assess the level of awareness and knowledge of sex education among adolescents in Nakifuma Sub-County.

No.	Statement	1	2	3	4	5
B1	I have adequate knowledge about sex education.					
B2	I understand how pregnancy occurs.					
B3	I am aware of different contraceptive methods.					
B4	I have knowledge about sexually transmitted infections (STIs).					
B5	My school provides sufficient sex education.					
B6	My parents/guardians discuss sexual health issues with me.					
B7	Media (TV, internet, radio) has improved my knowledge of sex education.					
B8	Sex education is important for adolescents.					

SECTION C: FACTORS CONTRIBUTING TO TEENAGE PREGNANCY

(Objective two) To examine the factors contributing to teenage pregnancy among adolescents in Nakifuma Sub-County.

No.	Statement	1	2	3	4	5
C1	Lack of sex education contributes to teenage pregnancy.					
C2	Peer pressure influences adolescents to engage in sexual activity.					
C3	Poverty increases the likelihood of teenage pregnancy.					
C4	Early marriages contribute to teenage pregnancy.					
C5	Alcohol and drug abuse lead to risky sexual behavior.					
C6	Lack of parental guidance contributes to teenage pregnancy.					
C7	Cultural norms encourage early sexual activity.					

C8	Limited access to contraceptives increases teenage pregnancy.					
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SECTION D: ROLE OF SEX EDUCATION PROGRAMS IN PREVENTING TEENAGE PREGNANCY

(Objective three) To analyze the role of sex education programs in preventing teenage pregnancy among adolescents in Nakifuma Sub-County.

No.	Statement	1	2	3	4	5
D1	Sex education programs help reduce teenage pregnancy.					
D2	Sex education programs promote abstinence among adolescents.					
D3	Sex education programs provide adequate knowledge on contraceptive use.					
D4	School-based sex education programs are effective.					
D5	Community-based programs play a key role in preventing teenage pregnancy.					

D6	Health workers effectively educate adolescents on sexual health.					
D7	Cultural beliefs limit the effectiveness of sex education programs.					
D8	Increasing access to sex education programs can reduce teenage pregnancy.					

SECTION E: OVERALL PERCEPTION

No.	Statement	1	2	3	4	5
E1	Comprehensive sex education is necessary for all adolescents.					
E2	Adolescents should be encouraged to openly discuss sexual issues.					
E3	Improving sex education will significantly reduce teenage pregnancy rates.					

INTERVIEW GUIDE

Introduction:

This interview seeks to gather in-depth information on adolescents' awareness of sex education, factors contributing to teenage pregnancy, and the role of sex education programs in prevention. The information provided will be treated with strict confidentiality and used only for academic purposes.

SECTION A: BACKGROUND INFORMATION

1. What is your role in the community/institution?
2. How long have you worked or lived in Nakifuma Sub-County?
3. Do you interact with adolescents in your work? If yes, how?

SECTION B: AWARENESS AND KNOWLEDGE OF SEX EDUCATION

4. What is your understanding of sex education among adolescents in this area?
5. How would you describe the level of awareness of sex education among adolescents in Nakifuma Sub-County?
6. What are the main sources of sex education for adolescents in this community?
7. To what extent do schools provide sex education to learners?
8. What role do parents or guardians play in educating adolescents about sexual and reproductive health?
9. Are there any cultural or religious influences affecting the delivery of sex education? Please explain.

SECTION C: FACTORS CONTRIBUTING TO TEENAGE PREGNANCY

10. In your opinion, what are the major causes of teenage pregnancy in this area?
11. How does peer pressure influence adolescent sexual behavior?
12. What role does poverty play in increasing teenage pregnancy?
13. How do cultural practices or beliefs contribute to teenage pregnancy?
14. To what extent does lack of parental guidance influence adolescents' decisions?
15. Are contraceptives accessible to adolescents? What challenges exist in accessing them?
16. How does substance abuse (alcohol, drugs) contribute to teenage pregnancy?

SECTION D: ROLE OF SEX EDUCATION PROGRAMS

17. Are there sex education programs available in this area? Please describe them.
18. Who are the main providers of these programs? (e.g., schools, NGOs, health facilities)

19. How effective are these programs in preventing teenage pregnancy?
20. What topics are commonly covered in these programs?
21. What challenges do these programs face in reaching adolescents?
22. How receptive are adolescents to sex education programs?
23. What role do schools, health workers, and community leaders play in these programs?

SECTION E: RECOMMENDATIONS AND IMPROVEMENTS

24. What strategies can be used to improve sex education among adolescents?
25. What measures can be taken to reduce teenage pregnancy in Nakifuma SubCounty?
26. What role should government and stakeholders play in addressing this issue?
27. Do you have any additional comments or suggestions?

Thank you for your participation.