

ASSESSING KNOWLEDGE, ACCESS, UTILISATION AND PERCEPTIONS OF YOUTH  
FRIENDLY SPACES AND SERVICES: A STUDY ON ADOLESCENT PREGNANCIES  
AND SEXUAL REPRODUCTIVE HEALTH

BY

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A Dissertation submitted to the University of Zambia in partial fulfilment of the requirements  
for the Degree of Master of Science in Public Health Nursing

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## **DECLARATION**

I, Boniface Mutale the undersigned, confirm that this dissertation is all my work. Reference, to quotations from and discussion of the work of any other person(s) has been correctly acknowledged within this dissertation.

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Date: .....

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I, Dr. Brenda Sianchapa, having supervised and read through this dissertation, am satisfied that this is the original work of the author under whose name is presented. I also confirm that the work has been completed satisfactorily and approve this dissertation for final submission.

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

Head: Public Health Nursing Department

Name.....

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

**CERTIFICATE OF APPROVAL**

The University of Zambia approves this dissertation by Boniface Mutale titled: “Assessing knowledge, access, utilisation and perceptions of youth friendly spaces and services: a study on adolescent pregnancies and sexual reproductive health” in partial fulfilment of the requirements for the award of Master of Science in Public Health Nursing.

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Examiner 2: Name.....Signature.....Date.....

Examiner 3: Name.....Signature.....Date.....

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## **DEDICATION**

I, **Boniface Mutale** dedicate this work to my dear wife, Felistus Musakanya–Mutale, and our children, Sampa Mutale, Mwaba Mutale, Bupe Mutale and Mweshi Bukata Mutale for their patience during my absence at the time of writing this dissertation. I denied them my much-needed fatherly attention, not forgetting my late Dad and Mum who always wanted to see me achieve the best in my academic life.

## ABSTRACT

**Background:** This study assessed the level of knowledge, accessibility, utilization, and perception of Sexual and Reproductive Health (SRH) services among pregnant adolescents attending antenatal, post-natal and Youth-Friendly Health Spaces (YFHS) at Kalwala Health Post and Location Urban Clinic in Chinsali District of Muchinga Province in Zambia. Variables assessed included the level of accessibility, knowledge, utilization and perceptions of SRH services.

**Methods:** The study used mixed research methods with embedded research approach that integrated both qualitative and quantitative techniques. The research also employed a Likert scale to evaluate the knowledge and views of adolescents, using linear regression analysis to examine the elements that affected access to and use of SRHS. Purposive sampling was used to select the participants with a sample size of 384 adolescents and 17 health care workers from Kalwala Health Post and Location Urban Clinic. The parametric statistical test that was used was linear regression analysis that compared relationships between the dependent and independent variables. Data were analysed using SPSS version 26 and Micro-Soft Excel 2016 (version: 16.0.4266.1001).

**Findings:** The research revealed that, although 75.27% of adolescents indicated having access to SRHS, merely 42.86% used them, underscoring a disparity between access and actual usage. While 74.73% recognized services at YFHS, knowledge of particular services such as family planning and menstrual hygiene was limited. Regression analysis indicated that a 1% rise in the number of adolescents aged 15-19 boosted the chances of utilizing SRH services by 0.452% ( $p=0.001$ ), while for those aged 10-14, it increased by 0.321% ( $p=0.004$ ). Access frequency also boosted future use, with coefficients of 0.215 for "Not often" ( $p=0.049$ ), 0.342 for "Often" ( $p=0.007$ ), and 0.520 for "Very often" ( $p<0.0001$ ). A positive correlation existed between SRH service access ( $\beta=0.250$ ) and knowledge ( $\beta=0.150$ ). Knowledge of services ( $\beta=0.450$ ,  $p<0.001$ ) and Youth-Friendly Health Spaces ( $\beta=0.320$ ,  $p<0.001$ ) increase service utilization. Negative perceptions, like the stigma around SRH services ( $\beta=-0.190$ ,  $p=0.008$ ), significantly reduced utilization.

**Conclusion:** The study urged the significance of addressing barriers through improved educational programmes, better service accessibility, and targeted interventions. Additionally, cultural and traditional values were observed from parents as main reasons for not discussing sex and sexuality with their children especially those of the opposite sex.

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## LIST OF ABBREVIATIONS

ADHS	Adolescent Health Strategy
AGEP	Adolescent Girls Empowerment Programme
AGYW	Adolescent Girls and Young Women
AHFS	Adolescent Health-Friendly Spaces
ANC	Antenatal Care
ART	Anti retro Viral Therapy
ASRH	Adolescent Sexual Reproductive Health
AYA	Adolescents and Young Adults
AYFHS	Adolescent Youth-Friendly Health Spaces
AYFHSS	Adolescent Youth Friendly Spaces and Services
AYPs	Adolescents and Young People
BAC	Blood Alcohol Consumption
CBIM	Coaching Boys into Men
CBR	Crude Birth Rate
CSE	Comprehensive Sexuality Education
CSO	Central Statistics Office
FGD	Focus Group Discussion
GBV	Gender-Based Violence
HAHC	Hospital Affiliated Health Centre
HCWs	Health Care Workers
HMIS	Hospital Management Information System
HP	Health Post
HPV	Human Papilloma Virus
IEC	Information Education and Communication
IPV	Intimate Partner Violence
KIs	Key Informants
LSHE	Life Skills and Health Education
MoE	Ministry of Education
MoH	Ministry of Health

PH	Public Health
QA	Quality Assurance
SAA	Sub Saharan Africa
SBA	Skilled Birth Attendants
SGBV	Sexual Gender-Based Violence
SRH	Sexual Reproductive Health
STIs	Sexually Transmitted Infections
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children’s Fund
USA	United States of America
WHO	World Health Organization
YFSRH	Youth Friendly Sexual Reproductive Health
ZDHS	Zambia Demographic Health Survey

## CHAPTER ONE: INTRODUCTION

### 1.0 Overview

Adolescents are an important age group in society and community for championing health-seeking behaviour. They are also important for carrying out behavioural change communication key messages if given appropriately at the right time and age. However, adolescent pregnancies are common throughout the world, and the United Nations Population Fund (2020) reported that, “every year, approximately 21 million girls aged 15 to 19 years become pregnant, accounting for 11% of all pregnancies globally,” including Zambia. Adolescent pregnancies are a common occurrence in Muchinga Province of Zambia, where the Health Information Management System (HIMS, 2022) recorded a total of 9,922 representing 25.3% of adolescent pregnancies. An average of 33.2% of adolescent pregnancies were recorded within a period of 5 years from 2018 to 2022. During the period there was a marginal decrease of 0.5% and that represented 25.3% in Chinsali District.

Kassa et al., (2018) revealed that adolescent pregnancy was a serious public health problem, particularly in Africa, in their systematic review and meta-analysis of published and unpublished studies in Africa. This was connected with significant maternal and child morbidity and mortality and had an impact on a country's socio-economic growth. When compared to older women, it was also associated with a higher risk of unfavourable pregnancy and delivery outcomes.

### 1.1 Background Information

Globally, adolescent pregnancies occurring before reaching the age of 20 years, are high, whether single or married (Moose, 2020). In North America and Western Europe, teenage pregnancies occurred among unmarried adolescents. However, Burton (2019) observed that, in developing countries, the majority of teenage pregnancies occurred mostly among married teenage girls. This was attributed to forced marriages among adolescents. Adolescent age ranges from 10 to 19 years and covers 25% of the total population, Adolescent Health Strategic Plan, (2022-2026). Malunga et al., (2023) reviewed six research studies that were carried out in Zambia between 2000 and 2022 and the review observed that the prevalence of adolescent pregnancies in Zambia ranged from 29% to 48%. In addition, 29.1% of the country's adolescents had given birth in 2018. Individual-level factors such as early or child marriage, media exposure, awareness of sexual reproductive health (SRH), contraceptive use, and hazardous sexual practices were found to be strongly linked with adolescent pregnancies. These

statistics were evident enough that adolescents were already engaged in sexual activities. Therefore, to improve the sexual reproductive health among adolescents, the Ministry of Health (MoH) in Zambia developed the first Adolescent Health Strategic Plan (Adolescent Health Strategic Plan, 2011-2015). The plan outlined holistic, appropriate, and comprehensive Adolescent Friendly Health Service (ADFHS) packages that focused on addressing special adolescent health needs and reducing barriers to accessing health services (Adolescent Health Strategic Plan, 2011-2015). Furthermore, it was observed that there were no Public Health facilities that offered specific health packages for adolescents then, hence the 2011-2015 Adolescent Health Plan that saw the birth of Youth Friendly Corners (YFCs) on a pilot basis. Those were intended to provide Youth Friendly Services. Those corners were spaces within the hospitals or health facilities. However, they were perceived not to be friendly by most adolescents who shunned them for fear of being seen by elderly patients, clients, and probably healthcare workers who could have known the adolescents and or their parents. Later, a review of the Adolescent Health Strategic Plan for 2011-2015 was done to strengthen the Adolescent Health Services in Zambia. To this effect, a new Adolescent Health Strategy (ADHS) 2017-2021 was developed and changed the name from Youth Friendly Corners to Adolescent Youth Friendly Health Spaces (AYFHS).

The Youth Friendly Spaces are infrastructures in the form of a room or spaces set aside as a platform for adolescents' health needs in the country (ADHS, 2017-2021). Therefore, various strategies for Adolescent Sexual Reproductive Health Services were outlined in that policy document and the title changed from Adolescent Health Strategic Plan 2011-2015 to Adolescent Health Strategy (2017-2021). The word strategy was emphasized to focus on different strategies to be adopted for helping adolescents and young people to use the Youth Friendly Spaces and services in health facilities. It was with a view of including all adolescent health needs, this was further emphasised in the 2022 to 2026 adolescent health strategic plan, and the document included adolescents with special needs and key populations.

Muchinga Province has a total population of 1,121,608 projections (CSO, 2021). Among this population 280,402 (25%) represent the adolescent age group both, males and females (ADHS-2017-2021). Adolescent Youth Friendly Health Spaces and Services are provided in all health facilities where adolescents and young people meet to discuss health issues that affect them within the province. These health issues can be resolved by them receiving social behavioural change and communication messages in the Youth Friendly Spaces at the health facilities.

Some of the social behavioural change and communication messages that focus on handling Adolescent Sexual Reproductive Health (ASRH) Services from the Youth Friendly Spaces.

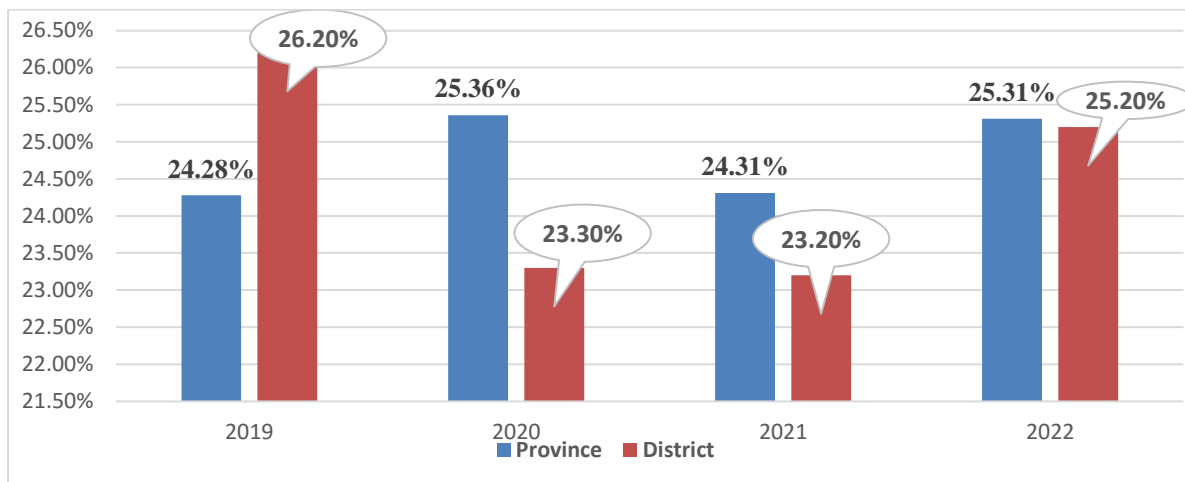
These messages include motivational talks on the importance of delaying early sexual debut, focusing on their education so that they can achieve their full potential in life, use of condoms for the prevention of pregnancies, STIs and HIV infections. Others include reduction on alcohol and drug use. These are provided for free by all Public Health Facilities and Government Grant-Aided Health Institutions. Furthermore, such services are extended to all schools and out-of-school adolescents. It has been noted that the inadequate use of these Youth Friendly Spaces by the adolescents has led to inadequate knowledge on issues that affect and threaten their health and well-being and this puts them at greater risk of acquiring Human Immunodeficiency Virus (HIV) infections and other Sexually Transmitted Infections (STIs), adolescent pregnancies and unsafe abortions. STIs like the Human Papilloma Virus (HPV) could predispose female adolescents and young people to cancer of the cervix. Free Youth Friendly Spaces were introduced by Ministry of Health in Zambia to increase awareness on sexual reproductive health for adolescents to make informed decisions. However, adolescent pregnancies continue to increase in Chinsali district.

## **1.2 Statement of the Problem**

Chinsali District, the capital of Muchinga Province recorded an increase in the number of pregnancies for the young people aged 10 to 19 years. This age group is defined as 'adolescents' by Ministry of Health in Zambia (Adolescent Health Strategic Plan, 2022-2027).

Majority of the adolescents are supposed to be in school, either at primary, secondary and or tertiary level.

Table 1.1: Percentage of Adolescent Pregnancies (2019 to 2022)



Source (HMIS, 2023)

Table 1.1, illustrates that, between 2019 to 2022, Muchinga province recorded an average of 24.8% of adolescent pregnancies, while Chinsali district recorded an average of 24.5% pregnancies in the same period and the highest recorded was 26.2% in 2019 for the district. The province however recorded a marginal increase in adolescent pregnancies by 1.08% in 2020 (HIMS 2023). Since then, there has been a steady increase by both the province and the district. In 2022, Muchinga province recorded 25.31%, while Chinsali district recorded 25.20% of adolescent pregnancies.

This is despite the political will by the Zambian Government through the Ministry of Health and its cooperating partners to formulate adolescent health programmes, appointment of an Assistant Director for Adolescent Health Services in the Department of Public Health and Social Determinants (DPHSDs) and focal point persons at Provincial Health Offices (PHOs) and District Health Offices (DHOs) to help avert these pregnancies. This study therefore sought to ascertain knowledge levels, practices and attitudes towards adolescent youth friendly health spaces and services by adolescents in the district.

### 1.3 Theoretical Model

A theoretical model for Two-Generation Models (Scott et al., 2016) guided this study. The models aimed to break the cycle of poverty by focusing on children and families from low-income countries. Scott, Popkin, and Simington (2016), argued that the models themselves vary widely, and policymakers and practitioners needed guidance on how best to design them to achieve their ambitious goals and capitalize on multiplier effects. Despite the model's

emphasis on the family and the individual, it also places great recognition on other players, the policy-makers to guide the general public.

This study as guided by the Two-Generation model looked at the four pillars contained in the model and how the pillars will help adolescents and individual families to reduce pregnancies and other similar vices.

**Family Goals:** For this study it looked at the family as a first source of knowledge acquisition for adolescents. When the family is fully aware of dangers of adolescent pregnancies and the psychological effects they have on the young people. The parents will be able to teach good values and morals them at an early age. By the time the adolescents start learning biology and reproductive system in schools, this information will be consolidated and help to avoid myths and misconceptions due to peer pressure.

**Individual Goals:** Adapting from the family goals and values, adolescents will package the information and teachings from the family and implement them. This helps an individual to have informed decisions based on family values and goals and ultimately contain sexual debut and prevent unplanned pregnancies.

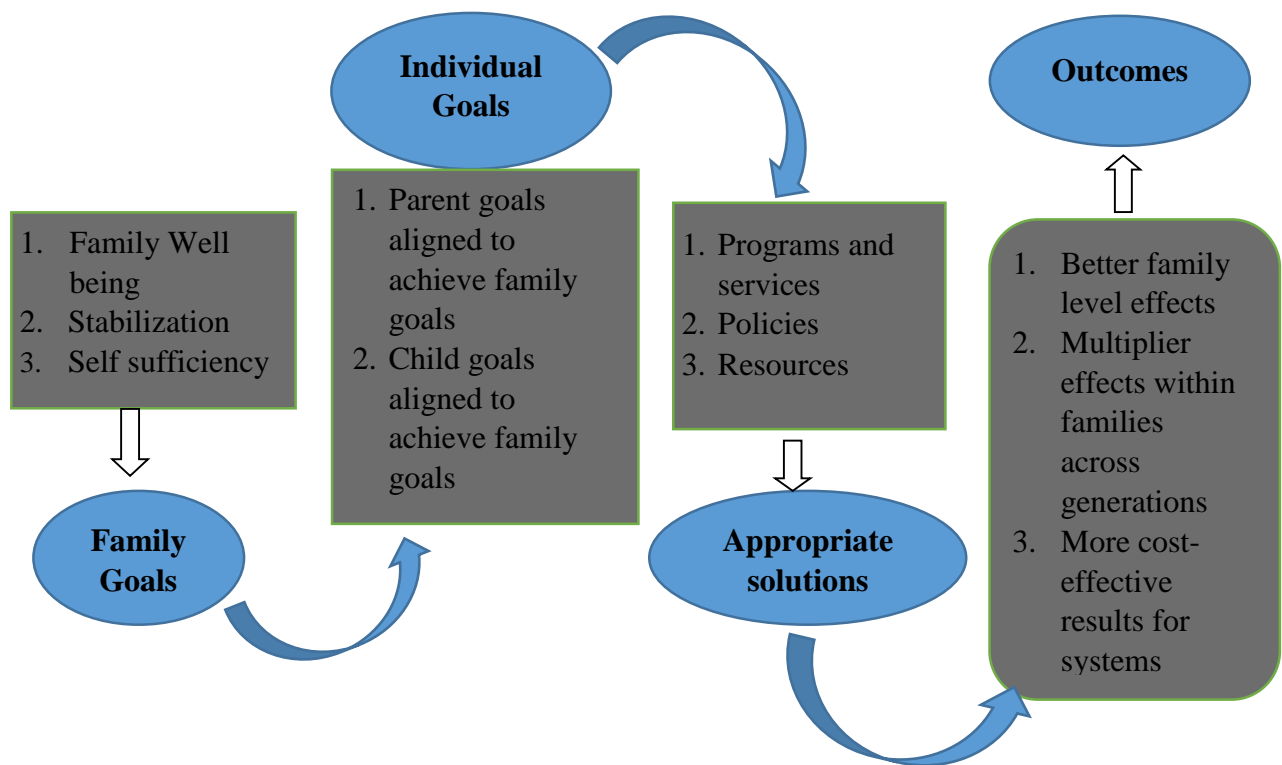
**Appropriate solutions:** This pillar is a build-up of individual goals that were consolidated from the family good and positive core values. Adolescents will be able to separate myths and misconceptions about the sexual reproductive life as they integrate into society where they find different people of different mind sets. If an adolescent does not have positive family core values, she will easily be convinced to engage in illicit sexual life, abortions, alcohol and substance abuse as contributing factors to engage in illicit sex.

**Outcome:** The last pillar, will show a significant decrease in adolescent pregnancies and well-informed young people on their sexual reproductive lives in Chinsali district.

Therefore, empowering adolescents with age-appropriate information, either formally or informally, may help them acquire lifelong knowledge and an understanding of safer sex on their sexual reproductive health. Parents and guardians act as role models to their children, who may copy their behaviour and lifestyles. Parents and guardians are considered role models by their children. Therefore, parents' and guardians' behaviour must be exemplary at home and in society because whatever parents do is considered a "gospel" truth by adolescents. Therefore, parenting styles and interactions with children are crucial in promoting adolescents' cognitive, language, and socio-emotional development (Sandler et al., 2012).

Scott, Popkin, and Simington (2016) states that, the exponential effect of the two-generation model is the result of achieving goals for parents and children, through a series of tailored interventions. Well-defined family goals enable practitioners to effectively target individuals in the household, set personal goals, align solutions, and hopefully achieve better outcomes for families and make systems that serve the poor more profitable in the long run. The illustration in Figure 1 below summarizes the two-generation model that guided this study.

Figure 1. Theoretical Model for Two Generations (Scott et al., 2016)



Source: (Scott, Popkin and Simington, 2016)

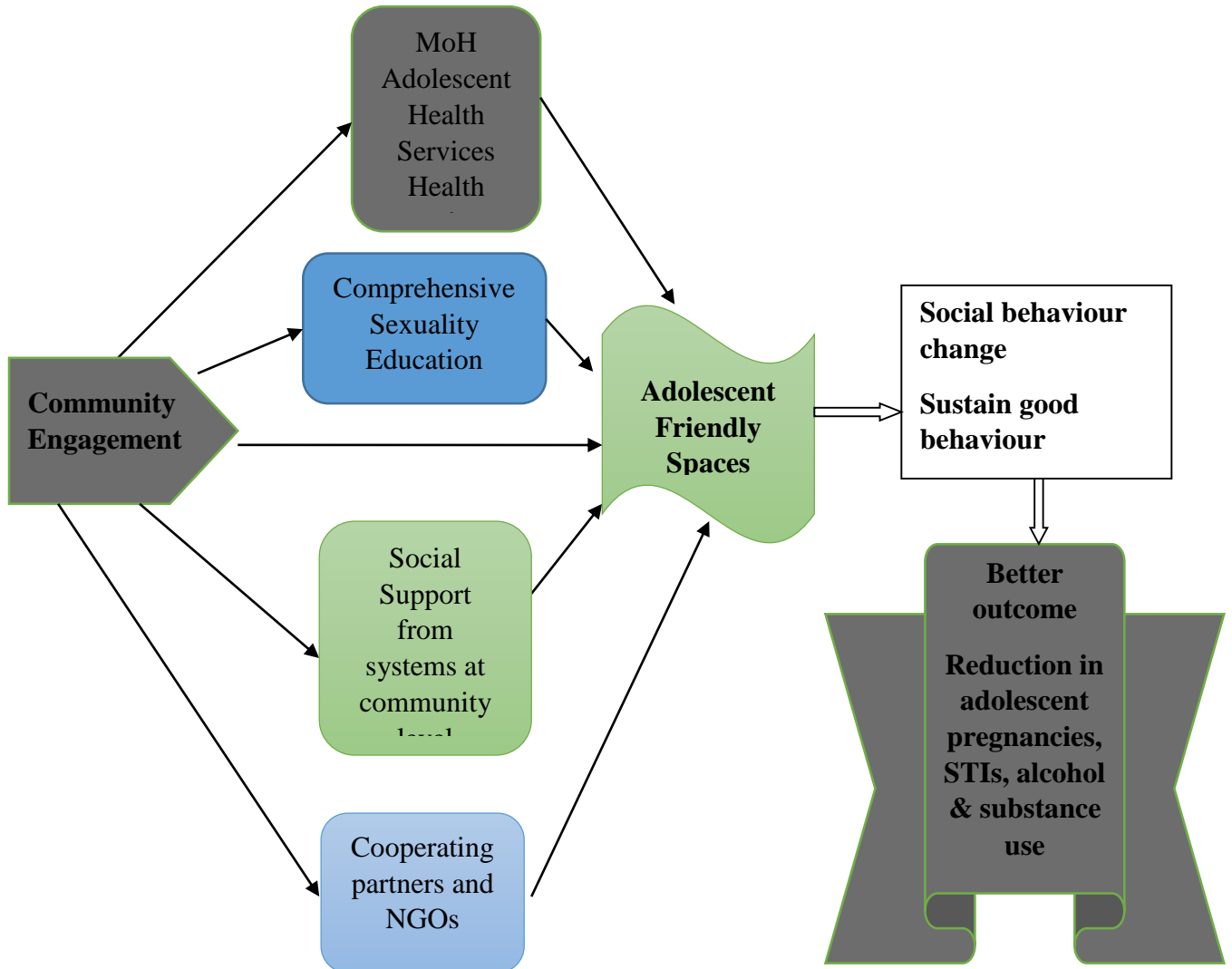
The Two-Generation Theoretical Model is utilized in coordination and collaboration with families, adolescents, and healthcare workers through adolescent youth-friendly spaces. It yields better outcomes for adolescent health like better family values and acceptable social norms.

### 1.4 Conceptual Framework

This framework adds to the two-generation conceptual framework that, the family was the first source of imparting knowledge and good morals in childhood. Meanwhile, Cherry (2020) stated that, as children grew, they constructed an understanding of the world around them, experienced discrepancies between their understanding and their experiences, and then

corrected those discrepancies by reorganizing the mental processes that helped them to have responsibility for their lives including sexual and reproductive lives.

Figure 2. Conceptual Frame Work (Mutale, Chanda and Banda, 2023)



Conceptual Framework (Mutale, Chanda and Banda, 2023) Based on the Theoretical Model for two Generations by Scott, Popkin and Simington, 2016.

The conceptual framework in Figure 2 was adopted from the Two-Generation Theoretical Model that guided this study. The conceptual framework illustrated the relationship of various stakeholders that contributed to the process of change in the mind set of adolescents for them to make their own informed choices in life (sexual and reproductive choices inclusive). Utilization of the Youth Friendly Spaces where the youths were given adequate social behavioural change and communication messages on sexual and reproductive health, were expected to increase their understanding of the importance of making positive life choices they

received and formed the first steps towards the prevention of negative vices according to Siniša, 2018. Furthermore, when it came to sex education, people in communities were sensitive to the subject matter. Despite knowing that adolescents were already engaged in sexual relationships, they were too shy to discuss it openly and advised them to utilize the Youth Friendly Spaces from the nearest health facilities. From the beginning of a child's education, the physical body, attitudes, and powerful sentiments aroused in adolescents should be discussed with the youth in various welcoming environments that include Youth Friendly Spaces in Health facilities, homes, schools, and the church.

### **1.5 Justification of the Study**

Adolescent health services are becoming increasingly important in low- and middle-income countries. The Adolescent Youth Friendly Health Services (AYFS) approach was initiated and promoted in South Africa and Zambia to standardize the quality of adolescent health service delivery (James et al., 2018). Although health facilities in Zambia had the necessary components for general service delivery, adolescent-specific health service provision was either inadequate or lacking hence the need for them to be initiated and promoted in Zambia. However, little is known about knowledge, access, utilisation and perceptions of youth friendly spaces and services, adolescent pregnancies and sexual reproductive health. There should be a marked decrease in the number of adolescent pregnancies if adolescents attended and utilized these youth-friendly health services. It is from these Youth Friendly Spaces and services that adolescents learn and share knowledge on sexual reproductive health matters which include, and not limited to sexual abstinence and correct condom use for those who cannot abstain from sexual intercourse. Mazur et al., (2018) in their study on “Assessing Youth-Friendly Sexual and Reproductive Health Services” revealed that the creation, implementation, and evaluation of youth-friendly health services (YFHS) to enhance the provision of sexual and reproductive health services for young people had been the focus of evidence-based research over the previous 25 years. Despite those study efforts, there was no evidence to support the success of YFHS, which could be due to disagreement over how to define and measure youth-friendliness to monitor progress and assess results. The study looked at the inconsistent methods and indications employed to gauge YFHS. The three most often evaluated areas were secrecy and privacy, personnel qualifications, traits, and accessibility. Most of the metrics did not focus on the needs of young people and frequently reflected minimal standards of care. Malunga et al., (2023) discovered in their systematic review that the prevalence of teenage pregnancy in Zambia ranged from 29% to 48%, and that 29.1% of the country's adolescents had given birth

as of 2018. Meanwhile, in 2022, Muchinga Province recorded 25.31% of adolescent pregnancies and an average of 33.21% from 2018 to 2022, thus questioning the outcome of YFHS on Adolescent Sexual Reproductive Health (ASRH) in the province. Another study by Bellieni (2016) emphasized that adolescent pregnancies should be discouraged because they carry a greater risk for both the mother and her unborn child. The study also emphasized that women should wait until they reached between the ages of 20 and 30 years to become pregnant.

These studies created gaps in knowledge, access, utilisation and perception of AYPFHS services on ASRH and adolescent pregnancies hence, the gaps needed to be filled by conducting this study because it has never been researched before in the Chinsali district of Muchinga province.

It is hoped that, the findings of this study will help individual adolescent girls to make correct decisions on their sexual life once the findings are disseminated and the district picture of young people becoming pregnant. Pregnancies in young age may have negative outcomes like long term fistulae and maternal deaths. The findings will also help the communities around Chinsali district and the province as a whole, to have well informed young girls and prevent unwanted pregnancies and concentrate their energies at school, taking advantage of free education policy that the Government of the Republic of Zambia introduced in 2022. The Ministry of Health will help to formulate targeted interventions on adolescent sexual reproductive services and engage its cooperating partners to help build standalone adolescent health friendly spaces and train more healthcare workers and peer educators to champion adolescent health services in order to prevent teenage pregnancies, abortions, alcohol and substance use among this vulnerable population.

### **1.6 Research Question**

Do adolescents have adequate knowledge, access and utilize youth friendly health spaces and services on sexual reproductive health at Kalwala Rural Health Post and Location Urban Clinic in Chinsali District of Muchinga Province?

### **1.7 General Research Objective**

To assess adolescent knowledge levels, access, and utilisation of adolescent youth-friendly health spaces and services on sexual reproductive health at Kalwala Rural Health Post and Location Urban Clinic in Chinsali District.

## **1.8 Specific Objectives**

1. To assess knowledge levels on Sexual Reproductive Health (SRH) of adolescents at Kalwala Health Post and Location Urban.
2. To assess accessibility of Youth Friendly Health Spaces and services for adolescents at Kalwala Health Post and Location Urban Clinic in Chinsali District.
3. To determine the perception of youth-friendly health spaces and services by adolescents at Kalwala Health Post and Location Urban Clinic.
4. To determine the level of utilisation of Adolescent Youth Friendly Health Services and Spaces (AYFHSS) at Kalwala and Location Urban Clinic in Chinsali District

## **1.9 Study Variables**

A variable in research simply refers to a person, place, thing, or phenomenon that you are trying to measure in some way (USC Libraries, 2010). Cramer et al., (2014) defined a dependent variable as a variable that depended on an independent variable and was expected to change as a result of an experimental manipulation of the independent variable or variables. An independent variable is a variable that is stable and unaffected by the dependent variable or variables that are being measured.

### **1.9.1 Dependent Variable**

For this study, the dependent variable was utilisation of Adolescent Youth Friendly Health Spaces at Kalwala Health Post and Location Urban Clinic.

### **1.9.2 Independent Variables**

Independent variables are the:

1. Knowledge of Adolescent Youth-Friendly Health Spaces and Services by adolescents.
2. Accessibility of Adolescent Youth-Friendly Health Spaces and Services.
3. Perceptions of Adolescent Youth Friendly Health Spaces and Services.
4. Utilisation Adolescent Youth-Friendly Health Spaces and Services by adolescents

**10.0 Variables, Conceptual and Operational definitions, Indicators, Cut of point and Question number**

**Table: 1.2 (a). Variables, and cut of points of Knowledge on SRH**

Variable/Type	Conceptual definitions	Operational definitions	Indicator	Cut off points	Question number
Knowledge on SRH.  (Ordinal)	Knowledge on SRH:  “This encompasses various aspects of human development, including anatomy, physiology and hygiene. It also covers fertility regulation methods, STIs, HIV/AIDS” (WHO, 2018).	Knowledge on SRH:  Adolescents who are aware of the following services in from the AYFH spaces (AYFHS)  - Condom use  - Family planning  access health services, connect with peers, and discuss important issues	Not knowledgeable.	No correct response to Knowledge questions on SRH	5 to 13
			Low knowledge levels.	1 to 2 correct responses to Knowledge questions on SRH.	
			Medium level knowledge.	2 to 5 correct responses to Knowledge questions on SRH.	
			High level knowledge.	6 to 9 correct responses to Knowledge questions on SRH.	

Table 1.2 (a) Shows variables, conceptual and operational definitions used in the study on knowledge levels, it also shows the indicators, cut off points and question numbers.

**Table: 1.2 (b). Variables, and cut of points on Access to AYFHSS and Perception on SRH**

<b>Variable/Type</b>	<b>Conceptual definitions</b>	<b>Operational definitions</b>	<b>Indicator</b>	<b>Cut off points</b>	<b>Question number</b>
Access to AYFHSS.  (Ordinal)	Access to AYFHSS:  Refers to “the availability and utilisation of health facilities, services and programs that cater to the unique needs and preferences of adolescents and the youth” (WHO, 2018).	Access to AYFHSS:  Adolescents who were able to visit freely and received the services provided by the AYF spaces.	Poor access to AYFHSS.	Presence of a health facility in the community but not able to use the services.	14 to 18
			Good access to AYFHSS.	Presence of a health facility in the community and ability to use the services.	
Perception on SRH.  (Nominal)	Perception:  “Refers to the attitudes, beliefs and options that adolescents hold regarding their sexual reproductive health.” (UNPF, 2020).	Perception on AYFHSS:  The individual feeling on SRH and using the services provided by AYFH spaces.	Positive.	Adolescents who would utilise AYFHSS.	19 to 24

The table above shows access AYFHS and perceptions on SRH

**Table: 1.2 (c). Variables, and cut of points on Utilization of AYFHS**

<b>Variable/Type</b>	<b>Conceptual definitions</b>	<b>Operational definitions</b>	<b>Indicator</b>	<b>Cut off points</b>	<b>Question number</b>
Utilization of AYFHS. (Ordinal)	Utilisation: Accessing, acceptable, equitable, appropriate and effective for different youth sub populations that provide the rights and dignity of young people (WHO, 2017, p.12).	Utilisation: Adolescents are able to use the spaces provided for the young people and able to learn from staff and teach their peers.	Poor utilisation.	Negative responses to utilisation questions.	25 to 34
			Good utilisation.	Positive responses to utilisation questions.	

The table above shows variables, and cut of points on Utilization of AYFHS

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.0 Introduction**

The study looked at the surge of adolescent pregnancies and the relationship with knowledge levels, access and utilisation of sexual reproductive health services from the designated youth friendly health spaces at Kalwala and Location urban clinic, therefore this study reviewed various literature from various sources such as authorized scholarly books, Journals, government-published documents (policy documents), and computerized databases e.g., PubMed, Google Scholar, etc. The review of literature was conducted to research variables of the study providing a global, regional, and national overview of the topic under study.

Globally, the Youth Friendly Health Spaces (YFHS) model has no real consensus on what it means or its implications in practice. However, the Youth Friendly Health Spaces model is utilized by various health professionals and different organizations (e.g., the education sector, non-governmental organizations, Faith Based Organizations etc.). Youth friendliness goes beyond service delivery settings to include community acceptance of young people's Sexual Reproductive Health (SRH) and adherence to change (Braeken and Rondinelli, 2018). In his study titled, "contraception continuation rates in the under 18s", Lawton (2017) argued that Youth Friendly Services are expected to offer a wide range of sexual and reproductive health services relevant to adolescents' needs which include sexual and reproductive health counselling, contraceptive counselling and provision (including emergency contraception) sexually transmitted infection/HIV prevention, counselling and testing, treatment and care, prenatal and post-partum care, sexual abuse counselling, relationship counselling, and safe abortion and abortion-related services.

### **2.1 Knowledge of ASRH and Services**

Globally, sexual activity is common during adolescence, up to 65% of girls and 72% of boys aged 15 - 19, with as many as 15% of girls and 35% of boys reporting sex before the age of 15 (Kennedy et al., 2018), and many are ill-prepared for this transition. Citing UNICEF (2019), "The State of Health Behaviour and Lifestyle of Pacific Youth in Vanuatu Report 2019", lack of comprehensive knowledge and awareness about sexual and reproductive health (SRH) are facing significant barriers to accessing quality SRH services. In the Pacific, adolescents suffer a disproportionate burden of poor SRH, including high rates of sexually transmitted infections (STIs) and unintended pregnancy, often with significant socio-economic consequences due to lack of knowledge and awareness of Sexual Reproductive Health (UNFPA, 2018).

**Knowledge of ASRH and Services:** Globally, in a more recent review by Kennedy et al., (2019) titled, “Be Kind to Young People so They Feel at Home in Venuatu”. Results show that adolescents described a lack of knowledge and awareness about SRH as a reason why they didn’t access services. Lack of knowledge about what they would be asked or what would happen at the clinic and not knowing how to talk with nurses were also reasons for not accessing services. As a result, adolescents described the need for more ‘awareness’ to be provided in communities and schools to increase knowledge about SRH and available services.

In South Africa, a study conducted by Morris and Rushwan (2018), which aimed at evaluating Individual barriers such as knowledge, shame and stigma affecting Youth Friendly Sexual Reproductive Health Services (YFSRHS) revealed that (38.5%) adolescents were knowledgeable on adolescent health services provided by health facilities. However, Morris and Rushwan, 2018; Francis and Gabriel, 2019; Ajike, 2018; Motuma et al., 2019; Akinyi, 2019; Uzoma, 2017 revealed that adolescents did not know of specific AYFH Services provided in their healthcare facilities. Additionally, a cross-sectional study carried out in Kenya by Godia et al., (2020), “Young people’s perception of sexual and reproductive health services”, revealed that knowledge of younger girls (12–14 years) was limited with the majority reporting that they did not know much about AYFHSS. However, boys of the same age were more knowledgeable and reported that young people used contraceptives for the prevention of HIV, pregnancy and other STIs. However, Helamo et al., 2018 reported that in Ethiopia those with good knowledge of the type of adolescents and youth-friendly reproductive health services (AYFRHS) were 1.68 times more likely to utilize AYFRHS.

In Zambia, health facilities implement systems to ensure that adolescents are knowledgeable about their health and know where and when to obtain health services (Regional Report, 2018). Adolescent birth rates in Zambia are higher among those in rural areas, with lower levels of education and poorer households, and lower among those in urban areas, with higher levels of education and wealthier households (Svanemyr, 2020). The Journal of Adolescence study, on “A comprehensive understanding of risk and protective factors related to adolescent pregnancy in Low- and Middle-Income Countries,” by Chung et al., (2018) revealed that low knowledge levels in Zambia and unmet needs for contraception were related to young people’s low utilization of reproductive health services and poor sexuality education both in and out of school. Similarly, limited knowledge about sexual and reproductive health among adolescents especially among unmarried adolescents was reviewed in another study by (Munakampe et al., 2018) titled, “Contraception and abortion knowledge, attitudes, and practices among

adolescents from low- and middle-income countries.” Zulu et al., (2018) in an evaluation protocol from Zambia, reproductive health community-based interventions for strengthening adolescent sexual reproductive health and rights asked, how adolescents could be integrated and sustained. In answering their research question, the study revealed that knowledge and awareness were very scarce, if not absent concerning sexual reproductive health services (SRHS). The study therefore recommended that; it was important to document mechanisms that could shape the integration processes to improve health systems’ responsiveness towards adolescents’ sexual reproductive health rights (SRHR). This study revealed similar findings on the level of adolescent pregnancies in Zambia among girls under the age of 16 years that had remained the same, (Svanemyr, 2020). Greater attention has been paid to addressing social norms that may hurt young people’s health (Pulerwitz et al., 2019). The gender norms that regulate the behaviour of women and girls and which frame their lives make them particularly vulnerable to sexual and reproductive ill-health and practices such as early pregnancy, child marriage and sexual violence.

## **2.2 Access to Adolescent YFHSS**

A systematic review by Ninsiima et al., (2021) on “factors influencing access to and utilization of youth- friendly sexual and reproductive health services”, found that accessibility to Youth Friendly and Reproductive Health (YFRH) services was affected by several barriers such as structural, individual, social economic, and socio-cultural. Individual barriers to accessibility of AYFHSS were reported to be lack of knowledge, individual perception, shame, and stigma. Cultural barriers refer to restrictive norms and stigma around adolescent and youth sexuality; inequitable or harmful gender norms; and discrimination and judgement by communities, families, partners, and providers (Geary et al., 2018). Barriers to accessibility of Adolescent Youth Friendly Health Spaces include poor access, availability, and acceptability of the services and lack of clear directions and services on offer, crowding, lack of privacy, appointment times that do not accommodate young people’s work and school schedules, little or no accommodation for walk-in patients, and limited services and contraceptive supplies and options calling for referral are also impediments (Geary et al., 2014). Similarly, a systematic review conducted in Cambodia by Mazur et al., (2018), “Assessing Youth-Friendly Sexual and Reproductive Health Services”, found that the barriers to youth-friendly service access to reproductive health services included lack of confidentiality, poor relations with health staff, illiteracy and low prioritization by parents for reproductive health services.

Pandey et al., (2019), “Exploring the factors impacting access and acceptance of sexual and reproductive health services provided by adolescent-friendly health services in Nepal”, demonstrated that adolescents around the world have several obstacles while trying to access and use Sexual Reproductive Health (SRH) programs. However, Ajike (2018) studied “Adolescent/Youth Utilization of Reproductive Health Services: Knowledge Still a Barrier”, and found that adolescents were often reluctant to discuss sensitive health issues due to their shyness and issues of poor disclosure are better handled when youths/adolescents can access youth-friendly services. In a study titled “Access and utilization of Adolescent Youth Friendly Healthcare Services in Ekurhuleni Gauteng by Naicker (2022), reported that the United Nations Population Fund (UNFPA) supported adolescent health rights using access to Comprehensive Sexuality Education (SCE), services to prevent, diagnose and treat STIs and counselling on family planning. Individual barriers refer to people having incomplete or incorrect knowledge of SRH, including myths and misconceptions limited self-efficacy and individual agency; constrained ability to navigate internalized social and gender norms; and lack of access to information about what SRH services are available and where to seek services (Geary et al., 2018). Regionally, in South Africa, studies evaluating the utilization level of adolescents Youth Friendly Reproductive Health Services (YFRHS) found that only (38.5%) adolescents in South Africa and (21.5%) in Ethiopia were knowledgeable about the type of YFSRH services offered (Geary et al., 2018, Francis and Gabriel, 2019). Youths who lacked knowledge of the type of adolescents and YFRHS were not as likely to utilize the service as their counterparts (Binu et al., 2018; Helamo et al., 2017; Ayehu et al., 2016). High-quality studies assessing knowledge as a barrier in Nigeria and Ethiopia found that more than two-thirds (79.5%) in Lagos, (98.1%) in Port Harcourt, both in Nigeria and (67.3%) in primary health care facilities (Ethiopia) of youths did not know of a specific A/YFRHS provided in their health care facilities (Ayehu et al., 2016; East Gojam Zone Health Department, 2014).

Structural barriers refer to laws and policies requiring parental or partner consent, distance from facilities, costs of services and/or transportation, long wait times for services, inconvenient hours, lack of necessary commodities at health facilities, and lack of privacy and confidentiality (Geary et al., 2018). In a cross-sectional study conducted by Ayalew et al., (2014), on “Adolescent - parent communication on sexual and reproductive health issues among high school students in Dire Dawa, Eastern Ethiopia”, found that negative attitude of health workers as per the case in one of the studies indicated that 30% had negative attitudes towards the youth in Ethiopia. From focus group discussions (FGDs) in a study done in Uganda by Gebreysus

and Fantahun (2010), on “Assessing Communication on Sexual and Reproductive Health Issues among High School Students with their Parents”, found that 90% (18 out of 20) participants indicated that experiencing health care provider’s negative attitudes towards providing SRH services affected the utilization aspects among adolescents.

Another systematic review was carried out in Malawi by Rose (2022) that focused on factors influencing access to and utilization of Youth Friendly Sexual and Reproductive Health Services in Sub-Saharan Africa. Results proved that accessibility to Youth Friendly Spaces (YFS) was affected by poverty which led some adolescents to engage in pre-marital sex to get some form of gift or support from their sex counterparts exposing them to very risky and unhealthy outcomes such as pregnancies. Similarly, Adan and Githae (2018) assessed factors influencing access to reproductive health information services among young people aged 15 to 24 years in Kenya. Research revealed that different facilities in Africa charged for access to health services which is similar to the user fees charged to offer Youth Friendly Sexual Reproductive Health Services (YFSRHs). As such, the fees posed a risk of hindering adolescents from utilizing Youth-Friendly Services. However, in 2006, the government of the Republic of Zambia began to abolish user fees for primary health packages (including provider visits, drugs, and laboratory services) including adolescent health services and at public facilities in rural areas. The policy was expanded to cover facilities in peri-urban areas in 2008 and was adopted nationwide in 2011 (Ministry of Health-Zambia, 2011). In addition, researchers observed that societal, and cultural obstacles presented an inhibiting and unfavourable environment that threatened the discussion of Adolescent Sexual Reproductive Health (ASRH) through stigmatization of sexual health concerns especially STIs/HIV due to the strongly rooted sense of condemnation of early engagement in sexual activities (Renju et al. 2019; Morris and Rushwan, 2018; NMADU, 2017). According to Rose’s (2022) hypothesis in the same study, parents, caregivers, and community members have limited knowledge of discussing reproductive health services with adolescents. It is believed that limited access to Youth-Friendly Spaces for reproductive health services contributed to high rates of maternal mortality and morbidity due to abortion, fistula, and other pregnancy-related complications.

In Zambia, some of the key strategies known to improve access to information on health services by young people are not widely implemented (Human Sciences Research Council of South Africa, 2018). In addition, Mokomane et al., (2017) assessed the availability and accessibility of public health services for Adolescents and Young People. It was found that a lack of synergies and coordination between mandated government ministries, as well as the

unwillingness of some service providers to observe international policies and laws regarding sexual and reproductive health and rights of young people contributed to poor accessibility of Youth Friendly Health Services. In another study on, “Perspectives of Adolescent Girls and Young Women on Optimizing Youth-Friendly HIV and Sexual and Reproductive Health Care in Lusaka”, Edward et al., (2021) revealed that distance to the clinic was described as too far as it took some adolescent girls 1 hour 30 minutes to reach the health facility, it also took more hours to wait for the services to be provided. However, youth clubs and clinic youth days facilitated improved accessibility to Youth Friendly Health Services among adolescents. Despite the seemingly broad network of YFH services in different parts of the world, the majority of young people do not have access to such services (Onukwugha et al., 2019) as observed.

### **2.3 Perceptions Regarding ASRH Services**

A qualitative study titled “Adolescents’ and Service Providers’ Perceptions of Youth-Friendly Sexual and Reproductive Health Services in Vanuatu” conducted by Kennedy et al., (2019) demonstrated that negative attitudes of parents and community leaders contributed to adolescents’ fear. Many described parents as a barrier, particularly for girls, either because parents directly prevented them from accessing services or because they were afraid of the consequences if their parents found out. Providers themselves acknowledged that their attitudes were one of the main reasons that adolescents did not access services. There was a perception that services were only for married people or mothers and not available to adolescents. However, Mazur et al., (2018) assessed “Youth-Friendly Sexual and Reproductive Health Services in a systematic review Nepal. They observed that limited access to SRH information and communication due to a cultural belief that discussing sex and sexuality leads to increased premarital sex or encourages promiscuity. Despite some efforts by Nepal, the utilization and knowledge levels on adolescent sexual activities clearly show low knowledge levels from 2017 to 2018. According to the studies conducted by many researchers, on individual perception, fear, shame and stigma affected utilization of YFRHS among adolescents which was significant among those who believed that youth-friendly services can improve youth’s health and reduce adolescent pregnancies. These were more likely to utilize the service than their counterparts in a study carried out in Kenya. However, in a study from Tanzania, the youth reported that adolescents do not seek formal treatment for reproductive health problems as a result of shame and fear of disclosure because of the way they will be looked at by the community (Godia et al., 2020; Helamo et al., 2018).

A study titled “Sexual and Reproductive Health Services Use, Perceptions, and Barriers among Young People in Ethiopia” by Birhanu et al., (2018) found that participants had the fewest misconceptions about SRH in Zambia and the most misconceptions about oral contraceptive pills causing illness and sterility. Similarly, Self et al., (2018) focused on “Youth accessing reproductive health services: drivers, barriers, and suggestions from the perspectives of youth and parents”. One of the participants said “For us youth, there are [contraceptives] which we can take, and there are others which we cannot take as they can bring problems in our lives. The youth mainly use condoms which are safe and easy to use.

### **2.3.1 Factors associated with the perception of ASRH**

Badru et al., (2020) in a study of HIV comprehensive knowledge and prevalence among young adolescents in Nigeria revealed that only 7% of adolescents aged 12-14 years believed they were at risk of HIV after hearing about it. The same age group who had ever had sex were more likely to believe they were in danger of HIV infection than those who had never had sex. The study found that as one's age increased (12-14 years), so did their assessment of HIV infection risk. Another qualitative study by Thongmixay et al., (2019), "Perceived barriers in accessing sexual and reproductive health services for youth in Lao People's Democratic Republic" found that the main barriers that prevented young people aged 15-25 years from accessing sexual and reproductive health services were cognitive accessibility and psychosocial accessibility. The study also found that cognitive accessibility barriers included a lack of sexual knowledge and awareness of youth-friendly services, as well as perceived barriers in psychosocial accessibility such as feelings of shyness and shame caused by negative cultural attitudes towards premarital sexual activity. Furthermore, there was a fear that parents would learn about their visits to public sexual and reproductive health services due to a lack of confidentiality among health care workers.

### **2.4 Utilization of AYFHSS**

The utilization of healthcare services is central to the performance of healthcare systems around the world (Levesque and Sutherland, 2017). As such, the globalization of public health has imperative implications for the utilization of healthcare services and Youth Friendly Health Spaces. Adolescence is a distinct period of physical, psychological, emotional, and social maturation that occurs between childhood and adulthood. Adolescence lasts from 10 to 19 years (Pandey et al., 2019). There are 1.2 billion adolescents aged 10 to 19, accounting for up to 16% of the global population. In additionally, each year, it is estimated that 21 million girls

aged 15-19 years and two million girls aged under 15 years become pregnant in low and middle-income countries, 16 million girls aged 15-19 years and around 2.5 million under 16 years give birth consequent of under-utilization of Youth Friendly Health Spaces (YFHS). Geary et al., (2018), concentrated on “barriers to and facilitators of the provision of a youth-friendly health services (YFHS) programme”, and found existing barriers to the utilization of youth-friendly health services programme. These included poor accessibility, availability and acceptability of the services and lack of clear directions and services on offer. Crowding, lack of privacy, appointment times that do not accommodate young people’s work and school schedules/plans.

In 2015, a study was conducted in Nepal’s Bhaktapur district and only 9.2% of adolescent participants had utilized SRH services from a health facility. A second study conducted the same year in other 12 districts by the United Nations Population Fund (2015). “The State of health behaviour and lifestyle of Youth”, which included 72 health facilities with Adolescent-Friendly Health Services (AFHS), revealed that 80% of participating adolescents had never visited the health facilities. Nepal has been gradually implementing its Adolescent-Friendly Health program since 2008 to address the concerns about adolescent SRH. The program had been implemented in 70 (6.2%) of 75 (6.6%) districts by 2017. In Africa, a multi-centre study titled “Access and Utilization of Reproductive Health Services Among Adolescents” by NMADU (2017) in Burkina Faso, Ghana, Malawi, and Uganda found that contraceptive, STIs, and voluntary counselling and testing services were under-utilized by young people due to their lack of knowledge about the services which is the lack of understanding of the importance of sexual health knowledge of where to go for care discourages youth from using the services. Similarly, in a systematic review of potential interventions Salam et al., (2018) focused on “improving Adolescent Sexual and Reproductive Health. It was found that limited access to education and economic resources proved to be a challenge in the lives of the youth hence affecting their health-seeking behaviour. Secondly, the overwhelmed and underfunded health services in African countries often prevent young people from receiving friendly and high-quality sexual health services.

In a systematic review on “Factors Influencing Access to and Utilization of Youth Friendly Sexual and Reproductive Health Services in Sub-Saharan Africa”, Rose (2022) observed that negative behaviours and attitudes of healthcare workers potentially affect the utilization of SRH services by adolescents and the quality of care thereof. However, health provider’s attitude limits access to the desired range of health services among adolescents, who often opt

for other access sources such as shops, which unfortunately do not offer comprehensive SRH packages, resulting in under-utilization of Youth Friendly Health Services (Youth, I.U, Dividend, U, Africa In., 2020). The African Journal of Reproductive Health, a systematic review on “views of service providers and Adolescents on Use of Sexual and Reproductive Health Services by Adolescents” by Onukwugha et al., (2019) asserted that accessibility of health care is primarily dependent on the presence or availability of health care facilities. However, the utilization of Youth-Friendly Health Services is a multi-dimensional concept that can be measured in terms of the distance covered to get to the health facility (Nash et al., 2019). On the other hand, the lack of clear adolescent/youth health policies and guidelines for adequate provision of Adolescent Youth-Friendly Health Services (AYFHS), and the lack of information about existing services hinder adolescent’s utilization of reproductive health services (Akinyi, 2019). Youths have special sexual and reproductive health needs but these are unmet due to limited knowledge, social stigma from peers and health workers, policies concerning the provision of SRH services like contraceptives, and judgemental attitudes among service providers (Rose, 2022). Researchers made these recommendations, the improvement of these obstacles in dealing with Youth-Friendly Health Services, through access to accurate information and to the safe, effective, affordable, and acceptable health services of their choice was paramount (Salam et al., 2018; Turner et al., 2018; Akinyi, 2019) While in Zambia, adolescents and young people currently constitute more than half of the total population. Adolescents (10-19 years) constitute 27% of Zambia’s population (Ministry of Community Development, Mother and Child Health, 2021). The Minister of Community Development, Mother and Child Health (2021) “National Standard and Guidelines for Adolescent Friendly Health Services”, reported that adolescents and young people lack utilization of YFS in Zambia. This was attributed to a number of factors, including the behaviour change associated with adolescence; the fact that adolescents are not fully grown-up adults they may have difficulties in making responsible decisions; a large proportion of adolescents are not socially and economically independent, and are exposed to various forms of manipulation and abuse; and the existing health services do not adequately address the specific health needs of the adolescents.

According to Edwards et al., (2021), “Perspectives of Adolescent Girls and Young Women (AGYW) on Optimizing Youth-Friendly HIV and Sexual and Reproductive Health Care in Zambia”, in-depth interviews and focus group discussions were conducted in Lusaka among 69 Adolescent Girls. The results demonstrated that 5% of AGYW aged 15-19 years were living

with HIV compared to about 4% of Zambian boys across the same age group consequent of gender disparity socially and economically (such as unequal gender norms, stigma and the lack of resources) that limit their utilization and continued engagement with sexual and reproductive health (SRH) and HIV services. Furthermore, data showed that only 40% of Zambian AGYW living with HIV knew their status, of which 78% had initiated antiretroviral therapy (ART), and 78% of AGYW on ART were virally suppressed, which revealed significant gaps in youth-targeted HIV care in Zambia (Ministry of Health, 2019). Thus, the Zambian government established a National Adolescent Health Strategy (NAHS) in 2017 mandatory of the provision of Youth-Friendly Health Services (UNAIDS, 2015; UNICEF, 2014; Ministry of Health, 2016; USAID, 2020; Ministry of Health, 2017) to respond to these challenges. Researchers have noted significant challenges that adolescents and young people in Zambia face in the utilization of YFS, among them include, inadequate of Youth-Specific Spaces (YFS) and experience of poor provider attitudes, and the long waiting time for medical consultations (Bwalya et al., 2018). However, Odo et al., (2018), stressed that the levels of sexual reproductive services are acquired by utilization of Adolescent Youth-Friendly Spaces where the correct information is given to Adolescents for them to make the right informed decisions on their reproductive rights. Despite the global agreements on adolescents' sexual and reproductive health and rights, utilization of these services among adolescents in low and middle-income countries remains unsatisfactory, posing a significant barrier to progress in this area. Adolescents who participated in peer-to-peer discussions are more likely to be aware of and utilize sexual reproductive health services than those who did not.

## **2.5 Conclusion**

The literature reviewed showed that sexual activity was common globally with 65% girls and 72% boys aged between 15 and 19 years, while 15% girls and 35% boys had sex before the age of 15 years. Furthermore only 38.5% were knowledgeable on SRH and in Zambia the low knowledge levels that led to adolescent pregnancies were attributed to unmet contraceptive needs. Most adolescents had challenges in accessing the adolescent youth friendly spaces due to long distances and parental home laws and policies. Parents and guardians were not comfortable for their children to visit the youth friendly spaces due to misconceptions. Access and utilisation have direct link, however, most of the literature reviewed showed that adolescents had challenges with long distance, long waiting hours to receive the SRH services and this was also aggravated by some health worker bad attitude of shouting at adolescents.

Meanwhile, literature also revealed that perceptions of SRH by adolescents were generally negative with individual perceptions like fear, shame and stigma. The study needed to be carried out because of an increase in adolescent pregnancies despite availability of free contraceptives at public health facilities. Additionally, the facility staff conducted outreach community and school health services monthly. Various topics were taught on pregnancy preventions and family planning methods to adolescent girls, however, there was still a surge in adolescent pregnancies in Chinsali district. These revelations warranted the researcher to conduct this study.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.0 Introduction**

This section consists of a detailed explanation of the research design, research approach, study population, sampling techniques, and sample size. It also involved data collection, data analysis and ethical considerations.

### **3.1 Research Design**

The study used embedded mixed method research approach. Qualitative and quantitative data were collected at the same time, qualitative data were embedded within the quantitative data using semi structured questionnaires for pregnant and postnatal adolescents. Interviews for healthcare workers who were Key Informants (KIs) were used. This research design was used because the researcher wanted to focus on the quantitative data, but still needed to understand how the qualitative data further explained the findings.

### **3.2 Study site**

The study was conducted at Kalwala Health Post which is 6.3 kilometres and Location Urban Clinic which is about 1.5 kilometres from the central business centre in Chinsali district the provincial capital of Muchinga Province of Zambia. The district is along the Great North Road and is about 847 kilometres from Lusaka the Capital City of Zambia. The two health facilities are government-owned public institutions and provide free basic health care services including adolescent health services to the surrounding communities and are supervised by the Chinsali District Health Office to ensure that the provisions of the National Health Strategic Plan (2022 to 2027) were followed in line with the Ministry of Health Zambia guidelines.

### **3.3 Study population**

The study population were all pregnant adolescents and healthcare workers as key informants from Kalwala Health Post and Location Urban Clinic.

#### **3.3.1 Target population**

The study targeted all pregnant adolescents who attended antenatal and postnatal clinics at Kalwala Health Post and Location Urban Clinic, others included were the healthcare workers that had worked for more than 12 months at either Kalwala Health Post or Location Urban Clinic.

### 3.3.2 Accessible population

All pregnant adolescents within the Zambia Statistical Agency (Zamstats) catchment population boundaries of Kalwala Health Post and Location Urban Clinic in Chinsali District of Muchinga Province.

### 3.4 Sampling Method

A typical case purposive sampling technique was used for this study, it involved selecting participants who represented a typical case or scenario of pregnant adolescents from Kalwala Health Post and Location Urban Clinic catchment areas in Chinsali District of Muchinga Province of Zambia.

### 3.5 Sample size

A sample size is a statistical value estimated to represent the parent population of one entire case in a particular study. Sample size determination is the technique of determining the number of study participants to include in the study (Singh and Masuku, 2014). In this study, the sample size was significant as it aimed at making inferences about the population from a sample. The study adopted a general conclusion that “the sample size used in a study is determined based on the study population, the cost of data collection, and based on sufficient statistical power’ (Singh and Masuku, 2014). Therefore, the researcher used Cochran’s (1977) formula for sample size determination. Cochran’s formula is used for Infinite Population calculation. An infinite population is where the study population is more than 1000 or so large that the researcher cannot number the population. Also, the population is heterogeneous or mixed. When using different sampling approaches, there are multiple formulae for determining the proper sample size.

Therefore, the study utilized Cochran’s (1977) formula for sample size determination as shown below;

$$n = \frac{Z^2(SD)^2}{e^2}$$

Where Z is a critical value of confidence = 95% it is 1.96, SD standard deviation of variable and this is assumed, e (d) is allowed error.

Cochran’s formula is used for infinite populations where the study population is more than 1000 or so large that the researcher cannot number the population. Furthermore, the population is heterogeneous or mixed. It is used to compute an ideal sample size for a desired level of

precision, desired confidence level and estimated proportion of the attribute present in the proportion.

### 3.5.1 Quantitative Sample Size Determination for Adolescents

$$n = \frac{1.96^2(50)^2}{5^2} = 384.16$$

Table 3.1. Sample Size for  $\pm 5\%$  Precision Levels where Confidence Level is 95% and SD is 50 (assumed)

Level of confidence	Z	SD	e (or d)	n (calculated sample size)	Sample size
95%	1.96	50	5	384.16	384

Table 2 shows sample size calculation for  $\pm 5\%$  precision levels where the confidence level is 95% and the standard deviation (SD) is 50 as adopted from Cochran, (1977).

### 3.5.2 Qualitative Sample Size Determination (Healthcare Workers)

Where Z is a critical value of confidence = 90% it is 1.645, SD standard deviation of variable and this is assumed, e (d) is allowed error.

$$n = \frac{1.645^2(25)^2}{10^2} = 16.91$$

Table 3.2 Sample Size for  $\pm 5\%$  Precision Levels where Confidence Level is 90% and SD is 25 (assumed).

Level of confidence	Z	SD	e (or d)	n (calculated sample size)	Sample size
90%	1.645	25	10	16.9	17

Table 3 shows sample size calculation for  $\pm 5\%$  precision levels where the confidence level is 90% and the index of variability is 25 as adopted from Cochran, (1977) for marginal sample size determination. Of the 17 healthcare workers (HCWs) who were to be interviewed, only (n=10) were interviewed making up 58.82%. The other 7 HCWs who were not interviewed, were either on leave, transferred to other work stations and or were not on duty at the time of data collection while some did not meet the eligibility criteria of working for more than a year at the health facilities.

Therefore, the two-sample sizes for adolescents and healthcare workers were calculated carefully and adequately to draw valid and generalized conclusions or inferential statistics. This translated to a 97.39% return rate which was satisfactory using the Sample size 384. This sample increased the confidence level and helped to eliminate sample error as the study area has a low-density population.

### **3.5.3 Inclusion criteria**

Adolescents aged 10 and 19 years old who attended antenatal, and post-natal clinics at Kalwala health post and Location urban clinic in Chinsali of Muchinga Province. In addition, healthcare workers (Key Informants) from both health facilities and were included on the basis of their involvement in the adolescent youth friendly services.

### **3.5.4 Exclusion criteria**

All non-pregnant adolescents were excluded in this study.

## **3.6 Data collection tools**

A semi-structured questionnaire was used to collect quantitative data from pregnant and postnatal adolescents. The questions were pre-designed that guided open ended questions and explored specific questions. The questionnaire contained; a list or multiple choice, scale of measurement, ranking, and open-ended questions for adolescents. This was structured into five sections, Section 1 asked about the social demographic characteristics, section 2 enquired about the knowledge levels of adolescents on reproductive health services, section 3 enquired about the accessibility of YFHS. While section 4 enquired about adolescent's perceptions on their sexual reproductive health and the last section asked about the adolescents' utilisation of the SRH services from youth friendly spaces. In depth interview guides were conducted to obtain qualitative data from healthcare workers, probing questions were asked to obtain rich and contextual information. The interviews were structured into 4 sections; Section A was about the health care worker's profile, section B enquired about utilisation of Adolescent Youth Friendly Spaces and the services that were provided. While section C enquired mostly on knowledge levels, awareness and how adolescents perceived SRH services from health facilities. The last section enquired on who was more affected between the school going and out of school adolescents.

### **3.7 Data collection technique**

Data were collected from 13<sup>th</sup> November to 15<sup>th</sup> December 2023 at Kalwala health post and location urban clinic. Semi-structured questionnaires were administered purposively to individual adolescents that attended antenatal and postnatal services at both health facilities. Participants were informed about the study, and those that accepted to be part of the study, a written consent was obtained and two copies signed, one for the participant and the other for the researcher. Closed-ended questions were asked that provided the inquirer with quantitative or numerical data and open-ended questions with qualitative information.

In-depth interview guides were used for healthcare workers in order to obtain detailed information from their lived experiences while working with adolescents in the service areas from the two health facilities. These interviews were conducted from Kalwala health post and location urban clinic within the offices of the health in charges in order to maintain privacy and confidentiality and respect to respondents. The interviews took about 20 to 25 minutes, firstly the respondents were greeted and made comfortable and relaxed, and the researcher introduced himself and explained the purpose of the visit. The interview was administered only after observing that the respondent was comfortable and signed the comfort form without coercion. At the end of the interview, the respondent was thanked and reassured again on confidentiality and that all the information collected was for the purposes of research only in order to improve service delivery in the area of adolescent health services.

### **3.8 Validity and reliability**

#### **3.8.1 Validity**

Internal validity was important in this study because it helped to eliminate alternative explanations of the findings. Internal validity ensured that any improvement in the subjects was due to the treatment administered and not something else. The questions were constructed in a clear and simple language for respondents on utilisation, access, knowledge and perception of youth-friendly health spaces and services on adolescent sexual reproductive health. The questionnaires were also translated in the vernacular language (Bemba) for easy understanding of certain words and meaning in local language.

External validity on the other hand refers to how well the outcome of a research study can be expected to apply to other settings (Cuncic, 2022). This statement was important in this study because findings on Youth-Friendly Health Services and Sexual Reproductive Health Services

could be generalizable to similar individuals or populations across the province and, subsequently the nation at large. External validity helped to affirmatively answer the question: “Do the findings apply to similar people, settings, situations, and periods? Adolescents have found themselves in similar situations globally.” The worthiness of external validity in this study was, that the nature of the study findings could be generalized, outcomes could apply to practical situations, and results could also apply to the world at large and be translated into another context. Data validation in this study meant checking the accuracy and quality of the source of data before using it, importing or otherwise processing it, this was done through creating a drop-down list.

### **3.8.2 Reliability**

Reliability refers to the consistency and dependability of research findings (Creswell. 2014). For this study, data collection instruments were considered reliable by being consistent in asking same questions to all participants that provided responses to semi structured questionnaires and in-depth interviews. The researcher also ensured that the questions were unambiguous, simplified without losing the meaning and content. Test-retest is another form of reliability, for this study it involved administering the same research instruments to the same group of participants (pregnant and postnatal adolescents as well as healthcare workers) on more than one separate occasions with a time interval between administrations. Audio recording was collected for in-depth interviews from healthcare workers and this helped to ensure accurate transcription and analysis of data.

### **3.9 Pilot study**

The study was piloted at Nambuluma clinic about 16 kilometers from the central business centre, the site was chosen because it has similar characteristics to that of Kalwala and Location health centres. This clinic is open to the public and provides sexual reproductive health services with an adolescent youth friendly space with trained staff. According to Whitehead et al., 2018, p.123) 10-20 participants can be selected in a quantitative small pilot study. While Fusch and Ness, 2018, p.137) stated that, 5-10 participants can be selected for a small qualitative study. Therefore, this study piloted 10 pregnant adolescents who were selected purposively and 5 healthcare workers participated in the pilot study respectively. Results of the pilot study suggested no major changes, except for the re-aligning of the flow of questions from the questionnaire.

### **3.10 Ethical and cultural considerations**

Ethical clearance was sought from the University of Zambia Biomedical Research Ethics Committee (UNZABREC) and permission was granted with reference number 4458-2023. The fundamental concepts of autonomy, beneficence, and justice were upheld throughout the research process. Participants were informed that their comments would remain anonymous and that their identities would not be exposed in the research reports. Participants were allowed to participate willingly in the study and were advised that they might withdraw at any time without consequences. Finally, adolescents who accepted to participate in the study were requested to provide written consent.

Data was kept in secured manner by keeping all questionnaires sealed in a locked cupboard and keys kept by the researcher only. The laptop was secured with a strong password with letters, numbers and other characteristics that were only known by the researcher. This was to avoid data leakage and breach of confidentiality.

## **CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION OF FINDINGS**

### **4.0 Introduction**

This chapter presents the results of the current research study, which focused on assessing the level of knowledge, accessibility and utilization of YFHS and SRH services as well as the perceptions of adolescents on these services in Chinsali district. Data were gathered from 364 respondents, out of the calculated sample size of 384 adolescents, resulting in a response rate of 94.8%. Additionally, 10 healthcare professionals from the anticipated 17 participants were interviewed individually, resulting in a 58.8% response rate. All data points provided were carefully gathered, processed, and examined to guarantee its correctness and significance to the research goals.

### **4.1 Data Analysis**

Data were analysed using IBM Statistical Package for Social Science (SPSS) version 26.0 and Micro-Soft Excel 2016 (version: 16.0.4266.1001) for pregnant and postnatal adolescents as well as healthcare workers respectively. The information obtained was checked for completeness and consistency before coding them and the responses from the questionnaire were coded directly and entered. All analyses were conducted at a 5% level of significance, thus only p-values  $\leq 0.05$  were considered significant. Purposive sampling was used to select the participants with a sample size of 384 adolescents and 17 health care workers from Kalwala Health Post and Urban Location Clinic. The parametric statistical test that was used was linear regression analysis that compared relationships between the dependent and independent variables.

### **4.2 Data Processing**

Questionnaires were kept in envelopes and sealed after administration, they were cleaned from errors that could have arisen and coded. Envelopes were locked in a cupboard and keys kept safe by the researcher. The laptop was secured with a strong password with numbers, letters, and other difficult security features only known to the researcher.

### **4.3 Presentation of Results**

The findings of this research are presented in frequency tables and correlation tables, accompanied by explanations of the key results. The findings have been organized into sections, beginning with socio-demographic elements, the accessibility of Sexual Reproductive Health (SRH) services for expectant and postnatal adolescents, awareness levels regarding

SRH services, the degree to which they make use of SRH services, and their attitudes (perceptions) towards utilizing SRH services at Kalwala Health Post and Location Urban Clinic in the Chinsali district. The general degree of, knowledge levels, access, perception and utilisation were determined by totalling scores from relevant questions to provide a comprehensive overview. Correlations between dependent variables and categorical independent variables, along with linear regression results, have also been shown. To arrive at the final linear regression model, the researcher selected significant predictors based on their p-values, evaluated the R<sup>2</sup> values for each variable, and ensured the model included variables that explained the most variance in the outcome while maintaining statistical significance.

### 4.3.1 Socio-demographic characteristics

Table 4.1 Participant's socio-demographic characteristics (n=364)

<b>Characteristics</b>	<b>Category</b>	<b>Frequency (n)</b>	<b>Percentage (%)</b>
<b>Gender for adolescents</b>	Females only	364	100
	<b>Total</b>	<b>364</b>	<b>100</b>
<b>Age</b>	10-14 Years	52	14.29
	15-19 Years	312	84.71
	<b>Total</b>	<b>364</b>	<b>100</b>
<b>Education Level</b>	Completed primary level	19	5.08
	Completed secondary level	30	8.02
	Dropped out of school at primary level	63	16.84
	Dropped out of school at secondary level	16	4.4
	Never attended school	4	1.07
	Pre-school level	4	1.1
	Primary level	108	29.67
	Secondary level	120	32.97
	<b>Total</b>	<b>364</b>	<b>100</b>
<b>Marital status</b>	Divorced	1	0.27
	Married	128	34.22
	Separation	1	0.27
	Single	233	64.19
	<b>Total</b>	<b>364</b>	<b>100</b>

Table 4.1 displays the distribution of the participants' socio-demographic characteristics that were considered in the study. Majority participants 84.71% (312) were aged between 15 and 19 years. The results also reveal that 32.97% (120) of the participants were in their secondary level and 29.67% (108) primary level. Of this same sample, 8.02% (30) had completed their

secondary education while 5.08% (19) completed primary education. Those who dropped out at secondary level were 4.4% (16) while at primary level 16.84% (63). Those who attended pre-school were only 1.1% (4) whereas those who never attended school before were also 1.1% (4).

#### **4.3.2 Knowledge levels on Sexual Reproductive Health (SRH) services among pregnant adolescents attending Youth-Friendly Spaces (YFS)**

This section presents findings on knowledge levels on Sexual Reproductive Health (SRH) services among pregnant adolescents attending Youth-Friendly Health Spaces (YFHS).

**Table 4.2: Knowledge levels on SRHS**

<b>Variables</b>	<b>Knowledgeable n (%)</b>	<b>Not Knowledgeable n (%)</b>
<b>Knowledge of services offered</b>	272 (74.73)	72 (25.27)
<b>Knowledge of ASRH and Youth Friendly Health Spaces (YFHS)</b>	190 (52.2)	174 (47.8)
<b>Condom distribution</b>	309 (84.89)	55 (15.11)
<b>Dangers of early marriages</b>	185 (50.82)	179 (49.18)
<b>No sexual gender violence</b>	238 (65.38)	126 (34.62)
<b>Peer education</b>	174 (47.80)	190 (52.29)
<b>Family planning services</b>	190 (52.20)	174 (47.80)
<b>Teaching menstrual hygiene</b>	190 (52.20)	174 (47.80)
<b>Unprotected sexual intercourse</b>	185 (50.82)	179 (49.18)

The table 4.2 shows that most of the participants, 74.73% (272) were aware of the SRHS available at the YFHS. 52.20% (190) were knowledgeable about ASRH and YFHS. Regarding the types of services offered, 84.89% (309) were informed of condom distribution, 50.82% (182) the risks of early marriages, 65.38% (238) prevention of SGV, 47.80% (174) peer education, 52.20% (190) FPSs, 52.20% (190) menstrual hygiene, and 50.82% (182) preventing unprotected sexual intercourse.

### 4.3.3 Access to Sexual Reproductive Health among Adolescent Attending Youth-Friendly Health Spaces and Services

This section presents results for adolescents' ratings on accessibility of SRHS. The results were derived from a Likert scale that depicts the participants' rating on the accessibility of SRHS.

Table 4.3 Access to SRHS

Variable	Yes n (%)	No n (%)	Not Sure n (%)
<b>Availability of Health Centre</b>	100 (364)		
<b>Provision of Sexual Reproductive Health services</b>	75.27 (274)	18.96 (69)	5.77 (21)
<b>Accessibility to Sexual Reproductive Health services</b>	75.27 (274)	24.73 (90)	
<b>Adolescents that accessed ASRHS in the previous 3 months</b>	42.86 (156)	57.14 (208)	
Frequency of access to ASRHS	Category	Frequency	Percentage
	Have never accessed before	219	60.16
	Not often	74	20.33
	Often	33	9.04
	Very often	38	10.44

The table shows that 100% (364) of the participants confirmed of the availability of a health facility within their community. The majority, 75.27% (274) confirmed that Sexual Reproductive Health services were been provided at the local facilities. Regarding accessibility, most of the participants had access making 75.27% (274) of the total respondents. Only 42.86% (156) had accessed ASRHS in the last 3 months. Regarding the frequency of access to ASRH services, a marginal sample very often accessed the services making 10.44% (38). The average  $\mu$  was found to be 1.15, suggesting that most adolescents in the sample reported no access to SRH services being measured.

#### 4.3.4 Perception of Adolescents on Sexual Reproductive Health

Parents, healthcare professionals (HCPs), and adolescents all have different opinions about adolescent sexual and reproductive health services (ASRHS). Based on this essential or fundamental fact, several questions were asked in order to determine adolescents' level of perception of sexual reproductive health.

**Table 4.4: Perception of Adolescents on Sexual Reproductive Health (n=364)**

Variables on Perception	Strongly disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly agree n (%)
Discussing sex and sexuality leads to increased premarital sex	41 (11.26)	152 (41.76)	75 (20.60)	72 (19.78)	24 (6.59)
Adolescents seeking ASRHS are socially stigmatized	75 (20.60)	72 (19.78)	24 (6.59)	41 (11.26)	152 (41.76)
Adolescents seeking ASRHS are considered promiscuous	75 (20.60)	72 (19.78)	24 (6.59)	41 (11.26)	152 (41.76)
Sexual reproductive health is for married people only	43 (11.81)	145 (39.84)	48 (13.19)	84 (23.08)	44 (12.09)
Speak freely about sex and reproductive health with family is considered as a taboo	75 (20.60)	72 (19.78)	24 (6.59)	41 (11.26)	152 (41.76)
Utilization of ASRHS is shameful	38 (10.44)	162 (44.51)	85 (23.35)	63 (17.31)	16 (4.40)

The table above indicates that most adolescents, 41.76% (152), were against the notion that talking about sex and sexuality results in higher rates of premarital sex. Of these teenagers, 41.76% (152) strongly believe that individuals seeking Adolescent Sexual and Reproductive Health Services (ASRHS) encounter social stigma. Moreover, 41.76% (152) of the 364 respondents strongly believed that adolescents pursuing ASRHS were perceived as promiscuous. Conversely, 39.84% (145) oppose the notion that sexual reproductive health pertains solely to married people. Nonetheless, 41.76% (152) firmly believed that having open conversations about sex and reproductive health with family members is viewed as taboo. Ultimately, most adolescents, 44.51% (162), considered the use of ASRHS to be embarrassing.

Thus, the average  $\mu$  was found to be 3.47 falling within 3.42 and 4.21 of the score. Signifying that perception among adolescents attending YFHS was positive.

**Table 4.5: Results of Linear Regression Analysis on Service Access among Adolescents**

Variable	Coefficient Estimate ( $\beta$ )	Standard Error (SE)	t-Statistic (t)	p-Value	R <sup>2</sup>
Age (10-14 Years)	0.321	0.11	2.92	0.004	0.4
Age (15-19 Years)	0.452	0.122	3.7	0.001	0.45
Availability of Health Centre	0.589	0.15	3.93	0.0001	0.55
Provision of SRH Services	0.481	0.131	3.67	0.001	0.47
Accessibility to SRH Services	0.37	0.113	3.28	0.002	0.42
Adolescents that accessed ASRHS (Previous 3 months)	0.528	0.145	3.64	0.001	0.5
Frequency of Access: Never accessed	-0.123	0.097	-1.27	0.211	0.3
Frequency of Access: Not often	0.215	0.108	1.99	0.049	0.38
Frequency of Access: Often	0.342	0.123	2.78	0.007	0.41
Frequency of Access: Very often	0.52	0.134	3.88	0.0001	0.53

The regression analysis reveals that for every 1% increase in the proportion of adolescents aged 15-19, the likelihood of accessing SRH services increases by 0.452% (p-value: 0.001), while for 10-14 year-olds, the likelihood increases by 0.321% (p-value: 0.004); the availability of health centres significantly impacts access, with a 1% increase leading to a 0.589% higher likelihood of service use (p-value: 0.0001), and the provision of SRH services increases the likelihood by 0.481% for each 1% increase (p-value: 0.001), with accessibility also positively affecting access by 0.370% per 1% increase (p-value: 0.002). Adolescents who accessed SRH services in the previous 3 months are 0.528% more likely to access them again (p-value: 0.001), and frequent access increases the likelihood of future use, with coefficients of 0.215 for “Not often” (p-value: 0.049), 0.342 for “Often” (p-value: 0.007), and 0.520 for “Very often” (p-value: 0.0001), while those who have never accessed SRH services show a negative but non-significant relationship with future use (coefficient: -0.123, p-value: 0.211).

**Table 4.6: Correlation Table - Accessibility and Knowledge**

Variable	Coefficient Estimate ( $\beta$ )	Standard Error (SE)	t-Statistic (t)	p-Value
Accessibility to Sexual Reproductive Health Services (Yes = 1)	0.25	0.07	3.57	0.01
Knowledge of Services Offered (Yes = 1)	0.15	0.06	2.5	0.022
Correlation Between Accessibility and Knowledge	Positive			

The positive correlation between accessibility to sexual reproductive health services ( $\beta = 0.250$ ) and knowledge of services ( $\beta = 0.150$ ) suggests that increased access leads to greater awareness, with both variables statistically significant ( $p < 0.05$ ), highlighting the importance of access in improving sexual and reproductive health knowledge and decision-making.

**Table 4.7: Regression Results for Correlation between Knowledge and Utilization**

Variable	Coefficient Estimate ( $\beta$ )	Standard Error (SE)	t-Statistic (t)	p-Value	R <sup>2</sup>
Knowledge of Services Offered (Knowledgeable vs. Not Knowledgeable)	0.45	0.11	4.09	<0.001	0.35
Knowledge of ASRH and Youth Friendly Health Spaces (YFHS) (Knowledgeable vs. Not Knowledgeable)	0.32	0.09	3.56	<0.001	0.3
Utilization of ASRH Services (Utilized vs. Not Utilized)	0.28	0.085	3.29	0.001	0.18

The analysis shows that knowledge of services offered ( $\beta = 0.450$ ,  $SE = 0.110$ ,  $t = 4.09$ ,  $p < 0.001$ ) and knowledge of ASRH and Youth Friendly Health Spaces ( $\beta = 0.320$ ,  $p < 0.001$ ) both significantly increase the likelihood of utilizing services, with R<sup>2</sup> values of 0.35 and 0.30, respectively, while utilization of ASRH services ( $\beta = 0.280$ ,  $t = 3.29$ ,  $p = 0.001$ ) is positively linked to greater knowledge, explaining 18% of the variance in knowledge.

**Table 4.8: Correlation Table - Knowledge and Perception**

Variable	Coefficient Estimate ( $\beta$ )	Standard Error (SE)	t-Statistic (t)	p-Value	R <sup>2</sup>
Knowledge of Services Offered (Knowledgeable vs. Not Knowledgeable)	0.46	0.12	3.83	<0.001	0.38
Knowledge of ASRH and Youth Friendly Health Spaces (YFHS)	0.35	0.095	3.68	<0.001	0.33
Utilization of ASRH Services (Utilized vs. Not Utilized)	0.28	0.075	3.73	<0.001	0.22
Discussing Sex Leads to Premarital Sex (Agree/Disagree)	-0.15	0.065	-2.31	0.022	0.12
Seeking ASRH is Socially Stigmatized (Agree/Disagree)	-0.19	0.07	-2.71	0.008	0.16
ASRH Seekers are Promiscuous (Agree/Disagree)	-0.17	0.06	-2.83	0.005	0.18
ASRH is for Married People Only (Agree/Disagree)	-0.12	0.055	-2.18	0.029	0.1
Speaking Freely About Sex with Family is Taboo (Agree/Disagree)	-0.18	0.065	-2.77	0.006	0.14
Utilization of ASRH is Shameful (Agree/Disagree)	-0.14	0.06	-2.33	0.02	0.12

The analysis reveals that knowledge variables, such as knowledge of services offered ( $\beta = 0.460$ ,  $p < 0.001$ ,  $R^2 = 0.38$ ) and knowledge of ASRH and Youth Friendly Health Spaces ( $\beta = 0.350$ ,  $p < 0.001$ ,  $R^2 = 0.33$ ), are strongly associated with increased likelihood of utilizing services, while service utilization itself ( $\beta = 0.280$ ,  $p = 0.001$ ,  $R^2 = 0.22$ ) positively correlates with greater knowledge; conversely, negative perceptions, including beliefs that discussing sex leads to premarital sex ( $\beta = -0.150$ ,  $p = 0.022$ ), seeking ASRH is stigmatized ( $\beta = -0.190$ ,  $p = 0.008$ ), ASRH seekers are promiscuous ( $\beta = -0.170$ ,  $p = 0.005$ ), ASRH is for married people only ( $\beta = -0.120$ ,  $p = 0.029$ ), discussing sex with family is taboo ( $\beta = -0.180$ ,  $p = 0.006$ ), and viewing ASRH as shameful ( $\beta = -0.140$ ,  $p = 0.020$ ) all significantly reduce service utilization.

### 4.3.5 Utilization of Adolescent Youth-Friendly Spaces and Services

The study posed a series of questions to evaluate whether teenagers who attended Adolescent Youth Friendly Health Corners at their preferred health facility were able to access Adolescent Sexual Reproductive Health Services.

**Table 4.9: Utilization of Adolescent Youth-Friendly Health Spaces and Services (n=364)**

Variables	YES (Utilized) n (%)	NO (did not utilize) n (%)	
Utilization of ASRHS	215 (59.07)	149 (40.93)	
Abstinence from early marriage	95 (26.12)	269 (74.70)	
Dangers of adolescent pregnancy	109 (29.95)	255 (70.05)	
Education on alcohol/drug abuse	74 (20.33)	290 (79.67)	
Discussed with family	8 (2.20)	356 (97.80)	
Discussed with friends	109 (29.95)	255 (70.05)	
Self-prescription	13 (3.57)	351 (96.43)	
Sought advice from AYFH Spaces	74 (20.33)	290 (79.67)	
Visited a health facility	126 (34.62)	238 (65.38)	
Frequency of utilization	<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
	0 to 1 Time	181	49.73
	1 to 3 Times in three Months	127	34.89
	3 to 5 Times in three Months	28	7.69
	More than 5 times in three Months	28	7.69

The table above shows that a significant portion of adolescents, 59.07% (215), utilized ASRHS. Among this group, 26.12% (95) utilized information regarding issues such as abstaining from early marriage, 29.95% (109) dangers of teenage pregnancy, and 20.33% (74) alcohol and drug misuse. In terms of steps taken by teenagers when addressing sexual health matters, merely 2.20% (8) reached out to their family, while 29.95% (109) confided in friends. Furthermore, 3.57% (13) used self-medication, while 20.33% (74) consulted AYFH spaces for guidance.

Additionally, 34.62% (126) went to a nearby health centre. The frequency of utilization shows an average  $\mu$  of 1.66 falling within 1.00 and 1.75, indicating that that utilization was very low.

The qualitative information collected from the Key Informants (KIs) through interviews from the study sites were able to identify factors associated with adolescents' accessibility, utilisation of AYFH spaces and services, as well as how adolescents perceived them.

**Knowledge of ASRH and Youth Friendly Spaces and Services:** The study further revealed that the healthcare workers who were interviewed explained that they understood what Adolescent Sexual Reproductive Health (SRH) and Youth Friendly Spaces were. This study therefore, revealed that all healthcare workers interviewed knew what SRH and services were. Additionally, they were able to take advantage of every woman of child bearing age they came in contact with at the health facility and discussed, screening for Cancer of the cervix, family planning services for all sexually active males and females. Other services include prevention of HIV and STIs especially for adolescents and young people.

During the interview one nurse stated that:

*"...Adolescent Sexual Reproductive Health and Youth Friendly Spaces are services that are being provided to adolescents concerning their reproductive health."* (HCW, 3, 2023).

While a Clinical Officer from Kalwala Rural Health Post explained that;

*"...it's a branch of medicine which deals with sexuality or the safety of the adolescents, furthermore, adolescent sexual reproductive health and youth friendly spaces are places where adolescents are educated about several diseases and this is a package of knowledge which seeks at informing these adolescents on how they should take care of their health."* (HCW 1, 2023).

Regarding whether adolescents knew and were aware of adolescent sexual reproductive health and the services provided. The healthcare workers explained that some adolescents knew about adolescent sexual reproductive health and services, while others had no knowledge the study revealed. A healthcare worker from Location urban clinic additionally narrated that;

*"...the type of Adolescent Youth Friendly Services offered at this facility is accessed by adolescents' instance, we offer IEC, contraceptives (we give them condoms), Family Planning services (pills), male circumcision (MC), HIV testing, PrEP –*

*prevention measures for HIV, condom distribution, antenatal and post-natal services and information on the importance of education and early antenatal bookings if they are pregnant early.” (HCW 3, 2023).*

Furthermore, other healthcare workers explained that adolescents knew about AYFS through IEC provision, especially those in schools rather than those coming from the community. Through the services that health officials provide at the health facility,

*“For example, some adolescents come to the health facility and say I have started menstruating and so what should I do to prevent getting pregnant? Subsequently, we provide them with that information, and so they become aware. Also, through school outreach services and the inclusion in the school syllabus. Also, during child health week, we give health talks so that parents can talk to their children at home.” (HCW 9, 2023).*

**Access to AYFHS and Services:** Some of the interviewed key informants narrated that services on reproductive health were easily accessible by adolescents because, the health facilities were easily accessible and the Ministry of Health in Zambia was able to provide basic health care packages and among them included provision of sexual reproductive health services for all women of child bearing age including adolescents. One health worker from Kalwala health post narrated that,

*“Many adolescents have access to Adolescent Youth Friendly Spaces and Services; since we have a secondary school here, they find it easy to access and use spaces and services through the school outreach programs. There is also provision of family planning services and other services when we go out during under five clinics. (HCW 1, 2023). Some adolescents are married and have children but they access family planning commodities during outreach stations.” (HCW 6, 2023).*

This study further revealed that, some adolescents did not have access to AYFHS and services, the healthcare workers (HCWs) were asked to explain how easy it was for adolescents to access and utilize AYFHS. One health worker responded that,

*“Adolescent Youth Friendly Spaces and services were easily accessible by a marginal population because we have an isolated office for them, as such they are not integrated with those who are at the public OPD, there is a back door at the clinic for adolescents to access the services that we offer, however most adolescents*

*are shy to visit the health facilities for fear of parents and school authorities. In my view the youth friendly spaces are better for them, they need encouragements from their fellow peers."* (HCW 4, 2023).

The other facility staff observed that:

*"This school is near to our health facility, and programs have been drawn for them (adolescents) at the school. For instance, recently we had an outreach at the school where we were screening for adolescents who got pregnancies during the holidays, this activity was done in cooperation with the school authorities. Confidentiality has been upheld by healthcare workers considering the adolescent age bracket, and as such they are free to express themselves, and this encourages them to access the Adolescent Youth Friendly Space at this facility."* (HCW 4, 2023).

The current study revealed that, adolescents were able to visit the health facilities to seek reproductive health services like contraceptive, however, the adolescent youth friendly spaces were not utilised by some adolescents and that they missed important information on reproductive health services. This predisposed them to pre-marital sex, pregnancies and sexually transmitted infections (STIs) as revealed by the study findings. The study participants were all pregnant adolescents, who were to be in school or to delay the pregnancies until the time of getting married outside the age bracket of adolescence.

On the other hand, another, a nurse at Location Urban Clinic explained that,

*"...in my opinion, adolescents access these spaces and services provided because there is proper sensitization of the community and training including of health workers. This makes it easier for adolescents to access the services, however, there is an upward trend in the number of teenage pregnancies recorded recently."* (HCW 9, 2023).

When asked, what could have made most adolescents become pregnant, the healthcare worker expressed shock that;

*"I do not know what has made our children to become so sexually active, that is why they are becoming pregnant. Girls are in beer drinking and the level of deciding to use a condom is affected when they are drunk."* (HCW 2, 2023).

**Perception of adolescents on SRH:** Healthcare workers explained that adolescents' perception of adolescent sexual reproductive health was negative. However, for some fill adolescents, their perception is positive. One of the healthcare workers from Location Urban Clinic explained that;

*“Adolescent perception depends on the individual. Some respond positively and others negatively. For instance, if they see an adolescent accessing family planning services, that adolescent will be labelled as promiscuous.”* (HCW 8, 2023).

Another HCW from Location Urban Clinic felt sad that;

*“Some parents do not talk to their children about sexual issues. Usually, parents beat around the bush, they don't tell their children exactly what dangers are there. Parents do not acknowledge these programs. As such we talk to them about AYFHS which you should discuss with your children. For instance, if a child is abused, and if they tell their parents, they do not disclose what happened. This is because of traditional and cultural beliefs held up and strong belief in tradition.”* (HCW 2, 2023).

The other staff shared that;

*“There is a huge challenge between parents. For example, a girl I interviewed told me that her parents should not know that I came to seek family planning services at the hospital, if so, then do not attend to me and please keep it a secret.”* (HCW 10, 2023).

In the same vein, a healthcare worker explained that adolescents lack peer guidance especially those who are in and out of school as a result it clouds their judgement, hence negative perceptions.

*“The community where they come from hinders them from taking family planning services though are not married, and information is not disseminated accordingly, members of staff at this clinic and teachers work hand in hand and they are involved in teaching girls and boys on sexual reproductive health matters through the school curricula that include youth-friendly services. As a result, we have created a positive perception of our adolescent health spaces and services provided.”* (HCW 1, 2023).

The other revelation by a healthcare worker explained;

*“.....As for the community, some have a positive perception of adolescent sexual health and avoidance of early sexual practice, however, there is a challenge. For instance, in this dispensation of human rights, as an adult, you can't control the adolescents, they simply tell you or reprimand you that you are not their fathers or mother. Hence, there is too much freedom for adolescents to do whatever they feel they choose to do. On the other hand, the community do not support and approve of ARSH because they see ARSH as a way of promoting prostitution. As such, their perception is negative about ARSH.” (HCW 9, 2023).*

The study also revealed that the issue of parental influence was dominant in their cultural beliefs, a psychosocial counsellor revealed that;

*“Parents believe that it is a taboo to discuss sexual issues with their children. Some parents are shy; for example, we see it when they come to access health services here, they sit separately from adolescents who are pregnant. However, we take the responsibility and tell them that here you have to come together so that we educate you,” (HCW 1. 2023).*

Additionally, another healthcare worker explained that;

*“.. if we tell them (adolescents) about family planning to prevent pregnancies, it is like we are encouraging our children to become promiscuous and have casual sex.” (HCW 8, 2023).*

**Utilization of AYFHSS responses from HCWs:** The research further enquired on the utilization of Adolescent Youth Friendly Spaces and Services provided by key informants who were healthcare workers that had worked at the two health institutions for more than a year. The findings revealed that not all adolescents that accessed the AYFHS were able to utilise the services provided. Others did while others did not due to personal reasons. There was a distinction between access to AYFH spaces and utilisation of the services provided in this study. When interviewed, a clinical officer, narrated that;

*“...what I think about adolescent youth-friendly services, is a great initiative, because of the counselling corner itself adolescents can get correct knowledge from the staff. But we find people who are older than adolescents, seeking family planning methods, and mixing them with adolescents is not right. However, our*

*adolescent health space provides a safe space for adolescents. Unlike, normal counselling which would cause anxiety and never be free considering the age differences between the person attending to them and adolescents. However, in these corners (Spaces), the adolescents are assured of being attended to by their peers. As a result, they can utilize these services, even though not all adolescents utilise these corners.” (HCW 10, 2023).*

Another staff was asked to explain what was done to ensure accessibility and utilization of adolescent youth-friendly services. The staff explained that Location Urban Clinic had programs formulated specifically for adolescents,

*“...for instance, this year, we have been visiting and reaching out to the schools regularly to ensure accessibility and utilization of adolescent youth-friendly services since the schools are near health facilities. Thus, most adolescents accessing and utilizing these services are those we have reached out to, unlike those from far places and those that could not be easily accessed like school dropout.” (HCW 2, 2023).*

Another Healthcare Worker narrated that,

*“...Accessibility and utilization of youth-friendly services are important because they (adolescents) are informed of the services, they can acquire from the health facility once they come and acquire this knowledge as most of the adolescents did not know about the services that they can get from these youth-friendly spaces. Because adolescents are sophisticated, they need to be aware of their sexual health programs to ensure protection from sexually transmitted infections (STIs) and pregnancies because most adolescents engage in sexual activities at an early stage, as such, these services are important to prevent early pregnancies.” (HCW 10, 2023).*

The nurse further explained that;

*“This knowledge impact on adolescents is that it reduces the probability of adolescent pregnancies and STIs. Adolescent youth-friendly services create awareness among adolescents on how they can take care of themselves in terms of infection prevention and reduction in teenage pregnancies.” (HCW 10, 2023).*

Additionally, Health Care Workers explained how they were involved in promoting accessibility and utilization of Adolescent Youth Friendly Health Spaces (AYFHS) in the communities. One healthcare worker explained:

*“Here at Kalwala Rural Health Post, there are health workers trained specifically in adolescent health and they are attached to the adolescent health department, as such they help adolescents access and utilize the services according to their needs. All health workers are involved in the promotion of accessibility and utilization of youth-friendly spaces in that, Adolescents are given directions on where to access the services, also everyone is on duty would help them (in terms of condom distribution). We also conduct sensitization programs, give IEC and sell our products so that they may know that we offer these services and are also officered at the secondary school just next to this facility.” (HCW 3, 2023).*

*“Furthermore, we ensure that we are available for the adolescents when they need our services. For instance, when we go for outreach, some officers will talk about family planning and we do provide condoms to the teenager.” (HCW 3, 2023).*

Another officer from Location Urban Clinic explained that,

*“We have been doing health promotion when we go for UCI (Universal Child Immunization) and EPI (Expanded Programme for Immunization Services) and we give health education when recipients come to access the service, and we ensure that their peers provide them with available materials.” (HCW 7, 2023).*

A nurse from Location clinic explained that,

*“...there is very low female condom uptake. Most of our clients including MCH department, feel uncomfortable to use a female condom. Moreover, most adolescents do not plan for sex, they just find themselves in the act without any protection hence the pregnancies we see. In my view it is a male partner who decides whether to use his condom or not. But ‘abalumendo’ (boys) in most case would want what they call ‘live skin to skin’ sex. I for one have tried to correct this misconception even to my boys at home” (HCW 10, 2023).*

The research findings revealed very few to no female condom stock levels at the two health facilities during the 6 weeks data collection period. However, there were adequate stocks of

male condoms and were readily available for collection by anybody that needed them. This revelation assumed the assumption that, female adolescents had no choice to use their own condoms but relied mostly on those of the male clients. One adolescent from Location urban clinic expressed concern that;

*“...mmm, the boys like forcing girls to have sex with girls and in most cases, they do not carry condoms with them in the end you just find that ‘filecitika’ [colloquial word for having sex].”* (17-year-old Female adolescent).

The decision to having sex was equated to show love to the male counterpart and fear for being left for another girl. Adolescents appeared to assume that being in a relationship meant they had to show and prove their love and affection for their partner through sexual intercourse and condom usage becomes an after thought, it is not prioritised.

The study also enquired on the age at which adolescents had their first sexual intercourse, this question was important in the study because it had a bearing on the reproductive sexual life of the adolescents that participated in the current study.

### **Age at 1<sup>st</sup> Sexual intercourse**

The study enquired from Health Care Workers on how prevalent adolescent pregnancies were in the two health facilities. The study revealed that the prevalence of adolescent pregnancies was moderate in certain areas and others high within the district. However, one health officer explained that,

*“.....I think there is a high prevalence of adolescent pregnant since I have been here for over a year and I usually see a good number of adolescents coming for antenatal services at this facility.”* (HCW 4, 2023).

As such, health care workers were asked to explain the causes of adolescent pregnancies within their catchment populations and in the district, one staff from Kalwala Health Post narrated that;

*“.... most adolescents were forced into marriages due to poverty levels; the other thing is that, here in the rural set-up, the school next to us goes up to grade 7 and when some children reach grade 7, their parents do not have sufficient money to send them to boarding schools at Chinsali Girls or Kenneth Kaunda Secondary School. Some girls stop school; hence the only activity they find to do is to get married with support from*

*their parents. As a result, there is an increase in adolescent pregnancies (HCW 5, 2023).*

The other staff explained;

*“I think, here in our area the main reason behind this is lack of knowledge, parents encourage their children to get into marriages, and some children have become uncontrollable as a result of the so-called human rights that have also contributed to pregnancies and early marriages. Additionally, the lack of knowledge and the fear of accessing health services, thinking that these services are for promiscuous individuals (HCW 8, 2023).*

The study further asked to determine if adolescent pregnancies were increasing and/or remained the same for the previous year in the district. The health facility staff expressed that;

*“...Certain programs had stopped being executed. For example, there was a chief who had put in a measure that, when a child is impregnated, the parents were made to pay to ensure that early marriages and pregnancies were stopped. As such, parents behaved themselves. However, today these bylaws are no longer in use, because of the introduction of human rights” (HCW 3, 2023).*

*“...Alcohol and drug abuse contribute also to early pregnancies. For instance, when you go to Kabuta (surrounding village) you find these teenagers abusing these drugs and engaging in sexual activities without any precautions, when they are drunk, they stop thinking rightfully, some adults also take advantage, buy beer and in exchange they have sex with them” (HCW 2, 2023).*

Further inquiry was made to determine who was more affected by adolescent pregnancies between those in Schools and out of school, health care workers elaborated that:

*“...The adolescents who were not going to school were more affected by pregnancies than those in school because of the fear that they are still in school, and those out of school lack information, from my own experience, they stop school at an early age, some at 15 years. Thus, they end up in early marriages (Health Care Workers, 2023).*

However, one healthcare worker from Kalwala Rural Health Post explained that;

*“...both those in school and out of school are more affected, there was no difference, these girls ...there is too much sex, I do not know...”* (HCW, 2023).

**Summary:** The study revealed, that both parents and adolescents were aware of the adolescent health services provided by AYFS especially those that had access to the health facilities. However, the parents had a negative perception that accessing and utilising AYFS would encourage adolescents and young people to freely engage in casual sex. The study also revealed an increase in the adolescent pregnancies at both Kalwala and Location Urban Clinic catchment areas. Despite, some adolescents accessing and utilising youth friendly spaces, some adolescents became pregnant due to peer pressure, inadequate and wrong use of contraceptives.

## **CHAPTER FIVE: DISCUSSION OF FINDINGS**

### **5.0 Introduction**

The findings on specific objectives of this study guided the discussion of findings. These objectives were;

1. To assess knowledge levels on Sexual Reproductive Health (SRH) of adolescents at Kalwala Health Post and Location Urban.
2. To assess accessibility of Youth Friendly Health Spaces and services for adolescents at Kalwala Health Post and Location Urban Clinic in Chinsali District.
3. To determine the perception of youth-friendly health spaces and services by adolescents at Kalwala Health Post and Location Urban Clinic.
4. To determine the level of utilisation of Adolescent Youth Friendly Health Services and Spaces (AYFHSS) at Kalwala and Location Urban Clinic in Chinsali District.

The study used mixed methods, quantitative and qualitative approaches. Thus, discussion of findings is premised on this foundation.

### **5.1 Knowledge levels of Adolescents on Sexual Reproductive Health Services**

The findings of this study on knowledge levels regarding Sexual Reproductive Health Services (SRHS) among pregnant adolescents attending Youth-Friendly Health Spaces (YFHS) revealed both strengths and gaps in the accessibility and awareness of sexual health information. The data showed that a majority of adolescents were knowledgeable about the SRHS provided, with 74.73% aware of the services provided at YFHS. This is a positive indicator of outreach and educational efforts, but there are notable areas where knowledge was still lacking, such as peer education, family planning services, menstrual hygiene, and the prevention of unprotected sexual intercourse, where only around 47% to 52% of adolescents reported being knowledgeable.

The study's findings are aligned with global literature that highlights the varying levels of knowledge among adolescents in different regions. For instance, in South Africa, Morris and Rushwan (2018) found that only 38.5% of adolescents were knowledgeable about the SRHS provided by healthcare facilities, with similar gaps in knowledge around specific services like contraception and HIV prevention. This mirrors the findings in the current study, where many adolescents, despite being aware of services like condom distribution, are less familiar with other essential SRHS, such as family planning services and peer education. This suggests that

while general awareness is high, more targeted educational efforts may be needed to ensure adolescents have comprehensive knowledge of all available services.

The findings of this study that increased access to SRHS correlates positively with greater awareness ( $\beta = 0.250$  for accessibility and  $\beta = 0.150$  for knowledge of services) this underscores the importance of improving service availability and accessibility. As healthcare workers in the study noted, outreach programs, especially those targeting schools and communities, are vital for increasing awareness. The positive correlation between access and knowledge is consistent with Helamo et al., (2018), who observed that adolescents with better knowledge of Youth Friendly Reproductive Health Services (YFRHS) in Ethiopia were more likely to utilize these services. This highlights that providing both information and access can lead to more informed decision-making and greater utilization of services.

However, the study also has highlighted a critical issue: while adolescents may have access to these spaces and services, their actual engagement with the services remains variable. Healthcare workers explained that many adolescents are unaware of the full range of services available, particularly in rural areas. Similarly, Godia et al., (2020) observed in Kenya that knowledge of SRHS among younger girls (12-14 years) was particularly limited, and boys were found to be more knowledgeable about contraceptive use. This gap in knowledge suggests a need for more targeted interventions that specifically address the information needs of adolescent girls, especially in rural settings where resources may be more limited.

Additionally, this study has revealed that healthcare workers perceive some adolescents as being knowledgeable about SRHS, especially those who access services through school outreach programs. This aligns with previous research indicating that school-based programs are an effective means of disseminating reproductive health information to young people. Studies such as those by Morris and Rushwan (2018) and Francis and Gabriel (2019) found that adolescents in school settings had higher levels of awareness compared to those who were outside the formal education system. This suggests that integrating sexual and reproductive health education into school curricula and utilizing school-based outreach could significantly enhance the knowledge levels of adolescents, particularly in rural and underserved areas.

The current findings also reflect a broader regional trend in countries like Zambia, where low knowledge levels about SRHS and unmet contraceptive needs are prevalent among adolescents. Studies such as those by Munakampe et al., (2018) and Zulu et al., (2018) have shown that adolescents in Zambia and other low- and middle-income countries often have

limited access to comprehensive sexual education, which contributes to high adolescent pregnancy rates. The lack of knowledge about contraception and sexual health in these contexts is a significant factor in adolescent pregnancies and other reproductive health challenges.

Although the study shows that a majority of pregnant adolescents attending AYFS have some knowledge of SRHS, there are significant gaps in their awareness of key services. This mirrors findings in other regions, where knowledge of specific services, particularly family planning and HIV prevention, remains low. The study's correlation between access to SRHS and knowledge emphasizes the importance of continued efforts to improve both the availability and quality of youth-friendly health services.

## **5.2 Access to Sexual Reproductive Health among Adolescent Attending Youth-Friendly Health Spaces and Services**

The results of the linear regression analysis regarding service access among adolescents correspond with the wider conversation about elements affecting adolescents' utilization of Sexual and Reproductive Health (SRH) services, especially within Youth-Friendly Health Spaces (YFHS). The analysis reveals a robust connection between variables such as age, accessibility of health facilities, and the availability of SRH services, emphasizing how these factors greatly influence adolescents' propensity to utilise SRH services in Adolescent Youth Friendly Spaces

For instance, the analysis shows that young people aged 10-14 years are 0.452% more inclined to utilize SRH services for every 1% rise in their share of the population, whereas for those aged 15-19 years, the probability rises by 0.321%. This aligns with the literature, including Rose's (2022) observations in Malawi, which show that although youth-friendly spaces exist, adolescents encounter obstacles like socio-economic challenges, educational issues, and social stigma that limit their regular access to these services.

The regression analysis for this study highlights that the existence of health centres and the delivery of SRH services notably enhance access (coefficients of 0.589% and 0.481%, respectively), aligning with observations made by Adan and Githae (2018), who pointed out financial obstacles, like user fees and limited access. Additionally, this study revealed that the rate of access is essential in-service utilization. Adolescents who utilized SRH services "often" or "very often" are considerably more inclined to keep using them in the future, as indicated by the regression coefficients of 0.342% and 0.520%, respectively. This highlights the

necessity of ongoing access and the importance of sustained involvement through outreach programs, as noted in HCW 4, 2023, which revealed that outreach efforts in schools are vital for improving service utilization.

However, the study revealed the negative but non-significant coefficient for adolescents who have “never accessed” SRH services (-0.123%) which signals a challenge, as these adolescents might face strong social stigma or fear, and this was observed by with HCW 9, 2023 of this study, and Renju et al. (2019) also emphasized that societal views on early sexual activity can discourage adolescents from seeking care, even when services are available.

Another study done by Geary et al., (2018) “Barriers to Accessibility of Adolescent Youth Spaces” revealed poor access, availability and acceptability of the services and lack of clear directions and services as some of the hindrances to access AYFS in health facilities. The research also revealed overcrowding, lack of privacy, appointment times that did not accommodate young people’s work and school schedules, and little or no accommodation for walk-in patients as other barriers to accessing AYFS

The regression analysis also complements findings on the underutilization of SRH services. Despite 75.27% of adolescents reporting access to SRHS, only 42.86% used them in the last three months. This gap is also seen in the study's discussion of the discrepancy between availability and actual usage, where the low utilization rates, especially in family planning and contraception, point to the importance of addressing barriers beyond physical access. These barriers include cultural stigmas, as noted by Morris and Rushwan (2018), and the need for youth-friendly environments that ensure privacy, as emphasized by healthcare workers in the study.

The regression analysis aligns well with the broader findings, underlining the importance of factors like accessibility, service provision, age, and frequency of access in influencing adolescents' use of SRH services. It also highlights the persistent barriers- financial, social, and cultural - that must be addressed to increase effective utilization, which requires a multi-faceted approach, including policy changes, outreach efforts, and addressing stigma.

These findings are supported further by Geary et al., (2018) in their study title, “Barriers to Adolescent Youth Friendly Health Spaces” which revealed that, poor access, availability, and acceptability of the services, as well as a lack of clear directions and services offered by health facilities, crowding, lack of privacy, and appointment times that do not accommodate young people's work and school schedules prevented young people to access the ASRH services. The

findings therefore explain why adolescents became pregnant despite having knowledge on family planning and use of contraceptives to avoid unplanned pregnancies.

### **5.3 Perception of the adolescent on SRHS**

The results of the research on adolescents' perception about Sexual and Reproductive Health (SRH) services emphasize the intricate connection between youth attitudes, societal expectations, and the use of these services. The information presented in Table 5 indicates a combination of positive and negative perceptions regarding SRH services among adolescents, consistent with current literature that highlights how perceptions of sexual health affect the use of these services.

The notion that talking about sex and sexuality results in more premarital sex was not firmly supported by the young people in this research. Only 6.59% completely agreed with this statement, while 41.76% opposed it. This shows a fairly progressive attitude towards open conversations about sexuality. Nevertheless, the notion that discussing sex could result in adverse effects, like heightened premarital sexual activity, continues to influence some adolescents. This aligns with the observations made by Mazur et al., (2018), who pointed out that in Nepal, a cultural belief exists that talking about sexuality may result in promiscuity, adversely affecting the use of services.

The idea that adolescents who pursue SRH services encounter social stigma was firmly backed by 41.76% of adolescents in this research, and an equal 41.76% agreed that these adolescents are perceived as promiscuous. This viewpoint highlights the societal stigma surrounding adolescent sexual health services, which acts as a significant barrier to their utilization. This is consistent with Kennedy et al. (2019), who found that teenagers in Vanuatu experienced fear and avoidance of SRH services due to stigma, particularly from parents and community leaders. The belief that seeking SRH services signifies promiscuity or inappropriate behaviour reflects broader societal attitudes that often stigmatize matters concerning adolescent sexual health.

A substantial portion of adolescents (41.76%) strongly believed that discussing sex and reproductive health with family members is considered taboo. This finding underscores the cultural and familial barriers to accessing SRH services. Negative family attitudes towards SRH discussions, which can lead to shame and secrecy, are common barriers identified in the literature. In the study by Godia et al., (2020), it was revealed that adolescents in Tanzania avoid formal treatment for reproductive health problems due to fears of disclosure and being

judged by their communities. Similarly, Kennedy et al. (2019) highlighted how parental disapproval could prevent adolescents from seeking necessary services.

A smaller but still notable portion of adolescents of this study (39.84%) disagreed with the view that sexual and reproductive health is only relevant for married people, while 23.08% agreed. This reflects a generational divide where older, more traditional views about SRH are challenged by the awareness that young, unmarried adolescents also need access to these services. The belief that SRH is solely for married people is a widespread misunderstanding that hinders adolescents' access to services. These findings are also supported by the research of Mazur et al., (2018) and Kennedy et al., (2019), who had similar views.

The study has also found that 44.51% of adolescents considered the use of SRH services to be embarrassing, highlighting a considerable degree of shame linked to asking for assistance. This aligns with the findings in studies like Godia et al., (2020), which showed that shame, particularly around issues of reproductive health, can prevent adolescents from utilizing available services.

The regression analysis performed in the research shows that unfavourable views of SRH services greatly diminish the chance of using these services. Beliefs including the notion that talking about sex results in premarital sexual activity ( $\beta = -0.150$ ,  $p = 0.022$ ), that pursuing SRH services is linked to stigma ( $\beta = -0.190$ ,  $p = 0.008$ ), and that SRH services are exclusively for married people ( $\beta = -0.120$ ,  $p = 0.029$ ) were discovered to negatively correlate with the utilization of services. These results align with wider studies that recognize stigma, fear, and cultural taboos as significant obstacles to adolescents' access to SRH services. For instance, Badru et al. (2020) discovered that unfavourable cultural perspectives and misunderstandings about SRH result in lower utilization, as adolescents are reluctant to access services due to anticipated social repercussions. The results of the research indicate that awareness of SRH services greatly influences adolescents' views. Teens who have a greater awareness of the available services generally hold more favourable views and are more inclined to make use of them.

This is confirmed by the regression findings showing that higher knowledge ( $\beta = 0.460$ ,  $p < 0.001$ ) was associated with an increased likelihood of using ASRHS. This outcome supports the research carried out by Birhanu et al., (2018) and Thongmixay et al., (2019), who asserted that a lack of knowledge and awareness about SRH services presents a significant barrier to their utilization. Educating adolescents on SRH services, their benefits, and the absence of

shame or stigma associated with using them can aid in countering negative perceptions and encourage greater use of these services.

Therefore, results of this study indicate that adolescents' views on SRH services are influenced by intricate cultural, social, and family dynamics. Although there is a certain level of understanding regarding the significance of SRH services, negative views such as stigma, shame, and misunderstandings still restrict their use. These obstacles align with those noted in the wider literature on adolescent sexual and reproductive health, where concerns about judgment, cultural stigmas, and negative views on adolescents' sexual activities frequently hinder their ability to obtain the necessary care. To enhance service usage, it is essential to tackle these views via education, transparent dialogue, and initiatives aimed at fostering a more encouraging and non-critical healthcare setting for teenagers.

#### **5.4 Utilization of ASRHS**

The results of this research on the utilisation of Adolescent Youth-Friendly Health Spaces and Services (ASRHS) offer important perspectives on adolescent access to sexual and reproductive health services. A considerable number of adolescents (59.07%) stated that they utilised ASRHS, suggesting that a large portion is informed about and involved with these services to some extent. Nevertheless, the usage is still quite limited regarding particular topics, like avoiding early marriage (26.12%), risks of teenage pregnancy (29.95%). The usage rate is also quite low, as almost half of the participants reported using the services just once or twice over three months, indicating that while these services are accessible, they might not be used often or consistently enough to meet ongoing needs.

Nonetheless, NMADU (2017) in a study conducted in Burkina Faso, Ghana, Malawi, and Uganda revealed that contraceptive, STIs, and voluntary counselling and testing services were under-utilized by young people. This was due to lack of knowledge about the importance of sexual health services, this discouraged the youth from using the services. However, this study, revealed that most adolescents were able to utilise the services provided by AYFHS, but incorrect and inconsistent contraceptive use like condoms and storage, predisposed them to become pregnant.

The regression analysis presented in the study shows a significant relationship between the awareness and use of ASRHS. The findings indicate that adolescents with greater awareness of available services ( $\beta = 0.45$ ,  $p < 0.001$ ) and youth-friendly health environments ( $\beta = 0.32$ ,  $p < 0.001$ ) are more inclined to use these services. This is consistent with the literature, including

the studies by Rose (2022) and Onukwugha et al., (2019), which highlight the necessity of enhancing adolescents' awareness about the accessibility and advantages of these services. This connection implies that enhanced education and understanding of SRH services may boost the chances of adolescents using them, tackling the deficiencies noted in the research.

Although a large number of adolescents used these services, various obstacles continue to obstruct broader usage. The research highlights the absence of family conversations (merely 2.20% indicated discussing SRH matters with family) and a dependency on friends (29.95%) for guidance. This underscores the stigma and hesitance to openly discuss sexual and reproductive health issues within families, a factor noted in earlier studies (Rose, 2022). The limited frequency of consulting healthcare providers (3.57% utilizing self-medication and 20.33% engaging with AYFH spaces) indicates that adolescents might be opting for alternative, possibly unsafe approaches to tackle their issues, thereby worsening the risks linked to SRH matters.

The detrimental actions and mindsets of healthcare professionals, as pointed out in the literature (Rose, 2022), are probable contributing elements to the insufficient use of these services. The research does not specifically tackle the topic of provider attitudes; however, it can be deduced that teenagers might feel uneasy or unwelcome in youth-friendly environments because of critical attitudes or ineffective communication. Consistent with the results from Onukwugha et al., (2019), the absence of health policies and guidelines tailored for youth, along with insufficient training for health providers, might lead to these adverse experiences.

The literature emphasizes additional structural obstacles, such as the financial reliance of adolescents and the proximity to medical services (Akinyi, 2019; Nash et al., 2019). In Zambia, for example, adolescents are not completely self-sufficient and might find it difficult to obtain services because of financial or logistical issues. The study's conclusion that 65.38% of adolescents did not access health facilities for SRH services indicates that these services are still hard to reach for many, especially those in rural regions or with restricted financial means.

The study has also addressed the influence of peer networks, as 29.95% of adolescents talk about SRH matters with their friends. This finding aligns with the study conducted by Odo et al., (2018), which indicates that discussions among peers can enhance awareness and usage of SRH services. Peer networks can offer emotional assistance and exchange details about services, rendering it a significant resource for adolescents. Nonetheless, these conversations might not consistently offer precise or thorough information, highlighting the necessity for

educational initiatives that can enhance peer support. These findings are similar to Ninsiima et al., (2021) in their study "Factors Affecting Access to and Utilisation of Youth-Friendly Sexual and Reproductive Health Services," barriers to accessing YFRH services revealed barriers like structural, individual, social-economic, and socio-cultural factors that hindered adolescents to access the Youth Friendly Health services.

The study's results indicate that although adolescents in some areas recognize and access youth-friendly sexual and reproductive health services, considerable obstacles persist. These obstacles, such as inadequate knowledge, stigma, provider attitudes, and structural limitations, persist in restricting the complete effectiveness of these services. Tackling these challenges via education, better training for healthcare providers, and policy changes can assist in guaranteeing that adolescents possess the knowledge and resources necessary to make informed choices regarding their sexual and reproductive health.

### **5.5 Implications to Public Health Nursing**

Implications to Public Health Nursing on adolescent pregnancies and sexual reproductive health can be significantly enhanced with the use of adolescent youth friendly spaces. The spaces provide a safe and non-judgement environment for adolescents to access sexual reproductive health (SRH) services, information and support.

### **5.6 Public Health Nursing Practice**

The findings of this study revealed gaps on how adolescents were handled and treated from public health institutions. The revelations of adolescent pregnancies for school going and those out of school is a public health emergency for Chinsali district and the province as a whole. Adolescent health education by facility staff should involve understanding of unique physical, emotional, cognitive and social changes that adolescents experience at different stages of life. The adolescents need to be treated as individuals with respect and confidentiality realising that adolescent youth friendly spaces provide easy access to SRH services, including contraception, STI testing and treatment, and prenatal care. This will lead to improved outcome by providing adolescents with accurate and comprehensive information about their SRH, these spaces together with well-informed healthcare practitioners can help reduce unintended pregnancies, STIs and HIV/AIDS.

### **5.7 Nursing Administration**

The study further revealed that not all healthcare workers were trained or oriented in Adolescent Health Sexual Reproductive Health (ASRH). Some adolescents were attended to in the presence of older women who were perceived to be relatives to the adolescents. This practice eroded adolescents' confidence to seek other medical and health services like family planning methods and commodities, hence it attributed to a rise in adolescent pregnancies. Therefore, Nurse Administrators ought to plan and budget for training of all healthcare workers that come in contact with adolescents during their health service delivery. It is also one of the roles of nurse administrators to engage and lobby cooperating partners like USAIDFHN, Marie Stopes-Zambia and CHAZ to support training of healthcare workers (HCWs) in ASRH value clarification. Training of more healthcare practitioners can help staff to provide services that are culturally sensitive and responsive to the needs of diverse adolescent populations.

### **5.8 Nursing Education**

The curriculum for nursing education on specific needs for adolescent sexual reproductive health and value clarification is not detailed, moreover, it is embedded in the general sexual reproductive health topics. This creates a gap for nurse educators to deliver detailed value clarifications for adolescent SRH. Therefore, nurse educators ought to be trained and oriented in ASRH using the Adolescent Health Training and Peer Educators' training manuals as opposed to training a few facility health staff. When trained health workers from colleges and universities graduate with knowledge in ASRH value clarification, it can help reduce the cost of conducting workshops to train HCWs in ASRH. The saved resources can be channelled to other needy areas. Additionally, more peer education and support is essential by involving peers in education and support activities to promote use of adolescent health (ADH) spaces and activities to promote SRH knowledge and behaviours. These spaces can help address help social determinants of health such as poverty, education and gender inequalities which can impact adolescents' outcomes.

### **5.9 Nursing Research**

This study revealed research gaps in ASRH services and that predisposed adolescents to becoming pregnant despite services being readily available at health facilities. Therefore, more research should be conducted in the adolescents and the youth friendly spaces in order to improve SRH outcomes.

## 5.10 Conclusion

This study has highlighted significant findings related to adolescents' access to, awareness of, and use of Sexual and Reproductive Health (SRH) services, especially in Youth-Friendly Health Spaces (YFHS). These findings emphasize notable advancements along with essential obstacles that must be tackled to enhance SRH service provision for adolescents.

Factors such as age, healthcare centres, and the presence of particular services significantly affect access to SRH services. Although adolescents aged 10-14 years are more likely to access SRH services than older ones, ongoing obstacles like socio-economic issues, and cultural stigma, still impede regular usage of these services. The study has highlighted the significance of ongoing outreach initiatives and the necessity for more accessible, adolescent-oriented services that address the specific needs of them, especially in rural or neglected regions.

Additionally, awareness of SRH services is extensive, as most adolescents know about the services offered at YFHS. Nonetheless, there are still gaps in comprehension, particularly concerning specific services such as family planning, menstrual hygiene, and the prevention of unprotected sexual activity. These knowledge gaps emphasize the necessity for focused educational initiatives, especially peer education initiatives and school-centered outreach, to guarantee that adolescents obtain thorough, precise information regarding the complete variety of SRH services accessible to them.

Moreover, the research revealed that although 59.07% of adolescents indicate using ASRHS, their usage is infrequent, especially regarding issues like preventing adolescent pregnancies contributing to early marriages. This aligns with the discovery that numerous adolescents prefer to obtain information from friends instead of healthcare professionals, highlighting the necessity to tackle the stigma related to SRH services. Cultural beliefs, negative views on premarital sex, and the shame tied to accessing SRH services continue to be major obstacles to increased service use. To counter these negative views, it is essential to implement education, facilitate open discussions, and promote a more supportive and non-judgmental atmosphere in healthcare environments.

Ultimately, the results have highlighted the essential impact that heightened awareness has on influencing adolescents' perspectives and their propensity to use SRH services. Adolescents who are more aware of the services offered typically hold more positive opinions and are more likely to ask for assistance. Consequently, ongoing initiatives to inform young people, diminish

stigma, and promote family and community conversations regarding sexual health are crucial for enhancing access and usage.

Although there have been significant advancements in improving access to SRH services for adolescents, considerable efforts are still needed to address the obstacles of cultural stigma, insufficient knowledge, and logistical issues. Tackling these challenges with focused educational initiatives, policy changes, and a nurturing healthcare setting will be vital in helping adolescents make informed decisions regarding their sexual and reproductive health, ultimately resulting in improved health outcomes for this at-risk group of adolescents.

### **5.11 Recommendations**

Drawing from the results of this research and the identified shortcomings, the study thus recommends and emphasizes that;

Decreasing structural obstacles to accessibility would enhance service access. Developing additional spaces tailored for youth in healthcare settings, along with outreach initiatives in the community, may assist in closing this divide. Enhancing understanding and awareness of ASRHS and youth-friendly environments is essential, as adolescents who know about these services are more inclined to utilize them. Awareness could be enhanced and the stigma linked to using SRH services could be diminished through educational campaigns aimed at schools, communities, and healthcare providers. Ultimately, tackling the negative perceptions – the stigma related to conversations about sex and SRH in families and communities is essential. Encouraging transparent discussions and involving parents, guardians, and community leaders in SRH education can help reduce stigma and create a supportive environment for adolescents seeking these services.

**5.11.1 The Ministry of Health (MoH):** Should expand the workforce of healthcare providers to deliver non-judgmental, confidential, and adolescent-oriented services. The perception that healthcare professionals view adolescents as promiscuous or are indifferent to their requirements may prevent them from accessing services. Initiatives aimed at enhancing provider attitudes and the general atmosphere in youth-friendly settings are crucial for making adolescents feel secure and backed.

**5.11.2 Health Facilities:** Should train all staff in adolescent health value clarification using a decentralised model which has been seen to be cost-effective and at low cost. This model can offer sessions at least 3 times a week every afternoon when the facilities are less busy until all

the modules are covered. All clinicians, nurses, laboratory personnel and other healthcare providers should be trained or oriented.

The health facilities should engage the district health office for support and lobby for the construction of stand-alone adolescent health youth-friendly spaces because sharing of the spaces with other clinical and nursing services breaches confidentiality and adolescents feel too shy to utilise the services provided especially collection of condoms and other family planning commodities for prevention of pregnancies.

Strengthen stakeholder meetings through Technical Working Groups (TWGs) with the community, gatekeepers and other line government ministries. The TWG will be a vehicle to engage various partners to help reduce adolescent pregnancies in the surrounding communities

There is a need to sensitize parents on the importance of encouraging their children to access and utilize Adolescent Youth Friendly Health Spaces and Services to prevent early pregnancies and marriages.

**5.11.3 District Health Office:** There is a distinct necessity for additional specialized educational initiatives, especially those aimed at marginalized populations such as young girls in remote regions. Allocate more funding and budget for training of more healthcare workers in adolescent health value clarification, and keep a master register for all trained staff and peer educators to prevent training the same people who have had some training before.

The District Adolescent Health Focal Point Person to have a routine monitoring and provide quarterly mentorship and technical support to health facility staff to strengthen the adolescent health services

**5.11.4 Provincial Health Office:** Provide trainers and supervise the districts in adolescent health services quarterly. The province to lobby engages various partners and stakeholder for training of peer educators in the district. The pool of trained peer educators will help carry and educate fellow peers on social behaviour change and communication (SBCC).

## **5.12 Study Limitations**

The study was conducted in two health facilities in Chinsali district, therefore, generalization of the findings to the district should be done cautiously. Additionally, only two postnatal mothers who were adolescents and became pregnant before the age of 19 years participated in the study.

### **5.13 Strengths of the study**

The strengths of this study on sexual reproductive health among adolescents in Chinsali district of Muchinga Province will offer several strengths among them are;

#### **1. Informed decision making**

When adolescents understand their sexual reproductive health, this will help them be equipped with the knowledge they need to make informed decisions regarding their sexual health and relationships.

#### **2. Health Promotion**

The study will help to develop effective health promotion key messages, strategies and interventions aimed at preventing risky behaviours and improving overall health outcomes among adolescents in Chinsali district and the province as a whole.

#### **3. Policy development**

The insights from this study will help inform policymakers about the specific needs of adolescents, leading to the creation of supportive policies and programs that addresses their sexual and reproductive health needs.

#### **4. Empowerment**

Education about SRH contributes to the empowerment of adolescents, enabling them to assert their rights and responsibilities related to their sexual health with adequate knowledge and understanding.

#### **5. Reduction of STIs and Unwanted pregnancies**

By understanding the factors that contribute to high rates of Sexually Transmitted Infection (STIs) and unintended pregnancies among adolescents, effective education and interventions can be developed to reduce these outcomes.

#### **6. Emotional and Mental Health**

This study will further help policymakers, health care workers, communities and indeed adolescents to understand the emotional and psychological aspects of adolescent sexuality, which is crucial for promoting positive mental health outcomes and may help reduce unwanted pregnancies that lead to unsafe abortions and loss of young lives.

## 7. Addressing inequalities

The study will also help to identify and address disparities in access to information and services among different populations, ensuring that all adolescents receive the support they need.

## 8. Cultural competence

This study noted some cultural beliefs that discussing SRH among family members was considered a taboo. Therefore, this study will help cultural beliefs and practices that affect young people's health, leading to more culturally sensitive and effective health messaging and services.

### **5.14 Dissemination of findings**

The Findings of this study will be disseminated at the school of Nursing Sciences, Medical library and graduate forum. Bound copies of the research report will be submitted to the School of Nursing Library, and the medical library and the University of Zambia Great East Road main library

Other stakeholders who shall receive copies include, the District Health Office (DHO), the Provincial Health Office (PHO), the Ministry of Education through the District Education Board Secretary (DEBS) and the Provincial Education Officer (PEO). The research findings will be published in reputable journals and the findings of the study will also be disseminated through seminar and workshops.

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## APPENDICES

### Appendix 1: Assent Form

#### Assent Form

My name is **Boniface Mutale**. I am trying to learn about **Assessing the effect of utilizing Youth-Friendly Services on Adolescent Sexual Reproductive Health in the Chinsali District** because **we have seen a rise in pregnancies, sexual gender-based violence, and alcohol and substance use among teenagers and young people** n explain the research **purpose in age-appropriate language**. If you would like, you can be in my study.

If you decide you want to be in my study, you will **be required to answer questions and share ideas from your experience**.

**There are no risks involved in taking part in my study, all the information shared shall be kept confidential, and the ideas will be used to inform policy and help other teenagers and young people**. Other people will not know if you are in my study. I will put things I learn about you together with things I learn about other [children, teens], so no one can tell what things came from you.

When I tell other people about my research, I will not use your name, so no one can tell who I am talking about. Your parents or guardian have to say it is OK for you to be in the study. After they decide, you get to choose if you want to do it too. If you don't want to be in the study, no one will be mad at you. If you want to be in the study now and change your mind later, that is fine. You can stop at any time.

My telephone number is **0977869211**. You can call me if you have questions about the study or if you decide you don't want to be in the study any more.

I will give you a copy of this form in case you want to ask questions later.

#### Agreement by Child

I have decided to be in the study even though I know that I don't have to do it. [Name of researcher .....] has answered all my questions.

\_\_\_\_\_  
Signature of Study Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Researcher

\_\_\_\_\_  
Date

## **Appendix 2: Informed Consent Form**

Title of the proposed study:

Assessing the effect of utilizing Youth-Friendly Services on Adolescent Sexual Reproductive Health in Chinsali District

### **Investigators:**

The principal investigator is Boniface Mutale, from the University of Zambia School of Nursing Sciences, Lusaka. Zamba. Phone: 0977869211

### **Background and rationale for the study:**

Recently, Muchinga province has recorded an increase in pregnancies, sexual gender-based violence, alcohol and substance use among teenagers and the young people, despite the Ministry of health and other cooperating partners putting up adolescent youth friendly spaces. These spaces if fully and well utilised, adolescents and the young people in Chinsali district will make informed decisions on their sexual reproductive rights and reduce the vice mentioned above.

### **Purpose:**

The study aims to seek the effect of adolescent youth friendly spaces in Chinsali district at Kalwala and Location urban clinic on the sexual reproductive health services among adolescents and young people.

### **Procedures:**

I am requesting you, the participant to answer the open and closed questions provided in my questionnaire. You are further reassured that all the information given to me shall only be used for the purposes of this study and will not be shared with any other person(s) whatsoever.

### **Who will participate in the study?**

Participants expected in this study are adolescents aged 10 – 19 years old who will attend antenatal, post-natal, and adolescent youth-friendly services from Kalwala and location urban clinic in Chinsali District of Muchinga Province. A total of 384 adolescents are expected to participate in this study from both health institutions

**Risks/Discomforts:**

I might keep you a bit longer for about 20 to 30 minutes during responses either, they questionnaire or focus group discussion as may share opinions.

**Benefits:**

There are no direct benefits in monetary form or material, however, the findings shall be used to inform the policy makers to improve on the lives and sexual reproductive health services among adolescents and young people.

**Alternatives:**

Kindly note that participation in the study is not mandatory you are free to participate or opt out during the study should you feel uncomfortable. However, all health services shall be provided to you from this facility whether you participate in this study or not.

**Cost:**

There are no monetary cost implications in participating in this study, however, you will be delayed a bit for about 10 -20 minutes after receiving the health services you have followed. The delay will be during responding to the questions or during focus group discussion.

**Compensation for participation in the study:**

The study provides no compensation, it is on a voluntary basis, in case the participant feels his/her rights are being infringed, he/she may opt out at any stage of the study.

**Reimbursement:**

Participants will meet their cost arrangements to and from home since they go to seek antenatal, postnatal and adolescent health services at Kalwala and Location urban clinic.

**Questions:**

Participants who will have study-related questions can reach the investigator to answer such questions either by physical contact at Chinsali Provincial Health Office or by mobile phone provided at 0977869211 and email: [bsmutale@gmail.com](mailto:bsmutale@gmail.com)

**Questions about participants' rights:**

All participants that shall accept wilfully to participate in the study will have the right to ask questions for clarity and be able to opt-out whenever they feel their human rights were infringed upon.

**Statement of voluntariness:**

Participation in the proposed study is voluntary and participants may join on their own free will. Participants also have a right to withdraw from the study at any time without penalty.

**Confidentiality:**

The results of this study will be kept strictly confidential and used only for research purposes. My identity will be concealed as far as the law allows. My name will not appear anywhere on the coded forms with the information. Paper and computer records will be kept under lock and key and with password protection respectively.

The interviewer discussed this information with me and offered to answer my questions. For any further questions, I may contact the Chairperson, UNZABREC on the following details: Tel: +260977925304, E-mail: unzarec@unza.zm.

**STATEMENT OF CONSENT/ASSENT**

..... has described to me what is going to be done, the risks, the benefits involved and my rights regarding this study. I understand that my decision to participate in this study will not alter my usual medical care. In the use of this information, my identity will be concealed. I am aware that I may withdraw at any time. I understand that by signing this form, I do not waive any of my legal rights but merely indicate that I have been informed about the research study in which I am voluntarily agreeing to participate. A copy of this form will be provided to me.

Name..... Signature of participant .....Age.....

Date (DD/MM/YY) .....

Name of Witness.....Signature of Witness.....

Date (DD/MM/YY) .....

Name.....Signature of parent or guardian for minors .....

Date (DD/MM/YY) .....

Name.....Signature of Interviewer .....Date (DD/MM/YY)

.....

If you have any further questions, please contact the University of Zambia Biomedical Research Ethics Committee

Telephone: +260977925304

Ridgeway Campus

Telegrams: UNZA, LUSAKA

P.O Box 50110

Telex: UNZALU ZA 44370

Lusaka, Zambia

Fax: + 260-1-250753

E-mail: unzarec@unza.zm

Assurance No. FWA00000338

IRB00001131 of IOR G0000774

### Appendix 3: Questionnaire

#### SECTION ONE: SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. Gender
  - Female
  - Male
2. Age
  - i. 10 - 14 years
  - ii. 15 - 19 years
3. Level of educational
  - i. Pre-School level
  - ii. Primary school level
  - iii. Secondary school
  - iv. Other (specify) \_\_\_\_\_
4. Marital Status
  - i. Single
  - ii. Married
  - iii. Other (specify) \_\_\_\_\_

#### SECTION TWO: KNOWLEDGE LEVELS ON ADOLESCENT SEXUAL REPRODUCTIVE HEALTH SERVICES (ASRHS)

5. Knowledge of services offered!
  - i. Knowledgeable
  - ii. Not knowledgeable
6. Knowledge of ASRH and Youth Friendly Health Spaces (YFHS)
  - Knowledgeable
  - Not Knowledgeable

#### The type of services provided at adolescent youth friendly spaces

Variables	Knowledgeable	Not knowledgeable
7. Condom distribution		
8. Dangers of early marriages		
9. No sexual gender violence		
10. Peer education		
11. Family planning services		
12. Teaching menstrual hygiene		
13. Unprotected sexual intercourse		

**SECTION THREE: ACCESSIBILITY OF ADOLESCENT YOUTH FRIENDLY HEALTH SPACES (AYFS) BY ADOLESCENTS**

14. Do you have a health facility within your community?

- i. Yes
- ii. No

15. If yes to question five (5), does the same health facility within your community offer Adolescent Sexual Reproductive Health Services (ASRHS)?

- i. Yes
- ii. No
- iii. Does not know

16. Do you have access to Adolescent Sexual Reproductive Health Services (ASRHS)?

- i. Yes
- ii. No

17. Have you accessed Adolescent Sexual Reproductive Health Services (ASRHS) in the last 3 months?

- i. Yes
- ii. No

18. Frequency of your access to Adolescent Sexual Reproductive Health Services (ASRHS) in the last 3 months?

- o Have never accessed before
- o Not often
- o Often
- o Very often

**SECTION FIVE: PERCEPTION OF ADOLESCENTS ON SEXUAL REPRODUCTIVE HEALTH**

Using a 5-Point Likert scale of measurement, kindly indicate your agreeableness to the following perceptual statements. Tick (√) in the box of your choice below in the table to demonstrate your response as indicated. 1 - Strongly disagree, 2 - Disagree, 3 - Neutral, 4- Strongly Agree, 5 – Strongly Agree

<b>Variables</b>	<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Strongly Agree</b>	<b>Strongly Agree</b>
19. Discussing sex and sexuality leads to increased premarital sex					
20. Adolescents seeking ASRHS are socially stigmatized					
21. Adolescents seeking ASRHS are considered promiscuous					
22. Sexual reproductive health is for married people only					
23. Speak freely about sex and reproductive health with family is considered as a taboo					
24. Utilization of ASRHS is shameful					

**SECTION FOUR: UTILIZATION OF ADOLESCENT SEXUAL REPRODUCTIVE HEALTH SERVICES BY ADOLESCENTS**

25. Are you able to utilize the Adolescent sexual reproductive health services (ASRHS)?
- i. Yes (utilize)
  - ii. No (Not Utilized)

**Types of Adolescent sexual reproductive health services (ASRHS) utilized**

<b>Variables</b>	<b>Yes (utilize)</b>	<b>No (Not Utilized)</b>
26. Abstinence from early marriage		
27. Dangers of adolescent pregnancy		

28. Education on alcohol/drug abuse		
29. Discuss with family when faced with sexual illness		
30. Discuss with friends when faced with sexual illness		
31. Self-prescription when faced with sexual illness		
32. Sought advice from AYFH Spaces		
33. Visited a health facility when faced with sexual illness		

34. How often do you utilize Adolescent sexual reproductive health services (ASRHS) in last three months?

- i. 0-1 time
- ii. 1-3 times
- iii. 3-5 times
- iv. More than 5 times

*Thank you for your participation*

## Appendix 4: HCW's Questionnaire

### A. Health Care Worker's Profile

1. Position of health worker: .....
2. Gender of health work: .....
3. Name of health facility: .....
4. For how long have you worked at this named health facility? .....

### B. Accessibility and utilization of Adolescent Youth Friendly Space (AYFS) by adolescents

5. Have you ever heard about AYFS?
  - i. Yes = 1
  - ii. No = 2
6. Have you been trained in Adolescent Sexual Reproductive Health?
  - i. Yes = 1
  - ii. No = 2
7. Have you ever accessed the AYFS here .....?
  - i. Yes = 1
  - ii. No = 2
8. What is the easiest way of accessing and utilizing AYFS
  - a. Probe
    - i. *What do you think about Adolescent Youth Friendly Spaces and Services provided?*
    - ii. *What was done to ensure accessibility and utilization of Adolescent Youth Friendly Spaces (AYFS) by adolescents?*
9. Why are accessibility and utilization of Adolescent Youth Friendly Spaces (AYFS) important to adolescents?

10. How are health care workers involved in promoting accessibility and utilization of Adolescent Youth Friendly Spaces and Services by adolescents at this facility?

11. Indicate some type of Adolescent Youth Friendly Services this clinic provides?

**C. Knowledge levels, awareness and perceptions on Sexual Reproductive Health of adolescents**

12. What is adolescent sexual reproductive health in your own opinion?

13. In your own opinion do adolescents know about their sexual reproductive health? If yes,

*Probe*

i. *How did they become aware of adolescent sexual reproductive health?*

ii. *Are there other mechanisms you used to reach out to adolescents? If yes, what are some of these mechanisms?*

14. What is the perception of adolescents on their sexual reproductive health among at this facility?

*Probe*

i. *Is there perception negative or positive towards sexual reproductive health?*

ii. *What are some of the things that build a negative perception among adolescents toward adolescent sexual reproduction health?*

iii. *What can you say about the way the following handle the issues of adolescent sexual reproduction health? **Parents; Teachers; Community members; Health officers?***

15. What can you say about the level of knowledge and awareness of adolescent sexual reproduction health among the following: **Parents; Teachers; Community members; Health Care Workers?**

*Probe*

i. *What is the community, parents, health workers and teacher doing to promote adolescent sexual reproductive health among adolescents?*

**D. Who is more affected by adolescent pregnancies between those in school and those out of school**

16. In your opinion, how prevalent are adolescent pregnancies within this facility catchment area?

*Probe*

i. *What could be the leading causes of adolescent pregnancies in the health facility catchment area?*

ii. Do you think adolescent pregnancies, have increased, decreased or remained within this facility catchment area for the past year?

17. Who is more affected by adolescent pregnancies between those in school and those out of school?

END

Thank you for your participation

**Appendix 5: NHRA Researcher registration**



## Appendix 6: Request to conduct research in Chinsali district

Muchinga Provincial Health Office  
PO Box 480021  
CHINSALI

18<sup>th</sup> September 2023  
The District Health Director  
Chinsali District Health Office  
CHINSALI

**RE: REQUEST TO CONDUCT RESEARCH AT LOCATION URBAN CLINIC  
AND KALWALA HEALTH CENTER**

The above subject refers to,

I am a student from the University of Zambia in the School of Nursing Sciences Department of Public Health Nursing. Additionally, am also an employee of the Ministry of Health at Chinsali Provincial Health Office as Principal Nursing Officer Standards and am also coordinating adolescent health services in the province as the focal point person.

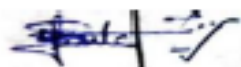
The purpose of this letter is to request your office to grant me permission to conduct research as a requirement for the University of Zambia to pursue a Masters's Degree.

**My research title is "Assessing the Effect of Utilizing Youth-Friendly Services on Adolescent Sexual Reproductive Health in Chinsali District"**

The research is non-interventional and has been proposed to be conducted from Location Urban Clinic and Kalwala Health Centre.

For any further questions, I may contact the Chairperson, UNZABREC on the following details: Tel: +260977925304, E-mail: [unzarec@unza.zm](mailto:unzarec@unza.zm). Head of Department School of Nursing Sciences Dr. Caroline Zulu on 0977691684 and my research supervisor Dr. Dorothy Osigwe Chanda on 0977847323.

Yours Faithfully,

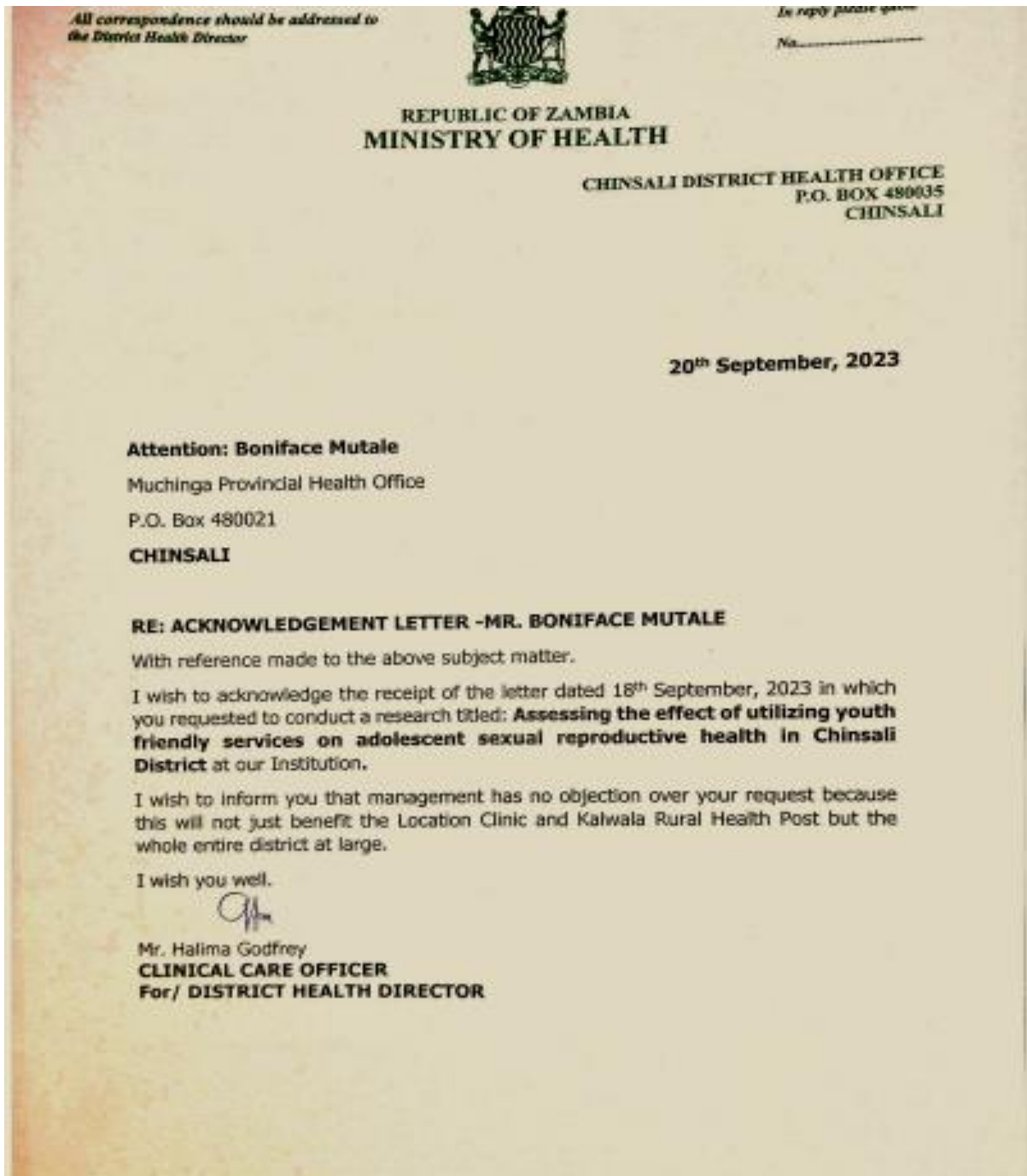


Boniface Mutale

Mobile: 0977869211

Email: [bsmutale@gmail.com](mailto:bsmutale@gmail.com)

**Appendix 7: Permission letter to conduct research by the DHD in Chinsali district**



Muchinga Provincial Health Office  
PO Box 480021  
CHINSALI

18<sup>th</sup> September 2023

The District Health Director  
Chinsali District Health Office  
CHINSALI

**RE: REQUEST TO CONDUCT RESEARCH AT LOCATION URBAN CLINIC  
AND KALWALA HEALTH CENTER**

The above subject refers to,

I am a student from the University of Zambia in the School of Nursing Sciences Department of Public Health Nursing. Additionally, am also an employee of the Ministry of Health at Chinsali Provincial Health Office as Principal Nursing Officer Standards and am also coordinating adolescent health services in the province as the focal point person.

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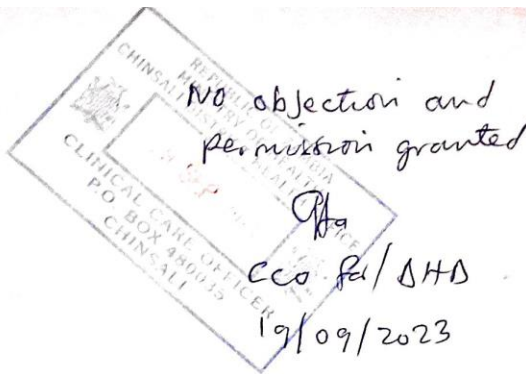
Yours Faithfully,



Boniface Mutale

Mobile: 0977869211

Email: [bsmutale@gmail.com](mailto:bsmutale@gmail.com)



## Appendix 8: UNZABREC Approval to conduct research



### UNIVERSITY OF ZAMBIA BIOMEDICAL RESEARCH ETHICS COMMITTEE

Telephone: +260 977925304  
Telegrams: UNZA, LUSAKA  
Telex: UNZALU ZA 44370  
Fax: +260-1-250753  
Federal Assurance No. FWA00000338 IRB00001131 of IORG0000774 NHRAR-REC No 2021-05-0002

Ridgeway Campus  
P.O. Box 50110  
Lusaka, Zambia  
E-mail: [unzabrec@unza.zm](mailto:unzabrec@unza.zm)

17<sup>th</sup> October, 2023

Your REF. No. 4458-2023

Mr. Boniface Mutale,  
University of Zambia,  
School of Nursing Sciences,  
PO BOX 50110,  
Lusaka.

Dear Mr. Mutale,

**RE: ASSESSING THE EFFECT OF UTILIZING YOUTH-FRIENDLY SERVICES ON  
ADOLESCENT SEXUAL REPRODUCTIVE HEALTH IN CHINSALI DISTRICT OF  
MUCHINGA PROVINCE ZAMBIA (REF. NO. 4458-2023)**

The above-mentioned research proposal was presented to the Biomedical Research Ethics Committee on 17<sup>th</sup> October, 2023. The proposal is approved. The approval is based on the following documents that were submitted for review:

- a) Study proposal
- b) Questionnaires
- c) Participant Consent Form

**APPROVAL NUMBER**


**: REF. No. 4458-2023.**

**This number should be used on all correspondence, consent forms and documents as appropriate.**

- i. **APPROVAL DATE** : 17<sup>th</sup> October, 2023
- ii. **TYPE OF APPROVAL** : Standard
- iii. **EXPIRATION DATE OF APPROVAL** : 16<sup>th</sup> October 2024
- iv. After this date, this project may only continue upon renewal. For purposes of renewal, a progress report on a standard form obtainable from the UNZABREC Offices should be submitted one month before the expiration date for continuing review.
- v. **SERIOUS ADVERSE EVENT REPORTING:** All SAEs and any other serious challenges/problems having to do with participant welfare, participant safety and study integrity must be reported to UNZABREC within 3 working days using standard forms obtainable from UNZABREC.

- vi. **MODIFICATIONS:** Prior UNZABREC approval using standard forms obtainable from the UNZABREC Offices is required before implementing any changes in the Protocol (including changes in the consent documents).
- vii. **TERMINATION OF STUDY:** On termination of a study, a report has to be submitted to the UNZABREC using standard forms obtainable from the UNZABREC Offices.
- viii. **NHRA:** You are advised to obtain final study clearance and approval to conduct research in Zambia from the National Health Research Authority (NHRA) before commencing the research project.
- ix. **QUESTIONS:** Please contact the UNZABREC on Telephone No. +260977925304 or by e-mail on [unzarec@unza.zm](mailto:unzarec@unza.zm).
- x. **OTHER:** Please be reminded to send in copies of your research findings/results for our records. You are also required to submit electronic copies of your publications in peer-reviewed journals that may emanate from this study. Use the online portal: [unza.rhinno.net](http://unza.rhinno.net) for further submissions.

Yours sincerely,



Prof. Sody Mweetwa Munsaka, BSc., MSc., PhD

**CHAIRPERSON**

Tel: +260977925304

E-mail: [s.munsaka@unza.zm](mailto:s.munsaka@unza.zm)