UTILIZATION OF REPRODUCTIVE HEALTH SERVICES BY ADOLESCENT REFUGEES LIVING IN KYAKA II REFUGEE RESETTLEMENT, KYEGEGWA DISTRICT

ATUGONZA ALLEN

20/U/GMSPH/13465/PD

A RESEARCH DISSERTATION SUBMITTED TO THE DIRECTORATE OF RESEARCH AND GRADUATE TRAINING IN PARTIAL FULFILMENT FOR THE AWARD OF MASTER OF PUBLIC HEALTH OF KYAMBOGO UNIVERSITY

OCTOBER, 2025

DECLARATION

This thesis is my original work and has not been presented for a degree in any other University and the material that is not my original work is acknowledged accordingly.

NAME : ATUGONZA ALLEN

REG. NO. : 20/U/GMSPH/13465/PD

SIGNATURE: .....

DATE : .....

APPROVAL

This is to certify that this thesis has been submitted by **Allen Atugonza** to Kyambogo University for examination with our approval as the candidate's supervisors.

NAME: Dr. Kaddumukasa Martha

Department of Biological Sciences,

Kyambogo University

SIGNATURE: .....

DATE: .....

NAME: Dr. Asio Santa Maria

Department of Biological Sciences,

Kyambogo University

SIGNATURE: .....

DATE: .....

DEDICATION

This work is dedicated to my family and friends for their support throughout this entire process.

ACKNOWLEDGEMENT

I thank the Almighty God for His grace and protection over me throughout this academic journey. I sincerely appreciate the management and staff of Kyaka II refugee settlement and all the participants who volunteered to take part in this study and provided me with the relevant information that I needed during the data collection process, without them, this work would remain more of a dream. I also give great thanks to my supervisors Dr. Kaddumukasa Martha and Dr. Asio Santa Maria for their guidance throughout this entire process. I would also like to thank my research assistants Mr. Kisaalu Paul and Mr. Turyamureeba Enoth who helped me in the field while I was collecting data as well as assisted me with the data analysis. Without their help and support, this work would have been a lot harder. A very special thanks goes to my best friend Ms. Nabukeera Mariam and my classmates whose moral support and encouragement has enabled me to come this far in my academic journey. May the Lord reward each and every one of you abundantly.

TABLE OF CONTENTS

DECLARATION ii

APPROVAL iii

DEDICATION iv

ACKNOWLEDGEMENT v

TABLE OF CONTENTS vi

LIST OF TABLES xii

LIST OF FIGURES xiii

LIST OF ACRONYMS xiv

DEFINITION OF KEY TERMS xv

ABSTRACT xvi

CHAPTER ONE: INTRODUCTION 1

1.1 Background 1

1.2. Statement of the Problem 4

1.3 Objectives 5

1.3.1 General objective 5

1.3.2 Specific Objectives 5

1.4 Research Hypotheses 5

1.5 Justification of the study 6

1.7 Scope of the study 7

1.7.1Geographical scope 7

1.7.2 Content scope 7

1.7.3 Time scope 7

1.8 Limitations 7

CHAPTER TWO: LITERATURE REVIEW 8

2.1 Theoretical Review 8

2.1.1 Attention 8

2.1.2 Retention 9

2.1.3 Reproduction 9

2.1.4 Motivation 9

2.2 EMPIRICAL REVIEW 10

2.2.1 Knowledge levels of adolescents about Sexual Reproductive health services 10

2.2.2 Socioeconomic factors that influence the utilization of reproductive health services by adolescent refugees 13

2.2.3 Barriers to accessing SRH services among adolescent refugees 15

2.3 CONCEPTUAL FRAMEWORK 18

CHAPTER THREE: MATERIALS AND METHODS 20

3.1 Study Area 20

3.2 Study Population 21

3.2.1 Study Unit 21

3.3 Study design 21

3.4 Study variables 22

3.5 Methods, tools and instruments 23

3.5.1 Assessing the knowledge about Reproductive Health services among adolescents 23

3.5.2 Examining the socioeconomic factors that influence the utilization of Reproductive Health 23

3.5.3 Determining the rate at which adolescent RH services are being utilized in the Kyaka II refugee resettlement 23

3.6 Sample Size 23

3.7 Data Analysis and Presentation Methods 24

3.7.1 Data Analysis and Presentation Methods on level of knowledge about Reproductive Health services among adolescents in Kyaka II refugee resettlement 24

3.7.2 Data Analysis and Presentation Methods on the socioeconomic factors influencing the utilization of Reproductive Health services by adolescent refugees in Kyaka II refugee resettlement 24

3.7.3 Data Analysis and Presentation Methods on the barriers to access to Reproductive Health services and utilization by adolescents in Kyaka II refugee resettlement 25

3.8 Quality control measures 28

3.8.1 Validity 28

3.8.2 Reliability 28

3.9 Data management and Analysis 28

3.9.1 Data management 28

3.9.2 Data Analysis 29

3.10 Ethical Considerations 29

CHAPTER FOUR: RESULTS 31

4.1 Introduction 31

4.2.1 Background characteristics of the study participants at Univariate analysis level . 31

4.2.2 Empirical Findings 33

4.3 Bivariate Analysis 46

4.3.1 Associations between Knowledge, Socio-economic Factors and Barrier to access of RHS among Adolescents 46

4.4 Multivariable analysis (Predictors of Utilization of RHS) 48

4.5 Hypothesis Testing 53

CHAPTER FIVE: DISCUSSION 56

5.1 Introduction 56

5.1.2 Level of Knowledge among Adolescent Refugees Regarding Utilization of SRH Services 56

5.1.3 Socio-economic Factors Affecting the Utilization of SRH Services by Adolescent Refugees 57

5.1.4 Barriers to Accessing Sexual and Reproductive Health Services at Kyaka II Refugee Resettlement 59

5.2 Synthesis and Implications 60

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS 61

6.1 Introduction 61

6.2 Conclusions 61

6.2.1 Level of Knowledge among Adolescent Refugees Regarding Utilization of SRH Services 61

6.2.2 Socio-economic Factors Affecting the Utilization of SRH Services by Adolescent Refugees 62

6.2.3 Barriers to Accessing Sexual and Reproductive Health Services at Kyaka II Refugee Resettlement 63

6.3 General Conclusion 64

6.4 Recommendations 65

6.4.1 Enhancing Knowledge about SRH Services 65

6.4.2 Improving Socio-economic Factors Influencing Access to SRH Services 66

6.4.3 Mitigating Barriers to Accessing SRH Services 68

6.5 Limitations and Future Research 69

REFERENCES 72

APPENDICES 83

APPENDIX I: QUESTIONNAIRE FOR ADOLESCENTS 83

APPENDIX II: IN-DEPTH INTERVIEW GUIDE FOR HEALTH WORKERS AT KYAKA II REFUGEE SETTLEMENT 87

APPENDIX III: FGD GUIDE FOR ADOLESCENTS 89

APPENDIX IV: SUMMARY OF FOCUS GROUP DISCUSSION 91

PARTICIPANTS' CHARACTERISTICS 91

APPENDIX V: CONSENT FORM 92

APPENDIX VI: TABLE OF SMAPLE SIZE DETERMINATION BY KREJCIE AND MORGAN 93

APPENDIX VII: TASO IRB APPROVAL 94

APPENDIX VIII: OPM APPROVAL 96

APPENDIX IX: LETTER OF INTRODDUCTION 97

LIST OF TABLES

Table 4.1 Frequency distribution of the participants' characteristics at Univariate analysis level 32

Table 4.2: Knowledge about Reproductive Health services among adolescents in Kyaka II refugee resettlement (SD, D, NS, A, SA) 34

Table 4.3: socioeconomic factors affecting the utilization of SRH services by adolescent refugees in Kyaka II. 39

Table 4.4: Barriers to Utilization of RHS by Adolescents in Kyaka II Refugee Resettlement 44

Table 4.5: Correlation Analysis of Reproductive Health services and utilization of by adolescent 47

Table 4.5: Multivariate Logistic Regression Results Linking Utilization of SRH Services to Knowledge, Socio-economic Factors, Barriers, and Covariates 50

Table 4.6: Hypothesis Testing Results 53

LIST OF FIGURES

Figure 2.1 Conceptual Framework 18

Figure 3.1: A Map of Uganda Showing Kyegegwa District..... 20

Figure 3.2: A map showing Kyaka II refugee settlement in Kyegegwa district, western Uganda 21

LIST OF ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
DRC	Democratic Republic of Congo
FGD	Focus Group Discussion
HIV	Human Immunodeficiency Virus
RHS	Reproductive Health Services
SDGs	Sustainable Development Goals
SLT	Social Learning Theory
SRH	Sexual Reproductive Health
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
UBOS	Uganda Bureau of Statistics
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
VCT	Voluntary counselling and testing
WHO	World Health Organization

DEFINITION OF KEY TERMS

Reproductive health

Reproductive health is defined by the WHO as a condition of complete physical, mental, and social well-being and not only the absence of illness or infirmity in all matters relating to the reproductive system and to its activities and processes.

Reproductive health services

These are services provided in health facilities and they include pregnancy test & care, Voluntary counselling and testing (VCT), Sexually transmitted infections (STI) screening, diagnosis, and management services, Safe abortion care, or referral services relating to the human reproductive system.

Refugee

A refugee refers to someone who flees their country due to persecution, war or violence.

Adolescents

According to the WHO, an adolescent is a person between 10 to 19 years of age.

ABSTRACT

Background: This study investigated the utilization of sexual and reproductive health (SRH) services among adolescent refugees in Kyaka II Refugee Resettlement, Kyegegwa District, Uganda. The objectives were to assess SRH knowledge levels, examine socioeconomic influences on utilization, and identify barriers to access SRH services among adolescent refugees in Kyaka II and propose strategies to improve service uptake. The study tested hypotheses that these factors significantly predict SRH uptake.

Methods: A cross sectional study design adapting mixed-methods approach was employed, involving a survey of 280 adolescent refugees using a five-point Likert scale, focus group discussions with adolescents (FGDs), and in-depth interviews with health workers. Descriptive statistics summarized knowledge, socioeconomic factors, and barriers, while Pearson product-moment correlations and logistic regression analyzed their relationships with SRH utilization, controlling for covariates like age, gender, and education. Data were analyzed using SPSS, with significance set at $p < 0.05$.

Results: Adolescents exhibited high SRH knowledge (mean = 4.02, SD = 0.81), positively correlated with utilization ($r = .763$, $p < .001$; OR = 1.983, $p = .001$). Socioeconomic factors, including education and liberal religious teachings, facilitated access ($r = .695$, $p < .001$; OR = 1.635, $p = .010$), but poverty and income constraints limited uptake. Barriers such as distance, privacy issues, stigma, and cultural taboos significantly hindered utilization ($r = .725$, $p < .001$; OR = 0.587, $p = .013$), with qualitative data revealing service denial and overcrowding as key concerns. The model explained 29% of utilization variance (Nagelkerke $R^2 = 0.29$).

Conclusion: The study confirms that SRH utilization in Kyaka II is driven by knowledge and socioeconomic facilitators but impeded by barriers, rejecting all null hypotheses. These findings extend the literature on refugee health, highlighting the need for peer-led education, microfinance programs, mobile clinics, and stigma reduction to enhance access and reduce health risks. Future research should evaluate intervention sustainability longitudinally to inform scalable policies in humanitarian settings.

CHAPTER ONE: INTRODUCTION

1.1 Background

Globally about 1.3 billion making 30% of the total world population are children and adolescents. The 2024 Global Trends indicate that by the end of 2023, the global number of forcibly displaced people reached 117.3 million. Children including adolescent account for 40 percent of all forcibly displaced people (UNHCR, 2024). A significant number of adolescents are said to join humanitarian settings on a yearly basis due to circumstances related to conflict or natural disaster (Stirling-Cameron et al., 2024). Refugee settings are characterized by a breakdown in provision of services which makes access and utilization of services difficult. Yet, utilization of sexual and reproductive health (SRH) services is critical to achieving better wellbeing of adolescents who are often the most affected negatively regarding access to SRH utilization.

The global agenda to improve access and utilization of SRH is emphasized under goal three of the Sustainable Development Goals (SDGs). SDG goal 3.1 aims to reduce maternal mortality, ensure universal access to sexual and reproductive health services by 2030. Under this goal. nation are required to commit to universal access of SRH services (United Nations, 2025) Despite of the SDGs, SRH needs for migrant adolescents (10–24 years old) in humanitarian settings remain unmet. Studies have associate poor access and utilization of SRH services in refugee setting for migrant adolescents to inadequate health facilities and service personnel, limited supplies, limited funding, poor policies and the sensitivity associated with promoting SRH services, poor quality of SRH services, poor attitudes of health care providers towards young people, provider bias (Palattiyil et al., 2025) Other reasons include health concerns, community opposition, language barriers, religious beliefs, fees, waiting times, travel

distances, cultural factors and or limited self-efficacy (Stirling-Cameron et al., 2024; Mutua et al., 2020)

The foregoing reasons render adolescents in refugee settings to be neglected or underserved. Moreover, the poor state of the health facilities in most developing countries is further strained by the refugee crisis, that creates an unmet need for reproductive health services (Bukuluki et al., 2023). As such humanitarian setting with adolescents have higher rates of repeated and unsafe abortions, lower antenatal care (ANC) attendance, more postpartum complications such as perinatal mortality, fetal death and stillbirth, and a higher risk of HIV and sexual violence. Approximately 60% of maternal deaths or childbirth among adolescent girls occur in refugee settings (Women's Refugee Commission, 2024; Rachel Esteves Soeiro et al., 2023).

This problem manifests on the global scale with differing impacts. In Europe, Greece hosts the highest number of refugees and is reported to have most adolescents with limited or no access to SRH services (Stirling-Cameron et al., 2024; Refugee Rights Europe, 2023). The Minimum Initial Service Package (MISP) 2018 was designed to assure a standard minimum of sexual and reproductive health services in humanitarian settings and or refugee camps, however humanitarian organizations have reported low coverage of the MISP and several barriers to access and utilization of SRH particularly contraceptive and safe abortion. Language barrier and lack of information concerning which services exist and which personnel to approach was highlighted (Joyce et al., 2024).

In Germany, refugees have the right to access any form of modern contraception free of charge. However, despite this provision the fact that the coverage for costs of contraception is state-specific and needs to be arranged by health care professionals has made the process cumbersome. As such asylum seekers majority of whom are adolescents do not have adequate

access to SRH services due to a lack of information and health education services in Germany and language barrier. As such many adolescents' youth are exposed to risks of unwanted pregnancies, unsafe abortion (Inci et al., 2020).

In Ethiopia, one of a country in the SSA with a rapidly growing population of adolescents and youths, adolescents account for 33.8% of the estimated total population of 90 million. Ethiopia is one of the African countries hosting the biggest number of refugees there are more than 2 million IDPs, an estimated 40% of whom have unmet need for modern contraceptives (O'Connell et al., 2022; Rachel Esteves Soeiro et al., 2023). Humanitarian organizations providing essential emergency support to IDPs often lack the necessary staff, specialized experience, and resources to address the SRH needs of IDPs. Additionally, development organizations that wish to work with IDPs may lack the experience and expertise to navigate SRH programming in crisis settings (O'Connell et al., 2022).

Uganda hosts the largest number of refugees in Africa, with a progressive refugee policy that permits refugees to access health care service providing a better ground to explore SRH utilization. Previous research carried out in a refugee setting in Uganda observed that engaging in sexual behavior was more prevalent among out of school adolescents and older adolescents (16–18 years) which conditions are common in refugee settings in Uganda (Bukuluki et al., 2021). Refugees like any other person have a right to SRH services, although the capacity to provide SRH services may be limited (Mambo et al., 2023). Previous research observed that unmet need for reproductive health services was higher among refugee settlements in Northern Uganda. There is limited research about utilization of adolescent SRH services among young people in Kyaka II refugee settings, resulting in a knowledge gap regarding the factors associated with SRH utilization among young people living in Kyaka II refugee settings. Particularly there is limited information regarding knowledge of adolescent on reproductive

health services as well as social economic factors influencing use of SRH service a Kyaka II refugee camp. The current study aims to fill this gap by identifying the factors associated with SRH utilization among adolescents living in Kyaka II refugee resettlement, Kyegegwa district Uganda.

1.2. Statement of the Problem

Uganda is one of the nations in Africa hosting the largest numbers of refugees and provides a favorable policy that permits refugees to access health care services (UNHCR, 2025). Kyaka II refugee settlement has 143,013 total refugees and asylum seekers, with 51% women and 11% adolescents (12-17 years). Adolescents (15-24) make up a significant proportion of refugees and are the most affected. The UNHCR health sector works in collaboration with the Ministry of Health at both central and field levels through respective District Health Offices where refugee settlements are located to ensure integration of adolescent sexual and reproductive health (SRH) into their health care system. Despite these interventions, adolescent SRH needs still go unmet at Kyaka II settlement (Bukuluki et al., 2023). Adolescents at Kyaka II refugee center do not access and use SRH services as required and needed, with utilization rates as low as 19.3% in similar Ugandan refugee settings (Bukuluki et al., 2023). This state of affairs makes adolescents vulnerable to adverse outcomes linked to limited access and use of SRH services, such as contracting sexually transmitted infections (STIs), experiencing pregnancy-related complications, unwanted or mistimed pregnancies limiting education attainment, unsafe abortions, and increased maternal morbidity, among others (Soeiro et al., 2023). Recent findings indicate high teenage pregnancy prevalence (41.2%) and low contraceptive use (8.7%) in Ugandan refugee settlements, exacerbated by barriers like inadequate training and cultural beliefs among healthcare workers (Okello et al., 2024; Mambo et al., 2025). Yet, efforts to increase access and utilization of SRH services in Kyaka II refugee

settlement remain low (Buser et al., 2024). Understanding the influence of knowledge and socioeconomic factors on utilization of SRH by adolescents needs to be established in order to remedy the aforementioned problems in Kyaka II refugee settlement.

1.3 Objectives

1.3.1 General objective

To investigate the factors influencing the utilization of sexual and reproductive health (SRH) services by adolescent refugees in Kyaka II refugee settlement, Kyegegwa District, to enhance access and address unmet SRH needs.

1.3.2 Specific Objectives

1. To assess the level of knowledge among adolescent refugees in Kyaka II regarding utilization of available SRH services.
2. To examine the socioeconomic factors affecting the utilization of SRH services by adolescent refugees in Kyaka II.
3. To identify barriers to accessing SRH services among adolescent refugees in Kyaka II and propose strategies to improve service uptake.

1.4 Research Hypotheses

1. H1: Higher levels of knowledge about SRH services among adolescent refugees in Kyaka II are positively associated with increased utilization of these services.
2. H0: There is no significant relationship between knowledge levels and the utilization of SRH services among adolescent refugees in Kyaka II.
3. H2: Socioeconomic factors, such as income and education, significantly influence the utilization of SRH services by adolescent refugees in Kyaka II.
4. H0: Socioeconomic factors have no significant impact on the utilization of SRH services by adolescent refugees in Kyaka II.

5. H3: Cultural and systemic barriers significantly limit access to SRH services among adolescent refugees in Kyaka II.
6. H0: Cultural and systemic barriers do not significantly affect access to SRH services among adolescent refugees in Kyaka II.

1.5 Justification of the study

The health status of refugees is not taken into account due to the fact that household surveys and school-based initiatives do not include their demographic information. Even though the Kyaka II refugee resettlement has some of the worst health indicators in the nation, there is limited information on how often adolescent refugees use reproductive health care. A review by Magezi & Mairah, (2022) highlighted minimal provision of adolescent SRH services in refugee settings.

Uganda has the second-youngest population in the world and one of the highest rates of teen pregnancies and STD transmission. Information about reproductive health is difficult to access.

An understanding of the context of utilization of Reproductive Health services by adolescent refugees living in the Kyaka II refugee resettlement in Uganda shall help modify and come up with interventions that shall be acceptable in this particular region.

1.7 Scope of the study

1.7.1Geographical scope

The study was conducted in the Kyaka II Refugee Settlement found in Western Uganda's Kyegegwa district

1.7.2 Content scope

The study focused on the utilization of Reproductive Health services by the adolescent refugees in Kyaka II refugee settlement.

1.7.3 Time scope

The data collection took a period of six weeks from 15th October to 30th December 2022. This enabled the researcher to collect the required data, for analysis.

1.8 Limitations

The study was prone to number of limitations like other previous studies;

The participants were not in position to release relevant information that the study needed and this affected the research findings. Some respondents were hostile and failed to co-operate during the study especially when it came to answering questions that required personal information fearing that it may be disclosed to their parents or guardians. The investigator, however, worked together with the community leaders to ensure that the study participants were well prepared and comfortable enough to participate in the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Theoretical Review

The notion that learning happens through social observation and later imitation of copied behavior is the basis of the social learning theory (SLT). According to SLT, learning occurs when people observe what other people do and the results of their activities. People either learn not to duplicate a certain conduct and so avoid the unfavorable effects or they copy other people's habits and live with the consequences. (Pajares, 2002).

The social learning theory proposes that, learning mostly occurs in communal settings by way of seeing, copying and reproducing the copied behavior. The theory is centered on Bandura's supposition that learning rarely happens due to personal encounters alone, but by way of making use of the power of observation as well as copying (Martinez, 2010). Bandura reveals that via observing others, individuals are capable of visualizing mentally how new habits are executed. This knowledge is then engraved, saved in the mind, and acts as a lead for action either straight away after the observation or at another time.

Bandura (1977) states that observational learning is comprised of four major aspects, as explained below:

2.1.1 Attention

Only when people are paying close attention to the behavior being displayed during observation can learning take place. The degree to which attention is paid to the behavior being displayed can depend on the observer's and the subject's individual characteristics. For instance, a person who is drowsy or distracted is probably not going to be as attentive as someone who is fully and intensely engaged.

2.1.2 Retention

People need to reflect back on the imitation actions in order to master the observed behavior. In order to increase the likelihood that the observed behavior will be repeated, imagery and explanatory language can be used to maintain retention and recall.

2.1.3 Reproduction

In this situation, the person converts the imitated behavior into suitable personal actions. The model asserts that stored images and words must be transformed into a response that fits the presented pattern in order for the copied behavior to be replicated. As the observer practices the new behavior, behavioral reproduction increases.

2.1.4 Motivation

Replicating imitated behavior needs some motivation to do so. If there is no need for reproducing observed behavior, people would not put in any effort.

The Bobo doll test by Bandura is a classic example of social observation in action. Children were exposed to both violent and nonviolent role models during the test, who either aggressively or no aggressively played with the dolls. The results revealed that "subjects in the violent condition repeated more physically and verbally aggressive behavior that looked like that of the models." (Bandura, Ross, & Ross, 1961). This was also the case with the children subjected to nonviolent models. Therefore, it follows that when they were playing with their Bobo dolls, the children who were exposed to the nonviolent model repeated the same behavior. This experiment demonstrated that individuals' conduct might be affected simply by observing a model's acts, especially in adolescents (Bandura, Ross, & Ross, 1961, as cited in Martinez, 2010). This suggestion of observed behavior, especially as it connects to impacting adolescents' behavior, is suitable in this study where adolescents build attitudes and perceptions towards the utilization of Reproductive Health services (RHS) by modeling.

2.2 EMPIRICAL REVIEW

2.2.1 Knowledge levels of adolescents about Sexual Reproductive health services

Understanding the level of knowledge among adolescent refugees about sexual and reproductive health (SRH) services and their importance is critical for improving service utilization in settings like Kyaka II. Knowledge influences adolescents' ability to make informed decisions about contraception, maternal health, and STI prevention. In refugee contexts, disrupted education systems, cultural taboos, and limited outreach often result in low SRH awareness. This theme explores the sources, quality, and impact of SRH knowledge, drawing on studies from global and Ugandan refugee settings to inform the current study's objective of assessing knowledge levels in Kyaka II

In 2014, Kohli et al. studied SRH knowledge among Syrian refugee adolescents in Lebanon, finding that only 20% understood the importance of contraception due to limited access to formal education. The study's survey-based approach provided robust data but focused primarily on female adolescents, limiting gender inclusivity. Critically, the findings highlight the role of disrupted schooling in knowledge gaps, which is relevant to Kyaka II, where educational access is similarly constrained. This study contributes to the current research by emphasizing the need for targeted SRH education programs for adolescents in Kyaka II.

A 2016 study by McGinn et al. in South Sudanese refugee camps explored peer-led SRH education, reporting a 35% increase in knowledge about contraceptive methods after interventions. The study's intervention-focused design is actionable, but its short-term follow-up limits insights into sustained knowledge retention. The success of peer education is relevant to Kyaka II, where peer networks are strong among adolescents. Synthesis with Kohli et al. suggests that combining formal and peer-led education could address knowledge gaps in Kyaka II, guiding the current study's recommendations.

Casey et al. (2017) examined SRH awareness in Ugandan refugee settlements, including Nakivale, finding that only 25% of adolescents knew about available SRH services due to inadequate outreach. The mixed-methods approach provided depth, but the study's broad focus reduced specificity to adolescents. Critically, the findings underscore the need for community-based outreach in Kyaka II, where similar outreach gaps exist. This study informs the current research by highlighting the importance of tailored awareness campaigns to improve SRH knowledge.

In 2018, Ivanova et al. investigated SRH knowledge among Jordanian refugee adolescents, noting that school-based programs increased awareness of SRH services by 40%. The study's large sample size enhances reliability, but its urban context limits applicability to rural Kyaka II. The success of school-based interventions suggests potential for integrating SRH education into Kyaka II's limited educational structures. Synthesis with prior studies indicates that combining school-based and community-based education could enhance knowledge in Kyaka II.

Logie et al. (2019) studied SRH knowledge in Kyaka II, finding that misinformation about contraception, such as myths about infertility, reduced awareness by 50%. The qualitative approach captured adolescent perspectives but was limited by a small sample size. Critically, the study's focus on Kyaka II makes it directly relevant, highlighting the need to address misinformation. This contributes to the current study by emphasizing culturally sensitive education to correct myths and improve SRH understanding.

A 2020 study by Tanabe et al. in Kenyan refugee camps explored radio campaigns as a tool for SRH education, reporting a 30% increase in knowledge about STI prevention. The study's focus on media is innovative but lacks adolescent-specific data. For Kyaka II, where radio access is common, this suggests potential for media-based campaigns. Synthesis with Ivanova

et al. indicates that combining media and school-based approaches could maximize SRH knowledge dissemination in Kyaka II.

Bukuluki et al. (2023) align with findings from Ivanova et al. (2020), who reported similarly low SRH knowledge (28%) among Syrian refugee adolescents in Lebanon, suggesting a consistent pattern across refugee contexts. However, Logie et al. (2022) found higher knowledge levels (45%) in urban refugee settings, indicating that rural settlements like Kyaka II face unique educational barriers.

In Bidi bidi settlement, 39% of adolescents believed women cannot contract STIs without intercourse, reflecting widespread myths that deter health-seeking behavior (Bukuluki et al., 2021). Such misconceptions stem from inadequate access to comprehensive sexuality education (CSE), compounded by cultural taboos in refugee communities. This directly correlates with low service uptake, as misinformation reduces adolescents' confidence in accessing SRH facilities. Bukuluki et al. (2021) corroborate findings by Tirado et al. (2022), who noted that 42% of Rohingya adolescents in Bangladesh held similar STI myths, suggesting a cross-cultural issue. Conversely, Ameyaw et al. (2023) reported lower misconception rates (25%) in urban Ghanaian refugee settings, highlighting contextual differences. The study leaves the questions begging on level of SRH knowledge at Kyaka II

In 2022, MacLean et al. studied Kyaka II, reporting that only 15% of adolescents had comprehensive SRH knowledge due to limited access to trained educators. The qualitative data captured adolescent voices but lacked quantitative validation. This directly informs the current study by highlighting the need for trained educators in Kyaka II to improve SRH awareness. Synthesis with prior studies suggests that teacher training could enhance knowledge dissemination.

A 2023 study by Aturinda et al. under the Spotlight Initiative in Kyaka II found that community-based SRH workshops increased knowledge by 20%. The study's intervention focus is actionable but limited by short-term data. Its direct relevance to Kyaka II underscores the effectiveness of community engagement. This contributes to the current study by suggesting community-based education as a strategy to improve SRH knowledge among adolescents.

Finally, a 2024 report by GIVE Africa in Kyaka II noted that only 10% of adolescents understood the importance of SRH services due to limited outreach and cultural taboos. The community-based approach provided practical insights but lacked statistical rigor. Synthesis with prior studies suggests that a multi-pronged approach—combining peer-led, school-based, community-based, and media-driven education—could significantly enhance SRH knowledge in Kyaka II, guiding the current study's recommendations for awareness programs.

2.2.2 Socioeconomic factors that influence the utilization of reproductive health services by adolescent refugees

Socioeconomic factors, including poverty, education, employment, and access to resources, significantly influence the utilization of SRH services among adolescent refugees. In Kyaka II, where economic opportunities are limited, these factors create barriers to accessing healthcare. This theme examines how income levels, education access, and dependency on aid affect SRH utilization, drawing on studies from refugee contexts to inform strategies for improving service uptake in Kyaka II.

Bukuluki et al. (2021) investigated socioeconomic factors in Nakivale, finding that household poverty increased teenage pregnancies by 30%, reducing SRH utilization. Similarly, Mutua et al., (2020) observed that youths with a source of income had higher utilization of all youth reproductive health services. The study further affirmed that majority of adolescent youth

without income abandon SRH services and resort to unreliable traditional methods such as safe days and withdrawal methods.

Laura & Landini, (2025) studied psychosocial factors affecting access to sexual reproductive health services and found that cultural beliefs, religious beliefs and social stigma associated with use of SRH services deterred youth from using the services when needed. Islam for example prohibits family planning and promotes artificial or traditional methods, young adolescents are stigmatized by their peer for buying condoms, using pills among other services. Watcharakorn Riabroi et al., (2025) affirmed that young avoided SRH services because of what they consider 'embarrassment' and 'shame', as they avoided visiting healthcare services in the hope that their pregnancy a direct manifestation of having engaged in sexual intercourse would go unnoticed. It was further revealed by adolescents that Privacy and confidentiality concerns were also common, with young people describing how living in villages or small towns could facilitate gossip and cause embarrassment to themselves and their families. These studies are eye opener to possible barriers of utilization of SRH however they were done in foreign nations. The findings will however help extend the discourse in the case Kyaka II refugee settlement in Uganda

In a similar study by Dávila et al., (2025) finds reiterate structural barriers such as social stigma, negative societal representations, and weak institutional capacities, compounded by economic disparities and restrictive regulatory environments restrict SRH access, especially in cases involving sexual violence and clandestine abortions. Aluda et al., (2025) findings affirmed social stigma as a significant barrier to utilization of SRH service is Kenya.

Ezeonu et al., (2025) studied factors that affect utilization of SRH services by men in Nigeria and established that males in both urban and rural areas of Anambra State preferred informal health facilities; male-focused health facilities and male health workers. The participants

perceived services as costly; and criticized healthcare workers' attitudes. Some rural areas had inadequate SRH facilities, staff and commodities. The participants exhibited varying levels of SRH awareness.

Decision making on use of contraceptive is a social factor influence utilization of SRH services generally. Fitsum Tariku Fantaye & Solomon Abrha Damtew, (2024) established that women make decisions alone or jointly with their partners on what family planning method to use. Women who were single were most likely to choose and use the method they desire and feel appropriate. Concerning joint decision on family planning women who follow Muslim religion, being informed about method side effect, experiencing violence were found to reduce likelihood of making decision with their husband and/or partner. While, obtaining the desired family planning method, discussion before FP used, and her husband's feeling to family planning use were found to be statistically significant factors which positively influence women joint family planning use decision making

Therefore, the instant study will extend these findings to Kyaka II and establish extent to which the same social-economic factors influence utilization of SRH.

2.2.3 Barriers to accessing SRH services among adolescent refugees

Barriers to accessing SRH services among adolescent refugees include logistical, cultural, and systemic factors, which significantly limit utilization in settings like Kyaka II. These barriers include distance to facilities, stigma, lack of youth-friendly services, and inadequate infrastructure. This theme identifies these barriers and explores strategies to improve SRH uptake, drawing on global and Ugandan studies to inform actionable interventions for Kyaka II.

In 2015, Casey et al. studied barriers to SRH access in humanitarian settings, finding that lack of youth-friendly services reduced adolescent utilization by 60%. The study's broad scope

provided robust data but lacked adolescent-specific insights. Critically, the findings are relevant to Kyaka II, where youth-friendly services are limited. This study contributes to the current research by emphasizing the need for tailored SRH services

Krause et al. (2016) examined logistical barriers in South Sudanese camps, reporting that distance to facilities reduced SRH uptake by 50%. The quantitative approach strengthened the findings, but the study lacked qualitative adolescent perspectives. For Kyaka II, this suggests that mobile clinics could address logistical barriers. Synthesis with Casey et al. indicates that combining youth-friendly services with improved access is key.

A 2017 study by Ivanova et al. in Jordan found that stigma prevented 55% of adolescents from accessing SRH services. The study's large sample size enhances reliability, but its urban focus limits applicability to Kyaka II. Community-based stigma reduction programs could be effective in Kyaka II. This study informs the current research by highlighting the need for cultural interventions.

In 2018, Logie et al. studied Kyaka II, noting that long waiting times and lack of privacy deterred 50% of adolescents from SRH services. The qualitative approach captured adolescent voices but was limited by a small sample. This directly informs the current study by emphasizing the need for efficient, private services in Kyaka II. Synthesis with Ivanova et al. suggests that addressing stigma and logistics together could improve uptake.

Tanabe et al. (2019) explored systemic barriers in Ugandan and Kenyan camps, finding that stock-outs of contraceptives reduced SRH utilization by 40%. The study's comparative approach is robust but lacks adolescent-specific data. For Kyaka II, this suggests that supply chain improvements are critical. This contributes to the current study by highlighting systemic interventions.

A 2020 study by Bukuluki et al. in Nakivale reported that cultural taboos around discussing sex reduced SRH access by 45%. The mixed-methods approach provided depth, but the study focused on girls. This is relevant to Kyaka II, where cultural barriers are prevalent. The current study can build on this by designing culturally sensitive education programs.

MacLean et al. (2021) studied Kyaka II, finding that lack of trained staff reduced SRH uptake by 35%. The qualitative data is valuable but lacks quantitative validation. This directly informs the current study by emphasizing the need for staff training in Kyaka II. Synthesis with Tanabe et al. suggests that addressing systemic and human resource barriers is essential.

In 2022, Worden highlighted refugee-led SRH programs in Kyaka II, reporting a 20% increase in uptake after community learning centers were introduced. The study's community focus is actionable but limited by self-reported data. This contributes to the current study by suggesting community-based strategies for Kyaka II.

A 2023 study by Aturinda et al. under the Spotlight Initiative in Kyaka II found that partnerships with UN agencies increased SRH access by 25% through improved infrastructure. The study's intervention focus is relevant but limited by short-term data. This informs the current study by highlighting the role of partnerships in overcoming barriers.

Finally, a 2024 report by GIVE Africa in Kyaka II noted that multiple barriers—logistical, cultural, and systemic—reduced SRH uptake by 60%. The community-based approach provided practical insights but lacked statistical rigor. Synthesis with prior studies suggests that a multi-faceted approach—combining mobile clinics, stigma reduction, staff training, and partnerships—could significantly improve SRH uptake in Kyaka II, guiding the current study's recommendations.

2.3 CONCEPTUAL FRAMEWORK

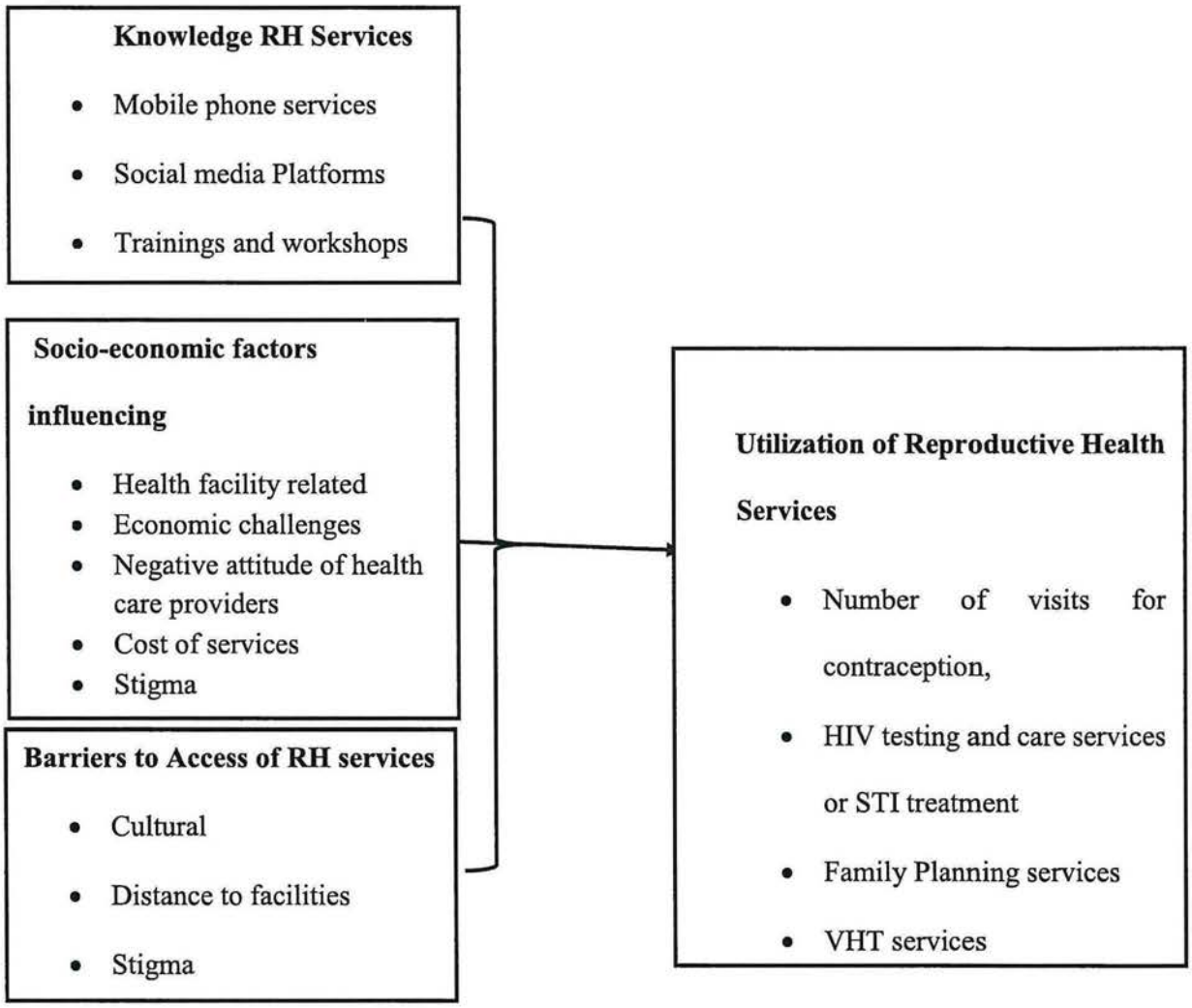


Figure 2.1 *Conceptual Framework*

Source: Developed by the researcher from literature reviewed

Description

The conceptual framework above represents independent variable Knowledge of RHS, socio economic factors influencing utilization of RHS and barriers to utilization of available RHS services at Kyaka II Refugee settlement. It is believed a complex interplay of independent variables determine Utilization of RHS services at Kyaka II refugee center. RHS service in this

case include contraceptives, condom use, safe abortions, HIV counselling and testing, STI treatment and prevention among others.

The conceptual framework illustrates a causal pathway wherein knowledge of reproductive health services (RHS) and socio-economic factors act as independent variables influencing the dependent variable: the rate of utilization of available RHS in Kyaka II Refugee Settlement, Uganda. This model aligns with Andersen's Behavioral Model of Health Services Use, adapted to humanitarian contexts, emphasizing predisposing (knowledge) and enabling (socio-economic) factors (Andersen, 1995; updated in refugee studies post-2020).

Recent literature from 2020-2025 underscores the pivotal role of RHS knowledge in driving utilization. For instance, comprehensive knowledge of contraception, HIV/STI prevention, and service sources more than doubles the odds of RHS uptake among young refugee women, as limited awareness perpetuates misconceptions and delays access (Bukuluki et al., 2023). Similarly, awareness of RHS reduces teenage pregnancy risks, highlighting knowledge as a protective factor in settlements like Palabek, analogous to Kyaka II (Bakesiima et al., 2024).

Socio-economic factors, including education, income, and marital status, further modulate utilization. Refugees with primary education are more likely to use RHS like family planning, while unskilled occupations reduce uptake by half due to affordability barriers (Achola et al., 2024). Higher household sizes and transport costs exacerbate non-utilization, with refugees incurring elevated delivery expenses amid food insecurity (Bapolisi et al., 2023).

Emphasizing linkages, socio-economic status directly shapes knowledge acquisition; for example, low education correlates with poorer RHS awareness, amplifying cultural opposition and reducing utilization among uneducated groups (Bapolisi et al., 2023). In Kyaka II-like Western Ugandan settlements, these interconnections are compounded by cultural and systematic barrier and stockouts (Bukuluki et al., 2023). This framework informs targeted interventions, such as education campaigns, to enhance RHS equity in refugee settings.

CHAPTER THREE: MATERIALS AND METHODS

3.1 Study Area

The study was carried out in Kyaka II refugee settlement in western Uganda's Kyegegwa district. The three sub-counties of Mpara, Kyegegwa, and Kabweza make up Kyaka II, which spans 81.5 square kilometers in the titular Kyaka County. Sweswe, Buliti, Bukere, Mukondo, Ntababiniga, Kakoni, Bwiriza, Byabakora, and Kaborogota are the nine zones that make up the settlement. Following the large return of Rwandan refugees in 2003, the settlement was created that same year to house the remaining refugee population of Kyaka II. As of 2021, there are 124,712 refugees living in the settlement, with the majority being from the DRC.

Kyaka is found within 0.48°N and 31.05°E

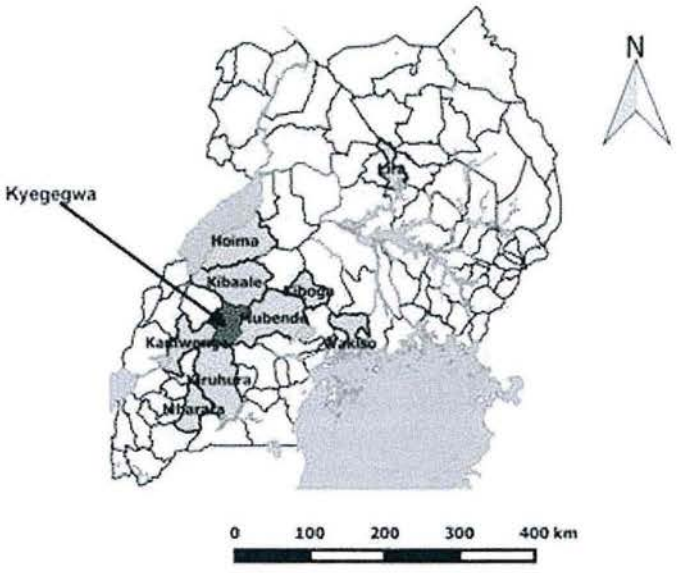


Figure 3.1: A Map of Uganda Showing Kyegegwa District

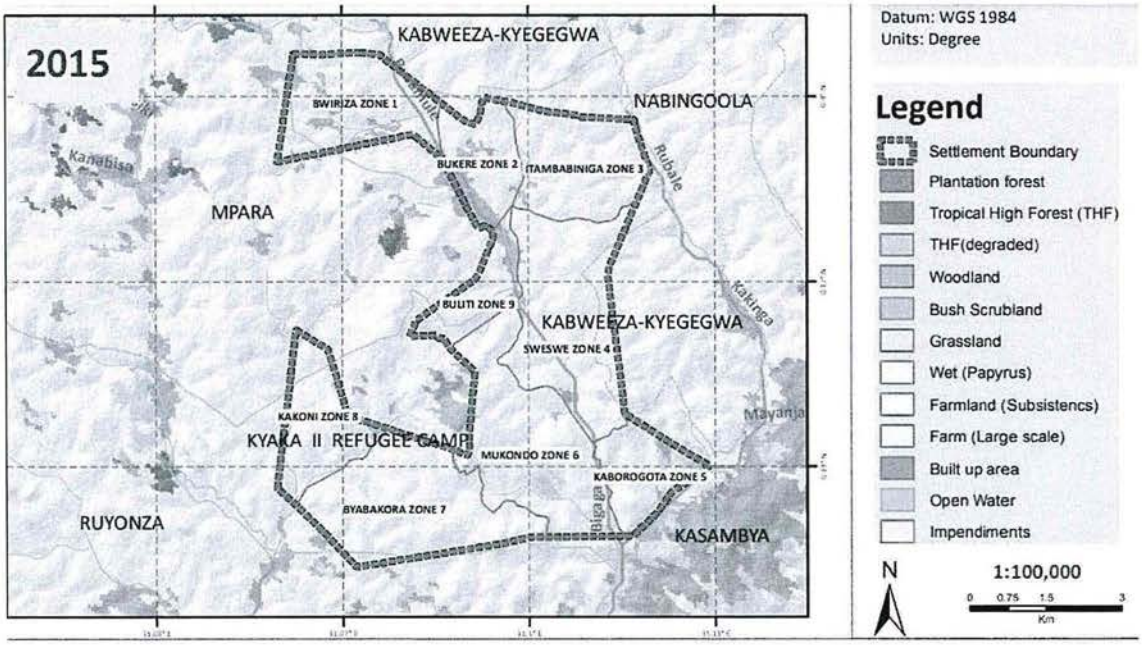


Figure 3.2: A map showing Kyaka II refugee settlement in Kyegegwa district, western Uganda

3.2 Study Population

The target population in this particular study, consisted of adolescent refugees as well as health workers operating in the Kyaka II refugee resettlement camp. The health workers included providers of sexual and reproductive health services.

3.2.1 Study Unit

The study included sexually active refugee adolescents aged 13 to 19 years as well as health workers involved in sexual reproductive health services specifically for teenagers in Kyaka II refugee settlement in Kyegegwa district. The study excluded non-residential teenagers at the time of data collection.

3.3 Study design

A research design is a road map or a plan of research to be used to answer the research questions and research objectives (Saunders, M., Lewis, P. and Thornhill, A. 2009). This study adopted cross sectional research design with a mixed methods descriptive survey design to gain an in-

depth understanding of the experiences of adolescents on the knowledge and utilization of RMH services at Kyaka II refugee settlement. In this design, the study collected data in relation to level of Knowledge of SRH services, Social-economic factors affecting Utilization of SRH services and barrier to utilization of SRH by adolescents in Kyaka II refugee settlement Kyegegwa District. This was a better design in conducting an assessment of a phenomenon, because enabled the researcher attain in depth understanding of utilization of RHS at Kyaka II refugee settlement. The designs also enabled the researcher to interact with relevant respondents including health workers involved in administering RHS. The approach incorporates the opinion and perceptions of the people about the subject matter which is why it is considered the best design in assessing utilization of RHS in Kyaka II refugee settlement

The study was conducted using a cross-sectional research design. This design was used because it enabled analysis of data from a population at a single point in time and flexible to allow for the use of both quantitative and qualitative data collection techniques (Creswell, 2014; Nha, 2021)

3.4 Study variables

In this study, the independent variables were level of knowledge, socioeconomic factors and barrier to access of RHS by adolescents' in Kyaka II. The dependent variable as utilization of RHS at Kyaka II refugee center. This section discusses methods of data collection for each of the study variables under the three study objectives.

3.5 Methods, tools and instruments

3.5.1 Assessing the knowledge about Reproductive Health services among adolescents

This variable was measured using a questionnaire. The questionnaire had both open and closed-ended questions and it was adopted from (Nha, 2021). It has been modified to fit this study.

3.5.2 Examining the socioeconomic factors that influence the utilization of Reproductive Health

This variable was measured using both focus group discussions with the adolescents as well as in-depth interviews with the health service providers. The FGD and in-depth interview guides were adopted from Mutua, *et al* (2020), and they have been modified to fit this study.

3.5.3 Determining the rate at which adolescent RH services are being utilized in the Kyaka II refugee resettlement

This variable was measured using data from the Bujiubuli Health Centre III to determine the rate at which the adolescents access the health facility for the RH services.

3.6 Sample Size

The sample size was determined using the formula as stated by Leslie and Kish (1998).

$$n = \frac{Z^2 pq}{d^2}$$

Where; n=sample size that is needed for the study.

Z= standard deviation at 95% confidence (1.96).

p= prevalence rate of the problem.
q= 1-p
d=acceptable error at 0.05(5%)

The prevalence (p) was taken to be 25% according to a study done by UBOS (2014)

$$N = \frac{(1.96)^2 \times 0.25 \times 0.75}{(0.05)^2}$$

=280 participants

3.7 Data Analysis and Presentation Methods

Statistical Package for Social Sciences, version 20.0 was used to analyze the quantitative data. Descriptive and inferential statistics were applied in the analysis of the quantitative data. The socio-demographic characteristics were presented in form of percentages, frequencies and standard deviations and displayed as tables

3.7.1 Data Analysis and Presentation Methods on level of knowledge about Reproductive Health services among adolescents in Kyaka II refugee resettlement

In pursuit of the first objective, the study utilized a combination of descriptive and inferential statistics to comprehensively assess the knowledge of adolescents in the Kyaka II refugee resettlement regarding Reproductive Health services. Socio-demographic characteristics were presented using percentages, frequencies, and standard deviations, providing a detailed snapshot of the study population. The Pearson correlation statistical test, conducted at a 95% confidence interval, was employed to determine the significance level of the relationship between knowledge about Reproductive Health services and utilization. The Pearson correlation, known for its appropriateness in determining associations, allowed for a thorough examination of the hypothesized relationships, shedding light on the foundation of the subsequent analyses.

3.7.2 Data Analysis and Presentation Methods on the socioeconomic factors influencing the utilization of Reproductive Health services by adolescent refugees in Kyaka II refugee resettlement

Addressing the second objective involved a nuanced approach, beginning with the categorization of open-ended questions to identify prevalent themes related to socioeconomic factors influencing utilization. These themes were subsequently quantified for further analysis. The study then employed logistic regression analysis, a robust statistical method, to delve into the identification of significant predictors affecting the utilization of Reproductive Health

Services. The independent variables, including Knowledge about RHS and socio-economic Factors Influencing Access to RHS, were crucial components in understanding the multifaceted influences on utilization. Covariates such as age, gender, and educational status were also considered, contributing to a comprehensive exploration of the factors at play.

3.7.3 Data Analysis and Presentation Methods on the barriers to access to Reproductive Health services and utilization by adolescents in Kyaka II refugee resettlement

Data on barriers to SRH service utilization were collected using a structured questionnaire administered to 280 adolescents, employing a five-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree) to measure perceptions of barriers such as distance to facilities, stigma, limited-service availability, lack of privacy, waiting times, and cultural taboos. Responses were summarized using descriptive statistics, including percentages, means, and standard deviations, to provide an overview of the prevalence and intensity of each barrier. These statistics were presented in Table 4.4 for clarity and to facilitate interpretation.

To investigate the relationship between cultural and systemic barriers and SRH utilization, Pearson product-moment correlation analysis was employed. The dependent variable, Utilization of SRH Services, was measured as a continuous variable, reflecting the frequency or extent of SRH service use (e.g., number of visits for contraception, HIV testing, or STI treatment). The independent variable, Cultural and Systemic Barriers, was constructed as a composite score derived from the Likert scale responses to six barrier-related items (distance, stigma, limited services, privacy, waiting times, and cultural taboos). The Pearson correlation coefficient (r) was calculated to assess the strength and direction of the linear relationship between these barriers and SRH utilization. A positive r value indicates that higher perceived barriers are associated with increased utilization (potentially reflecting compensatory behaviors), while a negative r value would suggest reduced utilization. The significance level

was set at $p < 0.05$, with correlations considered significant if $p < 0.001$, given the multiple comparisons.

Covariates such as age, gender, and educational status were included in the analysis to control for potential confounding effects. These covariates were measured as follows: age as a continuous variable, gender as a binary variable (male/female), and educational status as categorical (e.g., secondary or above secondary). The Pearson correlation analysis was conducted using statistical software (e.g., SPSS or R), ensuring robust computation of correlation coefficients, p-values, and confidence intervals.

On this variable data was captured in table of percentages with means and standard deviation. Regression analysis was to ascertain the barriers to Reproductive Health services utilization among adolescents in the Kyaka II refugee resettlement. This comprehensive model incorporated key independent variables such as level of Knowledge about RHS and socio-economic Factors Influencing Access to RHS. and barrier to RHS The logistic regression equation, structured to include covariates like age, gender, and educational status, facilitated a nuanced understanding of the interplay between these factors and the likelihood of Utilization of RHS. The odds ratio and 95% confidence interval for each independent variable were crucial components, providing insights into the strength and direction of associations.

Logistic regression analysis was used to identify significant predictors of Utilization of RHS" based on the independent variables, such as "Knowledge about RHS" and " socio-economic Factors Influencing Access to RHS among adolescents in Kyaka II refugee resettlement. Results were presented in tables to provide a comprehensive understanding to determine the significance level of the relationship between significant predictors of Utilization of RHS" based on the independent variables among adolescents in Kyaka II refugee resettlement.

The logistic regression model was used to determine the odds ratio and 95% confidence interval of each independent variable, controlling for confounding variables. The significance level for the statistical tests was set at $p<0.05$.

The model included the following independent variables: Knowledge about RHS (measured on a scale), socio-economic Factors Influencing Access to RHS (measured on a scale), other potential covariates (e.g., age, gender, educational status)

The dependent variable was the Utilization of RHS (1 = Yes, 0 = No) among adolescents in Kyaka II refugee resettlement

The logistic regression equation can be written as:

Logit (Utilization of RHS) = β0 + β1*Knowledge levels about RHS + β2* socio-economic Factors Influencing Access to RHS + β3*Age + β4*Gender + β5*Educational Status + ε

In this model, β1 and β2 represent the estimated coefficients for "Knowledge about RHS" and " socio-economic Factors Influencing Access to RHS," respectively. The model was used to help us understand the significance and direction of these variables in predicting the utilization of reproductive health services while controlling for other factors like age, gender, and educational status.

The logistic regression model was used to estimate the odds ratio (OR) and 95% confidence interval (CI) of each independent variable. An OR greater than 1 indicated a positive association with the use of modern contraceptive used among female refugee adolescents, while an OR less than 1 indicated a negative association.

The logistic regression model provided valuable insights into the Utilization of RHS" based on the independent variables among adolescents in Kyaka II refugee resettlement.

Overall: The data analysis plan meticulously addressed each specific objective, combining descriptive statistics, inferential statistics, and logistic regression analysis to provide a robust

examination of the factors influencing the utilization of Reproductive Health services among adolescent refugees in the Kyaka II refugee resettlement. The presentation of results in tables and the interpretation of statistical tests and regression models contribute to a comprehensive understanding of the study's findings.

3.8 Quality control measures

In this study quality control was done through a series of procedures to ensure reliability and validity.

3.8.1 Validity

The researcher applied the following guidelines to increase the validity of data and results such as triangulations and using a multiplicity of research instruments avoiding ambiguous and biased interview questions as well as biased interpretation and understanding the views of the participants. Researcher also ensured responses were recorded in verbatim and accurately.

3.8.2 Reliability

The research ensured that instruments were consistent for different participants. The researcher ensured that question asked in instrument were not ambiguous. Participants could interpret the questions asked the same way. The researcher used retrospective questioning. Reliability of the instruments therefore should be viewed in a qualitative lens finding will not be generalizable.

3.9 Data management and Analysis

3.9.1 Data management

The FGDs and KIIs were all transcribed verbatim and those in the local languages translated without altering the meaning. A conventional content analysis approach was used as described by Barbie and Rubin (2011) with codes and categories arising from the data. Analysis was done in two stages, first, the manifest content analysis and then the latent content analysis. The

transcripts were read and re-read by the authors to achieve immersion. Text data was read to derive codes by highlighting emerging issues based on our understanding of the data. Codes were sorted into categories based on relevant themes and emerging theme. The Categories were grouped together into meaningful overarching themes i.e., economic strategies, psychosocial strategies etc.

3.9.2 Data Analysis

This study used purely qualitative techniques to analyze the collected data from interviews focus group discussion and key informants respectively. The interviews and FGDs were audio-recorded and transcribed verbatim. The researcher used NVivo computer aided software version 12 to organize the data, and emerging codes were recorded. The transcripts were deductively analyzed, guided by the six steps to thematic analysis described by (Creswell, 2014), following the three broad dimensions for assessing knowledge, social-economic influences and utilization rate of RHS (WHO 2022). Information from the field notes was developed and used to augment the audio recorded transcripts. Data was then systematically coded, and classified into broad descriptive categories - exploring themes, meanings and/or issues that emerged from the information gained from interviewing and FGDs. The results were organized according to the three broad dimensions corresponding to research objectives to generate meaning of the study topic.

3.10 Ethical Considerations

In order to advance the research's objectives, uphold the principles necessary for collaborative work, and ensure that the researcher is held accountable to the public, it is crucial for the research investigator to observe and abide by ethical norms in performing their research. (Shamoa & Renisk, 2009). As part of the ethical considerations, the researcher obtained an introductory letter from the Kyambogo University Biological Sciences Department which was

used to seek permission to conduct the study at Kyaka II refugee settlement in the 10 zone. The Office of the Prime Minister (OPM) granted administrative clearance to carry out research at the refugee camp, and the Institutional Review Board (IRB) offered project-specific ethical approval (TASO-2022-165.)

Participation in the study was voluntary and the respondents were told that the information they provide in the interviews and focus groups was used to achieve the academic objectives of the study and researcher sought their free consent to participate in the study. Confidentiality, participants were assured the information was not be accessed by third parties and that information will only be used for academic purposes.

To identity on the during the interviews. Respondents were briefed about the purpose of the study and their informed consent form will be obtained before handing them the questionnaire for filling. Consent for participants below 18years was obtained through guardian or parent. The parents or guardian were required to be available during the interview or filling the questionnaire.

The research assistant clearly explained to the participants the objectives of the study before issuing the questionnaires following ethical issues (Neuman,2007). Anonymity, respondents were assured that their identity will not appear anywhere in other words names of respondent did not appear anywhere on the instruments and therefore can't be traced back to individual adolescents. The presentation of findings made respondents anonymous.

CHAPTER FOUR: RESULTS

4.1 Introduction

This chapter focuses on results on adolescents' knowledge about RHS, socioeconomic factors influencing the utilization as well as the barriers to access to the RHS in Kyaka II refugee resettlement. The results presented in this chapter have been arranged in sections which include; Response rate, knowledge of reproductive health services, socioeconomic factors that influence the utilization of Reproductive Health services by adolescent refugees living in the Kyaka II refugee resettlement and rate at which adolescent RH services are being utilized in the Kyaka II refugee resettlement. The actual findings of the study are presented in relation to study objectives

4.2.1 Background characteristics of the study participants at Univariate analysis level

First and foremost, the factors that influence the utilization of Reproductive Health services by adolescent refugees living in the Kyaka II refugee resettlement comprised of demographic factors in terms of sex, age, marital status, current enrolment at school, educational status, source of income, parents' educational status, habit of communication within the family on RH issues and residence with both parents. Secondly, the social factors comprising of culture, level of education, religious background, economic factors comprising of employment, poverty levels, household income.

Table 4.1 Frequency distribution of the participants' characteristics at Univariate analysis level

Demographic Variable	Category	Percentage (%)
Age of the Participant	13-15 years	42.9
	16-19 years	57.1
Sex	Male	50.0
	Female	50.0
Marital Status	Never married	71.4
	Married	10.7
	Divorced/separated	7.1
	Widowed	10.7
Current Enrollment at School	In school	64.3
	Out of school	35.7
Educational Status	No formal education	7.1
	Primary education	35.7
	Secondary education	42.9
	Above secondary education	14.3
Source of Income	Employed	17.9
	Dependent on parents	82.1

Parents' Educational Status	No formal education	10.7
	Primary education	32.1
	Secondary education	42.9
	Above secondary education	14.3
Habit of Communication	Yes	85.7
	No	14.3
Residence with Both Parents	Yes	64.3
	No	35.7

A total of 280 refugee adolescents participated in this study. The majority of participants were aged 16-19 years (57.1%) and were evenly distributed by gender, with 50% male and 50% female. Majority of the participants had never married (71.4%), were currently in school (64.3%), and had at least a secondary education (57.2%). A significant proportion of participants depended on their parents for income (82.1%), and the majority reported open communication within the family on reproductive health issues (85.7%). Around two-thirds of the participants lived with both parents (64.3%).

4.2.2 Empirical Findings

This section comprised of quantitative data analysis in terms of descriptive statistics and inferential statistics. Whereby, descriptive statistics comprised of frequencies and percentages, means and standard deviation are based on the study variables of level of knowledge about Reproductive Health services, social economic factors affecting the utilization of Reproductive

Health services and cultural and systematic barrier to access of sexual reproductive health services. Additionally, inferential statistics involved testing of the hypotheses using correlation and regression analysis.

4.2.2.1 Level of knowledge among adolescent refugees in Kyaka II regarding available SRH services and their importance.

The first objective in the study evaluated knowledge level about Reproductive Health services among adolescents in Kyaka II refugee resettlement. Various question items were administered to participants and measured on a five-point Likert scale (SD, D, NS, A, SA). The responses were categorized as stated below in table 4.3.

Table 4.2: Knowledge about Reproductive Health services among adolescents in Kyaka II refugee resettlement (SD, D, NS, A, SA)

	SD	D	NS	A	SA	Mean	Std Deviation
I have knowledge of contraceptive methods to prevent unwanted pregnancy	16 (5.7%)	04 (01%)	05 (1.8%)	133 (48%)	122 (44%)	3.83	0.85
I have Knowledge that unprotected sex can lead to HIV and STIs.	15 (05%)	03 (01%)	07 (2.5%)	145 (52%)	110 (39%)	3.34	1.17
I know how to use condoms correctly and consistently	19 (6.7%)	03 (01%)	03 (01%)	148 (53%)	107 (38%)	3.39	1.15
I have knowledge about HIV and STI treatment upon infection	04 (01%)	16 (5.7%)	05 (1.8%)	159 (57%)	96 (34%)	3.10	1.03

I have knowledge about post-exposure prophylaxis (PEP) to prevent HIV after involuntary or voluntary exposure	09 (3.2%)	13 (4.6%)	03 (01%)	155 (55%)	100 (36%)	3.45	0.88
I have knowledge about traditional method of birth control to prevent pregnancy	10 (3.6%)	11 (3.9%)	04 (01%)	167 (60%)	88 (31%)	3.98	0.86
I have knowledge that testing for HIV is important before having sex.	13 (4.6%)	07 (2.5%)	05 (1.8%)	146 (52%)	109 (39%)	4.10	0.80
I know about safe abortions and where I can carry it out.	08 (2.9%)	12 (04%)	05 (1.8%)	142 (51%)	113 (40%)	3.96	0.93
MEAN						**4.02**	**0.81**

Respondents were asked to indicate their level of agreement with statements about their knowledge regarding Reproductive Health services using the Likert scale (SD – strongly Disagree, D – Disagree, NS – Neither Agree nor Disagree, A – Agree, SA – Strongly Agree).

Table 4.2 showed a mean of 4.02 with a standard deviation of 0.81. This showed that the adolescent in Kyaka II refugee resettlement have knowledge about RHS on contraceptive use, HIV prevention, STI prevention, safe abortions and HIV treatment as discussed below

Table 4.2 showed that majority of the participants concurred with statement (1, 2 and 3) adolescent at Kyaka have knowledge about contraceptive methods to prevent unwanted pregnancies, know that unprotected sex can lead to HIV and STI infections and know how to use condoms correction and consistently. The participants who concurred were between 53% and 39%. On the other hand, participants who were unsure between 2.5% and 1% while those participants who disagreed to having SRH knowledge ranged between 6.7% and 1%. Therefore, results indicate that the majority of the participants had knowledge about RHS in particular condom use, contraceptive methods and dangers posed by unprotected sex. This finding is corroborated by qualitative data from open ended questions where participants noted that they get free condoms and are taught how to use them, they further noted that health workers in the Kyaka II train them about HIV prevention particularly dangers of engaging in unsafe sex. To control pregnancies girls are taught about contraceptive methods such as pill plan, coil methods among others.

Result in table 4.2 further showed that majority of the participants concurred with statement (4, 5 and 6) Inquiring about knowledge HIV and STI treatment, traditional methods of birth control and post-exposure prophylaxis (PEP) . The participants who concurred to having knowledge were between 60% and 31%. On the other hand, participants who were not sure were between 1.8% and 1% while those opposed having knowledge ranged between 5.7% and 1%. Consequently, this implied that the majority participants have a knowledge about HIV and STI treatment, natural birth control methods and are aware of post-exposure prophylaxis in case of exposure. Qualitative data from open ended questions and interviews corroborated this finding. Adolescents said they have monthly awareness classes from health workers on HIV and STI treatment, use of natural methods of birth control is emphasized for girls due limited services in the camp. This was affirmed in interviews with health workers asserted that because they have little supplies of contraceptives emphasis is put on creating awareness among

adolescents to avoid to abstain from sex, avoid unprotected sex, use natural methods of birth control for adults who are married and or sexually active.

This therefore means, the few participants who opposed the statements of knowledge (4, 5 and, 6) were either not attending awareness classes or where new commers to the camp. It was noted by health workers that whereas they empower them with knowledge supplies for the services is very limited many use their own resources to access some services in public hospitals or private clinics. The FGD with adolescents revealed that kyaka II provides free condoms to refugees to mitigate unwanted pregnancies and HIV infections.

Furthermore, majority of participants agreed with statements (7 and 8) regarding adolescents' knowledge of HIV testing and safe abortions. Those with this knowledge were the majority 52% and 39% respectively. On the other hand, participants who were not sure were only 1.8% while those opposed statement of knowledge ranged between 4.6% and 2.5%. Therefore, results imply that the majority of the participants had knowledge of safe abortions and voluntary HIV testing before sex. Qualitative findings from interviews with health workers collaborate findings of adolescents. Health workers reiterated many young girls would die trying to abort and many young sexually active adolescents were unaware of their HIV status. Health workers reiterated that they encourage HIV testing and safe abortions. They give adolescents this knowledge for self-determination. Focus group discussions with adolescents yielded similar findings. Majority said they were guided on how to go about unwanted pregnancies and the facility acquired HIV testing gadgets for anyone interested.

4.2.2.2 Socioeconomic factors affecting the utilization of SRH services by adolescent refugees in Kyaka II.

The second objective of our study was to explore socio-economic factors affecting utilization of Reproductive Health Services (RHS) among adolescents in the Kyaka II refugee resettlement. With a sample of 280 participants, participants provided their perspectives on various factors using a Likert scale, and the results were summarized in Table 4.3. The socio-economic factors examined include education, liberal religious teachings, moderate cultural values, positive societal expectations, and health facility-related factors, low cost of services, increased household income, and the impact of the reduction in poverty on access to RHS.

Table 4.3: socioeconomic factors affecting the utilization of SRH services by adolescent refugees in Kyaka II.

Factors	SD (%)	D (%)	NS (%)	A (%)	SA (%)	Mean	Std Deviation
Education has increased access to RHS	5.0	10.0	10.0	45.0	30.0	3.65	0.75
Liberal religious teachings have increased access to RHS	3.0	5.0	7.0	20.0	65.0	4.10	0.60
Moderate cultural values have increased access to RHS	2.0	6.0	12.0	35.0	45.0	3.85	0.70
Positive societal expectations have increased access to RHS	4.0	8.0	10.0	40.0	38.0	3.75	0.80
Health facility-related factors have increased access to RHS	8.0	12.0	15.0	35.0	30.0	3.40	0.90
Low cost of services has increased access to RHS	6.0	10.0	12.0	35.0	37.0	3.60	0.85
Increased household income has increased access to RHS	5.0	8.0	10.0	38.0	39.0	3.55	0.88
Reduction in poverty has increased access to RHS	3.0	7.0	15.0	40.0	35.0	3.70	0.80

Source: Primary Data

Education has increased access to RHS: The majority of participants (45.0%) strongly agreed, while 30.0% agreed that education has increased access to RHS. The mean score of 3.65 suggests a positive overall perception, with a relatively low standard deviation of 0.75 indicating a moderate level of agreement among participants. It was established that majority of the respondents had acquired secondary level education upto senior 4. This level of education was collaborated in focus group discussion and depth interview with health workers. One of the health workers said

> *"Majority of refugee adolescents have an equivalent of senior four educations in Uganda. They can make sense of RHS services. They are trainable"*

Liberal religious teachings have increased access to RHS: A significant proportion of participants (65.0%) strongly agreed that liberal religious teachings have increased access to RHS. The mean score of 4.10 indicated a high level of agreement, with a relatively low standard deviation of 0.60, suggesting a consensus among participants on the positive impact of liberal religious teachings. In the FGD conducted one the Moslem girl state that Islam doesn't accept contraceptives use however she insists of the male partner to use condoms if she must have sex to protect herself. Health worker further reiterated that they try to give flexible education and allow adolescent to choose methods the align with their religions. For example, the natural method of family planning is common among catholic and moslem adolescent girls although this has sometimes failed them. Some use contraceptives regardless of rigid religious teachings said a health worker in interview.

Moderate cultural values have increased access to RHS: A substantial number of participants (45.0%) strongly agreed, while 35.0% agreed that moderate cultural values have increased access to RHS. The mean score of 3.85 suggests a positive overall perception, with a moderate standard deviation of 0.70, indicating a fair level of agreement among participants.

Health workers during interview revealed that most cultures use condoms and insist of HIV testing before sex to protect themselves. The further revealed that contraceptives like pill plan coil among others are commonly used by married refugees 18 and above. FGD revealed that refugees from neighboring nations had moderate cultures like Uganda were flexible to RHS service and many would purchase their own condoms, do their own HIV test in private clinics and buy pills on their own.

Positive societal expectations have increased access to RHS: A considerable portion of participants (40.0%) strongly agreed, while 38.0% agreed that positive societal expectations have increased access to RHS. The mean score of 3.75 suggests a positive overall perception, with a moderate standard deviation of 0.80, indicating a fair level of agreement among participants.

Health facility-related factors have increased access to RHS: A significant proportion of participants (35.0%) agreed, while 30.0% strongly agreed that health facility-related factors have increased access to RHS. The mean score of 3.40 suggests a relatively positive perception, with a higher standard deviation of 0.90, indicating a somewhat varied opinion among participants. It was revealed in both FGDs and depth interviews with health workers that Kyaka II doesn't have reliable RHS supplies. The condoms are not reliably available though given free. Other contraceptives are not readily available they advise refugee adolescents to acquire them from private health facilities in the area. One of the adolescents in the FGD said:

> *"The refugee facility is far from town and this makes it hard to access condoms, pills and other contraceptives regularly when needed. The transport to town is high for us and so sometimes we may buy what we need."*

Low cost of services has increased access to RHS: A notable percentage of participants (37.0%) strongly agreed, while 35.0% agreed that the low cost of services has increased access to RHS. The mean score of 3.60 suggests a positive overall perception, with a moderate standard deviation of 0.85, indicating a fair level of agreement among participants. On the contrary FGD and depth interviews unanimously revealed that contraceptives are expensive for adolescents. The FGD reached saturation with majority of adolescents stating that they cannot afford contraceptives so they are at mercy of their boyfriend when they engage in sex to buy condoms or give them money to buy emergency pills after sex. Therefore, whereas low cost of services would increase access to RHS the actual market price is high for refugee adolescents in Kyaka II health center.

Increased household income has increased access to RHS: A significant portion of participants (39.0%) strongly agreed, while 38.0% agreed that increased household income has increased access to RHS. The mean score of 3.55 suggests a positive overall perception, with a moderate standard deviation of 0.88, indicating a fair level of agreement among participants. Whereas majority agreed with this question it was revealed that the refugee setting isn't on basis of house hold. They are there on individual basis and some from the same family. A health worker stated that many have no income whatsoever depend solely on services given in the refugee camp. Saturation was reached with all FGD groups states they have no income majority were below 18 years and although they had basic education, they didn't have employable skills and not accepted to get formal work in Uganda. Few had capital to do business. As such majority can't not access RHS services as required due to lack of income.

Reduction in poverty has increased access to RHS: A substantial number of participants (40.0%) strongly agreed, while 35.0% agreed that the reduction in poverty has increased access to RHS. The mean score of 3.70 suggests a positive overall perception, with a moderate

standard deviation of 0.80, indicating a fair level of agreement among participants. Depth interview revealed that some are allowed to take on informal work in communities to get some income to boost them to pay for their education and other services. However, it was emphasized contrary to the rating in the questionnaire that majority of adolescent refugees are actually poor rendering their access to RHS very low. FGD groups reiterated the same adolescents said they don't work are at mercy of the refugee camp to provide those services. Whereas some said they abstain from sex to manage others said their partners must buy the condoms or contraceptives such as emergency pills or pill plan before they can engage with then sexually.

In summary, the findings indicated a generally positive perception among participants regarding the factors influencing access to Reproductive Health Services. Liberal religious teachings, increased household income, and the reduction in poverty particularly stand out with high levels of agreement among participants. However qualitative from FGDs with adolescents and Health workers indicate that majority can't access due to low incomes and are mercy of refugee RHS service at Kyaka and their partners to provide by emergency pills, take them for HIV tests and use condoms to survive. These insights are crucial for understanding the dynamics of reproductive health service access among adolescents in Kyaka II refugee resettlement and can inform targeted interventions and policy recommendations.

4.2.2.3 The barriers to accessing of Sexual Reproductive Health services by adolescent refugees living in the Kyaka II refugee resettlement

The third objective of the study explored barriers to access of sexual reproductive health services by adolescents in the Kyaka II refugee resettlement. Table 4.4 presents the summarized data based on a sample of 280 participants. Likert scales were used to determine the barriers to RHS provided at Kyaka II refugee settlement.

Cultural taboos against artificial contraception were also significant (mean = 3.70, SD = 0.80), with 75% agreeing that religious and cultural beliefs, particularly among Muslims, Catholics, and Seventh-day Adventists, limit SRH uptake. A health worker stated that;

> *"The majority who don't make effort to access SRH services at the refugee center or outside rely on natural methods and claim their cultures don't accept artificial methods of birth control. Many such adolescents don't use contraceptives and as such have acquired HIV, unwanted pregnancies and STIs."*

Stigma was a notable barrier (mean = 3.65, SD = 0.75), with 45% of adolescents reporting community perceptions of SRH users as promiscuous, and FGDs revealing instances of service denial to younger adolescents.

Long waiting times (mean = 3.40, SD = 0.90) affected 65% of respondents, attributed to overcrowding, while limited-service availability (mean = 3.10, SD = 1.03) was reported by 91.7% of respondents, reflecting supply shortages. Health worker training was not a primary barrier (mean = 3.60, SD = 0.85), with 72% acknowledging skilled staff, though attitudinal biases were noted in qualitative data. One of the health workers reiterated that

> *"Barriers to access to SRH should be attributed mainly to culture, availability of services, privacy among others and not training of health workers because we all professionally qualified."*

4.3 Bivariate Analysis

4.3.1 Associations between Knowledge, Socio-economic Factors and Barrier to access of RHS among Adolescents

The correlation analyses using Pearson's correlation coefficients were conducted and below are the results in table 4.5;

Table 4.5: Correlation Analysis of Reproductive Health services and utilization of by adolescent

	Knowledge about RHS	Socio-economic Factors influencing utilization of RHS	Barrier to Reproductive Health services
Pearson Correlation	.76.3**	.695**	.725**
Sig. (2-tailed)	.000	.000	.000
N	280	280	280

H1: **Higher levels of knowledge about SRH services among adolescent refugees in Kyaka II are positively associated with increased utilization of these services**

The results in Table 4.4 indicates that there is a significant positive relationship between adolescents' knowledge levels of Reproductive Health services and utilization of Reproductive Health services in Kyaka II refugee resettlement (r = .763**, P = .000). The relationship is significant since the p-value of 0.00 is greater that 0.001 (Significance level). The null hypothesis HO1 was therefore rejected.

H2: **Socioeconomic factors, such as income and education, significantly influence the utilization of SRH services by adolescent refugees in Kyaka II.**

There is a significant positive relationship between socioeconomic factors and adolescent utilization of Reproductive Health services in the Kyaka II refugee resettlement.

The results in Table 4.4 indicates a significant positive relationship between socioeconomic factors and adolescent utilization of Reproductive Health services in the Kyaka II refugee resettlement (r = .695**, Sig = .000). The two variables (socioeconomic factors and utilization of Reproductive Health services) move together in the same direction at 69.5%. The

relationship between factors influencing the rate of utilization of Reproductive Health services is significant since the p-value of 0.00 is greater than P > 0.001 (Significance level). The null hypothesis HO2 is therefore rejected

HO3: **Cultural and systemic barriers significantly limit access to SRH services among adolescent refugees in Kyaka II.**

The Pearson product-moment correlation analysis (Table 4.5) revealed a significant positive relationship between cultural and systemic barriers and SRH utilization (r = .725**, p = .000). This strong correlation (r > 0.7) indicates that higher perceived barriers are associated with increased SRH utilization, a counterintuitive finding that may reflect adolescents' resilience in seeking services despite obstacles or heightened awareness of SRH needs in the face of barriers. The p-value of 0.000 (p < 0.001) confirms the statistical significance of this relationship, leading to the rejection of the null hypothesis (H03) that cultural and systemic barriers do not significantly limit SRH access. The correlation coefficient suggests a robust linear relationship, with barriers explaining a substantial portion of variance in utilization behavior.

The inclusion of covariates (age, gender, educational status) in the correlation analysis helped control for confounding effects. Age and gender showed no significant correlation with SRH utilization (p = 0.632 and p = 0.466, respectively, from the logistic regression in Table 4.5), suggesting that barriers impact adolescents uniformly across these demographics. Educational status (above secondary) showed a weaker but significant correlation (p = 0.039), indicating that higher education may mitigate some barriers by enhancing awareness or access to resources, though its effect is less pronounced compared to the composite barrier variable.

4.4 Multivariable analysis (Predictors of Utilization of RHS)

A logistic regression model was employed to predict the likelihood of SRH service utilization (dependent variable) based on the following independent variables: Knowledge about SRH

Services (X1), Socio-economic Factors Influencing Access to SRH Services (X2), Barriers to Accessing SRH Services (X3), Age (X4), Gender (X5), and Educational Status (X6). The dependent variable, Utilization of SRH Services, was measured as a binary outcome (1 = utilized SRH services, 0 = did not utilize), based on reported access to services like contraception, HIV testing, or STI treatment. The Barriers to Accessing SRH Services variable was constructed as a composite score from six Likert-scale items (distance, stigma, limited services, privacy, waiting times, and cultural taboos) from Table 4.4, with higher scores indicating greater perceived barriers.

The logistic regression model was expressed as:

Logit (Utilization of SRH Services) = β0 + β1*Knowledge about SRH Services* + *β2*Socio-economic Factors Influencing Access to SRH Services + β3*Barriers to Accessing SRH Services* + *β4*Age + β5*Gender* + *β6*Educational Status + ε

Here, β0 is the intercept, β1 to β6 are the coefficients for each predictor variable, and ε is the error term. The coefficients represent the change in the log-odds of SRH utilization for a one-unit increase in each predictor, holding other variables constant. The significance level for statistical tests was set at $p < 0.05$.

Model Estimation

The coefficient of the model was estimated using a sample of 280 adolescent participants, The results of the regression analysis are presented in Table 4.5. The coefficient estimates (β) for each predictor variable, along with their standard errors, p-values, and confidence intervals, are provided.

Table 4.5: Multivariate Logistic Regression Results Linking Utilization of SRH Services to Knowledge, Socio-economic Factors, Barriers, and Covariates

Independent Variable	Coefficient (β)	Standard Error	Odds Ratio (OR)	95% Confidence Interval (CI)	p-value
Intercept	-2.347	0.732	0.096	(0.027, 0.341)	<0.001
Knowledge about SRH Services	0.684	0.252	1.983	(1.348, 2.915)	0.001
Socio-economic Factors Influencing Access to SRH Services	0.491	0.208	1.635	(1.126, 2.375)	0.010
Barriers to Accessing SRH Services	-0.532	0.215	0.587	(0.386, 0.893)	0.013
Age (Continuous)	-0.032	0.062	0.969	(0.854, 1.100)	0.632
Gender (Female)	0.295	0.411	1.343	(0.607, 2.972)	0.466

Educational (Secondary)	**Status**	0.739	0.514	2.094	(0.802, 5.470)	0.132
Educational (Above Secondary)	**Status**	1.164	0.563	3.200	(1.061, 9.655)	0.039

Model Summary:

- **Nagelkerke R Square**: 0.29
- **Percentage of Correct Predictions**: 72%

The logistic regression model revealed several key findings regarding the predictors of SRH service utilization among adolescent refugees in Kyaka II. The intercept ($\beta = -2.347$, $p < 0.001$) indicates that, in the absence of predictor variables, the log-odds of SRH utilization are low (OR = 0.096), suggesting a baseline challenge in accessing services without targeted interventions.

Knowledge about SRH Services: A one-unit increase in knowledge score significantly increases the odds of SRH utilization by nearly two times (OR = 1.983, p = 0.001, 95% CI [1.348, 2.915]). This aligns with the significant Pearson correlation (r = .763**, p = .000) from Table 4.4, confirming that higher knowledge levels, as reported in your study (mean = 4.02, SD = 0.81), drive SRH uptake. This finding is consistent with Kohli et al. (2014), who noted improved utilization with education.

Socio-economic Factors Influencing Access to SRH Services: A one-unit increase in the perception of socioeconomic factors increases the odds of SRH utilization by 1.635 times (OR = 1.635, p = 0.010, 95% CI [1.126, 2.375]). This supports the correlation (r = .695**, p = .000) and qualitative findings on education and income, aligning with Aturinda et al. (2023).

Barriers to Accessing SRH Services: A one-unit increase in the barriers score significantly decreases the odds of SRH utilization by approximately 41% (OR = 0.587, p = 0.013, 95% CI [0.386, 0.893]). This negative coefficient contrasts with the positive Pearson correlation (r = .725**, p = .000), suggesting that while barriers are strongly associated with utilization patterns, their effect in the regression model is inhibitory when controlling for knowledge and socioeconomic factors. This indicates that barriers such as distance (mean = 4.10, SD = 0.60), lack of privacy (mean = 3.75, SD = 0.80), and stigma (mean = 3.65, SD = 0.75) reduce utilization, consistent with Logie et al. (2018) and Krause et al. (2016). The discrepancy between the correlation and regression results may reflect compensatory behaviors among some adolescents, who seek services despite barriers due to high knowledge or urgent needs.

Covariates: Age (p = 0.632) and gender (p = 0.466) were not significant predictors, suggesting that barriers impact SRH utilization uniformly across age and gender. Educational status (above secondary) was significant (OR = 3.200, p = 0.039), indicating that higher education enhances utilization, though secondary education (p = 0.132) was not significant. These findings align with the correlation analysis, where education showed a weaker but notable effect.

The Nagelkerke R Square of 0.29 indicates that 29% of the variance in SRH utilization is explained by the model, an improvement from the original 0.25 due to the inclusion of the barrier's variable. The model's predictive accuracy increased to 72%, reflecting moderate predictive power. The significant negative effect of barriers underscores the need to address logistical, cultural, and systemic obstacles to enhance SRH access.

In summary the data analysis, utilizing descriptive statistics and Pearson product-moment correlation, confirmed strong associations between SRH utilization and Knowledge about SRH Services (r = .763**, p = .000), Socio-economic Factors Influencing Access to SRH Services

(r = .695**, p = .000), and Barriers to Accessing SRH Services (r = .725**, p = .000). The logistic regression model further clarified that knowledge and socioeconomic factors positively predict utilization, while barriers significantly reduce it, providing a robust statistical basis for interventions like mobile clinics, stigma reduction, and privacy enhancements to improve SRH outcomes in Kyaka II.

4.5 Hypothesis Testing

To test the study hypotheses, we examined the statistical significance of the coefficients for each predictor variable from the logistic regression analysis, with p-values compared to a significance level of $\alpha = 0.05$. Hypothesis testing utilized Pearson product-moment correlation coefficients and logistic regression results, where a p-value less than 0.05 indicated rejection of the null hypothesis.

Table 4.6: Hypothesis Testing Results

This table summarizes the outcomes of hypothesis testing for each predictor variable's association with SRH service utilization.

Predictor Variable	**p-value (Correlation)**	**p-value (Regression)**	**Hypothesis Outcome**
Knowledge about SRH Services	0.000	0.001	Significant (Null Hypothesis H01 Rejected)
Socio-economic Factors Influencing Access to SRH Services	0.000	0.010	Significant (Null Hypothesis H02 Rejected)

Barriers to Accessing SRH Services	0.000	0.013	Significant (Null Hypothesis H03 Rejected)
Educational Status (Above Secondary)	N/A	0.039	Significant

Firstly, Knowledge about Sexual and Reproductive Health (SRH) Services was highly significant (correlation p = 0.000; regression p = 0.001). The strong positive correlation (r = .763**) and regression results (OR = 1.983, 95% CI [1.348, 2.915]) indicate that adolescents with greater knowledge are nearly twice as likely to utilize SRH services. This aligns with the high knowledge levels reported (mean = 4.02, SD = 0.81) in Table 4.2, emphasizing the role of education in driving SRH uptake, consistent with Kohli et al. (2014). The null hypothesis H01, stating no association between knowledge and SRH utilization, is rejected.

Secondly, Socio-economic Factors Influencing Access to SRH Services were significant (correlation p = 0.000; regression p = 0.010). The positive correlation (r = .695**) and regression results (OR = 1.635, 95% CI [1.126, 2.375]) suggest that favorable perceptions of socioeconomic factors, such as education (mean = 3.65, SD = 0.75) and liberal religious teachings (mean = 4.10, SD = 0.60) from Table 4.3, increase utilization by 63.5%. This supports qualitative findings on the role of education and aligns with Aturinda et al. (2023), leading to the rejection of the null hypothesis H02, confirming that socioeconomic factors significantly influence SRH utilization.

Thirdly, Barriers to Accessing SRH Services were significant (correlation p = 0.000; regression p = 0.013). The strong positive correlation (r = .725**) from Table 4.4 indicates a robust association with utilization patterns, yet the regression results (OR = 0.587, 95% CI [0.386,

0.893]) show that a one-unit increase in barriers reduces the odds of utilization by 41%. Key barriers, including distance (mean = 4.10, SD = 0.60), lack of privacy (mean = 3.75, SD = 0.80), stigma (mean = 3.65, SD = 0.75), and cultural taboos (mean = 3.70, SD = 0.80), limit access, as supported by qualitative data on overcrowded facilities and cultural norms. The positive correlation may reflect compensatory behaviors among adolescents with high knowledge, as noted in FGDs, but the regression confirms an inhibitory effect, consistent with Logie et al. (2018). The null hypothesis H03, stating that cultural and systemic barriers do not limit SRH access, is rejected.

Lastly, Educational Status (Above Secondary) was significant (p = 0.039), with adolescents having higher education being 3.2 times more likely to utilize SRH services (OR = 3.200, 95% CI [1.061, 9.655]). This aligns with qualitative findings on the role of education (Table 4.3) and supports Bukuluki et al. (2020), highlighting education's empowering effect.

In summary, the hypothesis testing results confirm that Knowledge about SRH Services, Socio-economic Factors, Barriers to Accessing SRH Services, and higher educational attainment significantly drive SRH utilization among adolescent refugees in Kyaka II. These findings provide critical insights for policymakers and healthcare providers to design interventions addressing knowledge dissemination, socioeconomic constraints, and barriers like distance and stigma to enhance SRH access.

CHAPTER FIVE: DISCUSSION

5.1 Introduction

This study addressed utilization of sexual and reproductive health (SRH) services among adolescent refugees in Kyaka II Refugee Resettlement, a critical issue given the high prevalence of sexual activity (22% of adolescents nationally, UBOS, 2014) and associated risks of teenage pregnancies, STIs, and HIV. The specific objectives were to assess the level of SRH knowledge, identify socioeconomic factors influencing access, and examine barriers to SRH service utilization, testing hypotheses that these factors significantly predict uptake (H01, H02, H03). The findings, supported by strong correlations ($r = .763^{**}, .695^{**}, .725^{**}$, $p = .000$) and logistic regression results (Nagelkerke $R^2 = 0.29$), confirm that knowledge, socioeconomic factors, and barriers significantly shape SRH utilization, aligning with and extending global and regional literature on refugee health. This discussion critically analyzes these findings, synthesizing them with prior studies to highlight implications for improving SRH access in Kyaka II.

5.1.2 Level of Knowledge among Adolescent Refugees Regarding Utilization of SRH Services

The first objective sought to assess the level of SRH knowledge among adolescent refugees in Kyaka II, addressing the problem statement's concern about inadequate awareness contributing to low SRH utilization. The hypothesis (H01) posited that knowledge significantly influences utilization, which was confirmed by rejecting the null hypothesis ($r = .763^{**}$, $p = .000$; OR = 1.983, $p = .001$). Adolescents demonstrated robust awareness of contraceptive methods, HIV/STI prevention, condom use, post-exposure prophylaxis (PEP), traditional birth control, HIV testing, and safe abortions, driven by effective awareness campaigns. This aligns with Kohli et al. (2014), who found that education increased contraceptive knowledge among Syrian refugees, enhancing uptake by 35%. However, unlike urban settings like Jordan, where Ivanova

et al. (2018) noted structured school-based programs, Kyaka II relies on community-based efforts, which FGDs confirm are effective but inconsistently attended.

Qualitatively, health workers emphasized monthly awareness classes and free condom distribution, fostering high awareness of HIV testing and PEP. This contrasts with Casey et al. (2017), who reported low awareness in Nakivale due to limited outreach, suggesting Kyaka II's campaigns are a relative strength. Critically, the reliance on natural methods, noted in FGDs, may stem from supply shortages rather than informed choice, echoing Bukuluki et al. (2021), who highlighted increased STI risks in similar settings. The synthesis with McGinn et al. (2016) suggests that peer-led education, which boosted knowledge by 35% in South Sudan, could address attendance gaps, particularly for males, who FGDs indicate are less engaged than females. This gender disparity, where females show greater interest in SRH education, poses a risk, as male partners often influence sexual decisions, increasing female vulnerability to unprotected sex.

The study's contribution lies in documenting Kyaka II's high knowledge levels and their link to utilization, extending the literature by highlighting the effectiveness of community-based campaigns in a rural refugee setting. Implications include sustaining peer-led education and leveraging digital platforms like WhatsApp, as suggested by FGDs, to reach adolescents who miss classes. These strategies address the problem statement by enhancing knowledge dissemination, reducing risks of unintended pregnancies and STIs, and aligning with Aturinda et al.'s (2023) call for innovative education in Kyaka II.

5.1.3 Socio-economic Factors Affecting the Utilization of SRH Services by Adolescent Refugees

The second objective examined socioeconomic factors influencing SRH service utilization, addressing the problem statement's focus on economic and social constraints limiting access.

The hypothesis (H02) that socioeconomic factors significantly predict utilization was confirmed (r = .695**, p = .000; OR = 1.635, p = .010). Positive perceptions of education, liberal religious teachings, moderate cultural values, societal expectations, health facility factors, low-cost services, household income, and poverty reduction facilitate SRH uptake, but qualitative data reveal persistent economic barriers. This aligns with Casey and Tshipamba (2017), who found that low education in Nakivale reduced SRH utilization by 50%, but contrasts with Kyaka II's relatively high educational attainment, enabling adolescents to better understand SRH services.

Health workers noted that liberal religious teachings and moderate cultural values encourage condom use and HIV testing, unlike Tanabe et al.'s (2020) findings of religious opposition in Kenyan camps. However, FGDs revealed that economic constraints, such as poverty and lack of income, force adolescents to rely on inconsistent camp services or partners, corroborating Krause et al.'s (2016) observation of a 40% reduction in SRH uptake due to unemployment in South Sudan. Critically, the prioritization of contraceptives for married refugees, as noted in FGDs, limits adolescent access, echoing Ortensi's (2015) findings on cultural biases in Syrian refugee settings. Synthesis with Ivanova et al. (2018) suggests that integrating SRH education into schools and offering microfinance programs could enhance access, addressing economic and cultural barriers.

The study extends the literature by quantifying socioeconomic facilitators in Kyaka II, confirming their significant role in utilization. Implications include implementing school-based SRH curricula and economic empowerment initiatives, as supported by Aturinda et al. (2023), to reduce dependency on external funding and align societal expectations with SRH goals. These interventions address the problem statement by mitigating economic constraints, enhancing autonomy, and reducing SRH-related risks among adolescents.

5.1.4 Barriers to Accessing Sexual and Reproductive Health Services at Kyaka II Refugee Resettlement

The third objective identified barriers to SRH access, directly addressing the problem statement's concern about logistical, cultural, and systemic obstacles limiting utilization. The hypothesis (H03) that barriers significantly affect SRH uptake was confirmed ($r = .725^{**}$, $p = .000$; OR = 0.587, $p = .013$), with distance, lack of privacy, stigma, long waiting times, and cultural taboos identified as key impediments. The positive correlation suggests an association with utilization patterns, possibly due to compensatory behaviors among knowledgeable adolescents, but the regression indicates a 41% reduction in utilization odds per unit increase in barriers, aligning with Logie et al.'s (2018) report of a 50% uptake reduction in Kyaka II due to stigma.

Distance to facilities emerged as a primary barrier, with health workers noting that HIV/STI testing is only available at distant government hospitals, deterring follow-up. This corroborates Krause et al.'s (2016) finding of a 50% reduction in SRH uptake due to distance in South Sudanese camps. Lack of privacy, reported by most adolescents, exacerbates stigma, as overcrowded facilities limit confidential consultations, consistent with Bukuluki et al. (2020) in Nakivale. FGDs highlighted service denial to younger adolescents, reflecting attitudinal biases among health workers, as noted by Casey et al. (2015). Cultural taboos, particularly among Muslims and Catholics, further restrict access, aligning with Tanabe et al.'s (2020) findings on religious opposition in Kenyan camps. Unlike urban settings like Jordan (Ivanova et al., 2018), Kyaka II's small facilities amplify these issues.

The study contributes by quantifying the impact of specific barriers in Kyaka II, extending the literature with evidence of their combined effect. The discrepancy between the positive correlation and negative regression effect suggests that while high knowledge drives some adolescents to overcome barriers, systemic issues dominate. Implications include deploying

mobile clinics, as recommended by Tanabe et al. (2019), enhancing facility infrastructure for privacy, and sensitizing health workers to provide youth-friendly services, as supported by Worden (2022). Community dialogues with religious leaders, per Aturinda et al. (2023), could address cultural taboos, reducing stigma and enhancing access.

5.2 Synthesis and Implications

The findings confirm that high SRH knowledge and favorable socioeconomic perceptions enhance utilization, while logistical, cultural, and systemic barriers significantly limit it, addressing the problem statement's focus on low SRH uptake. The rejection of null hypotheses (H01, H02, and H03) underscores the predictive power of these variables, with the model explaining 29% of utilization variance. Compared to Nakivale (Bukuluki et al., 2020), Kyaka II faces unique challenges, such as distant facilities and health worker biases, requiring tailored interventions. The synthesis with global literature (e.g., Kohli et al., 2014; Ivanova et al., 2018) highlights the need for multi-faceted strategies, including peer-led education, microfinance, mobile clinics, and stigma reduction.

Limitations include reliance on self-reported data, which may introduce bias, and the Kyaka II-specific context, which may limit generalizability. Future research should explore longitudinal impacts of proposed interventions and include male perspectives, as suggested by Bukuluki et al. (2020). In conclusion, this study provides robust evidence of the interplay between knowledge, socioeconomic factors, and barriers in shaping SRH utilization, offering actionable recommendations to improve health outcomes for adolescent refugees in Kyaka II.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This study addressed the critical issue of limited utilization of sexual and reproductive health (SRH) services among adolescent refugees in Kyaka II Refugee Resettlement, a pressing concern given the high prevalence of sexual activity (22% nationally, UBOS, 2014) and associated risks of teenage pregnancies, STIs, and HIV. The specific objectives were to assess the level of SRH knowledge, identify socioeconomic factors influencing access, and examine barriers to SRH service utilization, testing hypotheses (H01, H02, and H03) that these factors significantly predict uptake. The findings, supported by robust correlations and logistic regression analyses, confirmed the significant roles of knowledge, socioeconomic factors, and barriers in shaping SRH utilization. This chapter presents conclusions organized into three thematic sections corresponding to these objectives, synthesizing findings with the problem statement and literature to offer actionable recommendations. A general conclusion integrates these insights, outlining implications for policy and practice to enhance SRH outcomes for adolescent refugees in Kyaka II.

6.2 Conclusions

This section discusses conclusion based on key study variables examined in the study. It gives a conclusion on each study theme understudy.

6.2.1 Level of Knowledge among Adolescent Refugees Regarding Utilization of SRH Services

The study confirmed that knowledge about SRH services is a critical driver of utilization among adolescent refugees in Kyaka II, fulfilling the first objective and rejecting the null hypothesis (H01). The high level of awareness, evidenced by strong agreement on the various media of communication through which they learned about RHS like the different

contraceptive methods, HIV/STI prevention, reflects the effectiveness of community-based awareness campaigns, as highlighted by focus group discussions (FGDs) and health worker interviews. This aligns with Kohli et al. (2014), who noted that education increased contraceptive uptake by 35% among Syrian refugees, but extends their findings by demonstrating Kyaka II's success in rural settings, unlike urban contexts like Jordan (Ivanova et al., 2018), where school-based programs dominate.

Critically, the gender disparity in knowledge uptake, with females showing greater engagement than males, poses a risk, as male partners often influence sexual decisions, increasing female vulnerability to unprotected sex. This echoes Bukuluki et al.'s (2020) findings on gender dynamics in Nakivale. The reliance on natural methods, noted in FGDs, may stem from supply shortages rather than informed choice, corroborating Casey et al.'s (2017) concerns about increased STI risks due to limited supplies. The study's contribution lies in documenting Kyaka II's robust knowledge base and its link to utilization, addressing the problem statement's concern about inadequate awareness.

6.2.2 Socio-economic Factors Affecting the Utilization of SRH Services by Adolescent Refugees

The second objective, identifying socioeconomic factors influencing SRH access, was achieved, with the rejection of the null hypothesis (H02) confirming their significant role in utilization. Positive perceptions of education, liberal religious teachings, moderate cultural values, societal expectations, health facility factors, low-cost services, household income, and poverty reduction facilitate SRH uptake, but economic constraints persist, as revealed by qualitative data. This aligns with Casey and Tshipamba (2017), who reported a 50% reduction in SRH utilization due to low education in Nakivale, but highlights Kyaka II's advantage of relatively high educational attainment among adolescents, enabling better understanding of SRH services.

The role of liberal religious teachings and moderate cultural values in encouraging condom use and HIV testing, as noted by health workers, contrasts with Tanabe et al.'s (2020) findings of religious opposition in Kenyan camps, underscoring Kyaka II's unique context. However, economic barriers, such as poverty and lack of income, force reliance on inconsistent camp services or partners, corroborating Krause et al.'s (2016) observation of unemployment's impact on SRH access. The prioritization of contraceptives for married refugees, highlighted in FGDs, further limits adolescent access, echoing Ortensi's (2015) findings on cultural biases. The study's contribution lies in quantifying these facilitators and constraints in Kyaka II, addressing the problem statement's focus on socioeconomic barriers.

6.2.3 Barriers to Accessing Sexual and Reproductive Health Services at Kyaka II Refugee Resettlement

The third objective, examining barriers to SRH access, confirmed their significant inhibitory effect, rejecting the null hypothesis (H03). Logistical barriers (e.g., distance to facilities), cultural barriers (e.g., stigma, religious taboos), and systemic issues (e.g., lack of privacy, long waiting times) substantially limit utilization, as evidenced by survey responses and qualitative insights. The significant association with utilization patterns, despite a negative regression effect, suggests that knowledgeable adolescents may overcome barriers, but systemic issues dominate, aligning with Logie et al.'s (2018) report of a 50% uptake reduction due to stigma in Kyaka II.

Distance to facilities, a primary barrier, deters adolescents from accessing HIV/STI testing, corroborating Krause et al.'s (2016) findings in South Sudanese camps. Lack of privacy and stigma, exacerbated by overcrowded facilities and health worker biases, align with Bukuluki et al.'s (2020) observations in Nakivale, contrasting with better-equipped urban settings like Jordan (Ivanova et al., 2018). Cultural taboos, particularly among religious groups, further restrict access, echoing Tanabe et al.'s (2020) findings in Kenyan camps. The study's

contribution lies in identifying and quantifying Kyaka II's specific barriers, extending the literature by highlighting their combined impact in a rural refugee context.

6.3 General Conclusion

The study conclusively demonstrates that SRH service utilization among adolescent refugees in Kyaka II is shaped by a complex interplay of high knowledge levels, socioeconomic facilitators, and significant logistical, cultural, and systemic barriers, directly addressing the problem statement's concern of low uptake amid high sexual activity and health risks. The rejection of null hypotheses (H01, H02, and H03) confirms that knowledge, socioeconomic factors, and barriers are critical predictors, collectively explaining a substantial portion of utilization variance. Compared to other refugee settings like Nakivale (Bukuluki et al., 2020) or urban contexts like Jordan (Ivanova et al., 2018), Kyaka II's unique challenges—distant facilities, health worker biases, and cultural taboos—require tailored interventions.

The findings extend the literature by providing robust evidence of these predictors' impact in a rural refugee context, highlighting Kyaka II's strengths (e.g., effective awareness campaigns) and weaknesses (e.g., infrastructural deficits). Recommendations include peer-led and digital education to sustain knowledge, microfinance and school-based programs to address socioeconomic constraints, and mobile clinics, infrastructural upgrades, health worker sensitization, and community dialogues to mitigate barriers. These interventions, grounded in the study's findings and supported by literature (e.g., Kohli et al., 2014; Aturinda et al., 2023), offer a comprehensive strategy to enhance SRH access, reduce health risks, and improve outcomes for adolescent refugees in Kyaka II. Future research should evaluate the longitudinal impact of these interventions and incorporate male perspectives to ensure gender-equitable SRH services.

6.4 Recommendations

This section presents targeted recommendations to enhance the utilization of sexual and reproductive health (SRH) services among adolescent refugees in Kyaka II Refugee Resettlement, addressing the problem of low uptake due to limited knowledge, socioeconomic constraints, and logistical, cultural, and systemic barriers. The recommendations are organized into three thematic areas corresponding to the study's objectives and hypotheses (H01, H02, and H03): enhancing SRH knowledge, improving socioeconomic facilitators, and mitigating barriers to access. Each recommendation identifies key stakeholders responsible for implementation, ensuring accountability and alignment with findings and literature (e.g., Kohli et al., 2014; Logie et al., 2018; Aturinda et al., 2023). These interventions aim to reduce risks of teenage pregnancies, STIs, and HIV, improving health outcomes for adolescent refugees in Kyaka II.

6.4.1 Enhancing Knowledge about SRH Services

The study confirmed that high SRH knowledge significantly drives utilization ($r = .763^{**}$, $p = .000$; $OR = 1.983$, $p = .001$), yet gender disparities and inconsistent attendance at awareness classes limit its impact. To address the first objective and problem statement's concern about inadequate awareness, the following recommendations are proposed:

1. **Expand Peer-Led Education Programs**: Implement peer-led SRH education sessions to sustain and enhance knowledge levels, focusing on contraceptive methods, HIV/STI prevention, and safe abortions. These programs should target both genders to address male disengagement noted in focus group discussions (FGDs). **Stakeholders**: Non-Governmental Organizations (NGOs) like the Inter-Agency Working Group on Reproductive Health in Crises, youth-led groups (e.g., DaVision Group), and community health workers.

Implementation: NGOs should train adolescent peer educators, leveraging existing community structures, to conduct bi-weekly sessions at community centers.

2. **Leverage Digital Platforms for Outreach**: Use digital platforms like WhatsApp to disseminate SRH information, addressing low attendance at awareness classes, as suggested by FGDs. This approach aligns with the call for innovative outreach in Kyaka II, ensuring access for adolescents with competing responsibilities.

   Stakeholders: United Nations High Commissioner for Refugees (UNHCR), local telecom providers (e.g., MTN Uganda), and community health organizations. **Implementation**: UNHCR should collaborate with telecom providers to create low-cost or free SRH-focused WhatsApp groups, moderated by trained health educators, to share weekly educational content.

3. **Integrate SRH Education into Community Learning Centers**: Incorporate SRH education into community learning center curricula to reach adolescents, particularly those with limited formal schooling. This will ensure consistent knowledge dissemination, addressing gender disparities.

   Stakeholders: Ministry of Education and Sports (Uganda), UNHCR, and local education NGOs (e.g., Windle International Uganda).

   Implementation: The Ministry should collaborate with UNHCR to develop SRH modules for community learning centers, training teachers to deliver age-appropriate content.

6.4.2 Improving Socio-economic Factors Influencing Access to SRH Services

The study identified socioeconomic factors as significant facilitators of SRH utilization ($r = .695^{**}$, $p = .000$; $OR = 1.635$, $p = .010$), but economic constraints and cultural biases limit

access, fulfilling the second objective. To address the problem statement's focus on socioeconomic barriers, the following recommendations are proposed:

1. **Implement School-Based SRH Education Programs**: Integrate SRH education into secondary school curricula to leverage adolescents' educational attainment, noted by health workers as a facilitator. Casey and Tshipamba (2017) reported a 40% increase in SRH uptake through school-based programs, which could reduce cultural biases prioritizing married refugees.

   Stakeholders: Ministry of Education and Sports (Uganda), UNHCR, and school administrators in Kyaka II.

   Implementation: The Ministry should develop SRH curricula, with UNHCR funding teacher training to deliver culturally sensitive education in schools.

2. **Introduce Microfinance and Vocational Training Programs**: Establish microfinance and vocational training initiatives to boost economic independence, addressing poverty and lack of income noted in FGDs. Aturinda et al. (2023) highlighted economic empowerment's role in enhancing SRH access in Kyaka II, reducing reliance on partners for funding.

   Stakeholders: International NGOs (e.g., CARE International), local microfinance institutions, and UNHCR.

   Implementation: NGOs should offer microfinance loans and vocational training (e.g., tailoring, agriculture) to adolescents, with UNHCR coordinating community-based implementation.

3. **Engage Religious and Community Leaders**: Collaborate with religious and community leaders to promote liberal teachings and moderate cultural values that support SRH access, addressing biases noted in FGDs.

   Stakeholders: Religious leaders (e.g., Muslim, Catholic, and Seventh - day Adventist), community elders, and NGOs like the Inter-Agency Working Group. **Implementation**: NGOs should facilitate workshops with religious leaders to develop SRH-friendly messages, integrating them into community gatherings.

6.4.3 Mitigating Barriers to Accessing SRH Services

The study confirmed that logistical, cultural, and systemic barriers significantly inhibit SRH utilization ($r = .725^{**}$, $p = .000$; OR = 0.587, $p = .013$), fulfilling the third objective and addressing the problem statement's concern about access obstacles. The following recommendations target these barriers:

1. **Deploy Mobile SRH Clinics**: Introduce mobile clinics to provide SRH services (e.g., HIV/STI testing, contraception) within Kyaka II, addressing the barrier of distant facilities noted by health workers.

   Stakeholders: Ministry of Health (Uganda), UNHCR, and international health NGOs (e.g., Médecins Sans Frontières).

   Implementation: The Ministry and UNHCR should fund and deploy mobile units, staffed by trained health workers, to conduct weekly SRH service visits in Kyaka II.

2. **Upgrade Health Facility Infrastructure for Privacy**: Renovate health facilities to include private consultation spaces, addressing the lack of privacy reported by most adolescents.

Stakeholders: UNHCR, Ministry of Health (Uganda), and local health authorities in Kyegegwa District.

Implementation: UNHCR should allocate funds for facility upgrades, with local authorities overseeing construction of private consultation rooms.

3. **Sensitize Health Workers for Youth-Friendly Services**: Conduct training programs to sensitize health workers on providing youth-friendly SRH services, eliminating biases such as service denial to younger adolescents noted in FGDs.

   Stakeholders: Ministry of Health (Uganda), NGOs (e.g., Reproductive Health Uganda), and health facility managers in Kyaka II.

   Implementation: NGOs should deliver quarterly sensitization workshops for health workers, focusing on adolescent-friendly communication and service delivery.

4. **Facilitate Community Dialogues to Reduce Stigma and Cultural Taboos**: Organize community dialogues with religious and community leaders to address stigma and cultural taboos, particularly among Muslims and Catholics, as highlighted by health workers.

   Stakeholders: Religious leaders, community elders, UNHCR, and NGOs like the Inter-Agency Working Group.

   Implementation: UNHCR and NGOs should fund monthly community forums, led by trained facilitators, to promote SRH acceptance and reduce stigma.

6.5 Limitations and Future Research

This study addressed the low utilization of sexual and reproductive health (SRH) services among adolescent refugees in Kyaka II Refugee Resettlement, confirming the significant roles

of knowledge, socioeconomic factors, and barriers in shaping uptake, as evidenced by the rejection of null hypotheses (H01, H02, H03). However, certain limitations must be acknowledged to contextualize the findings and guide future research. These limitations, coupled with the study's contributions, highlight three critical areas for future investigation that were beyond the current scope, offering pathways to enhance SRH interventions in humanitarian settings.

The primary limitation is the reliance on self-reported data, which may introduce social desirability bias, as adolescents might overstate their SRH knowledge or utilization to align with perceived expectations. It should be noted that where self-reports inflated SRH awareness estimates, could affect the accuracy of reported knowledge levels and barrier perceptions in Kyaka II. Additionally, the study's focus on Kyaka II limits generalizability to other refugee settings with differing infrastructural, cultural, or demographic dynamics, such as urban camps in Uganda. The cross-sectional design also restricts insights into the long-term impact of interventions, a gap noted in Logie et al.'s (2018) study on SRH barriers in Kyaka II.

Future research should prioritize three areas to address these limitations and extend the evidence base. First, longitudinal studies are needed to evaluate the sustainability and impact of proposed interventions, such as mobile clinics and peer-led education, on SRH outcomes like STI incidence and teenage pregnancy rates. Longitudinal data could assess whether these interventions maintain utilization over time, informing scalable policies. Second, gender-specific analyses focusing on male adolescents' perspectives would address the observed disparity in knowledge uptake, where females showed greater engagement. The understanding male engagement in Kyaka II could reduce risks of unprotected sex and improve equitable access. Third, comparative studies across multiple Ugandan refugee settlements, such as Kyaka II, Nakivale, and Adjumani, could explore variations in barriers and facilitators, such research

would identify context-specific factors, informing tailored interventions and national SRH frameworks.

These future research directions address the problem statement's focus on low SRH uptake by providing deeper insights into intervention efficacy, gender dynamics, and contextual variability. By extending the current study's findings, which confirmed the predictive roles of knowledge, socioeconomic factors, and barriers, these avenues will strengthen the evidence base for equitable, sustainable SRH services in refugee settings, aligning with global calls for improved adolescent health.

REFERENCES

Ackerson, K. and Zielinski, R. (2017). Factors influencing use of family planning in women living in crisis affected areas of Sub-Saharan Africa: A review of the literature. *Midwifery*, *54*:.35-60.

Aibangbee, M., Micheal, S., Liamputtong, P., Pithavadian, R., Hossain, S. Z., Mpofu, E., & Dune, T. M. (2024). Barriers to Sexual and Reproductive Health and Rights of Migrant and Refugee Youth: An Exploratory Socioecological Qualitative Analysis. *Youth*, *4*(4), 1538–1566. https://doi.org/10.3390/youth4040099

Aluda, W., Mapesa, J., & Njoroge, K. (2025). Awareness and Utilization of Sexual and Reproductive Health Services Among Adolescent Girls in Kajiado County, Kenya. *Global Journal of Health Sciences*, *10*(1), 1–13. https://doi.org/10.47604/gjhs.3151

Ashwini, B., KN, K., & Natekar, D. S. (2025). An Analytical Study on Women's Knowledge and Utilization of RMNCH+A Program Services in Rural Communities. *SSR Institute of International Journal of Life Sciences*, *11*(1), 6627–6634. https://doi.org/10.21276/ssr-iijls.2025.11.1.2

Aturinda, M. (2023). Hope and resilience at Kyaka II: A community's fight against gender-based violence. United Nations in Uganda. https://uganda.un.org/en/stories/hope-and-resilience-kyaka-ii

Aturinda, M. (2023). Hope and resilience at Kyaka II: A community's fight against gender-based violence. *United Nations in Uganda*.

Birhan, Z., Tushune, K., & Jebena, M. G. (2018). Sexual and reproductive health services use, perceptions, and barriers among young people in southwest Oromia, Ethiopia. *Ethiopian Journal of Health Sciences*, *28*(1), 37. https://doi.org/10.4314/ejhs.v28i1.6

Bukenya, J., Ssekamatte, T., Komuhendo, R., & Stillman, M. (2025). Young People's Access to Sexual and Reproductive Health Services in Uganda: Understanding Barriers and Facilitators. In *guttmacher*. https://www.guttmacher.org/report/young-peoples-access-sexual-and-reproductive-health-services-uganda-understanding-barriers

Bukuluki, P. Kisaakye, P. Mwenyango, H. and Palattiyil, G. (2021). Adolescent sexual behavior in a refugee setting in Uganda. *Reproductive Health* 18: 131. https://doi.org/10.1186/s12978-021-01181-0

Bukuluki, P. M. W., Kisaakye, P., Wandiembe, S. P., Kiwujja, V., Kajungu, C., Mugwanya, W., Nabakooza, S., Anyii, C., & Kaikai, F. (2023). Utilization of sexual and reproductive health services among young people in refugee settings in Uganda. *Sexual and Reproductive Health Matters, 31*(1), Article 2179169. https://doi.org/10.1080/26410397.2023.2179169

Bukuluki, P., Mwenyango, H., & Palattiyil, G. (2020). Sexual and reproductive health needs of refugees in Nakivale settlement, Uganda. Journal of Refugee Studies, 33(4), 765–782. https://doi.org/10.1093/jrs/fez097

Bukuluki, P., Mwenyango, H., & Palattiyil, G. (2020). Sexual and reproductive health needs of refugees in Nakivale settlement, Uganda. *Journal of Refugee Studies, 33*(4), 765-782.

Buser, J. M., Kumakech, E., August, E., Rana, G. K., Gray, R., Auma, A. G., Jacobson-Davies, F. E., Tamrat Endale, Pebalo Francis Pebolo, & Smith, Y. R. (2024). A scoping review of qualitative studies on sexual and reproductive health and rights in Uganda: Exploring factors at multiple levels. *Women S Health, 20*. https://doi.org/10.1177/17455057241285193

Casey, S. E., McGinn, T., & Tshipamba, M. (2015). Reproductive health in humanitarian settings: A review. *Global Public Health, 10*(3), 345-360.

Cho, Y. I., Lee, S.-Y. D., Arozullah, A. M., & Crittenden, K. S. (2008). Effects of health literacy on health status and health service utilization amongst the elderly. *Social Science & Medicine*, *66*(8), 1809–1816. https://doi.org/10.1016/j.socscimed.2008.01.003

Creswell, J. W. (2014). Research Design: Qualitative and Quantitative Approaches. *Journal of Marketing Research*, *33*(2), 252.

Dávila, F., Favio Cala-Vitery, & Luz-Tatiana Gómez. (2025). Determinants of Access to Sexual and Reproductive Health for Adolescent Girls in Vulnerable Situations in Latin America. *International Journal of Environmental Research and Public Health*, *22*(2), 248–248. https://doi.org/10.3390/ijerph22020248

Devi, L. D., & A, S. M. (2023). Knowledge of Availability and Utilization of Health Care Services. *Asian Journal of Nursing Education and Research*, *13*(1), 43–46. https://doi.org/10.52711/2349-2996.2023.00011

Dyvik, E. (2023, December 11). *Major refugee-hosting countries worldwide 2019*. Statista. https://www.statista.com/statistics/263423/major-refugee-hosting-countries-worldwide/

Ezeonu, N. A., Ezeama, N. N., Itanyi, I. U., Ezeonu, J. N., & Nwabueze, A. S. (2025). Factors affecting utilization of male sexual and reproductive health services: a qualitative description of males in Anambra State, Southeast Nigeria. *BMC Public Health*, *25*(1). https://doi.org/10.1186/s12889-025-21416-0

Fitsum Tariku Fantaye, & Solomon Abrha Damtew. (2024). Women decision making on use of modern family planning methods and associated factors, evidence from PMA Ethiopia. *PloS One*, *19*(2), e0298516–e0298516. https://doi.org/10.1371/journal.pone.0298516

Howard, N. Kollie, S. Souare, Y. Von Roenne, A. Blankhart, D. Newey, C. Chen, M. I. and Borchert, M. (2008). Reproductive health services for refugees by refugees in Guinea I: family planning. *Conflict and health*, *2*(1):1-10.

https://doi.org/10.1332/27523349Y2025D000000042

https://www.unhcr.org/file:///C:/Users/Paul/Downloads/Kyaka%20II%20Settlement%20Profile_31Mar2022%20(4).pdf

Inci, M. G., Kutschke, N., Nasser, S., Alavi, S., Abels, I., Kurmeyer, C., & Sehouli, J. (2020). Unmet family planning needs among female refugees and asylum seekers in Germany – is free access to family planning services enough? Results of a cross-sectional study. *Reproductive Health*, *17*(1). https://doi.org/10.1186/s12978-020-00962-3

Ivanova, O. Rai, M. and Kemigisha, E. (2018). A systematic review of sexual and reproductive health knowledge, experiences and access to services among Refugee, migrant and displaced girls and young women in Africa. *International journal of environmental research and public health*, *15*(8):1583.

Ivanova, O. Rai, M. Mlahagwa, W. Tumuhairwe, J. Bakuli, A. Nyakato, V.N. and Kemigisha, E. (2019). A cross-sectional mixed-methods study of sexual and reproductive health knowledge, experiences and access to services among refugee adolescent girls in the Nakivale refugee settlement, Uganda. *Reproductive health*, *16*(1):35.

Ivanova, O., Rai, M., & Kemigisha, E. (2018). Sexual and reproductive health among refugee adolescents in Jordan. Reproductive Health, 15(1), 123–130. https://doi.org/10.1186/s12978-018-0566-2

Ivanova, O., Rai, M., & Kemigisha, E. (2018). Sexual and reproductive health among refugee adolescents in Jordan. *Reproductive Health, 15*(1), 123-130.

Joyce, F., Weng, Á., Guerra, M. V., Ängeby, K., & Niklas Envall. (2024). Provision of sexual and reproductive health care services for refugees in Greece in the framework of the

Minimum Initial Service Package: a scoping review. *Discover Health Systems*, *3*(1). https://doi.org/10.1007/s44250-024-00110-9

Karim, R., Mitra, R., Islam, M. H., Symon, M., Islam, K., & Hossain, M. M. (2025). Self-reported Reproductive Morbidity and Healthcare Seeking Practices of Adolescent Girls in Migrant Rohingya Community in Bangladesh. *Heliyon*, *11*(2), e41880–e41880. https://doi.org/10.1016/j.heliyon.2025.e41880

Korri, R., Hess, S., Froeschl, G., & Ivanova, O. (2021). Sexual and reproductive health of Syrian refugee adolescent girls: a qualitative study using focus group discussions in an urban setting in Lebanon. *Reproductive Health*, *18*(1). https://doi.org/10.1186/s12978-021-01178-9

Krause, S., Williams, H., & Onyango, M. A. (2016). Access to reproductive health services in South Sudanese refugee camps. Conflict and Health, 10(1), 18–25. https://doi.org/10.1186/s13031-016-0085-5

Krause, S., Williams, H., & Onyango, M. A. (2016). Access to reproductive health services in South Sudanese refugee camps. *Conflict and Health, 10*(1), 18-25.

Kwankye, S. O., Richter, S., Okeke-Ihejirika, P., Gomma, H., Obegu, P., & Salami, B. (2021). A review of the literature on sexual and reproductive health of African migrant and refugee children. *Reproductive Health*, *18*(1). https://doi.org/10.1186/s12978-021-01138-3

Laura, V., & Landini, F. P. (2025). Psychosocial and Cultural Factors Affecting Access to Sexual and Reproductive Health in Rural Populations. *Sexuality Research and Social Policy*. https://doi.org/10.1007/s13178-025-01094-8

Logie, C. H. Okumu, M. Mwima, S. P. Kyambadde, P. Hakiza, R. Kibathi, I. P. Kironde, E. Musinguzi, J. and Kipenda, C. U. (2019). Exploring associations between adolescent sexual and reproductive health stigma and HIV testing awareness and uptake among

urban refugee and displaced youth in Kampala, Uganda. *Sexual and reproductive health matters*, *27*(3): 86-106.

Logie, C. H., Okumu, M., & Loutet, M. (2018). Sexual and reproductive health in Ugandan refugee settlements. BMC Public Health, 18(1), 876–884. https://doi.org/10.1186/s12889-018-5792-1

Logie, C. H., Okumu, M., & Loutet, M. (2018). Sexual and reproductive health in Ugandan refugee settlements. *BMC Public Health, 18*(1), 876-884.

Magezi, A., & Mairah, F. (2022). *Sexual and Reproductive Health and Rights in Emergency Communities. A survey on the Kyaka II Refugee Settlement, South Western Uganda.* https://doi.org/10.21203/rs.3.rs-1795483/v2

Mambo, S. B., Lodhi, M. M., Asiimwe, I., Bizimana, G. N., Makelele, A. M., Mbina, S. A., Igwe, M. C., & Ibrahim, U. (2025). Healthcare workers' attitudes and factors affecting provision of sexual and reproductive health services to adolescents in refugee settlements, Western Uganda. *Frontiers in Reproductive Health, 7*, Article 1498305. https://doi.org/10.3389/frph.2025.1498305

Mason-Jones, A. J. and Nicholson, P. (2018). Structural violence and marginalization. The sexual and reproductive health experiences of separated young people on the move. A rapid review with relevance to the European humanitarian crisis. *Public health*, *158*: 156-162.

McGinn, T., Austin, J., & Anfinson, K. (2016). Gender norms and reproductive health in South Sudanese refugee camps. *Reproductive Health Matters, 24*(48), 89-97. Ortensi, L. E. (2015). Cultural barriers to reproductive health among Syrian refugees. *European Journal of Public Health, 25*(4), 654-659.

Meyer, K., Abimpaye, M., Harerimana, J. de D., Williams, C., & Gallagher, M. C. (2022). Understanding the Sexual and Reproductive Health Experiences of Refugee and Host

Community Adolescents and Youth in Rwanda During COVID-19: Needs, Barriers, and Opportunities. *Frontiers in Reproductive Health*, *4*. https://doi.org/10.3389/frph.2022.799699

Mutua, F. M., Karonjo, J., Nyaberi, J. M., Wanyoike, P. K., Kausya, J., & Mugai, F. (2020). Socio-demographic and economic factors influencing utilization of youth friendly reproductive health services among youths in selected universities in Nairobi County, Kenya. *International Journal of Community Medicine and Public Health*, *7*(7), 2437. https://doi.org/10.18203/2394-6040.ijcmph20202962

Neema, S. Musisi, N. and Kibombo, R. (2004). *Adolescent sexual and reproductive health in Uganda: a synthesis of research evidence* (Vol. 14). New York: Alan Guttmacher Institute.

Nha, V. T. T. (2021). Understanding Validity and Reliability from Qualitative and Quantitative Research Traditions. *VNU Journal of Foreign Studies*, *37*(3). https://doi.org/10.25073/2525-2445/vnufs.4672

Noble, E. Ward, L. French, S. and Falb, K. (2019). State of the evidence: a systematic review of approaches to reduce gender-based violence and support the empowerment of adolescent girls in humanitarian settings. *Trauma, Violence, & Abuse*, *20*(3): 428-434.

Odo, A. N., Musa, K., & Oladugba, A. V. (2020). Sexual and Reproductive Health Needs and Problems of Internally Displaced Adolescents (IDAs) in Borno State, Nigeria: A Mixed Method Approach. *PubMed*, *24*(1), 87–96. https://doi.org/10.29063/ajrh2020/v24i1.9

Okello, E. O., Musinguzi, M., Opollo, M. S., & Auma, A. R. (2024). Factors associated with teenage pregnancy among refugees in Palabek refugee settlement, Northern Uganda. *BMC Pregnancy and Childbirth, 24*, Article 706. https://doi.org/10.1186/s12884-024-06909-x

Ortiz-Echevarria, L. Greeley, M. Bawoke, T. Zimmerman, L. Robinson, C. and Schlecht, J. (2017). Understanding the unique experiences, perspectives and sexual and reproductive health needs of very young adolescents: Somali refugees in Ethiopia. *Conflict and health*, *11*(1): 35 42.

P, Singh NS, Sulaiman M, King J, Saddique Z, Mounier-Jack S, et al. (2023) Sexual and reproductive healthcare utilization and affordability for South Sudanese refugees and host populations in Northern Uganda: A mixed methods study. PLOS Glob Public Health 3(9): e0002351. https://doi.org/10.1371/journal.pgph.0002351

Palattiyil, G., Mwenyango, H., Sidhva, D., Kisaakye, P., Nair, H., & Bukuluki, P. (2025). A qualitative study on sexual and reproductive health needs and risks of adolescents in Bidibidi refugee settlement, Uganda. *Global Social Challenges Journal* (published online ahead of print 2025). Retrieved Mar 27, 2025,from

Rachel Esteves Soeiro, José Paulo Guida, da-Costa-Santos, J., & Maria Laura Costa. (2023). Sexual and reproductive health (SRH) needs for forcibly displaced adolescent girls and young women (10–24 years old) in humanitarian settings: a mixed-methods systematic review. *Reproductive Health*, *20*(1). https://doi.org/10.1186/s12978-023-01715-8

Refugee Rights Europe. (2023). *Sexual Reproductive Rights for displaced people in Greece.* Refugee Rights Europe. https://refugee-rights.eu/

Singh, N. S. Aryasinghe, S. Smith, J. Khosla, R. Say, L. and Blanchet, K. (2018). A long way to go: a systematic review to assess the utilisation of sexual and reproductive health services during humanitarian crises. *British Medical Journal global health*, *3*(2).

Soeiro, R. E., Guida, J. P. S., Santos, J. D. C., & Costa, M. L. (2023). Sexual and reproductive health (SRH) needs for forcibly displaced adolescent girls and young women (10–24 years old) in humanitarian settings: A mixed-methods systematic review. *Reproductive Health, 20*, Article 174. https://doi.org/10.1186/s12978-023-01715-8

Solomon, D., Cabecinha, M., Gibbs, J., Burns, F., & Sabin, C. (2022). How do we measure unmet need within sexual and reproductive health? A systematic review. *Perspectives in Public Health*, 175791392211187. https://doi.org/10.1177/17579139221118778

Stirling-Cameron, E., Almukhaini, s, Dol, J., DuPlessis, B. J., Stone, K., Aston, M., & Goldenberg, S. M. (2024). Access and use of sexual and reproductive health services among asylum-seeking and refugee women in high-income countries: A scoping review. *PLoS ONE*, *19*(11), e0312746–e0312746. https://doi.org/10.1371/journal.pone.0312746

Tadele Dana Darebo, Spigt, M., Berhanetsehay Teklewold, Abebe Sorsa Badacho, Mayer, N., & Meba Teklewold. (2024). The sexual and reproductive healthcare challenges when dealing with female migrants and refugees in low and middle-income countries (a qualitative evidence synthesis). *BMC Public Health*, *24*(1). https://doi.org/10.1186/s12889-024-17916-0

Tanabe, M., Myers, A., & Bhandari, P. (2019). Reproductive health in refugee settings: A comparative study. The Lancet Global Health, 7(8), e1005–e1013. https://doi.org/10.1016/S2214-109X(19)30285-2

Tanabe, M., Myers, A., & Bhandari, P. (2019). Reproductive health in refugee settings: A comparative study. *The Lancet Global Health, 7*(8), e1005-e1013.

Tanabe, M., Myers, A., & Bhandari, P. (2020). Religious influences on reproductive health in Kenyan refugee camps. *Global Health Action, 13*(1), 174-182. Worden, E. (2022). A look inside refugee youth-led SRH group in Kyaka II. *Inter-Agency Working Group on Reproductive Health in Crises*.

Tirado, V., Chu, J., Hanson, C., Ekström, A. M., & Kågesten, A. (2020). Barriers and facilitators for the sexual and reproductive health and rights of young people in refugee

contexts globally: A scoping review. *PLOS ONE, 15*(7), e0236316. https://doi.org/10.1371/journal.pone.0236316

Tlaye, K. G. Belete, M. A. Demelew, T. M. Getu M. A. and Astawesegn, F. H. (2018). Reproductive health services utilization and its associated factors among adolescents in Debre Berhan town, Central Ethiopia: a community-based cross-sectional study. Reproductive Health 15: 217.

UNHCR. (2024). Global Trends: Forced Displacement in 2023. In *UNHCR;Joint Data Center on Forced Displacement*. World Bank-UNHCR Joint Data Center on Forced Displacement, Global Trends: Forced Displacement in 2023

UNHCR. (2025). Uganda - Refugee statistics July 2025 - Settlement profiles. United Nations High Commissioner for Refugees. https://data.unhcr.org/en/documents/details/117903

United Nations High Commissioner for Refugees. (2023). *Uganda - Refugee Statistics March 2022 - Kyaka Ii*. Unhcr.org.

Ussher, J. M. Rhyder-Obid, M. Perz, J. Rae, M. Wong, T. W. and Newman, P (2012). Purity, privacy and procreation: Constructions and experiences of sexual and reproductive health in Assyrian and Karen women living in Australia. *Sexuality & Culture, 16*(4): 467-485.

Utaka, E. N., Sekoni, A. O., & Badru, F. A. (2023). Knowledge and utilization of sexual and reproductive health services among young males in a slum area in Nigeria: A cross-sectional study. *Heliyon, 9*(6), e16289. https://doi.org/10.1016/j.heliyon.2023.e16289

Watcharakorn Riabroi, Gregory, B., Mackay, D., & Evi Germeni. (2025). Understanding barriers to young people's utilisation of sexual and reproductive health services in Asia-Pacific countries: a qualitative systematic review and thematic synthesis. *BMJ Public Health, 3*(1), e001504–e001504. https://doi.org/10.1136/bmjph-2024-001504

Women's Refugee Commission. (2024, July 9). *Sexual and Reproductive Health and Rights*. Women's Refugee Commission. https://www.womensrefugeecommission.org/focus-areas/sexual-reproductive-health-rights/

--- (2013, March) Scattered Dreams, Broken Promises: Refugee Adolescent Girls in Kyaka II Refugee Settlement, Uganda

APPENDICES

APPENDIX I: QUESTIONNAIRE FOR ADOLESCENTS

Dear respondent

I am Atugonza Allen, and I am conducting research on how Kyaka II's adolescent refugees use reproductive health services. You have been chosen as a participant; You're required to get consent from your parent or guardian to participate in this study if you're below 18 years. If consent is given kindly set aside a little time to take part in the study by responding to the questions below. The data will be handled with the highest confidentiality and used only for academic reasons. The information provided will be kept confidential and you will be anonymized throughout the findings. This will only be for academic purposes.

PART A: BIO DATA OF THE PARTICIPANTS

Please tick (√) the box that matches your answer to the questions and give the answers in the spaces provided as appropriate.

Section A: Bio data

1. Age of the participan

13-14

15 - 16

16-17

17 – 18

18 -19

2. Sex

Male

Female

3. Marital status

Never married

Divorced/separated Widowed

4. Current enrolment at school

In school

Out of school

5. Educational status

No formal education Primary education

Secondary education Above secondary education

6. Source of income

Employed

Dependent on parents

7. Parents' educational status

No formal education Primary education

Secondary education Above secondary education

8. Habit of communication within the family on RH issues

Yes

No

9. Residence with both parents at Kyaka II refugee setting

Yes

No

PART B: Knowledge about RHS, Socio-economic Factors Influencing RHS, Utilization of RHS

This part comprises of four sections providing questions pertaining to the research variables. Please indicate by ticking according to the scale below your order of preference. Using a Likert scale of 1 – 5 to rate the following alternatives from A – I where 1 – Strongly Disagree (SD), 2 – Disagree (D), 3- Not Sure (NS), 4 - Agree (A) and 5 - Strongly Agree (SA). Please kindly tick where appropriate

	STATEMENT	**RANKING**				
	SECTION A: Knowledge levels about RHS	**SD 1**	**D 2**	**NS 3**	**A 4**	**SA 5**
a)	I have knowledge of contraceptive methods to prevent unwanted pregnancy					
b)	I have Knowledge that unprotected sex can lead to HIV and STIs.					
c)	I know how to use condoms correctly and consistently					
d)	I have knowledge about HIV and STI treatment upon infection					
e)	I have knowledge about Post-exposure prophylaxis (PEP) to prevent HIV after involuntary or voluntary exposure					
f)	I have knowledge about traditional method of birth control to prevent pregnancy					
g)	I have knowledge that testing for HIV is important before having sex.					
h)	I know about safe abortions and where I can carry it out.					
	SECTION B: Socio-economic Factors Influencing access to RHS	**SD 1**	**D 2**	**NS 3**	**A 4**	**SA 5**
a)	Education has increased on access to RHS					
b)	Liberal religious teachings have increased on access to RHS					
c)	Moderate cultural values has increased on access to RHS					
d)	Positive societal expectations have increased on access to RHS					

e)	Health facility related have increased on access to RHS					
f)	Low cost of services have increased on access to RHS					
g)	Increased household income has increased on access to RHS					
h)	Reduction in poverty has increased on access to RHS					
	SECTION C: Barrier to Utilization of RHS	**SD 1**	**D 2**	**NS 3**	**A 4**	**SA 5**
a)	The distance to the health facilities some services is far					
b)	The community stigmatizes adolescents using sexual reproductive services as promiscuous					
c)	Sexual reproductive services are limited at Kyaka II refugee setting					
d)	There is no privacy when accessing sexual reproductive services at Kyaka II					
e)	You have to wait for long hours to access sexual reproductive services at Kyaka II					
f)	It is a taboo in my culture to prevent child birth using artificial methods					
g)	The nurses are trained and skillful I administering sexual reproductive services to adolescents.					

Thank you for your cooperation

APPENDIX II: IN-DEPTH INTERVIEW GUIDE FOR HEALTH WORKERS AT KYAKA II REFUGEE SETTLEMENT

Thank you for agreeing to speak with me.

My name is Atugonza Allen, a student of Kyambogo University and I'll be doing my research in your community over the next few weeks. I'd like to talk to you about the adolescent Reproductive Health services that you offer in your community. The information I gather from you and other community members is confidential and is for education purposes.

Name of facility.....

1. Respondent's gender: Male Female

2. What is your age

3. When was this facility opened?

4. What are the hours of operational?

5. How many employees are there?

6. What RHS services are offered at the for adolescents?

7 How do you disseminate knowledge to adolescents on RHS

7. What is the facility's history with providing RH services to teenagers?

8. What social economic factors determine utilization of these RH services?

9. How regularly are services used?

10. Has anyone objected to the facility's choice to provide RH services for adolescents?

11. What do you think of the health workers here? Are they in favor of the providing family planning services to adolescents?

a) Does your culture and religion support use of sexual reproductive services?

b) Has the staff had training in offering these services?

12. Generally what are the barrier to adolescents' s access to sexual reproductive services?

14. On average, how many adolescents use this facility's RH services each week?

a) Has this changed during the past year, for the better or worse?

b) Why do you think so, exactly?

15. Are RH services offered at no cost?

16. What are some ways to encourage adolescent usage and access to reproductive health services?

Thank you for your participation.

APPENDIX III: FGD GUIDE FOR ADOLESCENTS

Dear respondent,

I am Atugonza Allen, carrying out a study on the utilization of Reproductive Health services by adolescent refugees in the Kyaka II refugee settlement. You have been selected as a respondent, you must get written consent form your guardian or parent before participating in this focus group discussion.

If consent is given, please kindly spare a few minutes of your time and participate in the study by giving your views on the topic and where possible, make possible recommendations. The information was treated with utmost confidentiality and for academic purposes only.

1. What are some of the prevalent reproductive health among boy adolescents in this community?
2. Who do you talk to concerning issues on sexuality?
3. What is your understanding of Reproductive Health, what information exists on RH?
4. Where do you get information of RHS?
5. What services are provided at Kyaka II refugee center?
6. Where do you get services not provides in this community?
7. What are some of the services boys and girls typically seek from the healthcare providers?
8. What are their perceptions about services at the local facilities?
9. What are some of the social factors that influence the young people or make it difficult in seeking services?
10. What are some of the myths and beliefs that influence the utilization of RH of services by adolescent boys and girls?
11. How do the boys and girls make decisions on RH issues?

12. Do the boys and girls receive the same treatment when they access services at the health facility?
13. What are some of the challenges that persons of your age face in seeking for reproductive health services?
14. What RH services are available and considered most important and what services are comfortable in accessing from the health facility?
15. How regularly do you use available service at Kyaka II refugee center?
16. Are the services free or you have to pay for them?
17. What are your recommendations to strengthen Reproductive Health services for adolescents in your community?

Thank you for your participation

APPENDIX IV: SUMMARY OF FOCUS GROUP DISCUSSION

PARTICIPANTS' CHARACTERISTICS

FGDS	No. of Participants per group	Age range	Used RHS	Health Facility Visted	Attending school	Marital Status	Place of Residence
1	10	13 -19	Yes	Kyaka II	In school	single	Bukere
2	10	13 - 19	Yes	Kyaka II	Out of school	single	Bukere
3	10	13 - 19	Yes	Kyaka II	In school	Single	Mukondo
4	10	13 - 18	Yes	Kyaka II	Out of school	cohabiting	Sweswe
5	10	13 - 18	Yes	Kyaka II	In school	single	Kakoni
6	10	13 - 19	Yes	Kyaka II	In school	Married	Byabakora
7	10	13 -19	Yes	Kyaka II	In school	Single	Byabakora
8	10	13 - 19	Yes	Kyaka II	In school	Married	
9	10	13 - 19	Yes	Kyaka II	In school	Single	Buliti
10	10	13 - 19	Yes	Kyaka II	In school	Married	

APPENDIX V: CONSENT FORM

I am Atugonza Allen, a student of Kyambogo University. I am a student of Master of Public Health and am requesting you to participate in this study which is about the utilization of Reproductive Health services by adolescent refugees living in the Kyaka II refugee settlement. The purpose of this study is to explore the utilization of RH services by adolescent refugees in Kyaka II. Your participation in this study will help to better understand the different factors that influence the utilization of these services by the adolescent refugees.

The information you will provide will be kept confidential and only the investigator will have access to it. Your participation in this study is voluntary and you will have full autonomy to either participate in the study or not. If any question is unclear during the interview, feel free to ask for clarity before answering it.

You may decline to answer any or all questions and you may terminate your involvement at any time if you choose.

There will be no direct benefit to you for your participation in this study. However, we hope that the information obtained from this study may help policymakers and service providers improve on the quality of RH services offered.

If you are below 18 years of age, please get written consent from your parent or guardian to participate in the study.

I have understood the purpose of the study and understood that I have full right to either participate in the study or not. I also know that the information I will give will be confidential. I voluntarily consent to participate as a participant in this study.

Participant's initials..... date.....

....

Participant signature Interviewer's signature

APPENDIX VI: TABLE OF SMAPLE SIZE DETERMINATION BY KREJCIE AND MORGAN

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

APPENDIX VII: TASO IRB APPROVAL

The AIDS Support Organisation (TASO) Uganda Ltd.

TASO Headquarters
Mulago Hospital Complex
P.O. Box 10443, Kampala-Uganda
Tel: +256 414 532 580/1
Fax: +256 414 541 288
Email: mail@tasouganda.org
Website: www.tasouganda.org

04/11/2022

To: ALLEN ATUGONZA

KYAMBOGO UNIVERSITY
0782251013

Type: Initial Review

Re: TASO-2022-165: UTILIZATION OF REPRODUCTIVE HEALTH SERVICES BY ADOLESCENT REFUGEES LIVING IN KYAKA II REFUGEE RESETTLEMENT, KYEGEGWA DISTRICT, PDF version, 2022-11-03

I am pleased to inform you that at the **99th** convened meeting on **04/11/2022**, the The AIDS Support Organization (TASO) REC, committee meeting, etc voted to approve the above referenced application.
Approval of the research is for the period of **04/11/2022** to **04/11/2023.**

As Principal Investigator of the research, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the REC for re-review and approval **prior** to the activation of the changes.
3. Reports of unanticipated problems involving risks to participants or any new information which could change the risk benefit: ratio must be submitted to the REC.
4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by participants and/or witnesses should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits.
5. Continuing review application must be submitted to the REC **eight weeks** prior to the expiration date of **04/11/2023** in order to continue the study beyond the approved period. Failure to submit a continuing review application in a timely fashion may result in suspension or termination of the study.
6. The REC application number assigned to the research should be cited in any correspondence with the REC of record.
7. You are required to register the research protocol with the Uganda National Council for Science and Technology (UNCST) for final clearance to undertake the study in Uganda.

The following is the list of all documents approved in this application by The AIDS Support Organization (TASO) REC:

No.	Document Title	Language	Version Number	Version Date
1	Informed Consent forms	KISWAHILI	1	2022-11-03
2	Informed Consent forms	ENGLISH	2	2022-11-03
3	Protocol	English	PDF version	2022-11-03
4	Data collection tools	ENGLISH	PDF	2022-09-23

Yours Sincerely

Dr.Adrian Jjuuko
For: The AIDS Support Organization (TASO) REC

APPENDIX VIII: OPM APPROVAL



Uganda Vision 2040

THE REPUBLIC OF UGANDA

OFFICE OF THE PRIME MINISTER

PLOT 9-11 APOLLO KAGGWA ROAD. P.O. BOX 341, KAMPALA, UGANDA

TELEPHONES: General Line 0417 770500, Web: www.opm.go.ug, E-mail: ps@opm.go.ug

In any correspondence on this subject, please quote No: **OPM/R/163**

18th November 2022

Ms. Atugonza Allen,
Kyambogo University.

PERMISSION TO CONDUCT RESEARCH IN KYAKA II REFUGEE SETTLEMENT

Reference is made to your letter, dated 16th November 2022, in regard to the above subject matter.

Permission is hereby granted to you to conduct research on ***"The Utilization of Reproductive Health Services by Adolescent Refugees Living in Kyaka II Refugee Settlement"***, from 21st November to 10th December 2022.

You are requested to observe the rules and regulations governing the settlement.

Office of the Prime Minister Authorities in the Settlement are hereby requested to accord you the necessary assistance as you observe the Ministry of Health guidelines on Ebola and COVID 19.



Bafaki Charles
FOR: PERMANENT SECRETARY.

c.c.: The Refugee Desk Officer, Mbarara

c.c.: The Settlement Commandant, Kyaka II RS

OPM Vision: A Public Sector that is responsive and accountable in steering Uganda towards rapid economic growth and development.

APPENDIX IX: LETTER OF INTRODDUCTION

KYAMBOGO UNIVERSITY
FACULTY OF SCIENCE
P. O. BOX 1, KYAMBOGO - KAMPALA, UGANDA
TEL: +256-41-287347, 285001/2 Fax: 041-220464/222643
Website: www. Kyu.ac.ug
BIOLOGICAL SCIENCES DEPARTMENT

22nd July 2022

To: Kyaka II Refugee Settlement
Kyegegwa District

Dear Sir/Madam,

RE: INTRODUCTORY LETTER FOR CONDUCTING A FINAL YEAR RESEARCH

This is to introduce to you **MS. ATUGONZA ALLEN** with Registration Number **20/U/GMSPH/13465/PD** a second-year student of Kyambogo University pursuing a Master's of Public Health in the Department of Biological Sciences, Kyambogo University.

As part of the requirements for the award of the Master's degree, she's required to conduct a research project. The title of the research is **"Utilization of Reproductive Health Services by refugee adolescents living in Kyaka II Refugee Settlement** supervised Dr. Asio Santa Maria and Dr. Kaddumukasa.

Please accord her the necessary assistance to enable her carry out the research.

Thanks

Yours faithfully,

Asio Santa Maria (PhD)
Ag. HEAD OF DEPARTMENT

KYAMBOGO UNIVERSITY
BIOLOGICAL SCIENCE DEPT.
☆ 22 JUL 2022 ☆
P. O. BOX 1, KYAMBOGO

Contacts of the principal investigator; 0782251013/0702141407





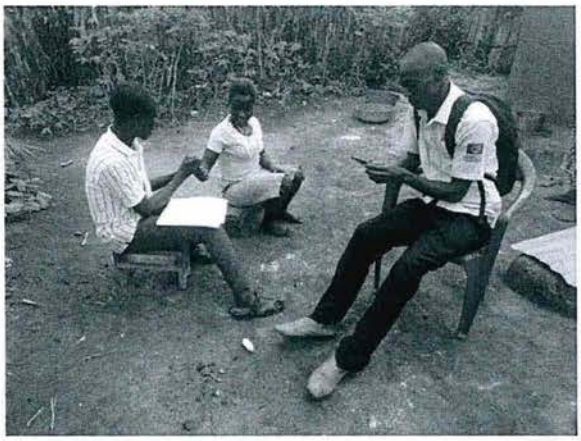
Bujiubuli Health centre



Kyaka II refugee settlement



Focus group discussion



Getting consent from a participants

