

**PREVALENCE AND FACTORS ASSOCIATED WITH ABORTION-RELATED
HEALTH RISKS AMONG SEX WORKERS
IN KYOTERA DISTRICT**

BY

SSEMAKULA MICHEAL

REG. NUMBER: 2023-M282-23324



**A POSTGRADUATE DISSERTATION SUBMITTED TO THE FACULTY OF HEALTH
SCIENCES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR
THE AWARD OF THE DEGREE OF PUBLIC HEALTH _HEALTH
PROMOTION UGANDA MARTYRS
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AUGUST, 2025

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DECLARATION

I, **Ssemakula Micheal**, have read the rules of Uganda Martyrs University on plagiarism and hereby state that this work is my own. It has not been submitted to any other institution for another degree or qualification, either in full or in part. Throughout the work I have acknowledged all sources used in its compilation.

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This work has been produced under my supervision

Name of Supervisor: **THEMBO MOSES**_____

Signature of Supervisor:  Date of Submission: _____ August 07th 2025

APPROVAL

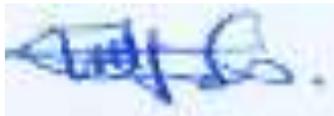
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APPROVAL DATE: August 07th 2025

DEDICATIONS

I dedicate this work to all my family members, and my colleagues at the Alliance of Women Advocating for change (AWAC)—for the guidance on this work.

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LIST OF ACRONYMS AND ABBREVIATIONS

AWAC	Alliance of Women Advocating for Change
CSW	Commercial Sex Workers
DHO	District Health Officer
FSWs	Female Sex Workers
HDI	Human Development Index
IRB	Institutional Review Board
MMR	Maternal Mortality Rate
MHCREC	Mulago Hospital Research and Ethics Committee
NDPIII	Third National Development Plan 2020
SA	Safe Abortion
SRHS	Sexual Reproductive Health Services
SRHR	Sexual Reproductive Health and Rights
UA	Unsafe Abortion
UBOS	Uganda National Bureau of Statistics
UDHS	The Uganda Demographic and Health Survey
WHO	World Health Organization

DEFINITION OF OPERATIONAL TERMS

Commercial Sex Workers: Individuals who engage in sexual activities in exchange for money, goods, or services. This term is often used in public health and social discussions to refer to people working in the sex industry, whether formally or informally.

Abortion is the medical or surgical termination of a pregnancy before the fetus can live independently outside the uterus. A procedure can be performed for various reasons, including health concerns, fetal abnormalities, personal circumstances, or in cases of unwanted pregnancy.

Unsafe Abortion: Refers to either an abortion performed by individuals without the necessary skills or in an environment that does not meet medical standards. It is typically carried out in circumstances where legal, safe, and accessible abortion services are not available, and it poses significant health risks to the individual undergoing the procedure.

Sexual Health: Involves physical, emotional, mental, and social well-being in relation to sexuality. It includes the right to have a satisfying and safe sexual life, free from violence, discrimination, and stigma.

Reproductive Health: Refers to the health of the reproductive systems and the ability to have a safe pregnancy, childbirth, and postnatal care. It also covers access to family planning services, safe abortion (where legal), and maternal health care.

Reproductive Rights: The rights of individuals to make their own informed decisions about their sexual and reproductive health, free from coercion and discrimination.

Sexual and Reproductive Health and Rights: Encompasses a broad range of issues related to the health and well-being of individuals in relation to their sexuality and reproduction.

Abortion-related health risks; refer to the potential physical and psychological complications that may arise from terminating a pregnancy, whether through surgical or medical means. However some of these procedures are done unsafely --which can result into physical and psychological complications, such as excessive bleeding, infection, damage to the cervix or uterus, and, in rare cases, death, and Psychological risks --which encompass emotional distress, anxiety, depression, and post-traumatic stress disorder (PTSD))

ABSTRACT

Introduction: Abortion and commercial sex work are illegal. This leads to unsafe abortion practices largely driven by a combination of restrictive abortion laws, stigma and discrimination, inadequate access to quality reproductive health services, and limited education on safe abortion methods against the victims. The study attracted that researcher to carry out a study to assess the prevalence and factors influencing abortion-related health risks among commercial sex workers in Kyotera District.

Methodology: A community-based cross-sectional study that used a cross section study design with quantitative and qualitative methods of data collection and analysis was used. A sample size of 152 respondents who were female sex workers was selected by purposive sampling technique. Data was collected using researcher administered questionnaires. It was analyzed by SPSS version 26 used binary logistic regression model where Adjusted Odds Ratio (AOR) and 95% Confidence Interval (CI) with significant level at <0.05 .

Results: There was high prevalence (105 (69%)) of abortion related risks among sex workers that participated in this study. This was significantly associated with; individual factors included; ordinary employees or casual work (AOR: 27.22, $P=0.007$), long duration in sex work (AOR: 0.002, $P=0.017$), monthly income (AOR: 0.001, $P=0.003$), living communally in brothels (AOR: 31.0, $P=0.010$). Health education about abortion (AOR: 28.88, $P=0.041$), awareness of facilities that provide SRHSs (AOR: 0.02, $P=0.008$). Qualitative results were; inadequate experience in sex work, young age, low incomes, communal sharing of accommodation and lack of basic knowledge about contraception. Environmental factors included; high stigmatization or discrimination (AOR: 38.06, $P=0.004$) and accessibility to emotional support (AOR: 0.0001, $P=0.002$). Qualitative results were; lack of adequate experience in sex work business and stigma to sex workers. Health related factors included; ready availability of PAC (AOR: 0.07, $P=0.036$), easy to access SRHSs (AOR: 0.02, $P=0.010$), long waiting time (AOR: 36.98, $P=<0.001$) and integration of PAC services into the general care (AOR: 0.013, $P=0.026$). Qualitative results were; unavailability of PAC services and well trained staff, lack of access to SRH services at nearest healthcare facilities, long waiting time and non integration of PAC services into the main healthcare stream.

Conclusion: There was high prevalence of abortion related risks among commercial sex workers that participated in this study. This was significantly associated with; being an irregular or casual employee, low experience in sex work business and young age, inadequacy of monthly income to meet healthcare demands, lack of support from close family members, high stigmatization or discrimination of commercial sex workers and high inaccessibility to emotional support access, lack of ready availability of PAC services, long waiting time, non integration of PAC services into the general reproductive health care.

Recommendations: The research recommends that; government should improve healthcare services by improve SRHSs, train and counsel healthcare workers about handling sex workers with SRHSs, distribute more contraception and advocate to people to change refrain from poor sexual practices

CHAPTER ONE: INTRODUCTION

1.0 Introduction

Tragic tales emerge as countless innocent lives are lost due to maternal complications and deaths resulting from unsafe abortions. This distressing reality significantly contributes to Uganda's maternal mortality rate, a crisis that demands our urgent attention. In this chapter we introduce and explore factors influencing abortion-related health risks among commercial sex workers in Kyotera district. We additionally, demystify the magnitude of the unsafe abortion plight, and why it has persisted despite interventions to improve maternal health in Uganda. The chapter further highlights the study's purpose, objectives, the reasons, and the importance in the context of maternal health.

Unsafe abortion is a silent yet pervasive health crisis that claims the lives of countless innocent women every year. In Uganda, the health risks and consequences of unsafe abortion contribute significantly to the nation's alarming Maternal Mortality Rate (MMR), a statistic that needs an urgent attention (Mulumba *et al.*, 2017). Every year, hundreds of women, particularly those from marginalized communities such as the female sex workers, suffer or die due to complications from unsafe abortions. This public health issue, though not always immediately visible to the wider society, has deep and far-reaching effects, often impacting those at the margins—the women who have limited access to resources, healthcare, and support systems (Inzama *et al.*, 2023).

In general, information about abortion in sexually active women is incomplete and limited globally. Still, the results show that sub-Saharan Africa has a high rate of abortion in these groups (Moradi *et al.*, 2022). In Côte d'Ivoire, more than half of FSWs report not continuing their pregnancies to the end. Also, 47.7% of FSWs in Zambia have reported this. Like in other developing countries, FSWs in Iran are subject to social restrictions (Perrault Sullivan *et al.*, 2020).

Commercial sex workers are among the groups most severely affected by unsafe abortions due to their social, economic, and health vulnerabilities, as well as limited access to reproductive health services and societal stigma. This study focused on assessing the factors influencing abortion-related health risks among sex workers in Kyotera district. Unsafe abortion remains a major public health challenge in Uganda, contributing significantly to the high maternal mortality rate (Makuei, Abdollahian and Marion, 2020). The Ministry of Health Strategic Plan (2020–2025) highlights that hundreds of women, especially from marginalized communities, die annually from abortion-related complications. Despite interventions aimed at improving maternal health, unsafe abortions persist, pointing to serious gaps in reproductive health services and education (Marlow, Shellenberg and Yegon, 2014a). The

compounded stigma and exclusion faced by sex workers increase their reliance on unsafe abortion methods, with deep consequences for individuals, families, and communities (Patience Pensang Adowaa, Sika Bright and Ampem Darko Asumadu, 2025).

By exploring knowledge gaps, socioeconomic influences, and environmental determinants, this research sought to uncover the root causes of this persistent issue. Ultimately, the study aimed at providing evidence-based recommendations to inform interventions and policies that promote safe and equitable access to reproductive health services, thereby contributing to the broader goal of reducing maternal mortality in Uganda.

1.1 Background of the study

Around 73 million induced abortions take place worldwide each year. 6 out of 10 (61%) of all unintended pregnancies, and 3 out of 10 (29%) of all pregnancies, end in induced abortion (Nkombondo, Kabasubabo and Akilimali, 2024). When people with unintended pregnancies face barriers to attaining safe, timely, affordable, geographically reachable, respectful and non-discriminatory abortion, they often resort to unsafe abortion. Estimates from 2010–2014 reveal that 45% of all induced abortions globally were unsafe. Alarmingly, one-third of these unsafe procedures were performed under the least safe conditions often by untrained individuals using hazardous and invasive method according to WHO.

An abortion refers to the termination of a pregnancy, most commonly during the first or second trimester (Bridwell et al., 2022). There are two main types of abortion: spontaneous and induced. Spontaneous abortion, often referred to as miscarriage, occurs naturally and typically results from genetic abnormalities, maternal health conditions, or infections (W. A. S *et al.*, 2025). Induced abortion, on the other hand, involves the intentional termination of a pregnancy through medical or surgical methods. The Patel et al., (2022), highlighted that, the common causes of spontaneous abortion include chromosomal abnormalities in the fetus, hormonal imbalances, maternal health conditions (such as diabetes or thyroid issues), infections, or problems with the structure of the uterus. WHO recognizes that this can be done early in the pregnancy with medication or later in the pregnancy through surgical procedures. Ghosh et al., (2021) notes that, medical methods involve medications such as mifepristone and misoprostol, while surgical methods include procedures such as suction aspiration or dilation and curettage (D&C)

The burden of unsafe abortion is disproportionately borne by developing countries, which account 97% of all unsafe abortions. More than half of all unsafe abortions occur in Asia, most in south and central

Asia. In Latin America and Africa, the majority (approximately 3 out of 4) of all abortions are unsafe. WHO acknowledges that, in Africa, nearly half of all abortions occur under the least safe circumstance. These statistics underscore the urgent need for effective interventions to ensure safe abortion services and reduce the health risks associated with unsafe practices (J. O. Ouma *et al.*, 2022).

Uganda's Maternal Mortality Rate remains one of the highest in the world, despite substantial reductions in recent decades. The maternal mortality ratio dropped from 684 per 100,000 live births in the early 2000s to 189 per 100,000 in 2022 UDHS. However, maternal deaths continue to present a significant public health challenge. The Ministry of Health estimates that 8% of maternal deaths in Uganda are attributable to unsafe abortion. This persistent challenge reflects systemic barriers to accessing safe and legal abortion services, particularly for marginalized populations (Namagembe *et al.*, 2022).

Unsafe abortion is a significant contributor to maternal mortality in Uganda, particularly among vulnerable groups such as adolescents, women in rural areas, and commercial sex workers. Many women resort to unsafe abortion due to restrictive abortion laws, lack of access to healthcare services, and pervasive stigma. These conditions result in severe complications, including infection, hemorrhage, infertility, and even death, further exacerbating Uganda's public health burden. While both spontaneous and induced abortions are recognized medically, the issue of unsafe abortion arises primarily in the context of induced abortions performed without adequate medical oversight or in unsafe conditions. The WHO defines unsafe abortion as a procedure performed by individuals lacking the necessary skills or in an environment that does not meet minimum medical standards. This definition highlights the critical need for accessible, safe, and legal abortion services to prevent the health related risks and adverse outcomes associated with unsafe practices.

Unsafe abortion remains a major public health concern in Uganda, contributing significantly to the maternal mortality ratio (8%) and disproportionately affecting marginalized women, especially commercial sex workers ((Mulumba *et al.*, 2017); Kibira *et al.*, (2023). These women often face barriers such as restrictive laws, limited access to contraceptives, poverty, stigma, and discrimination in healthcare, which drive them toward unsafe abortion methods. Studies Joy Margaret & Kizito, (2021) and AWAC—Uganda, highlight their unique vulnerabilities, including violence, social isolation, and lack of access to quality reproductive services, particularly in areas like Kyotera District.

According to the Subnational HDI - Global Data Lab, Kyotera, with an HDI of 0.609, presents unique socio-economic challenges—high poverty, poor healthcare infrastructure, and a significant presence of

sex workers, making it a focal point for studying abortion-related risks. The WHO, and UDHS-Report (2022) emphasize unsafe abortion as a leading contributor to Uganda's high maternal mortality, jeopardizing progress toward SDG 3.

This study aims to examine the factors influencing abortion-related health risks among commercial sex workers in Kyotera. It focused on; prevalence, individual factors (such as, knowledge gaps, socio-economic), environmental factors, and healthcare accessibility. By doing so, it would inform policy, enhance reproductive health programs, and support equitable healthcare for marginalized women in Uganda.

1.2 Problem statement

Estimates indicate that 46 million pregnancies are voluntarily terminated each year—27 million where only one is legally terminated and 19 million outside the legal system. In the latter case the abortions are often performed by unskilled providers or under unhygienic conditions or both which lead to adverse outcomes (WHO, 2024). In Sub Saharan Africa, 77% of the 6.2 million unsafe abortions that occur each year are carried out in unsafe circumstances, leading to serious maternal consequences (Tesema *et al.*, 2025; Adeyemi, no date). In Uganda, maternal mortality remains a significant public health challenge with unsafe abortion being one of the leading causes of death and morbidity among women. According to the Uganda Demographic and Health Survey (UDHS) 2022 Report, the maternal mortality ratio is estimated at 189 maternal deaths per 100,000 live births, while the pregnancy-related mortality ratio is 228 pregnancy-related deaths per 100,000 live births. Alarmingly, approximately 10% of the MMR is attributed to unsafe abortions.

Basing on Guttmacher Institute Report, abortion rates range from 18 per 1,000 women in the western region to 77 per 1,000 women in Kampala, Central Uganda, which includes districts like Kyotera, shows rates of 30-37 per 1,000 women. These variations underline the disparities in realizing the positive outcomes of reproductive health services and the influence of societal norms and legal frameworks on abortion practices (Ekerin *et al.*, 2023). The rates among commercial female sex workers are worse though no documented due to the fact that they operate in clandestine places and circumstance where even identifying them becomes quite difficult. As a result in Kyotera Town Council and nearby areas there were increasing cases of maternal deaths and maternal morbidities associated with post abortion effects.

Despite interventions, the included; free post abortion care services in all public healthcare facilities, mass education and sensitization about reproductive health, free contraception mainly condom distribution in brothels and community outreaches with focus on sex and reproductive health, the problem of abortion health related risks is still persistent. It could be that inadequate research among FCSW has been done to assess the prevalence and factors influencing abortion-related health risks among them. If no study is done to establish the cause more vulnerable groups of people including sex workers and young adolescent girls will increasing suffer from effects of unintended pregnancies and unsafe abortion. It was therefore upon this background that the researcher carried out a research study that assessed the prevalence and factors influencing abortion-related health risks among commercial sex workers in Kyotera District.

1.3 Objectives of the study

1.3.1 Purpose of the study

To assess the prevalence and factors influencing abortion-related health risks among FCSWs in Kyotera District.

1.3.2 Specific Objectives

- i. To assess the prevalence of abortion health risks among FCSWs in Kyotera District
- ii. To investigate the individual factors associated abortion-related health risks among commercial sex workers in Kyotera District
- iii. To study the environmental factors associated with abortion-related health risks among commercial sex workers in Kyotera District
- iv. To examine the healthcare factors associated abortion-related health risks among commercial sex workers in Kyotera District

1.4 Research Questions

The study answered the following questions

- i. What is the prevalence of abortion health risks among FCSWs in Kyotera District?
- ii. What are the individual related factors associated abortion-related health risks among FCSWs in Kyotera District?

- iii. What are the environmental factors associated with abortion-related health risks among FCSWs in Kyotera District?
- iv. What are the healthcare factors associated abortion-related health risks among FCSWs in Kyotera District?

1.5 Significance of the study

Non-Governmental Organizations: The findings of the study will help NGOs to know the lived experiences of sex workers as regards Sexual and Reproductive Health life. This will eventually be used as a basis of designing healthcare interventions to address SRHSs challenges sexual workers and other vulnerable groups face that impede them to get better healthcare especially under stigmatized situations such as treating effects of abortion.

Health workers in Kyotera District: Information will be obtained about the health related risks will be based upon to make relevant interventions so as to improve strategies to minimize the incidence of abortion related risks since the area have many young people carry out abortion and yet HIV prevalence is high.

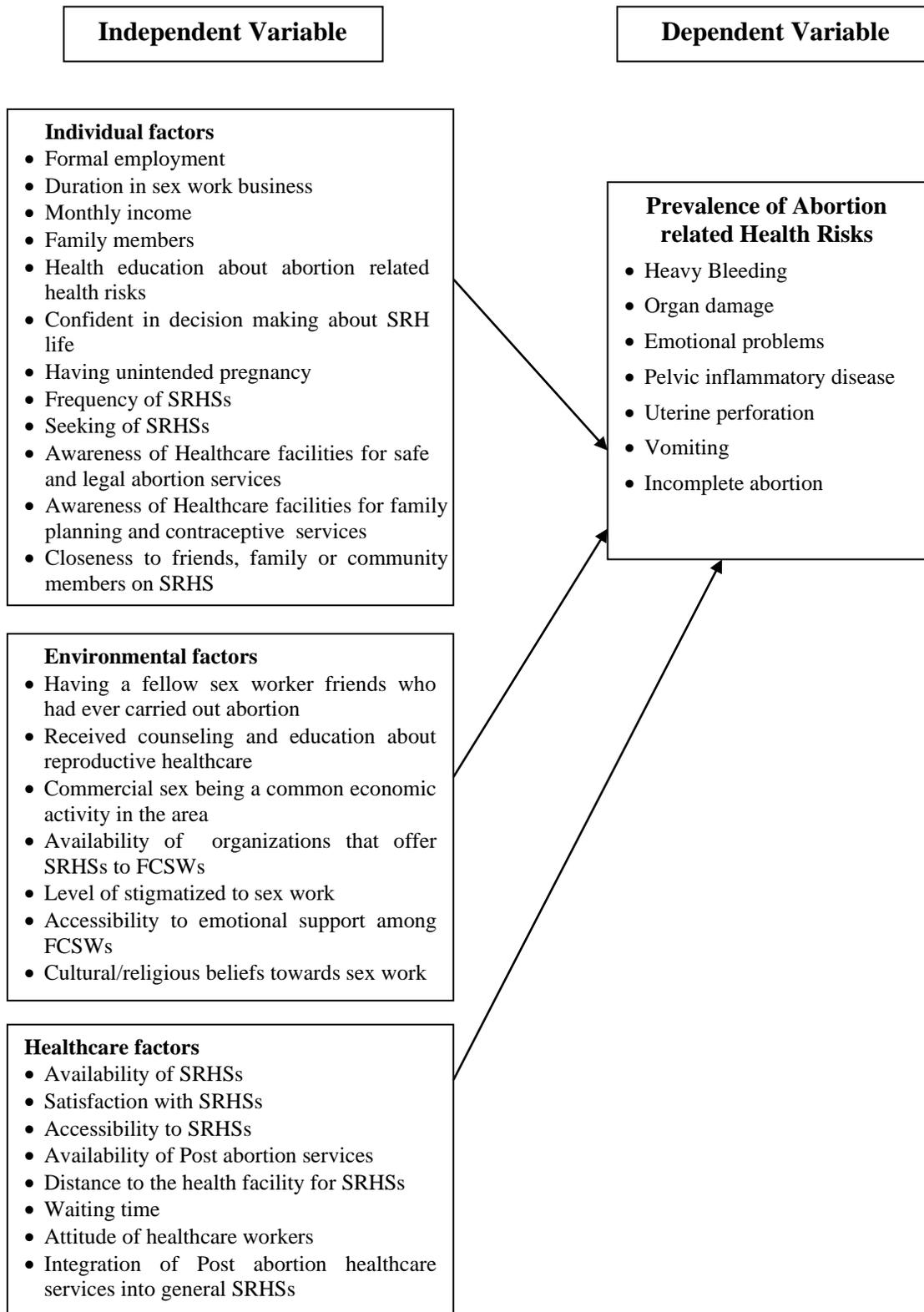
Fellow sex workers: The sex workers will self report identify the challenges that put them at risk of abortion health related risks which will be used by different stakeholders to help out the sex workers. This will therefore be a basis for sensitization about the need the dangers of sex work and SRHSs complications

Findings will be a source of reference for future researchers about immunization and related topics. This will help to identify gaps left by this study thus develop better solutions.

The results will be made into a report to be submitted in partial fulfillment for the requirements for the award of a Master's Degree in Public Health- Health Promotion to the researcher.

1.6 Conceptual framework of the study

Figure 1: Conceptual framework prevalence and factors influencing abortion-related health risks among FCSWs



CHAPTER TWO LITERATURE REVIEW

2.0 Introduction

This section reviews information from acknowledged documents in relation to the specific objectives of the study that included; assessing the prevalence of abortion-related health risks among FCSWs, investigating the individual, environmental and healthcare related factors associated abortion-related health risks among FCSWs in Kyotera District.

Heartbreaking stories emerge as precious lives are claimed by unsafe abortions – a troubling reality that demands our attention. The issue of unsafe abortion among commercial sex workers (CSWs) remains a significant public health concern, particularly in resource-limited settings like Kyotera district, Uganda. This chapter will explore how the existing literature explain how knowledge levels, socio-economic factors, and environmental factors contribute to unsafe abortion practices in marginalized populations like sex workers. Grossman et al., (2023) notes that, the lack of awareness and misinformation about reproductive health, including abortion methods, can lead to the use of unsafe procedures.

Similarly, Arambepola et al., (2016) acknowledges that socioeconomic factors, such as poverty, limited access to quality healthcare, and economic dependency, further exacerbate the vulnerability of CSWs, making them more likely to seek unsafe abortions due to financial and logistical barriers. Additionally, its noted that environmental factors, such as poor healthcare infrastructure, societal stigma, and restrictive legal frameworks, create an environment where CSWs are less likely to access safe and legal abortion services, and therefore, these become one of the major decisive factors associated with unsafe abortion (Yogi et al., 2018). This literature review aims to explore how these intersecting factors influence unsafe abortion among commercial sex workers in Kyotera district, interrogate the gaps in the current literature, and provide a foundation for further investigation and policy

2.1 Theoretical Framework:

The theoretical framework in this proposal, is guided by the HBM model which is adopted and modified from a study by Pisirai Ndarukwa et al., (2015).

The Health Belief Model is a health behaviour change and psychological model developed by Irwin M. Rosenstock in 1966 for studying and promoting the uptake of health services. The model was

furthered by Becker and colleagues in the 1970s and 1980s. Subsequent amendments to the model were made as late as 1988, to accommodate evolving evidence generated within the health community about the role that knowledge and perceptions play in personal responsibility. Originally, the model was designed to predict behavioural response to the treatment received by acutely or chronically ill patients, but in more recent years the model has been used to predict more general health behaviours. In the case of this study, it will be used to assess the knowledge patients have about abortions and attitudes the patients have on abortions (Alyafei and Easton-Carr, 2024).

This is to investigate and explore the prevalence and factors influencing abortion-related health risks among commercial sex workers in Kyotera district. It further highlights the relationships between individual, environmental and healthcare factors associated with Abortion health risks, and provides a basis for testing theoretical assumptions.

2.1. Theory Underpinning the study

The Health Belief Model (HBM) will be used in exploring prevalence and factors influencing abortion-related health risks among the commercial sex workers in Kyotera district.

The model suggests that an individual's decision to engage in a health-related behavior is influenced by their perceptions of the severity and susceptibility to a health issue, the perceived benefits and barriers to taking action, cues to action, and self-efficacy (Glanz, Rimer & Viswanath, 2015).

The HBM comprises six core constructs that influence an individual's decision-making process:

These constructs include: Perceived Susceptibility, Perceived Severity, Perceived Benefits, Perceived Barriers, Cues to Action, and Self-Efficacy.

The Health Belief Model is a theoretical framework that explains health behaviors, including unsafe abortion practices in this context. Therefore, the HBM constructs will be applied to explore prevalence and factors influencing abortion-related health risks among commercial sex workers in Kyotera district, as demystified below;

Perceived Susceptibility: Many commercial sex workers, particularly younger or less experienced ones, are vulnerable to unsafe abortion risks due to limited knowledge, low income, and poor access to services. Environmental and social factors, including stigma and lack of contraception, further heighten this susceptibility.

Perceived Severity: A lack of awareness and normalization of unsafe practices may cause sex workers to underestimate the dangers of unsafe abortion, such as hemorrhage, infertility, or death. This low perceived severity contributes to ongoing risky behavior.

Perceived Benefits: Despite the risks, some sex workers may see unsafe abortion as an easier, more accessible option to address unwanted pregnancies. Stigma, misinformation, and fear of judgment discourage them from seeking safer, regulated care.

Perceived Barriers: Key barriers include legal restrictions, high cost of safe services, stigma, provider discrimination, and lack of awareness. These barriers push many sex workers toward unsafe, informal abortion options.

Cues to Action: Positive triggers like health education, peer support, or guidance from healthcare providers can encourage sex workers to seek safer abortion care and reduce complications.

Self-Efficacy: Empowering sex workers with knowledge, support systems, and access to affordable, safe care increases their confidence and ability to avoid unsafe abortion practices.

2.1 Prevalence of abortion-related health risks among commercial sex workers

A cross-sectional study was conducted among 1257 Female Sex Workers (FSW) in five cities from Guangdong provinces in South China. The proportion of participants with ever experiencing at least one unintended pregnancy due to commercial sex was 19.3%. Of the 242 participants, the majority of participants chose induced abortion as a measure to terminate unintended pregnancy. In addition, among those who experienced unintended pregnancy, about four-fifths of participants self-reported that they had experienced induced abortion in their lifetime, while 40.5% of participants had multiple induced abortion. The proportion of having an abortion once in their lifetime is the highest, followed by two abortions (Liang *et al.*, 2024)

A cross-sectional study that utilized the third round of integrated bio-behavioral surveillance-III data in Iranian FSWs in December 2019 and August 2020 had 1,515 participants selected in 8 geographically diverse cities in Iran. The prevalence of lifetime intentional abortion in 1390 women was 37.3%; 95% CI: 32.43, 42.11%. According to the age group, the prevalence of abortion was higher in 31 to 40 years (42.60%) and then in less than 30 years (34.16%). Based on marital status, the highest prevalence of abortion was reported among divorced women (42.92%). Regarding education, the highest prevalence of abortion was reported in women with the secondary education level (63.20) and then in ones with diplomas (60.26). FSWs who reported lifetime intentional abortion were

younger than those who did not have an abortion in their first sexual intercourse (P-value = 0.014) (Moradi *et al.*, 2022).

Data was analyzed data that investigated the incidence of unintended pregnancy and associated factors among adolescent girls and young women at risk of HIV infection in Kampala, Uganda with focus on uptake of oral pre-exposure prophylaxis among adolescent girls and young women (AGYW) from January 2019 to December 2020. Volunteers attended 3-monthly study visits for 12 months each. We included 285 volunteers with a mean age of 19.9 [standard deviation (SD), ± 2.24] years; 54.7% had attained secondary school education or higher, 57.2% were single (never married), 92.6% reported engaging in transactional sex, 21.0% reported sex work as their main job, 51.9% consumed alcohol in the month prior to the interview, of whom 12.8% consumed alcohol daily, and 25.3% had *Chlamydia trachomatis/Neisseria gonorrhoeae*. The mean age at first sexual intercourse was 15.7 (SD, ± 2.1) years. We recorded 44 pregnancies over 187.2 person-years of follow-up, an incidence of 23.5 per 100 person-years [95% confidence interval (CI), 17.5–31.6] (Namukisa *et al.*, 2023).

2.2 Individual related factors associated with abortion-related health risks among FCSWs

Formal employment

This cross-sectional study utilizes the third round of integrated bio-behavioral surveillance-III data in Iranian FSWs in December 2019 and August 2020, and 1515 Participants were selected in 8 geographically diverse cities in Iran. In the multivariate logistic regression model, the marital status divorced sex workers were twice more likely to face abortion related health risks as compared to sex workers who stayed with their partners (AOR = 2.05, 95% CI: 1.29, 3.27) (Moradi *et al.*, 2022).

Duration in sex work business

A cross-sectional study was conducted among 1257 Female Sex Workers (FSW) in five cities from Guangdong provinces in South China. Findings indicated that FSW working in current location over one year (adjusted Odds Ratio (aOR): 2.82, 95% CI 1.71–4.64) and having more than seven clients in the past week (aOR: 4.53, 95% CI 2.74–7.51) were more likely to have had unintended pregnancy due to commercial sex and subsequent effect of abortion (Liang *et al.*, 2024).

A cross-sectional study among adult FSWs operating in the post-conflict Gulu district in Northern Uganda where it was established that rates of abortion related health risks were higher among sex workers with history of unintended pregnancies during sex work (adjusted PR = 1.24 CI: 1.01–1.51),

and being a brothel/lodge-based FSWs (adjusted PR = 1.28, 95% CI: 1.01–1.63) (S. Ouma *et al.*, 2022a).

History of sex violence

This cross-sectional study utilizes the third round of integrated bio-behavioral surveillance-III data in Iranian FSWs in December 2019 and August 2020, and 1515 Participants were selected in 8 geographically diverse cities in Iran. FSWs who have experienced sexual violence had significantly more abortions than other populations of FSWs (45.45% vs. 33.5%; P-value <0.001). FSWs with a history of alcohol consumption (42.92%), substance abuse (44.22%), and injecting drug use (59.8%) reported a history of intentional abortion significantly higher than FSWs who did not have such high-risk behaviors (Moradi *et al.*, 2022).

Monthly income

This is a secondary prospective cohort analysis using data collected as part of the WHISPER or SHOUT cluster-randomized trial in Mombasa, assessing effectiveness of an SMS-intervention to reduce incidence of unintended pregnancy. Findings indicated that Correlates of lifetime abortions were currently not using a highly effective contraceptive due to low incomes (adjusted OR (AOR)=1.76 (95% CI=1.11 to 2.79), p=0.017) (Simmelink *et al.*, 2022) and these reported high rates of abortion.

Having unintended pregnancy

Primarily, FSW often encountered financial burdens and difficulties in condom use negotiation in south Africa (George *et al.*, 2019) and meta synthesis of barriers and facilitators to negotiating consistent condom use among sex workers in Asia where sex workers rarely used condoms (Tan and Melendez-Torres, 2016), leading to accepting more clients and engaging in more unprotected sex as also reported in a study carried out in China (Liang *et al.*, 2024).

Secondly, the majority of FSW are unstable and transient due to the criminalization of sex work in China (Wang *et al.*, 2022) rendering it challenging for existing interventions to reach and assist them. Furthermore, family planning is not given the same priority in the current strategies for FSW health as it is in HIV/STIs prevention (Wahed *et al.*, 2017), resulting in a dearth of knowledge and utilization of relevant health services. Given the high prevalence of unintended pregnancies and the marginalized nature of FSW, exploring effective strategies to improve the knowledge and utilization of family planning service for them is needed.

A study carried out in Kenya showed that, despite the lower-than-expected unintended pregnancy incidence, still 51% of FSWs in our cohort reported an unintended pregnancy in their lifetime (Simmelink *et al.*, 2022). The gap between lifetime unintended pregnancies and lifetime-induced abortions could indicate that many women decide to keep a child from unintended pregnancies, which could be supported by the fact that between 70% and 80% of young FSW in Mombasa have reported one or more children (Luchters *et al.*, 2016). It may also indicate a high unmet need for induced abortion services among FSWs, for example due to ongoing or increasing difficulties in accessing SRH or abortion services for this group or increasing socio-cultural barriers to abortion (Ampt *et al.*, 2020).

Awareness of Healthcare facilities for safe and legal abortion services

A study carried out in Zanzibar showed that, the level of knowledge on reproductive healthcare and access to information sources by the under- 20 years FSWs which revealed a very poor situation. The concept of “Zanzibar Youth Education Environment Development Support Association (ZAYEDESAs)” should be considered to scale up in other countries as they developed a successful peer network among under- 20 years FSWs and provided education to the community and health staffs on building supportive attitude toward under- 20 years FCSWs (Wahed *et al.*, 2020).

Awareness of Healthcare facilities for family planning and contraceptive services

The study used secondary data from a cross-sectional study done in Jinja City and Iganga Municipality, including a health facility assessment and health worker survey. Findings indicated that sex workers who were aware of the healthcare facilities for family planning and contraceptive services were less likely to face abortion related health risks as compared to sex workers who weren't aware of the healthcare facilities for family planning and contraceptive services (Ssanyu *et al.*, 2025).

Closeness to friends, family or community members on SRHS

This cross-sectional study utilizes the third round of integrated bio-behavioral surveillance-III data in Iranian FSWs in December 2019 and August 2020, and 1515 Participants were selected in 8 geographically diverse cities in Iran. and alcohol consumption (AOR = 1.53, 95% CI: 1.18, 2.01) were significantly associated with a history of intentional abortion (Moradi *et al.*, 2022). work experience in brothels (AOR = 1.39, 95% CI: 1.04, 1.84) (Moradi *et al.*, 2022).

2.2 Environmental related factors associated with abortion-related health risks among FCSWs

Availability of organizations/entities that offer SRHSs to sex workers

Makhakhe and colleagues (Makhakhe *et al.*, 2019) report a similar finding concerning targeted services in South Africa. Participants felt that they could not consult public SRH services because of stigma. Similarly, a study carried out in Uganda found out that instead, non-governmental health and advocacy organizations providing SRH services through mobile facilities or through peer interactions were seen as promoting trust and providing tailored services (Justine Nnakate Bukenya *et al.*, 2019). Similar findings another study in Uganda however, showed that these services are provided in urban areas, leaving those outside of these sites vulnerable to the health risks associated with a lack of access of tailored services (Justine N Bukenya *et al.*, 2019) (Justine Nnakate Bukenya *et al.*, 2019).

Level of stigmatized or discrimination to sex work

The most common barrier identified in this review is stigma. Stigma on the societal level affected FSW's decision-making regarding RHC service utilization (Birger, Peled and Benyamini, 2024b). For example, Bangladeshi sex workers mentioned that disclosing their occupation could damage their reputation and relationships with family and community, and lead to physical abuse (Katz *et al.*, 2015). In Tanzania, women suffered from stigma related to being a sex worker, often coinciding with HIV-related stigma and stigma surrounding being a single mother (Beckham *et al.*, 2015). In Zimbabwe, the social stigma attached to being a young woman selling sex (Chareka, Crankshaw and Zambezi, 2021) and undergoing an abortion (discouraged women's information sharing on where to obtain safe abortions and resulted in hindering their access to tailored sex worker services

Accessibility of emotional support access to sex workers

Treloar *et al.* (Treloar *et al.*, 2021) also report on sex workers' experiences of mental healthcare professionals regarding sex work with fascination or voyeurism. Both of these aspects were reported by sex workers and counselors within our study. Such experiences of stigma and discrimination may significantly influence sex workers' intentions of seeking mental health support in the future (Bungay and Casey, 2019) (Rayson and Alba, 2019). In addition, our findings suggest that sex workers tend to downplay mental illness, which might partially be due to stigma surrounding mental illness.

Cultural or religious beliefs towards sex work

Covering data from various countries and sex work settings, we identified barriers that transcend geographical and cultural contexts, predominantly the stigma surrounding sex work and the inaccessibility of existing RHC services. The findings portray an alarming picture of how FSW are

deprived of reproductive rights and access to good-quality reproductive healthcare (Birger, Peled and Benyamini, 2024b).

2.4 Healthcare related factors associated with abortion-related health risks among FCSWs

Availability of post abortion healthcare services

The second most common barrier identified in this review was the inaccessibility of health services (Birger, Peled and Benyamini, 2024b). Overall, sex workers felt that service delivery did not account for their reality, as manifested in inconvenient operating hours (Chareka, Crankshaw and Zambezi, 2021) (Faini *et al.*, 2020) (Corneli *et al.*, 2016) and long waiting times in health facilities, which caused them to lose clients (Rocha-Jiménez *et al.*, 2018) (Ochako *et al.*, 2018). For example, sex workers in Tanzania missed monthly contraceptive supplies provided by family planning clinics because these were only open during the day when they rested after working at night (Faini *et al.*, 2020).

Accessibility to SRHSs

A global survey Sex Work, Health, and Human Rights: Global Inequities, Challenges, and Opportunities for Action found out that, the criminalization and stigmatization of sex work influence community perceptions of sex workers, reinforcing stigma and discrimination both in healthcare settings and in day-to-day life (Shapiro and Duff, 2021). Similar findings had earlier been reported in another global survey that focused on intersection of sex work-related stigma and evolving policing strategies (Krüsi *et al.*, 2016). As a result, sex workers are often denied equal access to quality health services and may experience difficulties accessing SRH care across their life course as reported among international migrant sex workers at the Mexico-Guatemala border (Rocha-Jiménez *et al.*, 2018), in a study on Stigma, access to healthcare, and HIV risks among men who sell sex to men in Nigeria (Crowell *et al.*, 2017). Together, these overlapping structural barriers contribute to a lack of targeted services, thus violating the right of sex workers to comprehensive and appropriate SRH care.

Availability of Post abortion services

A cross-sectional survey was conducted among healthcare workers working in health facilities offering sexual and reproductive health services in Kenya ($n = 212$), Tanzania ($n = 371$), Uganda ($n = 145$) and Zambia ($n = 243$). Findings indicated that lack of Post abortion services increased the odds of post abortion health risks by four folds. In all sectors delays in the delivery of supplies (37.4-63.9%) was given as main stockout cause (Ooms *et al.*, 2022).

Distance to the health facility for SRHSs

A study carried out in sexual health centre (SHC) of the city of Rotterdam, run by the Municipal Public Health Service found out that, sex workers who had easy access to healthcare facilities with Sexual and Reproductive Health Services were less likely to experience post abortion health risks as compared to those who stayed in distant places (Twisk *et al.*, 2021).

Attitude of healthcare workers

A mixed methods study that methods compared attitudes between healthcare workers who received the training intervention and those who did not about evaluating the Integrated Key Populations Sensitivity Training Programme for Healthcare Workers in South Africa found out healthcare worker positive attitude to influence sex workers' positive seeking of PAC services. Existing evidence suggests that sensitization training intervention can result in shifts in providers' attitudes, including increased empathy for sex workers, a reduction in stigmatizing and discriminatory moral-based judgments and an increased self-perceived capacity to appropriately assist sex workers (Duby *et al.*, 2019).

An exploratory study was conducted among trans-women sex workers in the Greater Kampala Metropolitan area, Uganda. Trans-women sex workers reported to have feared healthcare providers, felt embarrassed or did not have the confidence to report the STIs and abortions they suffered from to the healthcare workers, while at both general and key population-friendly healthcare facilities, thereby affecting access to SRH services (Ssekamatte *et al.*, 2020).

Integration of Post abortion healthcare services into general SRHSs

RHC services' inaccessibility was also related to service regulations. For example, sex workers in Kenya described compulsory HIV testing (Corneli *et al.*, 2016). Sex workers in two Guatemala-based studies (Rocha-Jiménez *et al.*, 2018) mentioned that existing services have minimal outreach – health centre personnel only advised using condoms but did not provide information and explanation on prevention, diagnosis and treatment (Birger, Peled and Benyamini, 2024b).

2.5 Summary of Literature

In conclusion, the literature above highlights the multiple and compounding factors associated with abortion health risks emanating from mainly the unsafe abortion practices among commercial sex workers (CSWs) in Kyotera district –which manifests a significant public health challenge. Knowledge gaps, socioeconomic constraints, and environmental barriers collectively contribute to the

heightened vulnerability of CSWs as marginalized group. Limited awareness and pervasive myths about reproductive health, coupled with inadequate education, exacerbate unsafe practices. Socioeconomic factors, including poverty, restricted access to quality healthcare, and lack of social support, further hinder CSWs from seeking safe abortion services, while environmental factors such as limited availability of contraception, inadequate healthcare infrastructure, laws, and societal stigma create an additional layer of obstacles. Despite the growing recognition of these issues, there remains insufficient attention to tailored reproductive health interventions that address the unique needs of CSWs. Therefore, bridging these gaps requires a study to explore targeted educational initiatives, policy reforms to improve healthcare access, and stigma-reduction strategies as a focus of this research.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter presents methods that were used in carrying out the study and these were; study design and rationale, study setting and rationale, study population, sample size determination, sampling procedures, inclusion criteria, definition of variables, research instruments, data collection procedures, data management, data analysis, ethical considerations, limitations for the study and dissemination of results.

3.1 Research Design

The study used a cross sectional and a mixed methods research design with an explanatory sequential approach. The researcher used both quantitative and qualitative data. In this case quantitative analysis was done first then was followed by qualitative data collection and analysis which explained and elaborated on the initial quantitative findings. The qualitative data served to clarify and expand upon the results obtained from the quantitative phase.

This study employed this approach to explore the factors associated with abortion-related health risks among commercial sex workers (CSWs) in Kyotera District. In combining these methodologies, the research sought to provide a comprehensive understanding of the issue by capturing both the depth of lived experiences and the breadth of statistical evidence. The qualitative component focused on personal, social, and systemic dimensions influencing unsafe abortion practices, while the quantitative approach quantifies the prevalence and impact of contributing factors. The cross-sectional design ensured data collection from a sample of participants at a single point in time, offering a snapshot of the current state of abortion-related health risks among this marginalized population.

The qualitative research utilized in-depth interviews, focus group discussions, and key informant interviews to explore socioeconomic, environmental, and cultural factors, as well as the role of stigma and discrimination in shaping health-seeking behaviors. This provided rich insights into the complexities influencing decisions around abortion. Concurrently, the quantitative component employed structured surveys to measure the prevalence of unsafe abortion practices and related health risks, allowed for the identification of patterns and correlations between variables such as socioeconomic status and access to healthcare. This mixed-methods approach was essential for generating evidence-based recommendations to improve reproductive health outcomes and inform targeted interventions for CSWs in Kyotera District.

3.2. Study Area

The study area for this research was Kyotera Town Council --Kyotera District Uganda. The districts that surround Kyotera District include Rakai District, Lwengo District, Kalangala District and Masaka District. Directly south of the new district is the Missenyi District in the Kagera Region of Tanzania. The district headquarters are located approximately 47 kilometres (29 mi), by road, southwest of Masaka, the nearest large city. This is about 182 kilometres (113 mi), by road, southwest of Kampala, Uganda's capital and largest city, with GPS coordinates of; $0^{\circ}37'54.0''S$ $31^{\circ}32'36.0''E$ · $-0.631667, 31.543333$. This area is occupied by a mixture of tribes but dominated by Baganda tribe and the settlement has about 275,296 dwellers according to the Uganda National Population and Housing Census 2024 (page 35). The district as a land coverage of 1,723 km² Area, population Density of 160.1/km² and an annual population change of 1.5% (*Kyotera (District, Uganda)*).

Kyotera District, located in the Central South region of Uganda. The District was selected because its one of the rural districts in Uganda that have a population that was kept alive by the thriving farming, sex work, cheap local brew among others. The low-income housing in the district caters for the farmers, blue-collar workers like commercial sex workers, hawkers, boda boda riders, and taxi touts. This presented a unique case for studying the intersection of unsafe abortion and marginalized populations. The district's Human Development Index (HDI) of 0.609, while close to Kampala's 0.663, reflects significant disparities in access to resources and healthcare services *Subnational HDI - Global Data Lab, (2022)*.

This specific area has been chosen as the focal point for the research to investigate these health and reproductive issues in these marginalized communities of the sex workers. The selection of these study areas aligns with the research objectives to address the urgent need to understand and explore factors influencing abortion-related health risks among commercial sex workers in Kyotera District.

3.3. Study Population

The study population for the research included Commercial sex workers in the specified rural area of Kyotera district. This group comprised of adult women who received money or goods in exchange for consensual sexual services or erotic performances either regularly or occasionally. Population included females between 18 and 50 years who resided in Kyotera Town Council and Kasaali areas of Kyotera District. According to local administrators, female sex workers ranged between 400 and 500 females

(Kyobe, 2025). This age range was selected to capture the perspectives, knowledge levels, common misconceptions, and myths regarding abortion, Perceptions of socioeconomic and environmental barriers to accessing safe abortion services, and the role of stigma and discrimination in shaping health-seeking behaviors. The group was selected due to its exposure to multiple sexual partners with limited use of the contraception services.

3.4. Study Unit

The research focused on female commercial sex workers (FCSWs) in Kyotera District, Uganda, targeting both adult women (25–50 years) and young women (18–24 years) involved in sex work. Key hotspots included; Kyotera Town Council (Industrial and Central Wards) and Kasali Town Council, with specific sites that included; Torino Guest House, Moonlight Bar, and Kadena Lodge. These locations—bars, lodges, and informal settlements—were selected because they harboured sex workers.

This population was chosen for their heightened vulnerability to unsafe abortion, driven by socioeconomic hardship, limited contraceptive access, and stigma-related barriers to healthcare. The study aimed to understand the prevalence of abortion-related health risks, the decision-making process, and systemic challenges, ensuring that findings reflect the realities and reproductive health vulnerabilities of FCSWs in a rural, resource-limited context.

3.5 Eligibility Criteria:

3.5.1 Inclusion criteria

This encompassed CSWs aged 18-50 years engaged in exchanging sexual services for money or goods, and Adolescent girls and young women engaging in transaction sex aged 18-24 years, resided in Kyotera District.

3.5.2 Exclusion criteria

Inability to communicate; individuals who were unable to communicate effectively in English or Luganda languages were excluded even if they had shown interest in the study. This was because the researcher and his assistants were only conversant in English and Luganda languages which increased understanding and communication among the respondents and researchers

Previous participation wasn't allowed. All individuals who had previously participated in a similar study on the exploring factors influencing abortion-related health risks among FCSWs in Kyotera district were excluded.

School going students were excluded. The study exclusively focused on the out of school youths or youths no longer going to school but engaging in commercial sex work, this because of the inflexibility in their timing to meet the interview.

3.6 Sample Size Determination

The sample size for each stratum was determined based on statistical consideration, such as desired level of precision, confidence interval and expected response rate. The sample size was sufficient to provide reliable estimates for each subgroup.

For quantitative data

Kish Leslie's formula was used to determine the sample size for quantitative data. The formula was given by

$$n = \frac{(Z^2PQ)}{D^2} \quad \text{where } n \text{ is the required sample size,}$$

Z is the value corresponding to the desired level of confidence which is 95%,

P= estimated proportion of the population with the characteristic of interest

Q= desired level of precision.

Assuming a confidence level of 95%, margin of error of (D) was 5%.

Given the proportion of the desired population as 10% as stated by the Uganda Bureau of Statistics, (2021), 10% of maternal deaths in the country are directly attributable to unsafe abortion (Page 99), the formula thus gave sample size, $Q=1-P=1-0.10=0.90$

$$n = 1.96^2 * 0.10 * 0.90 / 0.05^2$$

$$n = 138,$$

For matters of non response; the researcher added a 10% increment which made it 152 respondents

$$138 \times 10\% = 13.8 = 14 + 138 = 152$$

This sample size provided a representative sample of the target population and ensured the validity and reliability of the study findings.

Qualitative data

Participants for qualitative data were selected by purposive sampling. These included respondents who answered key informant interviews. These included; DHO and four health care workers from the study area. Another section were the respondents that participated in the focus group discussions. There were four FGDs each containing five respondents making a total of 20 respondents. These were part of the respondents who had participated in quantitative data collection.

3.7. Sampling Technique:

A purposive sampling procedure was employed in this study (also known as judgmental or selective sampling). This is a non-probability sampling technique where participants were deliberately selected based on specific characteristics or criteria relevant to the research objectives. This method was used to select respondents for qualitative data. These included; This approach ensured that the sample includes individuals who were most likely to provide rich, relevant, and insightful data for the study. For this study, FCSWs were the target population. Participants were selected purposefully from locations known as hotspots or brothels, where they operated. This selection process was facilitated by peer leaders, who were identified and engaged to assist in recruiting participants into the study from these locations.

3.8. Study Variables and Measurement:

Quantitative data: The research unit for this study comprised of FCSWs in Kyotera District, Uganda, specifically targeted adult female sex workers aged 18 to 50 years who resided in key sex work hotspots that included; Kyotera Town Council and Kasali Town Council. These areas had high-risk environments which included; bars, lodges, and other informal settlements where sex work was prevalent. This population was selected due to its heightened vulnerability to unsafe abortion practices, influenced by; socioeconomic challenges, limited access to contraception, new immigrants especially from Rwanda and Democratic Republic of Congo and stigma-related barriers to healthcare.

Through focusing on this marginalized group, the study aimed to capture insights into the prevalence of abortion-related health risks, decision-making processes, and systemic obstacles affecting reproductive health outcomes. This approach ensured that the data reflect the lived realities and health

vulnerabilities unique to FSWs in this rural and resource-constrained setting. *Below* are Study Variables and Measurement.

3.8.2 Quantitative variables measurements

Table 1: Shows the interaction of variables in this study

Specific objectives	Dependent variable	Independent variables
Individual related factors	Level of	<p style="text-align: center;">Individual related factors</p> <ul style="list-style-type: none"> • Formal employment • Duration in sex work business • Monthly income • Family members • Health education about abortion health risks • Confident in decision making about SRH life • Having unintended pregnancy • Frequency of SRHSs • Seeking of SRHSs • Awareness of Healthcare facilities for safe and legal abortion services • Awareness of Healthcare facilities for family planning and contraceptive services • Closeness to friends, family or community members on SRHS
Environmental related factors	Level of	<p style="text-align: center;">Environmental related factors</p> <ul style="list-style-type: none"> • Having a fellow sex worker friends who had ever carried out abortion • Received counseling and education about reproductive healthcare • Commercial sex being a common economic activity in the area • Availability of organizations/entities that offer SRHSs to sex workers • Level of stigmatized or discrimination to sex work • Accessibility of emotional support access to sex workers • Cultural or religious beliefs towards sex work
Health related factors	Level of	<p style="text-align: center;">Healthcare related factors</p> <ul style="list-style-type: none"> • Availability of post abortion healthcare services • Satisfaction with Sexual and Reproductive Healthcare Services • Accessibility to SRHSs • Availability of Post abortion services • Distance to the health facility for SRHSs • Waiting time • Attitude of healthcare workers • Integration of Post abortion healthcare services into general SRHSs

Qualitative method: The qualitative aspect was addressed throughout all the study specific objectives. This aspect was a supplementation of questions and responses that were vital in this study and needed further probing from purposively selected respondents. Most of these aspects couldn't be fully exhausted through quantitative data. Tools that were used to collect qualitative data included; in-depth interviews, focus group discussions, and key informant interviews.

This approach provided detailed insights into how these factors shape the daily experiences and healthcare decisions of FCSWs, highlighting barriers to accessing safe abortion care. The integration of these methodologies allowed a comprehensive understanding of the issue by examining the nuanced lived experiences of FCSWs while also quantifying the prevalence and impact of contributing factors to abortion-related health risks among commercial sex workers in Kyotera District.

3.9 Data Collection Tools (Instruments) and Methods (Techniques)

The study used primary data which was directly collected from the respondents by the researcher. This was collected by interviewing using a structured researcher administered questionnaire. The FCSWs were identified from their hotspot which included; Kyotera Town Council and Kasali Town Council. These areas had high-risk environments:-bars and lodges which included; Tiptop Bar, and Nwagi's Bar and Guest House and other informal settlements where sex work was prevalent. The FCSWs that were identified from the above mentioned areas were purposively selected after identifying them as ever had unsafe abortion.

3.9.1 Data Collection Techniques

Data collection techniques refer to various methods used to gather information, including interviews, observations (both direct and participant), questionnaires, and relevant documents. These techniques are employed to enhance the credibility of outcomes in research (Taherdoost, 2021). The researcher used; observation, survey methodology, focus groups, interviews and document reviews to collect both quantitative and qualitative data for the study for objectives.

3.9.2 Data Collection Tools

The study used a researcher administered questionnaires, focus group discussions, key informant interviews and observations as discussed below;

Researcher administered questionnaires helped to collect data from respondents where very good at writing and reading or just knew one of them. This was advantageous in that, first hand information

was got, responses could always be referred to whenever they were needed during data analysis and they created an opportunity to probe more in some interesting issues.

Focus group discussions: Focus group discussions (FGDs) are facilitated discussions, held with a small group of people who have specialist knowledge or interest in a particular topic. FGDs are typically carried out with between 6-12 people. They are normally based around a short list of guiding questions, designed to probe for in-depth information. Discussions typically last between one and two hours (Eeuwijk and Angehrn, 2017). Focus group discussions were used to probe more into issues that weren't satisfactorily answered in interviews and researcher administered questionnaires.

Key informant interviews: Key informant interviews are qualitative interviews with people who have knowledge and understanding on a specific issue or problem being addressed in a community. Semi-structured interviews consist of a series of open-ended questions designed to draw out responses about particular topics.

3.10 Data Analysis and Presentation

To process data about the prevalence of abortion-related health risks among FCSWs was dichotomised as '1' for having experienced good utilization and '2' for those who never experienced abortion-related health risks among FCSWs.

3.10.1 Quantitative Data

Data analysis was carried out in three phases using Statistical Package for Social Scientists (SPSS) software.

Univariate Analysis

In the first phase, a description of prevalence of abortion-related health risks among commercial sex workers was done using explanatory variables, as they appeared independently. After collecting the data, it was screened and then classified and coded according to specific objectives which were manually entered into the computer question by question and their responses were analyzed SPSS software version 26. The researcher proceeded with data analysis where frequencies and percentages were attained. These were then translated into tables and figures which were later transferred to Microsoft word program for description using narratives which gave a better meaning of the results of the study.

Bivariate Analysis

In the second phase, the Chi-square test (χ^2) and Pearson's Correlation test were used to examine any form of association between the prevalence of abortion-related health risks among commercial sex workers (dependent variable) and factors associated with abortion-related health risks among commercial sex workers (Independent Variables). The statistical significance of the values or P-value at 95% level of confidence where P-value less than 0.05 was taken to be significant ($P \leq 0.05$). This implied that these were categorical variables associated with the dependent variable. On the other hand, no significance existed if P-value was greater than 0.05 ($P > 0.05$).

Multivariate Analysis

The third section presents variables which assessed the prevalence of abortion-related health risks among commercial sex workers by using binary logistic regression model. All variables which were significant at bivariate analysis were fitted into the binary logistic regression model and analyzed. The results were reported using Odds Ratio (OR) with their corresponding confidence interval at 95%. Adjusted Odds Ratio greater than one ($AOR > 1$) which meant that there was significant association between the prevalence of abortion-related health risks among commercial sex workers and predictor variable (individual, environmental and healthcare factors associated with abortion-related Health Risks among Commercial Sex Workers). Adjusted Odds Ratio less than one ($AOR < 1$) meant there was negative association between the prevalence of abortion-related health risks among commercial sex workers and independent determinants of prevalence of abortion-related health risks among commercial sex workers thus the association was protective. Where $AOR = 1$ meant no association at all, hence the prevalence of abortion-related health risks among commercial sex workers was independent of categorical predictor variables.

Logistic regression analysis was used because it determined the effects of each predictor variable on the determinants of prevalence of abortion-related health risks among commercial sex workers and also determined the existence of strength of association with the prevalence of abortion-related health risks among commercial sex workers.

3.10.2 Qualitative Data

Content analysis was utilized to systematically investigate and categorize the recorded content. This method is suitable for in-depth analysis of the prevalence of abortion-related health risks among FCSWs arising from increased unsafe sexual activities. The researcher repeatedly read transcripts and listened to recordings, extracting meaningful sentences and categorizing similar content multiple times.

In this process, distributed the thoughts about the category, compared the sentences in the same category, deleted the semantically confusing categories, and created new categories. In this study, the researcher deliberated until more than six opinion and agreement exchanges took place. The meaning of each theme and subtopic was generated by a continuous analysis, and themes and subtopics were named by the researcher. Finally, three themes from each specific objective and probably over many subtopics were derived from the data.

The study data was evaluated based on Guba and Lincoln's criteria. To ensure sensitivity, the researcher reviewed interview contents and research findings with a healthcare worker in SRHSs clinic. This involved checking in with participants and discussing the study results during report writing. The researcher's understanding, assumptions, and biases were documented in a reflection diary and utilized as reflective data during data collection and analysis. These insights were presented in the results section and thoroughly discussed.

3.11 Quality Controls

3.11.1 Pre-testing of the tool

The tool was pretested at Nyendo Town among 15 female sex workers. This was done to test the reliability and validity of the questionnaire used. Errors identified were addressed before the final study was carried out at Kyotera Town.

The researcher selected six research assistants where three were Registered Midwives and three were Registered Nurses who helped the researcher collect data within a short period of time. The researcher trained them about the purpose and objectives of the study which made them conversant with the aim of the study. Use of research assistants minimized the report bias some respondents could have developed towards one researcher asking them all the questions and made the data collection fast.

3.11.2 Validity

Barifaijo et al. (2010) describe validity as the appropriateness of the data collection instruments in achieving study objectives. In other words, it was the ability of the study instruments to generate results which were in agreement with the theoretical and conceptual values of the study. The research instrument discussed with the supervisor and then subjected to approval by the ethical committee as well as authorization for data collection by relevant health care administrators. Thus, validity was computed Content Validity Index (CVI) using formula below;

$$\text{CVI} = \frac{\text{Number of items considered relevant and, or suitable for inclusion}}{\text{Total number of items considered in the instrument}}$$

Several studies considered use of CVI the most suitable measure for validity in studies that rely on the use of instruments. Drost (2011) recommended a minimum CVI of 0.7 for good research, which this study adopted.

3.11.3 Reliability

According to Heale and Twycross (2015), reliability refers to the consistency and reproducibility of research results. In this study, reliability was ensured through several quality control measures. The test-retest method was used, where the same questionnaire was administered to different groups of sex workers within the same week, and Cronbach's Alpha, analyzed using SPSS was used to assess consistency. Only reliable items were retained.

Six trained research assistants supported data collection after receiving instruction from the principal investigator. These were first trained about; the purpose of the study, the components of the data collection tool they used, the demographics and behavioural characteristics of the study population; in respect of observation of the ethical consideration before they started the data collection process.

Questionnaires were originally written in English and then interpreted into Luganda for the respondents who weren't conversant with English language. This was done during the data collection process to ensure more understanding of the research questions, minimize monopoly questioning bias and also save time.

All filled questionnaires were double-checked for completeness and consistency, and securely stored in locked cabinets with access limited to the principal researcher, ensuring data integrity and reliability.

3.12 Ethical Considerations

On completion of the research proposal with the supervisors' approval, the researcher got administrative clearance from School of Public Health and ethical clearance from UMUREC. The researcher got a letter of introduction from Uganda Martyrs University Research Ethics Office which introduced him to the administrators of Kyotera Town, Kyotera District. After analyzing the letter, the local leaders gave the researcher permission to carry out the study in the area. The researcher were given three officials on the Local Council Executive who accompanies the researcher and research assistants to the Brothels where sex workers were selects the respondents to participate in the study.

The major ethical issues which warranted adherence to during the process of study which included; voluntary participation, got informed consent from every participant by using serial numbers as opposed to names of respondents before enrollment, beneficence, guaranteed privacy and

confidentiality of the respondents. Other professional practices such as scientific honesty and competency were also considered.

3.13 Limitations of the study

As a cross-sectional study, it wasn't easy to infer causal interpretation of the results. The study relied on respondents' self-reported data, which couldn't easily be verified, and this led to respondents' recall bias that potentially resulted in over or under estimation of sex worker seeking PAC healthcare services from healthcare facilities. However, all quality assurance and ethics measures were employed in data acquisition and processing.

Generalization of findings may not show the actual problem on the ground among all sex workers since the study relied on respondents from a single health facility. Moreover, the information regarding sex workers abortion health risks was collected from selected respondents thus accuracy couldn't be guaranteed to be a general reflection of what transpired in other parts of the country. However, the findings of this study were considered indicative of the prevailing conditions.

3.14 Plan for Dissemination

The study findings were compiled into a detailed report and distributed to various stakeholders. One copy was submitted to Uganda Martyrs University (UMU) for examination toward the award of a Master's Degree in Public Health, while another was placed in the UMU Library for future academic reference. A third copy was given to Kyotera District administrators to support interventions targeting abortion-related risks and sexual health complications. The researcher kept a personal copy for reference. Additional copies may be used for scientific conferences, academic journal publications, and community health education. Dissemination will also include poster presentations and policy briefs targeting decision-makers (Murungi *et al.*, 2023).

CHAPTER FOUR:

FINDINGS, PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter presents the results of the study in relation to the specific objectives. These included; assessing prevalence of abortion-related health risks among FCSWs, examining the individual, environmental and healthcare related factors associated with abortion-related health risks among FCSWs.

4.1 Social demographic characteristics of respondents

Table 4.1: Social demographic characteristics of respondents n=152

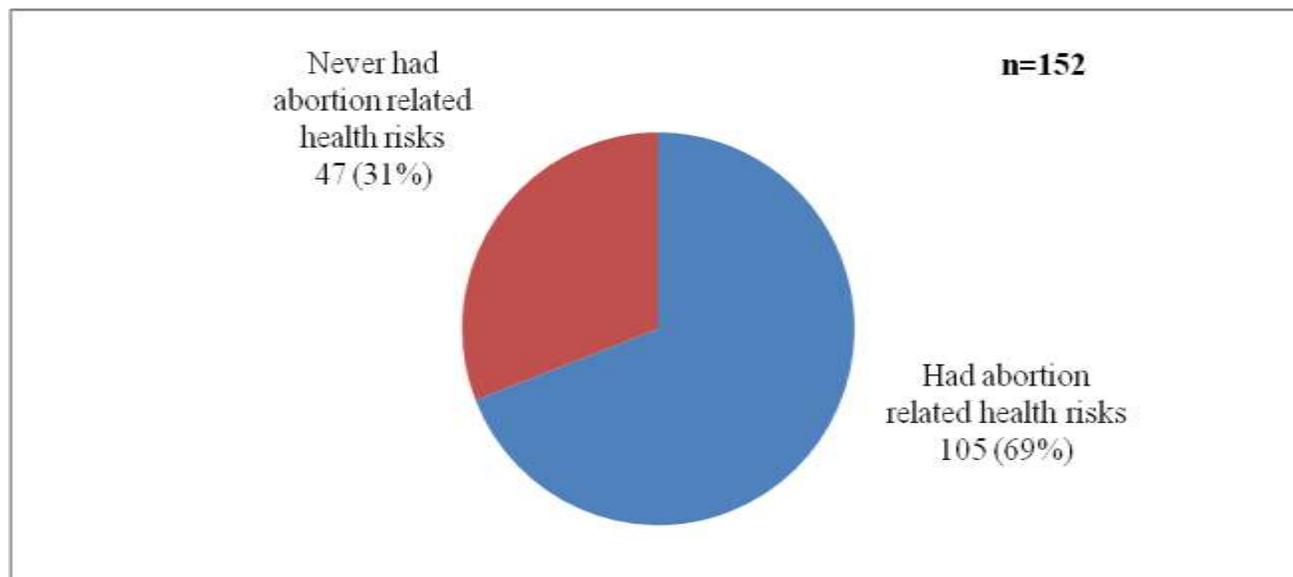
Variable	Category	Frequency	Percentage
Age	18–30 years	86	56.6
	31-40 years	43	28.3
	41–50 years	18	11.8
	51 years and above	5	3.3
Marital status	Single	92	60.5
	Married/Cohabiting	11	7.2
	Divorced/separated	14	9.2
	Widow/widower	35	23.0
Educational level	No formal education	56	36.8
	Primary	57	37.5
	Secondary	27	17.8
	Tertiary	12	7.9
Religion	Catholic	60	39.5
	Protestant	32	21.1
	Born Again Christian	20	13.2
	Muslim	27	17.8
	No religion	13	8.6

Source: Primary Data

Table 4.1 shows that, majority 86 (57%) were 18-30 years, 92 (61%) were singles, 57 (38%) never had primary education and 60 (40%) were Catholics.

4.2 Prevalence of Abortion-Related Health Risks among FCSWs

Figure 4.1: Prevalence of Abortion-Related Health Risks among FCSWs n=152



Source: Primary Data

Figure 4.1 indicate that out of the 152 respondents that participated in the study, majority 105 (69%) had ever faced abortion related risks while 47 (31%) had never faced abortion related risks.

4.2.2 Abortion-related health risks among female commercial sex workers

Table 4.2.1: Abortion-related health risks among female commercial sex workers

Variable	Category	Frequency	Percentage
Abortion-related health risks	Infections	126	83%
	Heavy bleeding	145	93.4%
	Emotional problems	152	100%
	Uterine perforation	36	23.7%
	Vomiting	120	79%
	Sepsis	19	12.5%
	Ruptured uterus	26	17.1%
	Removal of organs	13	8.6%

Source: Primary data

Findings in table 4.2.1 indicate that; 126 (83%) of the respondents faced infections, 145 (93.4%) experienced heavy bleeding, all 152 (100%) had emotional problems, 36 (23.7%) suffered uterine perforation, 120 (79%) were burdened by vomiting, 19 (12.5%) experienced sepsis, 26 (17.1%) suffered ruptured uterus and 13 (8.6%) reported removal of organs such as uterus, fallopian tube.

4.3 Individual related factors associated with abortion-related health risks among FCSWs in Kyotera District

Table 4.3.1: Univariate analysis of Individual related factors associated with abortion-related health risks among FCSWs in Kyotera District n=152

Variable	Category	Frequency	Percentage
Formal employment	House wives	6	3.9
	Civil servant	4	2.6
	Casual workers	80	52.6
	Ordinary employees	47	30.9
	Students	15	9.9
Year spent in sex work business	Less than 5 years	61	40.1
	Between 6-10 years	56	36.8
	11 years and above	35	23.0
The monthly income provided a good disposal income to met healthcare demands	Strongly disagreed	83	54.6
	Disagreed	19	12.5
	Agreed	29	19.1
	Strongly agreed	21	13.8
People respondents stayed with	Parents/family members	67	44.1
	Alone	17	11.2
	With Partner	21	13.8
	Communal	42	27.6
	With children	5	3.3
Number of your family members	1-3 members	78	51.3
	4-6 members	60	39.5
	7 members and above	14	9.2
Had ever been health educated about abortion health risks	Yes	112	73.7
	No	40	26.3
If you ever been health educated about abortion health risks, who health educated you	Healthcare workers	60	53
	Fellow sex workers	32	29
	Media	9	08
	Family members	4	04
	Humanitarians Organizations	7	06
	Total	112	73.7
Confident when making decision about sexual and reproductive health life	Very unconfident	85	55.9
	Unconfident	38	25.0
	Confident	17	11.2
	Very confident	12	7.9
Had ever had unintended pregnancy	Yes	132	86.8
	No	20	13.2

Frequency of seeking sexual and reproductive health services	Not at all	44	28.9
	Occasionally	80	52.6
	Always	28	18.4
If ever sought sexual and reproductive health services, services sought most	General consultation	4	04
	Family planning	10	09
	Antenatal care	3	03
	Post Natal Care services	9	08
	treating STIs	82	76
	Total	108	100
Were aware of any facilities where safe and legal abortion services were provided	Strongly disagreed	77	50.7
	Disagreed	42	27.6
	Agreed	21	13.8
	Strongly agreed	12	7.9
Were aware of facilities where one could obtain family planning and contraceptive services	Strongly disagreed	47	30.9
	Disagreed	12	7.9
	Agreed	24	15.8
	Strongly agreed	69	45.4
Easiness respondents had towards SRH conversations with friends, family or people in the community	Very uneasy	68	44.7
	Uneasy	50	32.9
	Easy	15	9.9
	Very easy	19	12.5

Source: Primary Data

Table 4.3.1 indicates that, majority 80 (53%) were casual workers, 61 (40%) had spent less than 5 years in sex work business, 83 (55%) strongly disagreed that monthly income provided a good disposal income to met healthcare demands, 67 (44%) stayed with parents/family members, 78 (51%) stayed with 1-3 people, 112 (74%) had even been health educated about abortion health risks where 60 (53%) were educated by healthcare workers.

Majority 85 (56%) of the respondents were very unconfident when making decision about sexual and reproductive health life, 132 (87%) had ever had unintended pregnancy, 80 (53%) occasionally sought sexual and reproductive health services where majority 82 (76%) sought STIs treatment and care, 77 (51%) weren't aware of any facilities where safe and legal abortion services were provided, 69 (45%) strongly agreed that they were aware of facilities where one could obtain family planning and contraceptive services and 68 (45%) found it very uneasy to share conversations with friends, family or people in the community about their sexual and reproductive health and life.

Table 4.3.2: Bivariate analysis of individual related factors associated with abortion-related health risks among FCSWs in Kyotera District n=152

Variables	Category	Prevalence of abortion related-risks		χ^2	P-value
		Had abortion health risks	Never had abortion health risks		
		105	47		
Formal employment	Casual workers	48 (60.0%)	32 (40.0%)	13.17	0.010**
	House wives	2 (33.3%)	4 (66.7%)		
	Civil servants	3 (75.0%)	1 (25.0%)		
	Ordinary employees	39 (83.0%)	8 (17.0%)		
	Students	13 (86.7%)	2 (13.3%)		
Year spent in sex work business	Less than 5 years	48 (78.7%)	13 (21.3%)	12.03	0.002**
	Between 6-10 years	41 (73.2%)	15 (26.8%)		
	11 years and above	16 (45.7%)	19 (54.3%)		
Monthly income was adequate to meet healthcare demands	Strongly disagreed	63 (75.9%)	20 (24.1%)	15.24	0.002**
	Disagreed	15 (78.9%)	4 (21.1%)		
	Agreed	20 (69.0%)	9 (31.0%)		
	Strongly agreed	7 (33.3%)	14 (66.7%)		
People respondents stayed with	Parents/family members	56 (83.6%)	11 (16.4%)	13.49	0.009**
	Alone	9 (52.9%)	8 (47.1%)		
	With Partner	11 (52.4%)	10 (47.6%)		
	Communal	25 (59.5%)	17 (40.5%)		
	With children	4 (80.0%)	1 (20.0%)		
Number of family members	1-3 members	60 (76.9%)	18 (23.1%)	9.71	0.008**
	4-6 members	40 (66.7%)	20 (33.3%)		
	≥7 members	5 (35.7%)	9 (64.3%)		
Got health education about abortion health risks	Yes	72 (64.3%)	40 (35.7%)	4.58	0.032**
	No	33 (82.5%)	7 (17.5%)		
Person who health educated respondents about abortion health risks	Healthcare workers	32 (53.3%)	28 (46.7%)	11.90	0.018**
	Fellow sex worker	27 (84.4%)	5 (15.6%)		
	Media	4 (44.4%)	5 (55.6%)		
	Family members	3 (75.0%)	1 (25.0%)		
	Humanitarians Organizations	6 (85.7%)	1 (14.3%)		
Confident when making decision about SRH life	Very unconfident	59 (69.4%)	26 (30.6%)	1.10	0.778
	Unconfident	26 (68.4%)	12 (31.6%)		
	Confident	13 (76.5%)	4 (23.5%)		

	Very confident	7 (58.3%)	5 (41.7%)		
Had ever had unintended pregnancy	Yes	97 (73.5%)	35 (26.5%)	9.12	0.003
	No	8 (40.0%)	12 (60.0%)		
Frequency of seeking SRHS	Not at all	30 (68.2%)	14 (31.8%)	12.53	0.002
	Occasionally	63 (78.8%)	17 (21.3%)		
	Always	12 (42.9%)	16 (57.1%)		
If ever sought sexual and reproductive health services, services sought most	General consultation	3 (75.0%)	1 (25.0%)	5.45	0.244
	Family planning	5 (50.0%)	5 (50.0%)		
	Antenatal care	1 (33.3%)	2 (66.7%)		
	PNC services	5 (55.6%)	4 (44.4%)		
	Treating STIs	61 (74.4%)	21 (25.6%)		
Were aware of HCFs with safe and legal abortion services were provided	Strongly disagreed	53 (68.8%)	24 (31.2%)	1.15	0.765
	Disagreed	29 (69.0%)	13 (31.0%)		
	Agreed	16 (76.2%)	52(3.8%)		
	Strongly agreed	7 (58.3%)	5(41.7%)		
Were aware of facilities where one could obtain FP and contraceptive services	Strongly disagreed	38 (80.9%)	9(19.1%)	9.68	0.022
	Disagreed	10 (83.3%)	2 (16.7%)		
	Agreed	18 (75.0%)	6 (25.0%)		
	Strongly agreed	39 (56.5%)	30 (43.5%)		
Easiness to have SRH conversations with friends, family or community members	Very uneasy	49 (72.1%)	19 (27.9%)	10.78	0.013**
	Uneasy	38 (76.0%)	12 (24.0%)		
	Easy	11 (73.3%)	4 (26.7%)		
	Very easy	7 (36.8%)	12 (63.2%)		

****Denotes significance at 95% CI**

Table 4.3.2 indicates that individual related factors that were significantly associated with abortion-related health risks among FCSWs were; employment status ($\chi^2=13.17$, $P=0.010$), duration in sex work ($\chi^2=12.03$, $P=0.002$), monthly income ($\chi^2=15.24$, $P=0.002$), family members ($\chi^2=13.49$, $P=0.009$), number of family members ($\chi^2=9.71$, $P=0.008$), health education about abortion health risks ($\chi^2=4.58$, $P=0.032$), having ever had unintended pregnancy ($\chi^2=9.12$, $P=0.003$), frequency of SRHSs ($\chi^2=12.53$, $P=0.002$), awareness of facilities providing family planning and contraceptive services ($\chi^2=9.68$, $P=0.022$) and ($\chi^2=10.78$, $P=0.013$). However, confident when making decision about SRH life, awareness of availability of facilities for safe and legal abortion services weren't significantly associated with abortion related risks.

4.4 Environmental related factors associated with abortion-related health risks among FCSWs in Kyotera District

Table 4.4.1: Univariate analysis of Environmental related factors associated with abortion-related health risks among FCSWs in Kyotera District n=152

Variable	Category	Frequency	Percentage
Had fellow FCSWs who had ever carried out abortion	Yes	118	77.6
	No	34	22.4
Received counseling and education about reproductive healthcare	Strongly disagreed	48	31.6
	Disagreed	60	39.5
	Agreed	29	19.1
	Strongly agreed	15	9.9
Commercial sex was a common economic activity in the area	Strongly disagreed	31	20.4
	Disagreed	34	22.4
	Agreed	33	21.7
	Strongly agreed	54	35.5
Had organizations that offered SRHSs as FCSWs	Yes	40	26.3
	No	112	73.7
Commercial sex workers were highly stigmatized or discriminated in the area	Strongly disagreed	13	8.6
	Disagreed	19	12.5
	Agreed	32	21.1
	Strongly agreed	88	57.9
Accessibility of emotional support access to FCSWs after facing effects of abortion	Highly inaccessible	77	50.7
	Inaccessible	42	27.6
	Accessible	18	11.8
	Highly accessible	15	9.9
Cultural or religious beliefs in community that embraced abortion	Strongly disagreed	85	55.9
	Disagreed	39	25.7
	Agreed	18	11.8
	Strongly agreed	10	6.6

Source: Primary Data

Table 4.4.1 shows that, majority 118 (78%) of the respondents had fellow sex worker friends who had ever carried out abortion, 60 (40%) never received counselling and education about reproductive healthcare, 54 (36%) strongly agreed that commercial sex was a common economic activity in the area, 112 (74%) weren't connected to any organizations/entities that offered SRHSs as a commercial sex worker in their area, 77 (51%) found accessibility to emotional support access to sex workers after facing effects of abortion very inaccessible and 85 (56%) never had any cultural or religious beliefs in community that embraced abortion.

Table 4.4.2: Bivariate analysis of environmental related factors associated with abortion-related health risks among FCSWs in Kyotera District n=152

Variable	Category	Prevalence of abortion related-risks		χ^2	P-value
		Had abortion health risks	Never had abortion health risks		
Had fellow sex worker friends who had ever carried out abortion	Yes	76 (64.4%)	42 (35.6%)	5.39	0.020**
	No	29 (85.3%)	5 (14.7%)		
Received counseling and education about reproductive healthcare	Strongly disagreed	32 (66.7%)	16 (33.3%)	13.73	0.003**
	Disagreed	49 (81.7%)	11 (18.3%)		
	Agreed	19 (65.5%)	10 (34.5%)		
	Strongly agreed	5 (33.3%)	10 (66.7%)		
Commercial sex was a common economic activity in the area	Strongly disagreed	25 (80.6%)	6 (19.4%)	17.11	0.001**
	Disagreed	29 (85.3%)	5 (14.7%)		
	Agreed	14 (42.4%)	19 (57.6%)		
	Strongly agreed	37 (68.5%)	17 (31.5%)		
Had any organizations/entities that offered SRHSs as FCSWs in their area	Yes	27 (67.5%)	13 (32.5%)	0.063	0.801
	No	78 (69.6%)	34 (30.4%)		
FCSWs were highly stigmatized or discriminated in the area	Strongly disagreed	4 (30.8%)	9 (69.2%)	9.91	0.019**
	Disagreed	14 (73.7%)	5 (26.3%)		
	Agreed	24 (75.0%)	8 (25.0%)		
	Strongly agreed	63 (71.6%)	25 (28.4%)		
Accessibility of emotional support access to FCSWs after facing effects of abortion	Highly inaccessible	56 (72.7%)	21 (27.3%)	20.01	<0.001**
	inaccessible	36 (85.7%)	6 (14.3%)		
	accessible	8 (44.4%)	10 (55.6%)		
	Highly accessible	5 (33.3%)	10 (66.7%)		
Cultural or religious beliefs in community that embraced abortion	Strongly disagreed	56 (65.9%)	29 (34.1%)	1.94	0.585
	Disagreed	29 (74.4%)	10 (25.6%)		
	Agreed	14 (77.8%)	4 (22.2%)		
	Strongly agreed	6 (60.0%)	4 (40.0%)		

****Denotes significance at 95% CI**

Table 4.4.2 indicates that environmental related factors that were significantly associated with abortion-related health risks among FCSWs included; history of abortion related risks from friends ($\chi^2=5.39$, $P=0.020$), counseling and education about reproductive healthcare ($\chi^2=13.73$, $P=0.003$), commercial sex was a common economic activity ($\chi^2=17.11$, $P=0.001$), stigmatized and discriminated

($\chi^2=9.91$, $P=0.019$) and accessibility of emotional support ($\chi^2=20.01$, $P=<0.001$). However, had any organizations that offered SRHSs as FCSWs and cultural or religious beliefs in community that embraced abortion weren't significantly associated with abortion-related health risks among FCSWs.

4.5 Healthcare related factors associated with abortion-related health risks among FCSWs in Kyotera District

Table 4.5.1: Univariate analysis of Healthcare related factors associated with abortion-related health risks among FCSWs n=152

Variable	Category	Frequency	Percentage
The post abortion healthcare services were readily available at the health facility	Strongly disagreed	63	41.4
	Disagreed	55	36.2
	Agreed	18	11.8
	Strongly agreed	16	10.5
Rating of personal satisfaction with the Sexual and Reproductive Healthcare Services in the at public health facilities	Very dissatisfied	42	27.6
	Dissatisfied	30	19.7
	Neutral	50	32.9
	Satisfied	30	19.7
Rating of easiness or difficulty with which respondents accessed the services at the facilities they visited	Very uneasy	36	23.7
	Uneasy	30	19.7
	Easy	46	30.3
	Very easy	40	26.3
Post abortion services were always available within public healthcare facilities in the area	Strongly disagreed	36	23.7
	Disagreed	64	42.1
	Agreed	34	22.4
	Strongly agreed	18	11.8
Distance from respondents' homes to the health facility where they could access SRHSs from	Less than 5 km	69	45.4
	Between 6-10 km	41	27.0
	Between 11-15 km	21	13.8
	16 km and above	21	13.8
Waiting time before being attended at the reproductive healthcare clinic	Less than 30 minutes	31	20.4
	Between 1-2 hours	28	18.4
	Between 3-4 hours	57	37.5
	More than 4 hours	36	23.7
The healthcare workers had positive attitude towards sex workers when receiving sex and reproductive healthcare services	Strongly disagreed	45	29.6
	Disagreed	25	16.4
	Agreed	53	34.9
	Strongly agreed	29	19.1
Post abortion healthcare services were integrated into the general reproductive health care	Strongly disagreed	76	50.0
	Disagreed	18	11.8
	Agreed	44	28.9

	Strongly agreed	14	9.2
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Source: Primary Data

Table 4.5.1 shows that majority 63 (41%) of the respondents strongly disagreed that PAC healthcare services were readily available at the health facility, 50 were satisfied that with the SRHSs in the at public health facilities, 64 (42%) strongly disagreed post abortion services were always available within public healthcare facilities, 69 (45%) stayed in less than 5km, 57 (38%) spent 3-4 hours at the health facility before being attended to, 53 (35%) spent agreed that healthcare workers had positive attitude towards sex workers when receiving SRHSs and 76 (50%) strongly disagreed that PAC healthcare services were integrated into the general reproductive health care.

Table 4.5.2: Bivariate analysis of healthcare related factors associated with abortion-related health risks among FCSWs n=152

Variable	Category	Prevalence of abortion related-risks		χ^2	P-value
		Had abortion health risks	Never had abortion health risks		
The post abortion healthcare services were readily available at the HCF	Strongly disagreed	51 (81.0%)	12 (19.0%)	17.09	0.001**
	Disagreed	40 (72.7%)	15 (27.3%)		
	Agreed	8 (44.4%)	10 (55.6%)		
	Strongly agreed	6 (37.5%)	10 (62.5%)		
Rating of personal satisfaction with the SRHS in the at public health facilities	Very dissatisfied	32 (76.2%)	10 (23.8%)	9.99	0.019**
	Dissatisfied	26 (86.7%)	4 (13.3%)		
	Neutral	31 (62.0%)	19 (38.0%)		
	Satisfied	16 (53.3%)	14 (46.7%)		
Rating of easiness or difficulty to accessing services at the facilities visited	Very uneasy	29 (80.6%)	7 (19.4%)	15.35	0.002**
	Uneasy	26 (86.7%)	4 (13.3%)		
	Easy	31 (67.4%)	15 (32.6%)		
	Very easy	19 (47.5%)	21 (52.5%)		
PAC services always available within public HCFs in the area	Strongly disagreed	27 (75.0%)	9 (25.0%)	36.68	<0.001**
	Disagreed	56 (87.5%)	8 (12.5%)		
	Agreed	19 (55.9%)	15 (44.1%)		
	Strongly agreed	3 (16.7%)	15 (83.3%)		
distance to the health facility for SRHS	Less than 5 km	47 (68.1%)	22 (31.9%)	1.09	0.781
	Between 6-10 km	29 (70.7%)	12 (29.3%)		
	Between 11-15 km	16 (76.2%)	5 (23.8%)		
	16 km and above	13 (61.9%)	8 (38.1%)		
Waiting time before being attended at the	<30 minutes	14 (45.2%)	17 (54.8%)	12.18	0.007**
	Between 1-2 hours	22 (78.6%)	6 (21.4%)		

reproductive healthcare clinic	Between 3-4 hours	45 (78.9%)	12 (21.1%)		
	More than 4 hours	24 (66.7%)	12 (33.3%)		
HCWs had positive attitude towards sex workers when receiving SRHS	Strongly disagreed	28 (62.2%)	17 (37.8%)	4.74	0.192
	Disagreed	19 (76.0%)	6 (24.0%)		
	Agreed	41 (77.4%)	12 (22.6%)		
	Strongly agreed	17 (58.6%)	12 (41.4%)		
Are PAC services integrated into the general reproductive health care	Strongly disagreed	57 (75.0%)	19 (25.0%)	16.90	0.001**
	Disagreed	12 (66.7%)	6 (33.3%)		
	Agreed	33 (75.0%)	11 (25.0%)		
	Strongly agreed	3 (21.4%)	11 (78.6%)		

****Denotes significance at 95% CI**

Table 4.5.2 indicates that healthcare related factors that were significantly associated with abortion-related health risks among FCSWs included; The PAC healthcare services were readily available at the HCF ($\chi^2=17.09$, $P=0.001$), rating of personal satisfaction with the SRHS in the at public health facilities ($\chi^2=9.99$, $P=0.019$), Rating of easiness or difficulty to accessing services at the facilities visited ($\chi^2=15.35$, $P=0.002$), PAC services always available within public HCFs in the area ($\chi^2=36.68$, $P=<0.001$), waiting time ($\chi^2=12.18$, $P=0.007$) and PAC services being integrated into the general reproductive health care ($\chi^2=16.90$, $P=0.001$). However, distance to the health facility and attitude of healthcare workers towards sex workers when receiving SRHS weren't significantly associated with abortion-related health risks among FCSWs.

4.6 Multivariate analysis of the factors associated with abortion-related health risks among FCSWs in Kyotera District

Table 4.6.2: Multivariate analysis of factors associated with abortion-related health risks among FCSWs in Kyotera District n=152

Variable	Category	AOR (95%) CI	P-value
Individual related factors			
Formal employment	House wife	1	
	Ordinary employee	27.22 (2.42-19.18)	0.007**
Duration sex work business	Less than 5 years	1	
	Between 6-10 years	0.002 (0.001-0.31)	0.017**
The monthly income was adequate to meet healthcare demands	Strongly disagreed	1	
	Disagreed	0.001 (0.001-0.08)	0.005**
	Agreed	0.001 (0.001-0.67)	0.037**
	Strongly agreed	0.001(0.001-0.005)	0.003**
People respondents stayed with	Family members	1	
	Communal	31 (4.09-48.09)	0.010**
ever been health educated about abortion health risks	Yes	1	
	No	28.88 (1.15-727.92)	0.041**
Were aware of HCFs for FP and contraceptive services	Strongly disagreed	1	
	Agreed	0.02 (0.01-0.022)	0.008**
Environmental factors			
FCSWs were highly stigmatized or discriminated	Strongly disagreed	1	
	Agreed	38.06 (16.19-71.5)	0.004**
Accessibility to emotional support after facing effects of abortion	Highly inaccessible	1	
	Inaccessible	0.001 (0.001-0.002)	0.007**
	Accessible	0.001 (0.001-0.011)	0.002**
	Highly Accessible	0.001 (0.001-0.011)	0.002**
Healthcare related factors			
The PAC services were readily available at HCF	Strongly disagreed	1	
	Agreed	0.07 (0.005-0.84)	0.036**
Rating of easiness in accessing SRHSs at HCF	Easy	1	
	Uneasy	0.02 (0.001-0.39)	0.010**
Waiting time at the reproductive HCF	Less than 30 minutes	1	
	Between 1-2 hours	36.98 (09.85-72.43)	<0.001**
PAC services were integrated into the general reproductive health care	Strongly disagreed	1	
	Disagreed	0.006 (0.001-0.12)	0.001**
	Strongly agreed	0.013 (0.001-0.59)	0.026**

****Denotes significance at 95% CI**

All variables that were significant at bivariate analysis were drawn into the logistic binary regression model and the following results were obtained after eliminating the cofounders.

Individual factors included; Findings indicated that respondents who were ordinary employees were 27 times more likely to experience abortion related risks (AOR: 27.22, 95% CI: (2.42-19.18), P=0.007) as compared to respondents who were housewives.

Findings from key informants (KI) also pointed to individual that influenced abortion-related health risks among female commercial sex workers. For example, KI related abortion-related health risks to employment status, as can be observed in their quotes below;

“(...) lack of a stable reliable source of income forces us into sex work and when we get sexual related problems we have little help (...)”: **Key Informant 2 & 6**

“(...) You can access the services from some clinics however it is not easy unless if you have money. Here a sex worker in her own words and experience gave us a story “during Covid 19 period, I got pregnant and opted to abort. I went in three different pharmacies and they all refused to help me. I chanced on another pharmacy and the lady accepted to help but on a condition that I was to pay her 150,000 shillings first” **FGD Respondent**

“(.....) being a student at high institutions of learning is a trap.... Fellow students lured me into sex work where I had very little knowledge about the effects such as unintended pregnancies and unsafe abortion” **Key Informant 1 & 3**

Respondents who had spent between 6-10 years in sex work business were less likely to experience abortion related risks (AOR: 0.002, 95% CI: (0.001-0.31), P=0.017) as compared to respondents who had spent less than 5 years in sex work business.

Findings from key informants (KI) also pointed out that spending long time in sex business garnered experience to sex workers to avoid SRH related risks which included effects of abortion risks. This is quoted in the following *statements*;

“(...) I have spent long time in this sex work business...now it is very difficult for me to even get pregnant. If that mistake comes, I know how to abort safely to avoid risks...even my fellows may not know **Key Informant 1**

“(...) as a healthcare worker on reproductive health, abortion related risks are most among those girls who have just started this business with little experience. Some you sex workers are deceived by men to get pregnant on promising to marry them which in almost all cases fails. They end up aborting unsafely and face adverse effects mainly hemorrhage”. **Key Informant 7**

Respondents who strongly agreed that their monthly income provided a good disposal income to meet healthcare demands were less likely to experience abortion related risks (AOR: 0.001, 95% CI: (0.001-0.005), P=0.003) as compared to respondents who strongly disagreed that monthly income provided a good disposal income to meet healthcare demands

Similar findings were reported in a qualitative study where KI reported that; low incomes are among the major causes of sex work business and the resultant abortion related risks. This is evident in the quotation below;

“(...).. I couldn’t access good healthcare since the money I get from this business cant full fill all my personal and domestic needs. This forced me to use unsafe abortion methods which put my life at the verge of death; Key Informant 8

People respondents who lived communally were 31 times more likely to experience abortion related risks (AOR: 31.0, 95% CI: (4.09-48.09), P=0.010) as compared to respondents who lived with their Parents/family members.

The people sex workers stayed with had a paramount role in influence the occurrences of similar findings were reported in qualitative results where the following was captured;

“(.....).. Sex workers who live communally have high cases of abortion related risks according to reports in our office. They come pleading for support since they expect local leaders to have support from the government” Key Informant 8

Respondents who had never been health educated about abortion health risks were 28 times more likely to experience abortion related risks (AOR: 28.88, 95% CI: (1.15-727.92), P=0.041) as compared to respondents who had had ever been health educated about abortion health risks.

Key informants also revealed that being health educated has a great influence on the prevalence of abortion related risks as observed in the statements below;

“(..). Most of the sex workers we receive in our clinic lack the basic knowledge about use of contraception and treatment of sexual and reproductive related health complication especially Post Abortion Care”, Key Informant 7

Respondents who were aware of facilities where one could obtain family planning and contraceptive services were less likely to experience abortion related risks (AOR: 0.02, 95% CI: (0.01-0.022),

P=0.008) as compared to respondents who strongly disagreed that they were aware of facilities where one could obtain family planning and contraceptive services.

Findings from key informants (KI) also pointed to some of the individual related factors associated with abortion-related health risks among female commercial sex workers in Kyotera District. For example, key informants attributed to lack of adequate experience in sex work business as can be observed in their quotes below:

Environmental factors included; Respondents who agreed that female commercial sex workers were highly stigmatized or discriminated in the area were 98 times more likely to experience abortion related risks (AOR: 38.06, 95% CI: (16.19-71.5), P=0.004) as compared to respondents who strongly disagreed that female commercial sex workers were highly stigmatized or discriminated in the area

Respondents who had high accessibility to emotional support access to sex workers after facing effects of abortion were less likely to experience abortion related risks (AOR: 0.0001, 95% CI: (0.001-0.011), P=0.002) as compared to respondents who had high inaccessibility to emotional support access to sex workers after facing effects of abortion.

Findings from key informants (KI) also pointed to some of the environmental related factors associated with abortion-related health risks among female commercial sex workers in Kyotera District. For example, key informants attributed to lack of adequate experience in sex work business as can be observed in their quotes below:

“(.....) we don’t do this job out of our wish, but the economic constraints force us to...we are highly stigmatized especially by religious leaders who command their followers to treat us as outcasts... so we feel shy to seek abortion related care we need it” (Key Informant 10).

“(.....).I lack emotional support to help me manage challenging conditions such as unwanted pregnancies, abortion and subsequent effects” (Key Informant 8)

“(.....) they all bring sex workers after abortion and dump them here at the clinic with barely no support to cater for their medical expenses.....some are even emotionally disoriented” (Key Informant 7)

Health related factors included; respondents who agreed that post abortion healthcare services were readily available at the health facility were less likely to experience abortion related risks (AOR: 0.07,

95% CI: (0.005-0.84), P=0.036) as compared to respondents who strongly disagreed that post abortion healthcare services were readily available at the health facility

Respondents who had easiness in accessing SRH services at the facilities they visited were less likely to experience abortion related risks (AOR: 0.02, 95% CI: (0.001-0.39), P=0.010) as compared to respondents who had difficulty in accessing SRH services at the facilities they visited

Similar findings were reported in a qualitative study where it was reported that ready availability of post abortion healthcare services in nearby clinics was associated with less occurrence of abortion related risks. This is vindicated in the assertion below;

*“(...) One day HW from Kifuuta, to help a teenager of 16years to abort. When the father heard about it, the Health worker was reported and had to pay 7million because he feared his papers to be cancelled, his clinic was also destroyed. Now all health workers fear to do this unless If there are circumstances like where the client has been referred due to incomplete abortion or there congenital abnormalities. Otherwise a person can report you and you fall on the wrong side of the law.” **Health worker respondent***

*“(...) the availability of a well trained midwife in the health facility near our brothel saves us at least to get some little care though not public sought”. **Key Informant 5***

It was however reported in the broader spectrum by other sex workers that access to PAC services and other SRHSs wasn't easy due to a number of constraints. Findings indicated that, there was general consensus that while many sex workers got unintended pregnancies largely attributed their reluctance to embrace family planning yet involving into live sex for higher pay, it was not common to find a sex worker who is visibly pregnant. When probed regarding their reason for not using family planning, majority disclosed that

“Sex workers shun away from using hormonal family planning methods on grounds that family planning causes vaginal dryness to some while others get heavy bleeding eventually putting them at high risk of HIV and other Sexually transmitted diseases of their work involves having s multiple sexual partners. (P003 Kyotera TBA; P027; P010) ”

“(...) Unplanned pregnancies are common—men remove condoms, condoms break, or we fall in love with a client who disappears; for example my close friend aborted after the man denied responsibility.

She used a local herb called Kisandasanda, developed complications, and died from an ectopic pregnancy. That's why I hate men—men are evil.” FGD Respondent.

Respondents who waited for more than one hour before being attended to at the reproductive healthcare clinic were 36 times more likely to experience abortion related risks (AOR: 36.98 , 95% CI: (09.85-72.43), P=<0.001) as compared to respondents who waited for less than 30 minutes before they were attended to at the reproductive healthcare clinic

The Key Informants also complained of long waiting time as an accelerating factor to abortion related risks since most of the sex workers who had heavy hemorrhage couldn't withstand the burden of waiting for long at public health care facilities before they were attended to. This is recorded in the following statement;

“(....) I became psychologically affected when I was losing a lot of blood and healthcare workers at the nearest..... public healthcare facility couldn't help. I almost lost my life” Key Informant 5

Respondents who strongly agreed that post abortion healthcare services were integrated into the general reproductive health care were likely to experience abortion related risks (AOR: 0.013 95% CI: (0.001-0.59), P=0.026) as compared to respondents who strongly disagreed that post abortion healthcare services were integrated into the general reproductive health care.

Further on, lack of easiness in accessing SRH services at the healthcare facilities was a barrier to accessing SRHS which predisposed sex workers to abortion related complications as stated in the following quotations;

“(....) the fact that, the clinic was near to be when I aborted and didn't feel well I immediately went to the clinic where I was care for very well” Key Informant 9

Key informants noted that also pointed out non integration of PAC services into the main healthcare stream as a propelling factor for increased rates of abortion related risks as can be observed in their quotes below;

“(....)by law we aren't supposed to help women carry out abortion otherwise one who does so risks having his or her license cancelled. This forces many sex workers to resort to unsafe abortion means which end in problems”. Key Informant 7

CHAPTER FIVE: DISCUSSION OF RESULTS

5.0 Introduction

This chapter presents the discussion of the results of the study in relation to the specific objectives. These included; assessing prevalence of abortion-related health risks among FCSWs, examining the individual, environmental and healthcare related factors influencing abortion-related health risks among FCSWs.

5.1 Discussion of the Results

5.1.1 Prevalence of abortion-related health risks among FCSWs

Findings indicated that almost seven out of ten sex workers faced abortion related risks which implied a great health risk the respondents lived. Respondents faced various health risks which included; heavy bleeding (hemorrhage), organ damage, emotional problems, pelvic inflammatory diseases, uterine perforation, vomiting, sepsis, persistent infections, ruptured uterus, removal of organs such as uterus, fallopian tube and the ovary infertility and retention of the products of abortion. This led to other health complications which ended up in hospitalization and high medical costs. These findings closely align with those of a community knowledge approach survey conducted across eight countries (that is: Angola, Brazil, Democratic Republic of Congo, India, Indonesia, Kenya, Nigeria, and South Africa), which reported that 56.8% (750 out of 1,320) of maternal deaths among female sex workers were linked to unsafe abortions (Willis *et al.*, 2023). That study similarly identified complications such as hemorrhage, infections, and other critical health outcomes. Together, these studies underscore the pressing need for comprehensive sexual and reproductive healthcare services tailored to female sex workers, including access to contraception, safe abortion procedures, and post-abortion care.

5.1.2 Individual related factors influencing abortion-related health risks among FCSWs

individual factors significantly associated abortion-related health risks included; occupation, duration in sex work business, level of disposable income, relationship with people respondents stayed with, level of health education about SRHS and awareness of facilities where one could obtain family planning and contraceptive services.

Regarding the occupation of the respondents, findings indicated that respondents who were ordinary employees were one hundred and seven times more likely to experience abortion related risks as compared to respondents who were housewives. This implied that having unreliable sources of income

or alternatives from other close family members like spouses was associated with high risk to abortion related adverse effects. This could be attributed to the fact that having unreliable income meant inaccessibility to healthcare services since most of them sought PAC services from private healthcare facilities which needed a lot of money. Similarly, research from Ethiopia identified low monthly income as a significant determinant of induced abortion (Tilahun, Dadi and Shiferaw, 2017). Women earning less than 500 Ethiopian Birr per month were substantially more likely to undergo abortions, underscoring the role of financial constraints in reproductive decisions.

The observed reduction in abortion-related risks among sex workers with 6–10 years of experience in Kyotera District aligns with findings from a cross section study in post-conflict Northern Uganda. This study reported that female sex workers with longer durations in sex work (≥ 2 years) were more likely to adopt long-acting reversible contraception (LARC), thereby reducing unintended pregnancies and associated abortion risks (S. Ouma *et al.*, 2022b). The increased experience likely contributes to better knowledge of reproductive health, improved financial stability to afford healthcare services, and enhanced negotiation skills for safer sex practices. These factors collectively empower sex workers to make informed decisions regarding their reproductive health, leading to a decrease in abortion-related complications.

Regarding level of disposable income; Respondents who strongly agreed that their monthly income provided adequate disposable income to meet healthcare demands were less likely to experience abortion-related risks compared to those who strongly disagreed. Improved disposable income allowed sex workers better access to safe abortion services, reducing risks like hemorrhage and sepsis. These findings align with (Zafar *et al.*, 2018) who studied 296 women at Nishtar Hospital, Multan, between 2012 and 2015, and found that 71.6% of patients with unsafe abortion complications were from low-income backgrounds, with common complications including hemorrhage (30.1%), uterine perforation (49.3%), and bowel perforation (45.6%). Both studies emphasize the vital role of financial stability in accessing safe reproductive healthcare and illustrate how low socioeconomic status heightens vulnerability to abortion-related health complications.

The kind of people sex workers lived with significantly influenced the prevalence of abortion-related risks. Respondents living communally with fellow sex workers were eighty-one times more likely to experience these risks compared to those living with parents or family members. Communal living often lacked necessary support, as sex workers tended to view each other as competitors rather than allies, with limited social attachment due to their transient interactions during work hours. This finding

is supported by (Tilahun, Dadi and Shiferaw, 2017), who found that communal living among sex workers is associated with limited social support and increased vulnerability to health risks, including abortion complications. In contrast, living with family or stable social networks provides better emotional and practical support, promoting safer health behaviors. Thus, the social environment plays a crucial role in shaping reproductive health outcomes among marginalized sex workers.

Health education was significantly associated with abortion related risks. Respondents who had never been health educated about abortion related health risks were almost twenty nine times more likely to experience abortion related risks as compared to respondents who had had ever been health educated about abortion related health risks. This implied that health education helped in raising level of knowledge towards the best interventions to adopt in case of abortion to minimize adverse health effects. This study aligns with a cross-sectional study conducted among preparatory school students in the Guraghe zone, Southern Ethiopia, which found that young females without sexual health education were 6.4 times more likely to undergo induced abortion than those who had received such education (Banerjee *et al.*, 2013). This indicates the protective effect of health education against abortion-related risks. Enhancing knowledge about safe abortion services and reproductive health, educational interventions empower individuals to make informed decisions, thereby minimizing health risks associated with unsafe abortions.

Findings further indicated that sex workers who had never had unintended pregnancies were less likely to experience abortion related risks as compared to sex workers who had unintended pregnancies. This could be attributed to the fact that having unintended to the fact that fathers to unintended pregnancies weren't known so the sex workers didn't want to carry the burden of raising the child alone. Similar findings were reported in a study carried out in a cross-sectional study among adult FSWs operating in the post-conflict Gulu district in Northern Uganda where the rates of abortion related health risks were higher among sex workers with history of unintended pregnancies during sex work and being a brothel/lodge-based FSWs (S. Ouma *et al.*, 2022a). This is literary because raising the child in Uganda just like in other developing countries is financially based on male involvement where in case with unintended pregnancies, the men responsible for the pregnancies weren't known.

Many respondents lacked knowledge about where to seek abortion-related care, increasing their risk of complications. Those aware of facilities offering family planning and contraceptive services were less likely to experience abortion-related risks compared to those unaware of such services. This gap in knowledge hindered timely access to safe abortion and post-abortion care, often resulting in severe

outcomes like heavy bleeding. Key informants noted that new sex workers particularly struggled to identify reliable healthcare providers, often relying on peer advice that sometimes led to unsafe practices. This aligns with findings by Balzer et al. (2018) and (Moon *et al.*, (2019), who reported that lack of awareness about reproductive health services significantly contributes to unsafe abortion and related complications among sex workers. Increasing awareness and access to trusted health facilities is critical in reducing abortion-related health risks in this population.

5.1.3 Environmental related factors influencing abortion-related health risks among FCSWs

Environmental factors significantly associated abortion-related health risks were; stigmatization or discrimination of commercial sex workers and accessibility to emotional support access by sex workers.

Stigmatization and discrimination are significant barriers to healthcare access, especially among vulnerable groups like commercial sex workers. In this study, respondents who agreed that sex workers were highly stigmatized were ninety-eight times more likely to experience abortion-related risks than those who strongly disagreed. This is likely due to prevailing cultural and moral disapproval of sex work in the study area, consistent with broader Ugandan and African societal views. Stigma discourages sex workers from seeking abortion-related services, as many fear revealing their identities. This finding aligns with a scoping review by Birger, Peled and Benyamini, (2024a), which found that stigma is a major global barrier to reproductive healthcare for female sex workers, often resulting in delayed care and negative health outcomes. Both studies underscore how stigma critically impedes access to safe abortion services, increasing the likelihood of unsafe procedures and associated complications.

Cordial support from colleagues and friends was found to significantly reduce abortion-related risks among sex workers. Respondents with greater access to emotional support after abortion were less likely to face complications compared to those lacking such support. This suggests that emotional care plays a vital role in recovery and risk reduction. Marlow, Shellenberg and Yegon, (2014b), support these findings, noting that peer support networks among sex workers in Uganda enhance access to safe abortion services and post-abortion care. Their study emphasizes the value of community-level interventions like peer education and safe spaces for dialogue. Such networks help reduce stigma,

improve emotional well-being, and facilitate access to reproductive healthcare. These combined effects contribute to lowering abortion-related risks.

5.1.4 Healthcare related factors influencing abortion-related health risks among FCSWs

Health related factors significantly associated abortion-related health risks included; availability of Post Abortion Care (PAC) services, accessibility to SRH services at the facilities, waiting time and integration of post abortion healthcare services into the general reproductive health care.

Findings indicated that respondents who agreed that post-abortion care (PAC) services were readily available at nearby health facilities were less likely to experience abortion-related risks compared to those who strongly disagreed. Many respondents reported that such services were not accessible at the closest health centers. This challenge is partly due to Uganda's restrictive abortion laws, which limit the provision of PAC in public facilities. As a result, low-income sex workers are particularly disadvantaged, often unable to afford private healthcare services where such care might be available at a high cost. A study by Babigumira et al. (2013) supports these findings, highlighting that the high costs associated with treating complications from unsafe abortions place a significant burden on Uganda's healthcare system and emphasize the need for improved access to affordable PAC services..

In this study, most respondents reported limited access to sexual and reproductive health services (SRHSs), primarily because they lacked the financial means to pay for care at private clinics, which were the most common healthcare providers. Interestingly, respondents who found it difficult to access SRH services were less likely to experience abortion-related risks compared to those with easier access—an outcome attributed to fears of stigma and discrimination from community members and healthcare providers, which discouraged service use. These barriers were particularly pronounced among sex workers, who often could not afford private care and avoided public facilities due to fear of judgment. Supporting these findings, Nakanwagi *et al.*, (2016) observed that female sex workers in periurban Uganda face similar challenges, including financial hardship and provider stigma, which hinder their use of SRH services and increase their vulnerability to reproductive health risks.

Respondents who waited for more than one hour before being attended to at the reproductive healthcare clinic were three hundred and thirty six times more likely to experience abortion related risks as compared to respondents who waited for less than 30 minutes before they were attended to at the reproductive healthcare clinic.

Most respondents revealed that post-abortion care (PAC) services were integrated into mainstream healthcare, likely because abortion in Uganda is illegal and considered a capital offense. Key informant healthcare providers confirmed this, expressing fear of treating sex workers post-abortion due to the risk of prosecution and potential loss of their licenses. Further analysis showed that respondents who strongly agreed that PAC was integrated into general reproductive healthcare were more likely to report abortion-related risks than those who disagreed. This suggests that accessing PAC services allowed for the management of complications such as hemorrhage, pelvic inflammation, vomiting, and retained products of abortion, thanks to trained medical personnel. These findings are supported by Klingberg-Allvin *et al.*, (2015), who reported that Ugandan midwives often struggle between moral beliefs and professional responsibilities in providing PAC. The fear of legal consequences and stigma contributes to limited service provision. Klingberg-Allvin *et al.* emphasize the importance of task sharing and supportive policies to improve both access and quality of PAC services across Uganda.

CHAPTER SIX:

CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

This chapter presents the conclusion and recommendation from the results of the study in relation to the specific objectives. These included; assessing prevalence of abortion-related health risks among commercial sex workers, examining the individual, environmental and healthcare related factors influencing abortion-related health risks among FCSWs.

6.1 Conclusion

6.1.1 Prevalence of abortion-related health risks among FCSWs

There was high prevalence of abortion related risks among sex workers that participated in this study.

6.1.2 Individual related factors influencing abortion-related health risks among FCSWs

Individual related factors significantly associated abortion-related health risks were; being an irregular employee, low experience in sex work business and young age, inadequacy of monthly income to meet healthcare demands, lack of support from close family members. Lack of health education about abortion related health risks, unawareness of facilities that provide family planning and contraceptive services.

6.1.3 Environmental related factors influencing abortion-related health risks among FCSWs

Environmental factors significantly associated abortion-related health risks were; high stigmatization or discrimination of commercial sex workers and high inaccessibility to emotional support after facing effects of abortion.

6.1.4 Healthcare related factors influencing abortion-related health risks among FCSWs

Health related factors significantly associated abortion-related health risks were included; lack of ready availability of post abortion healthcare services, uneasiness to access SRH services at the facilities, long waiting time, non integration of PAC services into the general reproductive health care and lack of well trained staff.

CHAPTER SIX:

CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

This chapter presents the conclusion and recommendation from the results of the study in relation to the specific objectives. These included; assessing prevalence of abortion-related health risks among FCSWs, examining the individual, environmental and healthcare related factors associated with abortion-related health risks among FCSWs.

6.1 Conclusion

6.1.1 Prevalence of abortion-related health risks among FCSWs

There was high prevalence of abortion related risks among sex workers that participated in this study.

6.1.2 Individual related factors associated with abortion-related health risks among FCSWs

Individual related factors significantly associated abortion-related health risks were; being an irregular employee, low experience in sex work business and young age, inadequacy of monthly income to meet healthcare demands, lack of support from close family members. Lack of health education about abortion health risks, unawareness of facilities that provide family planning and contraceptive services.

6.1.3 Environmental related factors associated with abortion-related health risks among FCSWs

Environmental factors significantly associated abortion-related health risks were; high stigmatization or discrimination of commercial sex workers and high inaccessibility to emotional support access after facing effects of abortion.

6.1.4 Healthcare related factors associated with abortion-related health risks among FCSWs

Health related factors significantly associated abortion-related health risks were included; lack of ready availability of post abortion healthcare services, uneasiness to access SRH services at the facilities, long waiting time, non integration of PAC services into the general reproductive health care and lack

of well trained staff. These challenges have been further worsened by the Mexico City Policy (also known as the Global Gag Rule), which restricts U.S. funding to foreign NGOs that provide, promote, or even discuss abortion, limiting critical resources for reproductive health services in affected regions like Kyotera.

6.2 Recommendations

The researcher suggests the following interventions to be effected

- **To the government/ Ministry of Health**

- The government should build more healthcare facilities to offer sexual and reproductive healthcare services. This would increase access to healthcare services to vulnerable groups like sex workers.
- Government support sex workers' organizations to support their skilling in alternative means of livelihood to ease some of their transitioning from Sex work.
- The government through Act of parliament should enact a law that decriminalizes sex work to addresses the issues regarding sex work including, arbitrary arrests, extortion among others.
- Integrate PAC services into the general reproductive health care where abortion related risks would be addressed.

Healthcare facilities

- Health care facilities should recruit more healthcare providers to minimize waiting time. This would save time since healthcare worker patient-ratio would be lessened.
- The health workers should bring SRHS close to the sex workers in their hotspots/brothels to ease and amplify their accessibility.

- Use of the peer educators to support basic counseling and linkage to tailored SRHS services, including Safe abortion and Post abortion care services for sex workers. Peers can also act as expert clients in providing Demedicalized Self-Managed Medical Abortion services to the sex workers.
- Support community based models like Drop in centres to provide SRHS including PAC services.

To the Health care workers

- Healthcare workers should provide health education to all women who visit their health care facilities about abortion health related risks. This should also be extended to brothels where sex workers are found as this may minimize stigma levels sex workers face in the healthcare facilities.
- Healthcare workers should educate against stigma or discrimination of commercial sex workers within their institution through education and counseling to other SRHS seekers.
- The government should train health workers and improve the quality of family planning. This is evident from one of the quotes captured during the FGD interviews, *“I gave birth because my FP method failed and the man denied responsibility. He only called after I had given birth.”* — FGD Respondent

To the Sex Workers

- Sex workers should seek counselling from health centres and community based institutions such as Drop in Centres, and peer educators/expert clients. This would enable them to know where to seek safe SRHS.
- Sex workers should be open and seek support from progressive health workers in case they face abortion related health risks.

To the community leaders

- Community members should give emotional support access to sex workers after facing effects of abortion. This would restore their hope for a better living.

Area for future research

There is need to carry out a study on the influence of education interventions on prevalence of abortion health related risks among female commercial sex workers.

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APPENDICES

APPENDIX I: INFORMED CONSENT FORM

Title of the study : **Prevalence and factors associated with abortion-related health risks among Female Commercial Sex Workers in Kyotera District**

Investigator : **Sssemakula Micheal**

Registration Number: **2023-M282-23324**

Course : **Master's Degree in Public Health- Health Promotion.**

Institution Identity : **Uganda Martyrs University**

Sponsor : **Principal Researcher**

Purpose: Aims to establish the prevalence and factors associated with abortion-related health risks among Commercial Sex Workers in Kyotera District, Uganda in order to minimize the prevalence of SRH complications especially among vulnerable populations in Uganda

Why Kyotera Town is chosen: There is high prevalence (at 43%) of abortion related cases in Kyotera town according to data from local clinics where females especially sex workers seek PAC.

Procedures: Data will be collected from sex workers' at their brothels.

Study visits: The researcher together with the area local leaders will visit the brothels of sex workers from Mondays to Fridays between 7:00 pm and 10:00 pm until the data collection process is complete.

Storage of the Specimen: Data collected using Research administered questionnaires on each day shall be kept by the investigator herself in a desired safe way at his home.

Risks: There are no eminent risks associated with this study. However, at some point the respondent may feel her private life (health and welfare of the family members) being encroached upon when asked about the individual related to the factors associated with abortion related risks.

Minimizing the risks: The researcher hopes to minimize this through thorough explanation to the study participants the purpose of the study and associated benefits they will get and the community as well as a result of their participation in this study.

Benefits: The findings will have the following contributions to different stakeholders;

- i. **Non-Governmental Organizations:** The findings of the study will help NGOs to know the lived experiences of sex workers as regards Sexual and Reproductive Health life. This will eventually be used as a basis of designing healthcare interventions to address SRHSs challenges sexual workers and other vulnerable groups face that impede them to get better healthcare especially under stigmatized situations such as treating effects of abortion.
- ii. **Health workers in Kyotera District:** Information will be obtained about the health related risks will be based upon to make relevant interventions so as to improve strategies to minimize the incidence of abortion related risks since the area has many young people and yet HIV prevalence is high.
- iii. **Fellow sex workers:** The **sex workers** will self report identify the challenges that put them at risk of abortion health related risks which will be used by different stakeholders to help out the sex workers. This will therefore be a basis for sensitization about the need the dangers of sex work and SRHSs complications
- iv. **Respondent:** I will be asked a series of interview questions for about 15 minutes as the researcher records my answers and all remain confidential. My privacy and safety will be maintained. I can decline to answer any question or withdraw from the study any time. The interview is entirely voluntary and does not entail any foreseeable risks and direct benefits. All data will be maintained in a safe place by the researcher for one year and then shredded.

Non participation and withdrawal: The anticipated participant still has an option of not joining the study and that not joining will not affect receipt of expected services or lead to any penalty.

Storage of specimen for future use: Data collected from the field shall be kept by the researcher

Compensation for research related injury: The researcher doesn't anticipate any injury related risk given the nature of the study. However, in case this happens under unforeseeable circumstances a mutual understanding will be agreed upon with the victim in mediation of the Local Area Leaders

Compensation for participation: The study will be voluntary where participants will be requested to dedicate their time and give answers to the study. No compensation for transport is expected because respondents will be met at their brothels. In case there is any transport costs incurred by the respondent the researcher shall compensate to a maximum of 5,000/= (Five Thousand Ugandan Shillings)

Person to contact when you as a participant has questions about the study contact the principle investigator Ms. **Ssemakula Micheal** on Telephone Number; **0781415037**. In case of questions

regarding the rights of participants contact Mulago Research Ethic Committee Chairperson; Dr. Nakibuuka Jane; on Telephone contact 0772618111.

I agree that I have read, understood the form and I freely consent to take part in the study

Name and signature section with date for literate participant:

Thumbprint section for illiterate participant.....

Name and signature section for literate witness

Name of Investigator/designee.....

Signature of the Investigator/designee:

Separate signature section for stored specimens:

Thanks for Cooperation

APPENDIX II: QUESTIONNAIRE

Title: Prevalence and factors associated with abortion-related health risks among female commercial sex workers in Kyotera District

This questionnaire is intended to collect information on factors influencing abortion practices among commercial sex workers in Kyotera.

You have been chosen due your role as a peer leader and as such the operational use the terms “You or “your” may call for feedback from either your personal experience or about any of your peers who had an experience with abortion.

SECTION A: Demographic Information

Section A: Social Demographic Characteristics

1. What is your age?

- | | | | |
|----------------|----------------------|-----------------------|----------------------|
| a) 18-30 years | <input type="text"/> | b) 31-40 years | <input type="text"/> |
| c) 41-50 years | <input type="text"/> | d) 51 years and above | <input type="text"/> |

2. What is your marital status?

- | | | | |
|-----------------------|----------------------|-----------------------|----------------------|
| a) Single | <input type="text"/> | b) Married/Cohabiting | <input type="text"/> |
| c) Divorced/separated | <input type="text"/> | d) Widow | <input type="text"/> |

3. What is your level of education?

- | | | | |
|------------------------|----------------------|-----------------------|----------------------|
| a) No formal education | <input type="text"/> | b) Primary education | <input type="text"/> |
| c) Secondary Education | <input type="text"/> | d) Tertiary education | <input type="text"/> |

4. What is your religion?

- | | | | |
|--------------------------|----------------------|---------------|----------------------|
| a) Catholic | <input type="text"/> | b) Protestant | <input type="text"/> |
| c) Born Again Christian | <input type="text"/> | d) Muslim | <input type="text"/> |
| e) Others (specify)..... | | | |

5. What is your formal occupation?

- | | | | |
|------------------|----------------------|----------------------|----------------------|
| a) House wife | <input type="text"/> | b) Civil servant | <input type="text"/> |
| c) Casual worker | <input type="text"/> | d) Ordinary employee | <input type="text"/> |
| e) Student | <input type="text"/> | f) Unemployed | <input type="text"/> |

6. What is your work experience?

- | | | | |
|------------------------|----------------------|------------------------|----------------------|
| a) Less than 5 years | <input type="text"/> | b) Between 6-10 years | <input type="text"/> |
| c) Between 11-15 years | <input type="text"/> | d) Between 16-20 years | <input type="text"/> |
| e) More than 20 years | <input type="text"/> | | |

SECTION B

Prevalence of abortion-related health risks among commercial sex workers in Kyotera District

7. i) Have you ever carried out an abortion?

- | | | | |
|--------|----------------------|-------|----------------------|
| a) Yes | <input type="text"/> | b) No | <input type="text"/> |
|--------|----------------------|-------|----------------------|

ii) If yes, what type of abortion did you undergo?

- | | | | |
|----------------|----------------------|--------------------------|----------------------|
| a) Medical | <input type="text"/> | b) self-Induced | <input type="text"/> |
| c) Traditional | <input type="text"/> | d) Others (specify)..... | |

iii) If yes how many times have you carried out abortions?

- | | | | |
|-----------|----------------------|-------------------------|----------------------|
| a) Once | <input type="text"/> | b) twice | <input type="text"/> |
| c) Thrice | <input type="text"/> | d) Four times and above | <input type="text"/> |

iv) If you have ever carried out an abortion, did you face any abortion-related health risks?

- | | | | |
|--------|----------------------|-------|----------------------|
| a) Yes | <input type="text"/> | b) No | <input type="text"/> |
|--------|----------------------|-------|----------------------|

v) If yes, mention the abortion-related health risks you faced?

- | | | | |
|------------------------|----------------------|--------------------------------|----------------------|
| a) Heavy Bleeding | <input type="text"/> | b) Organ damage | <input type="text"/> |
| c) Emotional problems | <input type="text"/> | d) Pelvic inflammatory disease | <input type="text"/> |
| e) Uterine perforation | <input type="text"/> | f) Vomiting | <input type="text"/> |
| g) Incomplete abortion | <input type="text"/> | h) Ordinary employee | <input type="text"/> |

vi) What was the extent of the pain of the abortion-related health risks you faced?

- | | | | |
|-----------|----------------------|----------------|----------------------|
| a) Mild | <input type="text"/> | b) Moderate | <input type="text"/> |
| c) Severe | <input type="text"/> | d) Very severe | <input type="text"/> |

SECTION C

Individual related factors associated with abortion-related health risks among commercial sex workers in Kyotera District

10. The monthly income provides a good disposal income to met healthcare demands?

- | | | | |
|----------------------|----------------------|----------------------|----------------------|
| a) Strongly Disagree | <input type="text"/> | b) Disagree | <input type="text"/> |
| c) Agree | <input type="text"/> | d) Strongly Disagree | <input type="text"/> |

11. Whom do you stay with?

- a) Alone
- b) My Parents
- c) With Partner
- d) Communal

12. What is the number of your family members?

- a) 1-3 members
- b) 4-6 members
- c) 7 members and above

13. i) Have you ever been health educated about abortion health risks?

- a) Yes
- b) No

ii) If you ever been health educated about abortion health risks, who health educated you?

- a) Healthcare worker
- b) Fellow sex worker
- c) 7 members and above

14. How confident are you when making decision about your sexual and reproductive health life?

- a) Very unconfident
- b) Unconfident
- c) Confident
- d) Very Confident

15. Have you ever had unintended pregnancy

- a) Yes
- b) No

16. i) How frequently do you seek sexual and reproductive health services?

- a) Not at all
- b) Occasionally
- c) Always

ii) If you ever seek sexual and reproductive health services, which services do you seek most?

- a) General consultation
- b) family planning,
- c) Antenatal care
- d) Post Natal Care services
- e) Others (specify).....

17. Are aware of any facilities where safe and legal abortion services are provided?

- a) Strongly Disagree
- b) Disagree
- c) Agree
- d) Strongly Disagree

18. Are you aware of facilities where one can obtain family planning and contraceptive services?

- a) Strongly Disagree
- b) Disagree
- c) Agree
- d) Strongly Disagree

19. How easy is it for you to have sexual and reproductive health conversations with friends, family or people in your community?

a) Very Easy b) Easy

c) Uneasy d) Very Uneasy

SECTION D

Environmental related factors associated with abortion-related health risks among commercial sex workers in Kyotera District

20. Do you have fellow sex worker friends who have ever carried out abortion?

a) Yes b) No

21. Do you receive counselling and education about reproductive healthcare?

a) Strongly Disagreed b) Disagree

c) Agree d) Strongly Agree

22. Commercial sex is a common economic activity in the area?

a) Strongly Disagreed b) Disagree

c) Agree d) Strongly Agree

23. i) Do you have any organizations/entities that offer you sexual and reproductive health services as a commercial sex worker in your area?

a) Yes b) No

24. Commercial sex workers are highly stigmatized or discriminated in the area?

a) Strongly Disagreed b) Disagree

c) Agree d) Strongly Agree

25. How accessible is emotional support access to sex workers after facing effects of abortion?

a) Highly inaccessible b) Inaccessible

c) Accessible d) Highly accessible

26. The cultural or religious beliefs in your community embrace abortion?

a) Strongly Disagreed b) Disagree

c) Agree d) Strongly Agree

SECTION E:

Healthcare related factors associated with abortion-related health risks among commercial sex workers in Kyotera District

27. The post abortion healthcare services are available at the health facility

- | | | | |
|----------------------|----------------------|-------------------|----------------------|
| a) Strongly Disagree | <input type="text"/> | b) Disagree | <input type="text"/> |
| c) Agree | <input type="text"/> | d) Strongly Agree | <input type="text"/> |

28. Rating of personal satisfaction with the Sexual and Reproductive Healthcare Services in the at public health facilities?

- | | | | |
|----------------------|----------------------|-----------------|----------------------|
| a) Very dissatisfied | <input type="text"/> | b) Dissatisfied | <input type="text"/> |
| c) Neutral | <input type="text"/> | d) Satisfied | <input type="text"/> |
| e) Very Dissatisfied | | | |

29. How would you rate the easiness or difficulty with which you accessed the services at the facilities you visited?

- | | | | |
|--------------|----------------------|-------------------|----------------------|
| a) Very easy | <input type="text"/> | b) Easy | <input type="text"/> |
| c) Difficult | <input type="text"/> | d) Very Difficult | <input type="text"/> |

30. Post abortion services are always available within public healthcare facilities in the area

- | | | | |
|----------------------|----------------------|-------------------|----------------------|
| a) Strongly Disagree | <input type="text"/> | b) Disagree | <input type="text"/> |
| c) Agree | <input type="text"/> | d) Strongly Agree | <input type="text"/> |

31. What is the distance from your home to the health facility where you can access sexual and reproductive healthcare services?

- | | | | |
|---------------------|----------------------|--------------------|----------------------|
| a) Less than 5 km | <input type="text"/> | b) Between 6-10 km | <input type="text"/> |
| c) Between 11-15 km | <input type="text"/> | d) 16 km and above | <input type="text"/> |

32. For how long do you wait before you are attended at the reproductive healthcare clinic?

- | | | | |
|-------------------------|----------------------|----------------------|----------------------|
| a) Less than 30 minutes | <input type="text"/> | b) Between 1-2 hours | <input type="text"/> |
| c) Between 3-4 hours | <input type="text"/> | d) More than 4 hours | <input type="text"/> |

33. The healthcare workers have positive attitude towards sex workers when receiving sex and reproductive healthcare services?

- | | | | |
|-----------------------|----------------------|-------------------|----------------------|
| a) Strongly Disagreed | <input type="text"/> | b) Disagree | <input type="text"/> |
| c) Agree | <input type="text"/> | d) Strongly Agree | <input type="text"/> |

34. Are post abortion healthcare services integrated into the general reproductive health care?

a) Strongly Disagreed

b) Disagree

c) Agree

d) Strongly Agree

Thanks for your cooperation

APPENDIX III: KEY INFORMANT QUESTIONS

Health workers

What constraints do health workers face in their attempt to conduct abortion procedure
Do health workers have access adequate training or resources on safe abortion practices?

Yes No

Section 5: Abortion Experiences

6. Service related and systemic factors

7. Social and cultural factors

Who has the mandate and final say on whether an abortion should be done or not

What is the societal and public perception towards abortion?

Do you think cultural or religious beliefs shape public attitude and perception of abortion in your community? Yes No

If yes please explain

Are there any social or cultural practices related to pregnancy or childbirth that may affect decisions about abortion? Yes No

Are there any socially constructed norms, practices and attributes that determine whether and how an abortion will be carried out? Yes No

If yes, please explain.

Do you know how sex workers in your community are able to harmonize their own needs and desires with family and community expectations when determining to have an abortion? Yes No

If yes, please explain.....

Is the information about safe abortion practices adequate Yes No

Section 8: Legal and Policy Environment

Do the present laws and policies influence sex worker' access to abortion related services Yes No Not sure

Have you heard of plans or campaigns geared towards transforming the existing laws on in your area? Yes No

If yes, please explain.

What are the public perceptions and views from authorities such as : religious leaders , cultural leaders and RDCs on the abortion legal regime.....

We appreciate your voluntary participation and feedback will enhance our understanding abortion practices and boost access to safe and comprehensive abortion care.

APPENDIX IV: PICTURES CAPTURED DURING THE FIELD WORK



Figure 1: Picture with Midwife at Kasali HCIII



Figure 2: Pictures taken in an FGD at HK Bar



Figure 3. Tool pre-test with data collectors



Figure 4: Picture with a DHO representative at Kalisizo Hospital



Figure 5. Pictures at with FGD at Tiptop Bar, and Nwagi's Bar and Guest House



Figure 6. Research Team with one of the Midwife at Kasali HCIII



Figure 7. **Picture taken after securing a permission from the DHO's office to conduct the research study.**

APPENDIX V: UNIVERSITY SUPPORT LETTER AND DISTRICT STAMP

**Uganda
Martyrs
University**



Making a difference

Faculty of Health Sciences
Email: deanhealthsciences@umu.ac.ug
Date: Saturday, 19th April 2025

To: Whom It May Concern,

Dear Sir/Madam,

Re: Letter of Support for SSEMAKULA Micheal
[Reg. No: 2023-M282-23324]

Mr. SSEMAKULA Micheal [Reg. No: 2023-M282-23324] is our student at Uganda Martyrs University, Faculty of Health Sciences. He is pursuing his study leading to the award of a Master of Public Health – Health Promotion. His topic is **“Prevalence and Factors Influencing Abortion-Related Health Risks Among Commercial Sex Workers in Kyotera District”**. The topic and all the study protocols have been approved by relevant university authorities.

Should you need additional information on his study, you can contact his immediate supervisor, Mr. Thembo Moses at Tel: Tel: +256783747491, E-mail: msibling@gmail.com

Further information can be obtained from the office of the Dean, Faculty of Health Sciences, Uganda Martyrs University.

Any assistance rendered to him towards his study will be greatly appreciated.

Thank you.

Yours sincerely,


Dr. Omona Kizito
Dean, Faculty of Health Sciences
Uganda Martyrs University
E-mail: deanhealthsciences@umu.ac.ug
Tel: +256706464873



DISTRICT HEALTH OFFICER
24 APR 2025
KYOTERA & JIHLI
P.O. BOX 60, KYOTERA

Uganda Martyrs University P. O. Box 5498 – Kampala – Uganda
Tel: (+256) 0382-410611 Fax: (+256)0382-410100 E-mail: registrar@umu.ac.ug

APPENDIX VI: IRB APPROVAL AND PERMISSION FROM DISTRICT THROUGH A STAMP

TELEPHONE: +256-41554008/1
FAX: +256-414-5325591
E-mail: admin@mulago.or.ug
Website: www.mulago.or.ug



MULAGO NATIONAL REFERRAL HOSPITAL
P. O. Box 7051
KAMPALA, UGANDA

IN ANY CORRESPONDENCE ON THIS SUBJECT PLEASE QUOTE NO.....

24th April 2025.

Mr. Micheal Ssemakula
Principal Investigator
Uganda Martyrs University.

Dear Mr. Ssemakula,

Re: Approval of Protocol MHREC 2921: "Prevalence and Factors Influencing Abortion-Related Health Risks among Commercial Sex Workers in Kyotera District"

The Mulago Hospital Research and Ethics Committee reviewed your proposal referenced above and granted approval of this study on 24th April 2025. The conduct of this study will therefore run for a period of one (1) year from 24th April 2025 to 23rd April 2026.

This approval covers the protocol and the accompanying documents listed below;

- Consent Form for individual sex workers
- Consent form for FGDs
- Consent form for Key Informants
- Questionnaire
- Focus group discussion guide
- Key informant interview guide

This approval is subjected to the following conditions:

1. That the study site may be monitored by the Mulago Hospital Research and Ethics Committee at any time.
2. That you will abide by the regulations governing research in the country as set by the Ugandan National Council for Science and Technology including abiding to all reporting requirements for serious adverse events, unanticipated events and protocol violations.
3. That no changes to the protocol and study documents will be implemented until they are reviewed and approved by the Mulago Hospital Research and Ethics Committee.
4. That you provide quarterly progressive reports and request for renewal of approval at least 60 days before expiry of the current approval.
5. That you provide an end of study report upon completion of the study including a summary of the results and any publications.
6. That you will include Mulago Hospital in your acknowledgements in all your publications.

I wish you the best in this Endeavour.

DR. JANE NAKIBUUKA
CHAIRPERSON - MULAGO HOSPITAL RESEARCH & ETHICS COMMITTEE.



Vision: "To be the leading centre of Health Care Services"



CS CamScanner