THE INFLUENCE OF HIV KNOWLEDGE ON PREVENTION PRACTICES AMONG FEMALE YOUTH AGED 15-24 YEARS IN KISUMU EAST SUB-COUNTY, KENYA.

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DECLARATION AND APPROVAL

Declaration by Student

This research thesis is my original work and has not been submitted in any other university for consideration.

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ABSTRACT

Introduction: Approximately 39 million people globally live with HIV/AIDS, women and girls accounting for 54% of infections. Kisumu County in Kenya has a HIV prevalence 3.5 times the national average. In 2022, it ranked 4th nationally for new infections among 15-24-year-olds, with HIV prevalence rates 1.2 times higher in females. By 2019, HIV-related mortality in Kisumu County was over 20% higher among females than males. Comprehensive HIV knowledge in young women remains low, averaging 38.5% in sub-Saharan Africa and 33.8% in Kenya, especially in Kisumu's rural and informal areas. The objective was to assess HIV knowledge and its impact on prevention practices among females aged 15-24 in Kisumu County.

Methods: A Cross-sectional study on 429 respondents selected by two stage cluster sampling from the 5 wards in Kisumu East Sub County. Data collection using structured questionnaires, key informant guides and recorders for in-depth interviews. Data analysis using R (version >= 4.3.1) for quantitative data and thematic analysis for qualitative data.

Results: School was the main HIV knowledge source, with 85% showing high knowledge – especially older educated respondents. Sexual debut averaged 17 years with low condom use and limited testing among younger respondents. Higher HIV knowledge was linked to 51% and 72% lower abstinence odds (aOR=0.49, 0.28). Despite a positive trend in condom use, consistent use was lower in the high knowledge group (aOR=0.32). High knowledge increased awareness of personal (aOR=3.87) and partner HIV status (aOR=6.82), PEP/PrEP (aOR=4.24) and reduced high-risk behavior (aOR=0.47) but was not linked to age at sexual debut or monogamy.

Conclusion: HIV prevention programs must go beyond disseminating information to include peer education and behavioral support, to enhance the practical application of knowledge and reduce infection rates.

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ABBREVIATIONS

ABC	Abstinence, faithfulness to one sexual partner and condom use
AGYW	Adolescent girls and young women
AIS	AIDS indicator surveys
AIDS	Acquired Immune-deficiency Syndrome
AMIU	Amref International University
ART	Antiretroviral Therapy
CBO	Community Based Organization
CHW	Community Health Worker
CI	Confidence Interval
DHS	Demographic Health Survey
ESRC	Ethics Research and Scientific Committee
HCT	HIV Counseling and Testing
HIV	Human Immune-deficiency virus
IMB	Information -Motivation- Behavior
KDHS	Kenya Demographic Health Survey
KNBS	Kenya National Bureau of Statistics

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MSM	Men having sex with men
MOH	Ministry of Health
NACC	National AIDS Control Council
NASCOP	National AIDS and STI Control Program
NACOSTI	National Commission for Science, Technology, and Innovation
NGO	Non -Governmental Organization
NACC	National AIDS Control Council
OR	Odds Ratio
PEP	Post exposure prophylaxis
PrEP	Pre-exposure prophylaxis
PMTCT	Prevention of mother-to-child transmission
PEP	Post exposure prophylaxis
STI	Sexually transmitted infection
SGBV	Sexual gender-based violence
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNGASS	United Nations General Assembly Special Session
VMMC	Voluntary Male Medical Circumcision

DEFINITION OF TERMS

Adolescent: According to the WHO, Adolescence is the phase of life between childhood and adulthood, from ages 10 to 19 years.

Heterosexual intercourse: Defined by the WHO and UNAIDS as the intercourse between persons of opposite sex

Sexual debut: Age at first ever sexual intercourse in life

Transactional sex: Sexual relationships that do not occur in a marital or commercial setting (not sex work) but are motivated by exchange of sex for material support and other benefits.

Young people: The WHO and the United Nations define young people as people in the age range of 10-24 years.

Youth: The UN defines a youth as any person in the 15–24-year age group

CHAPTER 1: INTRODUCTION

1.1 Overview

This study investigates the influence of HIV knowledge on prevention practices among female youth aged 15-24 years in Kisumu County, Kenya. The chapter begins with a background that discusses the magnitude of HIV both globally and locally, highlights trends in HIV-related knowledge and reviews the prevention practices commonly adopted by this age group.

Following the background, the chapter presents the problem statement, research questions, objectives and justification for the study. It also covers the significance, scope, and assumptions that guide the research. This structure provides a clear foundation for understanding the importance of exploring how HIV knowledge impacts prevention behaviors in Kisumu's female youth.

1.2 Background of the Study

The Human Immunodeficiency Virus (HIV), which causes Acquired Immune Deficiency Syndrome (AIDS), remains a critical global health challenge (UNAIDS, 2023).By the end of 2023, approximately 39.9 million people were living with HIV worldwide, with 1.3 million new infections and 630,000 AIDS-related deaths (UNAIDS, 2023).Although new infections have declined by 39% since 2010, sub-Saharan Africa still carries about two-thirds of the global HIV burden and 50% of new infections (UNAIDS, 2023).Young women aged 15–24 are especially vulnerable, they make up approximately 44% of new HIV infections globally and acquire HIV 5-7 years earlier than young men in sub-Saharan Africa (NASCOP, 2020).

In Eastern and Southern Africa, only around 39% of young women possess comprehensive HIV knowledge, while in Western and Central Africa, the figure falls to approximately 28%, based on data collected between 2011 and 2018 (UNAIDS, 2023). This level of knowledge is considered inadequate given the persistent high rates of new infections among adolescent girls and young women in these regions. A large-scale analysis of Demographic and Health Survey (DHS) data from 19 sub-Saharan African countries between 2015 and 2020 found that the average level of comprehensive HIV knowledge among youth was just 38.5% (Pollard et al., 2022).There was significant variation across countries, as low as 10.3% in Benin and as high as 66.4% in Rwanda (Pollard et al., 2022).Country-specific assessments revealed that Malawi recorded 42.2% comprehensive knowledge among young women aged 15–24, Rwanda reported 53.6% among adolescent girls aged 15–19, and a school-based study in Nigeria showed that only 38% of secondary school girls demonstrated full understanding of HIV transmission and prevention methods (Chory et al., 2023; Joorbonyan et al., 2022).These figures underscore the critical knowledge gap that persists among young women in Africa, despite widespread awareness campaigns and educational efforts, indicating the need for more effective, targeted interventions that go beyond awareness and interventions that address social, cultural and systemic barriers to learning and behavior change.

In Kenya, levels of comprehensive HIV knowledge among young women remain relatively low. According to the 2022 Kenya Demographic and Health Survey, only 33.8% of females aged 15–24 demonstrated comprehensive HIV knowledge, defined as the ability to correctly identify key prevention methods and reject common misconceptions (KDHS, 2022). While general awareness is high, 82.9% knew that a healthy-looking person can

have HIV and 68.3% understood correct condom use, these figures highlight critical gaps in depth and accuracy of HIV-related information (KDHS, 2022). Moreover, although 85% of Kenyan women have reported being tested for HIV at least once, recent testing rates were much lower, with only 47% undergoing testing in the past 12 months (KDHS, 2022). Utilization of newer tools such as HIV self-test kits remains minimal, with just 10% of young women having ever used one (Akello et al., 2023). These figures suggest that while awareness campaigns have made strides in reaching the population, comprehensive understanding and routine engagement in preventive behaviors are still lacking, particularly among youth.

Kisumu County, located in western Kenya, is one of the nation's HIV hotspots. Its prevalence is 17.5%, nearly four times the national average of 4.9% (NASCOP, 2020). Young women in the county face early sexual debut, poverty, violence and gaps in youth-friendly services (Sing'oei et al., 2023). Although 98% of Kisumu youth are aware of condoms, only about 60% know how to use them correctly (Kisumu County Integrated Development Plan II, 2018-2022, 2018). The awareness of biomedical prevention (PrEP/PEP) hovers around 60-70%, yet actual use remains extremely low, especially in informal settlements like Nyalenda and Manyatta B, where HIV prevalence reaches 18.4% (Kisumu County Integrated Development Plan II, 2018-2022, 2018).

Globally and regionally, while awareness of basic prevention methods (condoms, abstinence, HIV testing, PrEP/PEP) is widespread, comprehensive knowledge remains low and translating that knowledge into practice is hindered by peer pressure, misinformation, stigma, gender norms, and poor service accessibility (Miller et al., 2024; Oketch, 2022).These findings align with the Information–Motivation–Behavioral Skills (IMB)

model, which shows that knowledge alone is insufficient without motivation and practical skills to support behavior change (Irungu et al., 2021).

In summary, while HIV awareness is high globally and locally, comprehensive knowledge is inadequate, especially in East Africa and in Kisumu. Meanwhile, myths (e.g., mosquito transmission) persist and actual prevention behaviors lag. This pattern highlights the need for multilevel interventions that pair accurate education with empowerment, service access and structural support to meet global targets like the UNGASS 2010 goal of 95% youth awareness and to adapt these strategies to Kisumu's local challenge.

1.3 Statement of the Problem

Kenya's national HIV prevention guidelines emphasize a comprehensive approach that combines behavioral, biomedical, and structural strategies to reduce new HIV infections, especially among adolescents and young people aged 15–24 years (NASCOP, 2020). This national strategy promotes comprehensive sexuality education, consistent and correct condom use, abstinence, HIV testing and counseling, mutual knowledge of HIV status among partners, and the uptake of biomedical interventions such as Pre-Exposure Prophylaxis (PrEP) and Post-Exposure Prophylaxis (PEP) (UNAIDS, 2023). The overarching goal is to empower youth with both knowledge and access to services that enable informed sexual and reproductive health decisions (NASCOP, 2020).

Despite this progressive framework, significant gaps persist between HIV prevention knowledge and the actual practices among female youth in Kisumu County. Although awareness is relatively high,98% of youth have heard of condoms and approximately 73.5% report some knowledge of HIV prevention, only 60% know how to use condoms

correctly, and the uptake of PrEP and PEP remains very low due to stigma, misinformation and limited availability of youth-friendly services (Adhiambo et al., 2025; Ngure et al., 2021). Additionally, early sexual debut, poverty and gender-based violence intensify the risks faced by young women in Kisumu (Oketch, 2022).

The sustained high HIV prevalence rates in Kisumu, particularly within informal settlements like Nyalenda and Manyatta, highlights a critical gap between policy intentions and on-the-ground realities (Kisumu County Integrated Development Plan II, 2018-2022, 2018).This study, therefore, seeks to explore how HIV prevention knowledge among female youth in Kisumu County influences their actual prevention behaviors, including condom use, abstinence, partner faithfulness, HIV testing and the use of PrEP and PEP. It also aims to identify barriers hindering the translation of knowledge into practice, with the goal of informing more targeted, contextually relevant interventions that effectively reduce new HIV infections among this vulnerable population.

1.4 Research Objectives

1.4.1 General Objective

To determine the HIV/AIDS knowledge and prevention practices among female youth aged 15 -24 years in Kisumu County.

1.4.2 Specific Objectives

1. To determine the level of HIV knowledge among female youth aged 15-24 years in Kisumu County.
2. To investigate the HIV prevention practices among female youth aged 15 -24 years of age in Kisumu County.

3. To determine the effect of HIV knowledge on prevention strategies among female youth aged 15 -24 years in Kisumu County.
4. To identify challenges faced by female youth aged 15 -24 years on HIV knowledge and prevention in Kisumu County.

1.5 Research Questions

1. What is the level of HIV knowledge among female youth aged 15-24 years in Kisumu County?
2. What are the HIV prevention practices among female youth aged 15 -24 years of age in Kisumu County?
3. What is the effect of HIV knowledge on prevention strategies among female youth aged 15 -24 years of age in Kisumu County?
4. What are the challenges faced by female youth aged 15 -24 years of age in Kisumu County on HIV knowledge and prevention?

1.6 Justification of the Study

While global efforts to combat HIV/AIDS have made significant progress, adolescent girls and young women (AGYW) continue to carry a disproportionate burden of new infections, particularly in Sub-Saharan Africa (UNAIDS, 2023). In Kenya, and specifically Kisumu County, the HIV prevalence among young women aged 15-24 remains high despite reported improvements in HIV awareness (KNBS, 2022). This suggests a critical disconnect between knowledge and preventive action, raising the question, does knowledge equate to practice? This study is necessary because existing HIV prevention strategies have predominantly focused on awareness creation, often assuming that

knowledge automatically leads to behavior change (Frances et al., 2023). However, emerging evidence shows that even when young women possess adequate HIV-related knowledge, they may still engage in high-risk behaviors due to contextual factors such as peer pressure, gender power imbalances, economic dependency and limited access to youth-friendly services (Mojola & Wamoyi, 2019).

Not only is Kisumu East Sub-County one of the most densely populated sub-counties with a large youth population, it also includes two of the five major informal settlements in the region which are underserved in both health education and access to care (Establishment of Village Units in Kisumu County, 2019). Despite high awareness levels, behaviors such as early sexual debut, inconsistent condom use, and low uptake of PrEP and PEP still persist (NASCOP, 2020).

This points to the need to understand how knowledge is internalized, applied or obstructed in real-life scenarios. Therefore, this study goes beyond measuring knowledge levels. It explores the relationship between HIV prevention knowledge and actual prevention practices, while identifying barriers that prevent young women from acting on what they know. The findings are expected to inform national strategies by proposing context-specific, youth-sensitive interventions that integrate not just information but empowerment, negotiation skills, and structural support systems. By addressing this knowledge-practice gap, the study aligns with Kenya's Vision 2030 and Sustainable Development Goal 3, which targets the end of the AIDS epidemic by 2030. The study also adds to the body of literature that supports a more nuanced, multi-layered approach to HIV prevention, particularly for adolescent girls and young women in high-burden urban settings.

1.7 Significance of the Study

This research aims to identify the gaps between HIV knowledge and prevention practices among female youth aged 15–24 years in Kisumu County. By identifying these gaps, the study seeks to inform the development of more effective, youth-friendly interventions that empower young women to make informed health decisions and confidently access prevention tools such as PrEP and PEP.

Healthcare providers and youth-friendly clinics will benefit from the findings by gaining insights into existing knowledge and service delivery gaps, enabling them to improve counseling approaches and engagement with young women. Policymakers at both county and national levels will be equipped with data-driven evidence to refine HIV prevention strategies and optimize resource allocation within established frameworks like NASCOP and National AIDS Control Council (NACC).

Non-governmental organizations (NGOs) and community-based organizations (CBOs) focused on HIV prevention and youth empowerment will be better positioned to strengthen their programs, ensuring interventions effectively address the actual needs of the target population. Additionally, this research will contribute to the academic knowledge base on HIV prevention in Sub-Saharan Africa, especially within resource-limited settings.

Finally, parents and guardians will indirectly benefit by gaining a clearer understanding of the challenges their children face, enabling them to offer more informed support and engage in meaningful conversations about sexual and reproductive health.

1.8 Scope of the Study

The geographical scope of this study is confined to Kisumu County, with a specific focus on female youth aged 15 to 24 years residing in Kisumu East Sub-County, an area with persistently high HIV prevalence and significant youth representation. The study limits its conceptual scope to HIV prevention strategies that are within the control of individuals, namely behavioral (such as abstinence, condom use) and biomedical (such as PrEP and PEP) interventions, while excluding structural strategies like policy and economic factors, which fall outside the scope of this research. The temporal scope is limited to the period of data collection; therefore, findings may not reflect long-term changes in knowledge or behavior beyond the study timeframe.

1.9 Assumptions of the Study

This study assumes that existing data on HIV knowledge levels in Kisumu County—drawn from prior research, demographic surveys, and government reports—are generally accurate and reflective of the current context, though some variation over time or among subpopulations may exist. It is also assumed that the HIV prevention methods under investigation, such as condoms, HIV testing services, PrEP, and PEP, are officially available and broadly accessible to the study population, recognizing that practical access may vary. Furthermore, the study assumes that participants will respond honestly and accurately to survey and interview questions, particularly those concerning sensitive issues such as sexual behavior and HIV prevention, while acknowledging the potential influence of social desirability bias. These assumptions underpin the design of the study tools and

the interpretation of findings, particularly in examining how HIV knowledge translates into preventive practices among female youth aged 15–24 years.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This study examines the influence of HIV knowledge on prevention practices among female youth aged 15 to 24 years in Kisumu East Sub-County, Kisumu County, Kenya. Understanding the relationship between knowledge and behavior is critical in addressing the persistent HIV epidemic among adolescent girls and young women (AGYW) in this region, where prevalence remains disproportionately high. The first section of this chapter presents the theoretical framework of this study, focusing on the Information-Motivation-Behavioral Skills (IMB) model as the framework for understanding health-related behavior change. The IMB model provides a comprehensive approach to explaining how individuals' knowledge, motivation, and behavioral skills interact to influence their decisions and actions regarding HIV prevention

Following this, the chapter reviews relevant literature on key themes aligned with the study objectives. These include existing knowledge on HIV prevention strategies among female youth, factors influencing the adoption of HIV preventive behaviors, and the documented impact of HIV knowledge on actual prevention practices. The review integrates global, African, and Kenyan studies to contextualize the findings and highlight gaps in knowledge, particularly within Kisumu County. Finally, the chapter concludes by presenting a conceptual framework that visually summarizes the key variables and hypothesized relationships guiding this study, grounded in the IMB model and informed by empirical evidence.

2.2 Theoretical Framework

The theoretical framework used in the study is from the Information-Motivation-Behavioral Skills (IMB) model which was first proposed by Fisher and Fisher in 1992. It is a general social psychological framework for understanding and promoting health-related behavior (Fisher & Fisher, 1992). It states that three constructs are essential for behavior change, which includes accurate information, sufficient motivation and the behavioral skills necessary to perform the behavior (Fisher & Fisher, 1992). The extent to which an individual possesses correct information about a behavior, is motivated to act on it, and has the required behavioral skills determines their likelihood of initiating and maintaining health-promoting behaviors and experiencing positive health outcomes.

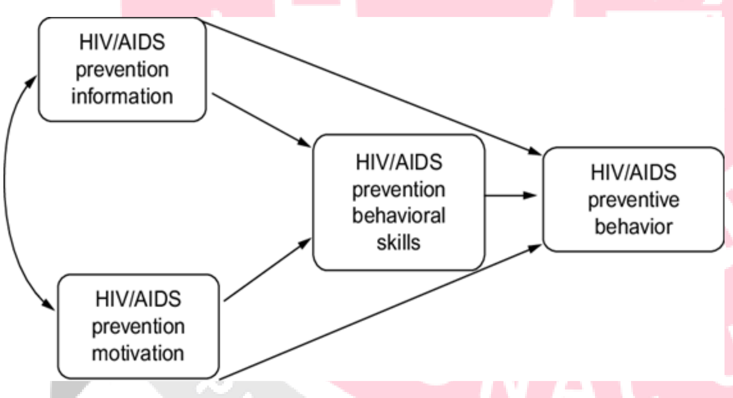

Figure 2.1: The IMB Model

Source: Fisher & Fisher, 1992

According to the model, information serves as the foundational step towards achieving the desired health behavior. It encompasses knowledge related to the desired behavior, including personal beliefs and myths that influence decision-making processes (Fisher et al., 2003). In this study, information included knowledge of HIV transmission modes, recognition of HIV symptoms, and understanding of HIV prevention methods.

Motivation derives from both intrinsic and extrinsic sources, such as personal beliefs, attitudes, and values toward HIV, as well as social influences from peers, family, schools, and the broader community. This study assumed that individuals who are well-informed and motivated are more likely to demonstrate behavioral skills such as assertiveness, problem-solving ability and self-control. Motivation is shaped by beliefs about intervention outcomes, attitudes toward the behavior, and perceived social support for engaging in preventive practices (Fisher et al., 2003).

Behavioral skills, according to the model, they depend on an individual's self-efficacy and objective ability to perform the behavior (Fisher et al., 2003). This study examined behavioral skills including non-acceptance of risky behaviors, assertiveness, problem-solving skills, and self-control.

The IMB model has been applied in various contexts. For example, in a study done by McCuistian et al., (2021) in California, they delivered video-based HIV and substance use counseling services to young adults aged 18-29, grounded in the IMB framework. Participants received psychoeducation on HIV, antiretroviral therapy (ART) adherence and substance use, with motivation enhanced through goal setting and text reminders. Problem-solving therapy supported behavioral skill development. Four months post-intervention, participants showed improvements in ART adherence, HIV knowledge, mental health symptoms and reduced stigma related to mental health and substance use (McCuistian et al., 2021).

Similarly, in a highly mobile fishing community in Uganda, community health workers (CHWs) facilitated behavior change by providing HIV prevention and treatment

information while nurturing personal and social motivation. The study concluded that CHWs play a pivotal role in promoting the use of PrEP, condoms, and ART, and in facilitating healthcare access (Pollard et al., 2022). Research highlights the interdependent and symbiotic relationship among the IMB constructs, emphasizing that their combined influence is critical for the model's success in health behavior interventions (Wells et al., 2021).

The IMB model was selected to guide this study among adolescent girls and young women (AGYW) in Kisumu County because it comprehensively describes how relevant information, motivation (both personal and social) and behavioral skills influence behavior change. The research questions and data collection tools were designed to assess these IMB constructs as they relate to HIV preventive behaviors among AGYW aged 15–24 years in Kisumu County. This study was based on the model's assumption that the adoption of recommended HIV risk-reduction behaviors depends on an individuals' information about HIV transmission and prevention, their motivation to engage in risk-reducing behaviors, and their behavioral skills to effectively perform those behaviors (Fisher & Fisher, 1992).

2.3 Review of Related and Empirical Literature

2.3.1 Knowledge of HIV

The first objective of this study was to determine the level of HIV knowledge among female youth aged 15–24 years in Kisumu County. This objective is directly informed by the Information component of the Information-Motivation-Behavioral Skills (IMB) model, which proposes that accurate knowledge is a foundational prerequisite for health behavior

change (Fisher & Fisher, 1992). Understanding existing knowledge levels is therefore critical to identifying gaps that may hinder HIV preventive behaviors in this population.

In 2001, the United Nations General Assembly Special Session on HIV/AIDS set a global target that by 2010, 95% of youth aged 15–24 would have comprehensive knowledge of HIV/AIDS (UNAIDS, 2015). Comprehensive knowledge includes understanding HIV transmission routes and the ability to reject common local misconceptions, such as transmission through mosquito bites, witchcraft, or sharing food with HIV-positive persons (KDHS, 2022; Son et al., 2020). Population-based surveys such as Demographic and Health Surveys (DHS) and AIDS Indicator Surveys (AIS), conducted every five years in low- and middle-income countries, provide estimates of such knowledge, focusing on core questions like consistent condom use, faithfulness to an uninfected partner, and rejecting myths (KDHS, 2022).

A multi-level analysis using DHS data from 19 Sub-Saharan African countries between 2015 and 2020 found that comprehensive HIV knowledge averaged 38.54% (95% CI: 38.32, 38.75), with wide variation between countries, ranging from 10.3% in Benin to 66.38% in Rwanda with knowledge being generally higher in Eastern Africa (Teshale et al., 2022). However, numerous studies highlight that comprehensive knowledge remains low among adolescent girls and young women in Sub-Saharan Africa. For example, Tsegaw et al. (2024) found that only 27.1% of adolescent females in Gambia could correctly answer all five standard DHS questions. Similarly, Kene et al. (2021) reported that just 34% of Ethiopian university students had comprehensive HIV knowledge despite widespread general awareness. In a cross-sectional study in Nigeria among secondary school girls, Orji et al. (2025) found that 38% of female secondary school students had

comprehensive knowledge but with prevalent misconceptions about transmission and prevention.

Urban-rural disparities are notable. Estifanos et al. (2021) observed that rural Ugandan youth had significantly lower HIV knowledge than their urban counterparts, reflecting inequities in sexual health education access. This pattern aligns with socio-economic and infrastructural divides present in Kenya and specifically in Kisumu County, where many female youths live in informal settlements or rural areas with limited access to health education outreach (Nzelu et al., 2024). A systematic review by Oppong Asante & Oti-Boadi (2013) further emphasized that females, youth with lower educational attainment and those in rural settings consistently have lower comprehensive HIV knowledge, which is a characteristic representation of the marginalized groups in Kisumu East Sub-County.

Sources of HIV information influence knowledge quality and accuracy. Beebwa et al. (2021), in a school-based study of 12-19-year-olds in Southwestern Uganda, found schools, healthcare workers and media to be major sources, but peer networks, though common, often provided inaccurate or incomplete information. This finding resonates with many households, where cultural norms and stigma may limit parent-child communication and reduce healthcare engagement, creating gaps in accurate knowledge dissemination (Beebwa et al., 2021). Uganda's Ministry of Health has implemented structured peer-education programs (e.g., Straight Talk package) to improve messaging quality, an approach that could be adapted in Kenya.

Media exposure (television, radio, internet) plays a significant role in HIV knowledge. Cross-sectional studies from Nigeria and Rwanda on the female youths reveal that media

access correlates with higher HIV knowledge but does not consistently translate into preventive behaviors such as HIV testing (Fana, 2020; Kawuki et al., 2023). For example, a 2023 survey in Osun State, Nigeria, found 57.6% of secondary students aged 15–24 had comprehensive knowledge, yet only 20.6% had ever tested for HIV despite 80.6% showing positive attitudes toward screening (Idowu et al., 2023). In Rwanda, 53.6% of adolescent girls aged 15–19 had comprehensive knowledge, with better knowledge associated with higher education, mobile phone use and prior HIV testing, however, regional disparities persisted (Kawuki et al., 2023). These findings indicate that while media and education improve HIV knowledge, gaps remain between knowledge and action.

Parent-adolescent communication, although less frequently cited as an information source today, has demonstrated protective effects on sexual health outcomes (Habib et al., 2024) However, Beebwa et al. (2021) noted that such discussions are often indirect or avoided in conservative or religious households, indicating an underutilized opportunity for intervention.

Methodologically, most studies on HIV knowledge among youth, including this one, employ cross-sectional survey designs (Bojo et al., 2025; Kamire et al., 2022). These designs are effective for estimating prevalence and identifying associations but cannot establish causality. They are also vulnerable to social desirability and recall biases, particularly on sensitive topics like HIV and sexuality (Doku, 2012; Oppong Asante & Oti-Boadi, 2013). The commonly used five-question metric to assess "comprehensive HIV knowledge" has been criticized for oversimplifying the complex and contextual nature of HIV literacy (Tarkang et al., 2023). Additionally, most large-scale surveys lack qualitative depth; for example, Ciaranello et al., (2011) provided insights into how stigma and gender

norms shapes HIV understanding in India, but such context is typically missing from national datasets.

This study utilized a cross-sectional design, aligning methodologically with existing literature and facilitating comparison with national and regional data. It also focused on marginalized populations such as out-of-school youth and residents of informal settlements in Kisumu County, groups often underrepresented in DHS datasets. Moreover, this study incorporated additional variables like peer influence and perceptions of healthcare services, elements frequently missing from national surveys, to provide a more nuanced understanding of the information, motivation, and behavioral skills factors influencing HIV prevention among female youth.

2.3.2 HIV Prevention Strategies

The second objective of this study was to investigate the HIV prevention practices among female youth aged 15–24 years in Kisumu County. HIV prevention strategies are broadly categorized into behavioral, biomedical, and structural approaches (National HIV Curriculum, 2025). Behavioral strategies aim to influence knowledge, attitudes, and perceived risks of HIV infection while providing motivation and skills needed to change HIV risk behaviors (National HIV Curriculum, 2025). These include delaying sexual debut, reducing the number of sexual partners, and promoting consistent condom use (National HIV Curriculum, 2025). Harm reduction components address stigma reduction, disclosure of HIV status to sexual partners, and antiretroviral treatment adherence (County Health Rankings & roadmaps, 2025). Other behavioral strategies encompass promoting HIV counseling and testing (HCT), diagnosis and treatment of sexually transmitted infections

(STIs), antenatal care services, and prevention of mother-to-child transmission (PMTCT) (Kameni et al., 2022; UNAIDS, 2023).

The ABC approach, Abstinence, be faithful and condom use, is a well-known behavioral strategy. Abstinence refers to never having had sexual intercourse or secondary abstinence where individuals cease sexual activity after initiation. Faithfulness involves lifelong or serial monogamy, fidelity within polygamous marriages, or an overall reduction in casual sexual partnerships. Condom use entails consistent and correct use among sexually active individuals (ABC Complementary Approaches for HIV/AIDS Prevention: A Literature Review, 2021).

The ABC approach gained attention following Uganda's reduction of HIV prevalence from 15% in the early 1990s to 5% in 2001 (Murphy et al., 2006). This conclusion was based on analysis of government reports, DHS surveys, and prior studies, though it lacked direct primary data collection and rigorous analysis (Murphy et al., 2006). The approach faces criticism regarding applicability elsewhere due to limited female autonomy over sexual decisions, partner violence and limited control over condom use and partner fidelity (Poku, 2023). Abstinence-only education remains controversial amid advances in biomedical prevention (Aloni et al., 2019).

In Kenya, Lillie et al. (2010) conducted a cross-sectional survey among 13- to 19-year-old secondary school youth, revealing that while nearly 50% understood "abstinence," only 20% comprehended "being faithful," and just 7% correctly understood "consistent condom use." This study highlights significant gaps in ABC knowledge, especially concerning fidelity and condom-related concepts. Among adults, Musili (2021) conducted a cross-

sectional mixed-methods study in Kiambu County and found that although Christian churchgoers endorsed abstinence and fidelity, these attitudes did not reliably translate into behavior, demonstrating a gap between moral beliefs and practice.

Similarly, Poku (2023) conducted a cross-sectional descriptive study in Ghana with 362 survey participants and 52 interviewees, identifying that urban respondents had greater knowledge and practice of ABC than rural counterparts. "Being faithful" remained poorly understood across both contexts and condom use was particularly low in rural areas. Methodologically, these studies rely mainly on cross-sectional designs with purposive or convenience sampling, limiting causal inference and generalizability. Self-reported data also introduces social desirability bias. Moreover, some studies do not clearly define what constitutes adequate ABC knowledge or practice, impacting interpretability (Poku, 2023).

Despite ABC's prominence, these findings suggest its effectiveness is shaped by complex sociocultural factors, highlighting the need for culturally tailored interventions and comprehensive education beyond simple messaging. Biomedical prevention strategies have expanded significantly beyond traditional condom use and voluntary medical male circumcision (VMMC) to include antiretroviral (ARV)-based methods such as PMTCT, post-exposure prophylaxis (PEP), and pre-exposure prophylaxis (PrEP) (Generating Demand for HIV Biomedical Prevention in the Era of Choice, 2022). These interventions require high awareness, motivation, and adherence (Adekola, 2020).

In Kisumu County, biomedical prevention faces unique challenges. A 2024 focus group study involving 120 adolescents aged 15-19 found widespread confusion between PrEP, PEP, and emergency contraception, compounded by stigma and financial barriers (Miller

et al., 2024). Additionally, a 2021 qualitative study on PrEP uptake among adolescent girls and young women aged 14-24 in Kisumu documented stigma-related fears (being labeled promiscuous or HIV-positive), logistical obstacles and mistrust of healthcare providers as significant deterrents (Were, 2019). However, this study's small, purposive sample limits its generalizability.

Conversely, the SEARCH trial (2023–2024), a cluster-randomized controlled trial in rural Kenya and Uganda, tested a community-based, client-centered HIV prevention model offering choice between PrEP and PEP, supported by community health workers (CHWs) (Kakande et al., 2023). The intervention areas demonstrated a substantial increase in biomedical prevention coverage to 28%, compared to 0.5% in control sites, providing strong causal evidence of the effectiveness of integrated, community-driven approaches (Kakande et al., 2023). However, concerns remain about sustainability beyond 48 weeks and reliance on self-reported adherence. The non-representative sampling further tempers broad applicability.

Structural strategies focus on creating enabling environments by addressing social, political, cultural, economic and legal factors that influence HIV prevention (UNAIDS, 2023). Examples include laws protecting human rights, stigma and discrimination reduction interventions, gender-based violence prevention, economic empowerment to mitigate poverty and unemployment, and efforts to address civil unrest and underdevelopment (UNAIDS, 2021). UNAIDS (2023) emphasizes that effective HIV prevention requires a synergistic approach integrating behavioral, biomedical, and structural strategies, as focusing on a single approach is insufficient to curb infection rates.

2.3.3 How HIV Knowledge Affects Prevention Practices

Building upon the detailed exploration of HIV prevention strategies among female youth, it is essential to understand how HIV knowledge influences the adoption of these strategies. While behavioral, biomedical, and structural interventions offer a comprehensive framework for prevention, the effectiveness of these approaches is fundamentally anchored in the level of accurate knowledge possessed by the youth. The preceding sections highlight the complexity of prevention efforts and sociocultural barriers. This section covering objective three delves deeper into how knowledge acts as both a facilitator and a barrier in translating prevention strategies into practice among young women aged 15 to 24 years.

Behavior change remains one of the most effective strategies to halt the spread of HIV/AIDS in Africa, particularly because the disease is incurable and no vaccine currently exists (Barney & Trussell, 1996). In Kenya, after HIV/AIDS was declared a national disaster in 1999, the National AIDS and STI Control Program (NASCOP) initiated concerted efforts aimed at increasing HIV knowledge among the population with the goal of influencing risk behaviors and ultimately reducing new infections. Knowledge plays a pivotal role not only in understanding how the virus is transmitted but also in improving the quality of life for people living with HIV and reducing the stigma that surrounds the condition (Aloni et al., 2019). This knowledge influences crucial decisions such as the uptake of HIV testing services, consistent condom use and the adoption of safer sexual practices (Cheruiyot et al., 2019).

Several empirical studies have investigated the relationship between HIV knowledge and prevention behaviors, particularly among youth. For instance, Akello et al. (2023)

conducted a cross-sectional survey of 260 secondary school students aged 13 to 19 years in Homa Bay County, a region with high HIV prevalence. Their findings demonstrated that students possessing moderate to high HIV knowledge exhibited fewer risky sexual behaviors compared to their counterparts with lower knowledge levels. Additionally, the study revealed that students who held negative attitudes towards HIV/AIDS were four times more likely to engage in high-risk sexual activities. Although this study benefits from a reasonably large sample size and robust survey methods, it is limited by its reliance on self-reported behaviors and a cross-sectional design, which precludes definitive causal conclusions.

Complementing these findings, a comprehensive systematic review by Endalamaw et al. (2024) examined global research on HIV knowledge and attitudes, concluding that women with limited HIV knowledge were more likely to exhibit stigmatizing attitudes toward people living with HIV. This review strengthens the evidence base by synthesizing multiple studies, although heterogeneity among primary studies and potential publication biases reduce the conclusiveness of the findings. In a more qualitative approach, Poku (2023) explored youth perceptions in Ghana and found that many young people mistakenly believe that HIV transmission occurs exclusively through sexual intercourse. This misconception leads to an overreliance on abstinence as a prevention strategy, while neglecting other important transmission routes and prevention methods. The small and non-representative sample used in Poku's study limits the generalizability of these results but provides valuable contextual insights.

Further supporting the link between knowledge and prevention, Onoyase (2021) analyzed cross-national data and found that youth with better HIV knowledge are more likely to

engage in protective behaviors such as HIV testing and condom use, particularly in extramarital relationships. Similarly, analyses of Demographic and Health Surveys (DHS) by Frimpong et al. (2022) and Izudi et al. (2022) confirmed that comprehensive knowledge of HIV/AIDS correlates positively with higher uptake of HIV testing services, increased condom use and reduced incidence of sexually transmitted infections. These studies leverage large, representative datasets, lending strength to their findings. However, like many observational studies, they are limited by their cross-sectional design and reliance on self-reported data, which can introduce social desirability and recall biases.

Conversely, studies have consistently linked poor HIV knowledge with increased engagement in risky sexual behaviors. Peng et al. (2022) and Worede et al. (2022) found that women with limited HIV knowledge were more likely to inconsistently use condoms and disregard their partners' sexual risks, even within supposedly monogamous relationships. In Sierra Leone and South Africa, Osborne et al. (2024) and Dendup et al. (2022) observed associations between low HIV knowledge and earlier sexual debut as well as condomless sex among young people. While these studies highlight critical behavioral risks, their cross-sectional nature and potential for recall bias restrict causal interpretations.

Overall, the literature strongly suggests that comprehensive HIV knowledge is integral to effective HIV prevention among female youth in Kenya and comparable settings. However, despite the established association between knowledge and safer practices, significant gaps in understanding and persistent stigma remain major barriers to the adoption of effective prevention strategies. Methodological limitations common across studies, such as reliance on self-reported data and cross-sectional designs, indicate a need for more longitudinal and intervention-based research to better elucidate causality and inform programmatic

responses. Nonetheless, improving HIV knowledge tailored to the sociocultural context of Kisumu County is essential for enhancing prevention efforts among female youth.

2.3.4 Challenges to HIV Protection Practices

Despite the availability of various HIV prevention approaches, female youth aged 15 to 24 in Kisumu County encounter multifaceted challenges that undermine their ability to effectively acquire HIV knowledge and adopt prevention strategies. These barriers span across the behavioral, biomedical, perceptual, and structural domains, deeply intertwined with sociocultural norms and systemic inequalities and they are explored by objective number four of tis study.

Behavioral strategies, often framed within the ABC (Abstinence, be faithful, Condom use) model, encounter significant practical limitations. Abstinence, while theoretically 100% effective in preventing HIV transmission, proves difficult to maintain consistently in real-life contexts due to biological factors such as hormonal changes during puberty that heighten sexual desire, alongside cultural undervaluation of abstinence (ABC Complementary Approaches for HIV/AIDS Prevention: A Literature Review, 2021). Empirical data from Kenya and other African countries confirm early sexual debut is common, averaging around 15 to 16 years (Osborne et al., 2024; Sing'oei et al., 2023). This early initiation correlates with lower HIV knowledge, reduced socioeconomic status, limited media exposure, contraception use, and early childbirth (Kiiru et al., 2024). Protective factors fostering abstinence include school attendance, parental communication, religious involvement, and household social support, as shown in a longitudinal Ghanaian study (Alhassan & Dodoo, 2020). Although cross-sectional designs dominate much of the

literature, limiting causal inference, these findings consistently highlight biological, social, and economic pressures that complicate adherence to abstinence among female youth.

The notion of being “faithful” similarly encounters conceptual ambiguity that hampers its preventive potential. Studies from Uganda and Nigeria reveal divergent interpretations between genders, with men equating faithfulness to sexual exclusivity from women, while women view faithfulness as the ongoing material support despite their partners’ infidelity (Mayanja et al., 2022; Poku, 2023). This discordance reflects entrenched gender power imbalances that disadvantage young women, who may find themselves unable to negotiate safer sexual practices or reduce partner numbers effectively. The prevalence of serial monogamy further undermines the objective of lifetime partner reduction promoted by the ABC approach. While qualitative methods provide rich insight into these gendered dynamics, their limited sample sizes and cultural specificity caution against broad generalization.

Condom use, a cornerstone of HIV prevention, is burdened with stigma and gendered challenges. In many Sub-Saharan contexts, condom negotiation by women is interpreted as mistrust or accusations of infidelity, discouraging open dialogue and consistent use, especially within monogamous relationships where condom use may threaten intimacy or imply partner promiscuity (Elshiekh et al., 2020; Peng et al., 2022). Additional barriers include partner resistance, condom unavailability and desires for pregnancy, which further reduce uptake (Gamarel et al., 2020). These findings, predominantly derived from cross-sectional surveys, reveal the complex interplay between interpersonal trust, gender roles, and prevention behaviors, though social desirability bias may underreport stigma.

Biomedical HIV prevention strategies, including pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP), represent promising advances yet face significant knowledge and access gaps among female youth. In Kenya, qualitative research reveals confusion between PrEP/PEP and emergency contraception, as well as misconceptions that daily pill use equates to HIV treatment rather than prevention (Miller et al., 2024). Male adolescents show greater awareness but remain reluctant to access services due to stigma and discomfort discussing sexual health with providers (Miller et al., 2024). Such qualitative insights, while informative, are limited by their scope and do not fully capture wider population trends. Furthermore, fear of judgment and abandonment hinders disclosure of HIV status, contributing to unprotected intercourse among youth (Okorie et al., 2023). Substance use compounds these risks. Female youth engaging in drug and alcohol use are significantly more likely to partake in unprotected sex with unknown-status or older partners, increasing vulnerability to HIV (Uye et al., 2023).

Risk perception emerges as a crucial yet problematic factor influencing HIV prevention behaviors. Studies indicate that higher risk perception correlates with delayed sexual debut, increased testing uptake, and acceptance of biomedical prevention (Hill et al., 2020; Kamire et al., 2022). However, adolescent girls frequently underestimate their HIV risk due to lack of visible symptoms, peer norms, youthfulness and HIV-negative status of parents (Muravha et al., 2021). This disconnect between perceived and actual risk limits motivation to engage consistently in preventive behaviors, particularly among those who may be at elevated risk due to sexual networks or behaviors.

Structural and systemic barriers further constrain female youth's access to HIV prevention knowledge and services. Socioeconomic vulnerabilities, including involvement in

transactional sex and age-disparate relationships, are associated with higher rates of HIV, sexually transmitted infections, early pregnancy and multiple sexual partners (George et al., 2022). Health service delivery challenges such as confidentiality concerns, long wait times and negative healthcare provider attitudes deter young women from seeking preventive care (Dzinamarira & Moyo, 2024). These systemic issues perpetuate inequities and stigma, creating environments where youth are reluctant or unable to obtain accurate information and biomedical interventions.

In summary, the challenges to HIV knowledge and prevention among female youth in Kisumu County are deeply embedded within biological, cultural, gendered, perceptual, and structural contexts. While knowledge is foundational, its translation into behavior is hindered by social norms, power dynamics, misconceptions, stigma, and service barriers. The predominance of cross-sectional study designs in literature limits causal interpretations and underscores the need for more longitudinal and mixed-methods research to fully unravel and address these complex challenges. Interventions must therefore be multi-dimensional, targeting not only knowledge deficits but also gender equity, stigma reduction, health system strengthening and socio-economic empowerment to effectively reduce HIV risk in this vulnerable population.

2.4 Identification of Knowledge Gap

Despite numerous studies on HIV prevention in sub-Saharan Africa, significant gaps remain in localized, age and gender specific data on how knowledge translates into prevention practices among adolescent girls and young women (AGYW). Most research separately addresses behavioral or biomedical strategies, with few integrating these

alongside structural and social determinants. Existing evidence often relies on national or regional data, limiting relevance to uniquely high-prevalent areas like Kisumu County.

Previous studies highlight knowledge gaps, stigma, and service delivery challenges but rarely explore their interaction within Kisumu's unique socio-cultural context. Methodological limitations such as non-representative sampling and reliance on self-reports further constrain understanding. Systemic barriers, including healthcare worker attitudes, access to services, and gender dynamics, are under-examined in relation to prevention uptake.

Moreover, little research captures the diverse experiences of AGYW or considers influences like male partners, digital health tools, or policy environments. Longitudinal data are also lacking, hindering assessment of behavior change over time.

This study aims to address these gaps by providing context-specific, cross-sectional evidence on HIV knowledge and prevention practices among female youth in Kisumu, integrating behavioral, biomedical any emerging relevant structural determinants.

2.5 Conceptual Framework

The conceptual framework, developed specifically for this study, illustrates the relationship between independent, dependent and intervening variables. The independent variable is HIV knowledge, which encompasses understanding of HIV transmission modes and symptoms, as well as awareness of prevention methods such as partner reduction, consistent condom use, HIV testing, and availability and use of PEP/PrEP.

The dependent variable is HIV prevention practices, including behavioral strategies outlined in the ABC approach (abstinence, be faithful, condom use), HIV counseling and

testing, STI screening and treatment, and sexual partner reduction. Biomedical strategies, such as use of PEP and PrEP, are also part of prevention practices.

Intervening variables include factors that influence the relationship between knowledge and prevention practices, such as drug and substance use, economic factors like transactional sex, characteristics of sexual partners, HIV risk perception, and age.

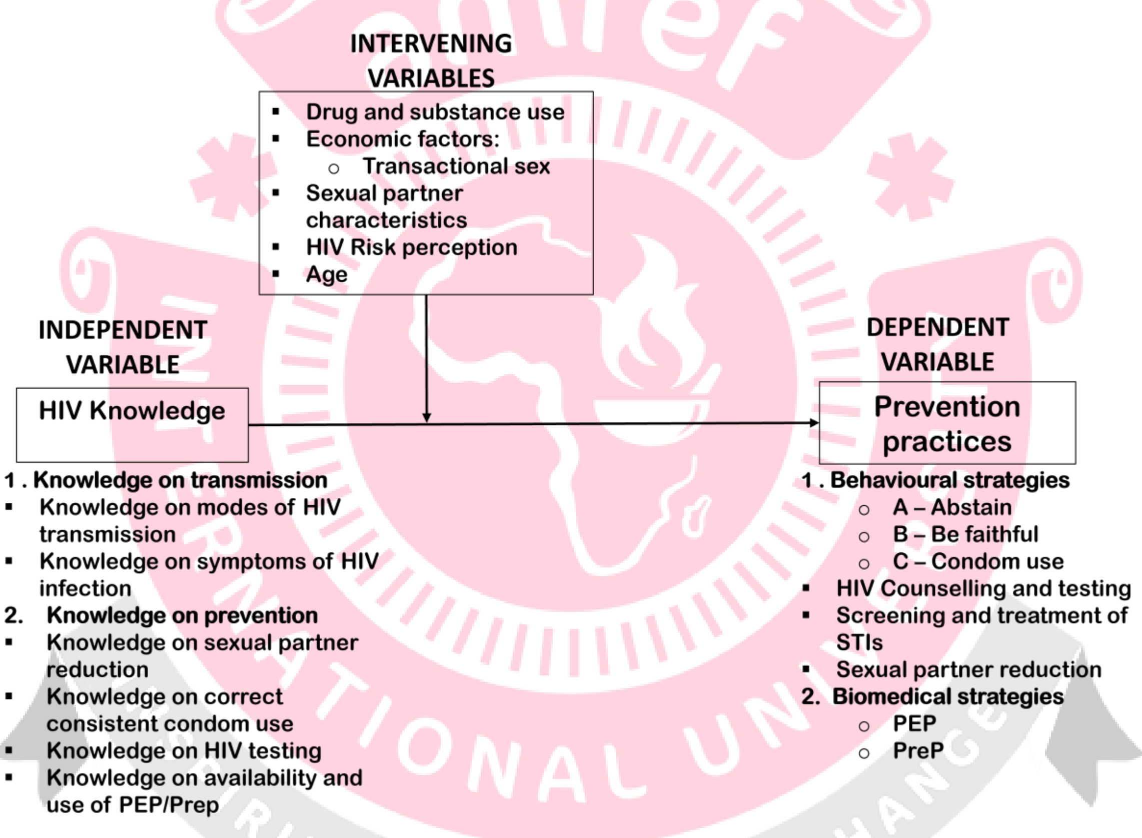

Figure 2.2 Conceptual framework

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter outlines the methodology used in the study, which was conducted in Kisumu East Sub-County in April 2024. It provides a detailed description of the study area and the rationale for selecting Kisumu East Sub-County as elaborated in section 3.3. The chapter also defines the study population and outlines the inclusion and exclusion criteria for participant selection. Additionally, it describes the instruments and methods used for data collection, including the procedures for pretesting the tools. The process of obtaining informed consent and assent is also discussed. Furthermore, the chapter presents the approaches to qualitative and quantitative data analysis and presentation. It concludes by addressing the ethical considerations, the plan for disseminating findings, and the constraints and limitations encountered during the study.

3.2 Study Design

This study employed a cross-sectional design. The rationale for using a cross-sectional approach was that it allowed for the assessment of both exposure variables (such as HIV knowledge) and outcome variables (such as HIV prevention practices) simultaneously at a single point in time, which was cost-effective and time efficient. A mixed-methods approach was adopted to address the knowledge-behavior gap identified in previous literature. It incorporated both quantitative and qualitative techniques. The qualitative component complemented the quantitative data by providing deeper insights, particularly in revealing barriers and contextual influences on HIV preventive behavior. Data collection was carried out in the month of April 2024 and involved the use of structured questionnaires

for the quantitative component and key informant interview guides and in-depth interviews for the qualitative component.

3.3 Area Under Study

The study was conducted in Kisumu East Sub-County, located within Kisumu County, one of the 47 counties in Kenya. Kisumu County covers an area of 2,576.5 km² and lies between longitudes 33°20'E and 35°20'E and latitudes 0°20' South and 0°50' South. It borders Nandi and Kericho counties to the east, Homa Bay to the south, Siaya to the west, and Vihiga to the northwest (*Kisumu County Environment Policy*, 2019). According to the 2019 Kenya Population and Housing Census, Kisumu County had a total population of 1,155,574 and a population density of 550 people per km² (KNBS, 2022).

Kisumu County is divided into seven sub-counties: Kisumu East, Nyando, Kisumu West, Seme, Kisumu Central, Muhoroni, and Nyakach (*Kisumu County Environment Policy*, 2019). Kisumu East Sub-County covers an area of 141 km² and is the most populated of the seven sub-counties, with approximately 220,997 residents (The Kenya Population and Housing Census, 2019). It features both urban and rural settings. The sub-county comprises five wards—Central Kolwa, East Kolwa, Manyatta, Nyalenda, and Kajulu - and ten village units as shown in Table 3.1 (Establishment of Village Units in Kisumu County, 2019). Notably, Nyalenda A and Manyatta B are among the five informal settlements in Kisumu County and as of the year 2018, these informal settlements were characterized by a HIV prevalence of up to 18.4% and a poverty rate of approximately 63% (Kisumu County Integrated Development Plan II, 2018-2022, 2018).

The 2019 Kenya Population and Housing Census (2019) approximated the females to be contributing to 51% of the total population and adolescent girls and young women (AGYW) aged 15–24 years in Kisumu East Sub County were 14,112 (KNBS, 2022). According to the National AIDS Control Council (2018), the national HIV prevalence was 3.3% (2.16% among males and 4.46% among females). Kisumu County had the highest prevalence at 11.7% (8.6% in males and 14.9% in females). Of the 16,752 new infections nationally, 1,210 new infections were reported in Kisumu County (484 males and 725 females). The county also recorded the highest number of HIV-related mortalities in 2023, with 1,761 out of 20,480 HIV related deaths nationally (HIV in Kenya by County, 2023).

Table 3.1 Kisumu East Sub County Wards and village Units

Adapted from (Establishment of Village Units in Kisumu County, 2019)

Ward	**Village Units**
Kajulu	Kajulu East
	Kajulu West
Central Kolwa	Kasule
	Nyalunya
East Kolwa	Kawese
	Chiga
Manyatta B	Kuoyo
	Kanyakwar
Nyalenda A	Dago
	Kowino

3.4 Study Population

The study consisted of female youth between 15-24 years of age, residing in Kisumu East Sub County at the time of the study.

3.4.1 Inclusion Criteria

Potential participants had to have these features for them to be incorporated in the study.

i. Female youth, 15-24 years of age who were residing Kisumu East Sub County at the time of the study.
ii. Female youth, 15-24 years of age able to communicate using any of the three languages used in the study: Kiswahili, English or Dholuo.
iii. Female youth, 15-24 years of age who must be physically available for the duration of time allocated to complete the interview.
iv. Female youth, 15-24 years of age who are willing to provide informed consent (18-24 years) or assent with guardian consent (15-17 years).

3.4.2 Exclusion Criteria

i. Female youth aged 15-24 years who were not physically available for the interview duration.
ii. Female youth aged 15-24 years who were unable to provide informed consent or assent due to cognitive or developmental impairments.

3.5 Sample and Sampling Procedures

Based on the 2019 Kenya Population and Housing Census, Kisumu East Sub- County had an estimated 14,112 adolescent girls and young women (AGYW) aged 15–24 years

(KNBS, 2022). This age group formed the study population. To determine the required sample size, Yamane (1967) simplified formula for calculating sample size from a known population was applied (Yamane, 1967):

Yamane formula was used to calculate the sample size as follows.

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

n = Required sample size from population under study

N =The whole population under study

e =Precision level

n = 14112/ (1 +14,112 $(0.05)^2$)

Sample size = 388.97 rounded up to 389.

10% of the required sample size was added to account for any losses and nonresponses during the study. This came to a total of 429 respondents for the quantitative study.

3.5.1 Sampling Strategy and Justification

Purposive sampling was used to select Kisumu County, guided by deviant case sampling which targets atypical yet information-rich cases (Kisumu County Health Facilities Report, 2022). Kisumu County ranks among the top five counties in national HIV prevalence, with rates up to 3.5 times the national average, and was fourth in new HIV infections among AGYW (NASCOP, 2020; National AIDS Control Council, 2018).

Kisumu East Sub-County was selected using maximum variation purposive sampling due to its demographic diversity and its mix of urban and rural communities (Patton, 1990). It

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also has the largest population of all seven sub-counties in Kisumu County, providing a heterogeneous yet representative context for the study. Additionally, Kisumu East Sub-County includes multiple informal settlements (e.g., Nyalenda A, Manyatta B), which have high HIV prevalence and poverty levels, making it a high-priority area for HIV prevention interventions (Kisumu County Integrated Development Plan II, 2018-2022, 2018).

The study was conducted in all five wards and ten village units within the sub-county. While equal numbers of respondents were allocated per village unit to maintain operational balance, this method did not reflect the actual population size of each unit. The absence of proportional weighting may limit generalizability and is acknowledged as a methodological constraint. The sampling process used a two-stage cluster sampling approach: Stage 1: Major market areas were purposively selected as primary clusters due to their high youth density.

Stage 2: Smaller community units within those markets were then randomly selected. Community Health Volunteers (CHVs) assisted in generating household lists of eligible AGYW. Where more than one eligible participant was present, one was randomly selected using a simple lottery method (drawing lots) to avoid intra-household selection bias. Simple random sampling was used at the household level for feasibility and due to the absence of recent, disaggregated population data per village unit, which limited the application of probability-proportional-to-size methods. Interviews continued until the target number of respondents per ward was reached.

The qualitative component included 25 AGYW, purposively selected across the five wards for in-depth interviews (IDIs). These participants were not part of the quantitative sample

to avoid respondent fatigue and enhance data triangulation. The sample size was guided by data saturation principles.

Five key informants (KIs) were selected from public health facilities within the sub-county. This number was based on service diversity and facility reach. Informants included nurses, clinicians, and HIV Testing and Counselling (HTC) officers from the Comprehensive Care Centre (CCC), Voluntary Counselling and Testing (VCT) services, and the Gender-Based Violence Recovery Centre (GBVRC). As of 2022, Kisumu East Sub-County had 50 health facilities, including 13 Ministry of Health facilities, 1 non-governmental organization facility, 4 faith-based facilities, and 32 privately owned facilities nationally (Kisumu County Health Facilities Report, 2022). Public facilities were selected for this study due to their affordability and accessibility for AGYW. Of the 13 public facilities, five were purposively chosen for their capacity to offer key HIV prevention services such as PrEP, PEP, HIV testing, and GBV support. These included Gita Sub-County Hospital, Chiga Dispensary, Kowino Dispensary, and two additional public facilities serving informal settlements. Key informant interviews were conducted using structured interview guides.

In total, the study engaged 404 AGYW in quantitative survey, 25 AGYW in in-depth interviews and 5 health personnel in key informant interviews across Kisumu East Sub-County.

3.6 Data Collection Instruments

Quantitative data was collected using the structured interviewer-administered questionnaires which were delivered by trained research assistants. The questionnaire and scoring system were adapted from standardized tools, including the Demographic and

Health Survey (DHS) HIV module and Knowledge, Attitudes, and Practices (KAP) frameworks commonly used in HIV research (KDHS, 2022; NASCOP, 2020). To ensure content accuracy and reliability, experts and research supervisors with relevant experience reviewed the tools. The questionnaire was carefully designed and translated to capture information across four key domains: sociodemographic characteristics, knowledge and awareness of HIV, sexual behavior, and perceived barriers to HIV preventive behavior.

The first section focused on basic sociodemographic data such as age, education level, and residence. The second section assessed the participants' knowledge of HIV transmission, prevention and treatment options. The third section explored sexual behavior, while the fourth section addressed challenges or barriers to adopting HIV preventive practices. Both close-ended and open-ended questions were incorporated. Close-ended questions enabled standardized, comparable data across the sample, while open-ended questions - particularly in sections three and four - provided participants with the opportunity to elaborate and offer contextual insights that quantitative data alone might not reveal.

Qualitative data were collected through key informant interviews (KIIs) using semi-structured guides composed of open-ended questions. These interviews involved clinicians, nurses, and HIV Testing and Counselling (HTC) officers purposively selected from health facilities capable of providing HIV prevention services. Facilities included Comprehensive Care Centers (CCCs), Voluntary Counselling and Testing (VCT) sites, and Gender-Based Violence Recovery Centers (GBVRCs). The semi-structured format allowed interviewers to guide discussions while giving informants flexibility to elaborate, facilitating rich data collection on health providers' perspectives regarding HIV prevention strategies,

implementation challenges, and potential improvements to service delivery for adolescent girls and young women in Kisumu East Sub-County.

3.5.2 Study Variables

The independent variable was HIV prevention knowledge, assessed using 16 closed-ended questions with response options of “true,” “false,” or “don’t know.” Each correct answer scored 1 point, while incorrect, “don’t know,” or unanswered questions scored zero. Participants were categorized into low (<8), moderate (8–12), or high (>13) knowledge groups based on total scores.

The dependent variable was HIV prevention practices, measured through responses related to the ABC approach (abstinence, be faithful, condom use), HIV counselling and testing, STI screening and treatment, sexual partner reduction, and use of PEP and PrEP, with these responses considered indicative of correct preventive practices

3.6 Validity and Reliability

The questionnaire and scoring system were adapted from validated tools such as the DHS HIV module and KAP frameworks, widely recognized for HIV research (KDHS, 2022; NASCOP, 2020). Content validity was ensured through expert review by experienced researchers and supervisors familiar with HIV prevention research in the local context. Additionally, pretesting helped refine the tools to enhance clarity, relevance, and appropriateness for the target population, thereby strengthening face validity. Training of research assistants further ensured consistency and reliability in data collection.

3.7 Data Collection Procedures

Five research assistants with prior training in social sciences and research experience were recruited to assist in data collection across the five wards under study. They underwent a one-day training session covering data collection techniques, rapport building with respondents, and confidentiality protocols.

3.7.1 Pretesting

Pretesting was conducted with a purposive sample of 22 individuals aged 15–24 years, representing 5% of the intended sample size. These individuals resided in neighboring sub-counties within Kisumu County, with similar sociodemographic characteristics to the study population. Following informed consent or assent, participants completed the questionnaire and provided feedback on the clarity, length, and comprehensibility of the items. The research team paid close attention to the time taken to complete the questionnaire and noted any skipped or inadequately answered questions. Based on this feedback, necessary adjustments were made to the data collection tools before commencing the main study.

3.7.2 Quantitative Data Collection

A total of 429 respondents (86 per ward) meeting inclusion criteria were approached for participation. After a thorough explanation of the study, written informed consent or assent was obtained, including parental or guardian consent for minors. Research assistants administered the questionnaire, ensuring anonymity by assigning study IDs and excluding any personal identifiers. Each interview lasted approximately 30–45 minutes.

3.7.3 Qualitative Data Collection

Qualitative data was collected through in-depth and key informant interviews. Five key informants -comprising nurses, clinicians, and HTC officers- were purposively selected from facilities capable of providing HIV prevention services, including Gita Sub County Hospital, Chiga Dispensary and Kowino Dispensary. The key informant interview guide was used to facilitate discussions lasting 30–45 minutes. Inclusion criteria required informants to be health professionals involved in HIV prevention, with at least six months of experience at their respective facilities, and willing to participate fully in the interviews.

Separately, 25 respondents aged 15–24 years, distinct from the quantitative sample, participated in in-depth interviews conducted face-to-face by research assistants using a semi-structured guide. These interviews aimed to gain deeper insights into the HIV prevention practices and were audio-recorded with participant consent.

3.8 Data Analysis and Presentation

After data collection, research assistants reviewed the questionnaires for accuracy and completeness. To ensure confidentiality, verified questionnaires were assigned unique identification numbers and securely stored in a password-protected folder accessible only to the principal investigator and lead research assistant. Data was coded and entered in google sheets for analysis.

Audio recordings from the key informant interviews were transcribed verbatim and verified against interview guides. Qualitative data was analyzed manually using a deductive thematic approach based on the study's theoretical framework.

Quantitative data was analyzed using R statistical software version 4.3.1; R Core Team, 2023). Descriptive statistics summarized the sociodemographic characteristics, knowledge scores, HIV risk behaviors and preventive strategies. Categorical variables were presented as frequencies and percentages, while continuous variables were summarized accordingly with means, standard deviations, medians and interquartile ranges. Binary logistic regression was used to estimate associations between predictor variables and HIV prevention service uptake, with results reported as odds ratios (ORs) and 95% confidence intervals (CIs). Appropriate diagnostics were considered to ensure the validity of the logistic regression model. Missing data was handled via listwise deletion, which reduced sample size in some analyses and may have introduced bias. Findings were presented using bar graphs, histograms, and tables.

3.8 Ethical Considerations

School level approval for the research was obtained from the AMREF Ethics and Scientific Review Committee (ESRC) in March 2024, followed by authorization from the National Commission for Science, Technology and Innovation (NACOSTI) (License number NACOSTI/P/24/33903, April 2024). Additional permissions were granted by the County Government of Kisumu, Ministry of Interior (CC/KC/RES/1/3/VOL.6/06, April 2024), Department of Medical Services, Public Health and Sanitation (GN 133 VOL.XVI/239, April 2024), and the Ministry of Education (CDE/KSM/GA/3/24/VOL. VI/22, April 2024). Sub-county, ward, and village administration offices were also notified.

Community sensitization was conducted through community health volunteers. The purpose of the study was clearly explained to potential participants before enrollment.

Written informed consent was obtained from all eligible participants, with assent and parental or guardian consent for minors under 18 years. Participation was voluntary, with the right to withdraw at any time without penalty. To maintain anonymity, no names were recorded on data collection tools. Interviews were conducted at participants' residences or private locations of their choosing to ensure comfort and privacy. All data was handled confidentially and accessible only to authorized study personnel.

3.9 Data Dissemination Plan

Dissemination of findings will be a continuous process, conducted in phases. Feedback will be shared with community health volunteers and key informants via discussion forums and summarized reports. The full study report will be published on the Kisumu County Department of Public Health and Sanitation website for stakeholders and public access. Additionally, results will be submitted for publication in peer-reviewed journals and deposited in the AMIU library to facilitate broader dissemination among researchers and policymakers.

3.10 Study Constraints and Limitations

The study acknowledged potential respondent bias, particularly concerning sensitive questions about sexual behavior, with participants possibly providing socially desirable answers (underreporting risky behaviors and overreporting protective behavior). This was mitigated by conducting interviews in private, encouraging honesty, reassuring anonymity, placing sensitive questions at the end of interviews, and allowing participants to answer certain questions privately. Pretesting the questionnaire and making necessary adjustments further reduced this bias.

Respondents were required to recall past behaviors such as age at sexual debut or condom use, which may have introduced inaccuracies. Therefore, questions were phrased clearly and simply to aid recall, and adequate time was allocated per question.

Other limitations identified included difficulty accessing certain segments of the target population, which may affect the generalizability of findings. This was addressed through rigorous sampling methods and collaboration with grassroots leadership to improve access to hard-to-reach groups.

Language barriers could have influenced participant understanding and willingness to disclose sensitive information. To mitigate this, study materials were translated into local languages, research tools were pretested, and bilingual, culturally competent research assistants facilitated effective communication.

CHAPTER 4: RESULTS

4.1 Introduction

This chapter presents the findings from the cross-sectional study conducted in Kisumu County in April 2024. Quantitative data was analyzed using both descriptive and inferential statistics, while qualitative data was examined through thematic analysis. Of the 429 individuals approached to participate, 404 completed the written questionnaire, resulting in a 94% response rate.

4.2 Socio - Demographic Characteristics of the Respondents

This section describes the demographic characteristics of the 404 respondents who participated in the study. The average age of participants was 18 years, with the most frequently reported age being 15 years. More than half of the respondents (87.4%) were unmarried and 72% had attained secondary education. Additionally, 70.4% lived with both parents and 82.7% were economically dependent on their families. These demographic factors provide important context for understanding the subsequent analysis of HIV knowledge and prevention behaviors among female youth in Kisumu County as shown in Table 4.1 below.

Table 4.1Socio- demographic characteristics of the respondents

Variable	Values	Frequency N=404, n (%)
Age	Under 18 (15-17 years) Above 18 (18-24 years)	208 (51.5) 196 (48.5)
Marital status	Not married Married Separated	353 (87.4) 48 (11.9) 3 (0.7)
Level of education	Secondary education Primary education Tertiary education No education	291 (72.0) 55 (13.6) 50 (12.4) 8 (2.0)
Family structure	Both parents Single parents Extended family Other	284 (70.4) 87 (21.5) 30 (7.4) 3 (0.7)
Economic status	Dependent on parents Financially independent Dependent on spouse Dependent on a sponsor Other sources	334 (82.7) 35 (8.6) 20 (5.0) 10 (2.5) 5 (1.2)

4.3 Analysis on the Knowledge of HIV

Objective 1: To determine the level of HIV knowledge among female youth between 15-24 years in Kisumu County.

Knowledge about transmission and prevention

To assess HIV prevention knowledge, a set of 16 closed-ended questions with responses of "true," "false," or "don't know" were included. Each correct answer was scored as 1, while incorrect, "don't know," or unanswered questions were scored as 0. The overall results, showing the percentage of respondents who answered each question correctly, are presented in Table 4.2. Table 4.3 below represents the HIV knowledge category scores. Overall, respondents had a mean score of (10.75 (SD± 2.97), with scores ranging from 3 to 16, from the 16 questions in the assessment tool. Accordingly, 32.4% were classified as having a high level of knowledge (score of ≥13), 52.5% as having moderate level of

knowledge (scores of 8 to 12), and 15.1% as having low level of knowledge (scores of ≤7). The following questions on myths and misconceptions were answered wrongly by the following percentage: One can reduce the risk of getting HIV by using condoms during every sexual encounter =49%, knowledge that people who appear healthy can be HIV positive =36 %, HIV can be transmitted by insects and mosquito bites = 21% and one can get HIV by sharing food with HIV positive people = 13%. It was also noted that up to 49% of respondents believe that emergency contraceptive pills are protective against HIV.

Table 4.2 Knowledge on HIV transmission and prevention scores

Knowledge on HIV transmission and prevention	N (%)
1. One sexual encounter is enough to get HIV **(True)**	262 (64.9)
2. Having sex during your monthly period protects you against HIV **(False)**	333 (82.4)
3. One can get HIV by sharing utensils with HIV positive people **(False)**	353 (87.4)
4. Bathing immediately after sex reduces your chances of getting HIV **(False)**	325 (80.4)
5. You can get HIV through many ways other than sex **(True)**	327 (80.9)
6. Pulling out the penis before ejaculation reduces the chances of HIV **(False)**	208 (51.5)
7. HIV can be transmitted by mosquito bites **(False)**	340 (84.1)
8. It is not easy to know people with HIV by physical appearance **(True)**	265 (65.6)
9. Emergency contraception pills (E-Pills) reduce your chances of HIV if taken within 72 hours **(False)**	206 (51)
10. As soon as you get HIV, symptoms start showing **(False)**	312 (77.2)
11. Lubricating condoms with Vaseline reduce chances of condom tears during sex. **(False)**	151 (37.4)
12. A negative HIV test after exposure should be repeated after 3 months to ensure one is negative **(True)**	225 (55.7)
13. To prevent HIV transmission, oral and anal sex are safer options than vaginal sex **(False)**	234 (57.9)
14. All children born by HIV positive mothers end up being HIV positive **(False)**	303 (75)
15. ARVs cure HIV **(False)**	256 (63.4)
16. Having sex with a HIV positive person using a condom reduces your chances of getting HIV **(True)**	250 (62)

Table 4.3 Knowledge category based on overall scores

Knowledge category	Score out of 16	N (%)
Low	Scores of ≤ 7	61 (15.1)
Moderate	Scores between 8 -12	212 (52.5)
High	Score of ≥13	131 (32.4)

4.3.1 Factors Influencing HIV Knowledge Scores – Age

The mean HIV knowledge score among respondents was 10.75 out of 16, with a standard deviation of 2.97. Figure 4.1 illustrates the mean knowledge scores by age group. Age was found to influence HIV knowledge scores, with 24-year-olds achieving the highest mean score of 12.70 and 15-year-olds the lowest mean score of 9.38. Other age groups scored as follows (in descending order): 20-year-olds (12.03), 22-year-olds (11.11), 18-year-olds (11.07), 21-year-olds (11.00), 17-year-olds (11.00), 23-year-olds (10.87), 19-year-olds (10.97), and 16-year-olds (10.37). Respondents aged 18 years and younger generally had mean scores at or below 11.00, whereas those above 18 years typically scored above 11.00, except for the 23-year-olds.

These results suggest that older respondents tend to have higher HIV knowledge scores compared to younger respondents, highlighting age as an important factor influencing HIV awareness among female youth in Kisumu County.

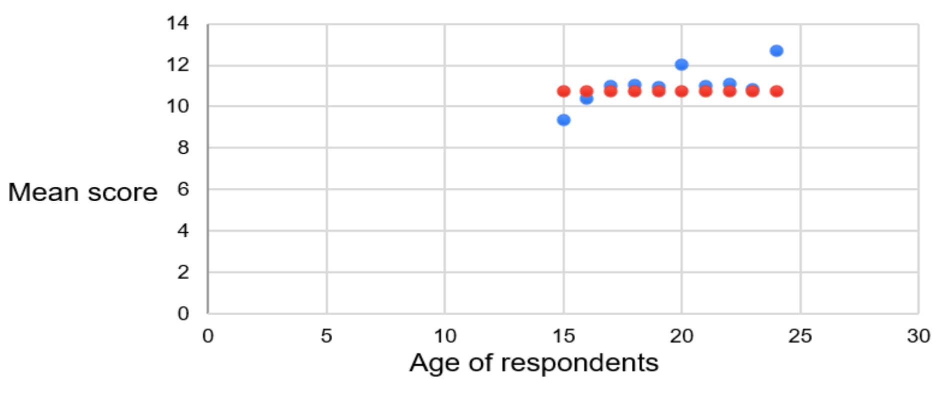

Figure 4.1 Age of respondents' vs mean knowledge score

4.3.2 Factors Influencing HIV Knowledge Scores - Source of Knowledge

The most cited sources of HIV knowledge, in order, were school (294 respondents, 32%), mass media (225 respondents, 25%), family (162 respondents, 18%), peers and friends (91 respondents, 10%), social media (82 respondents, 9%), and print media (62 respondents, 7%) as shown in Table 4.4. Respondents whose source of knowledge was family/guardians scored the highest, followed by those citing social media, peers, school, mass media, and print media. The mean score for respondents whose source was print media was the lowest at 10.49.

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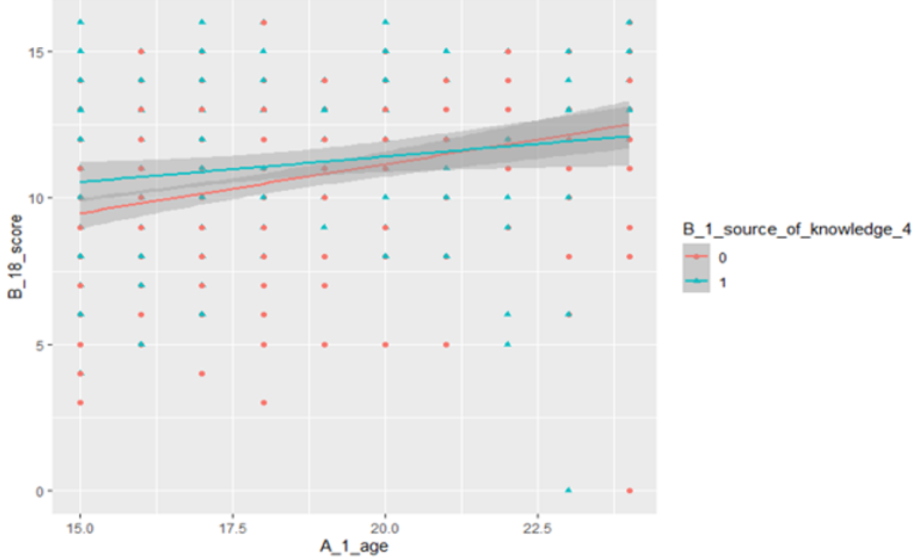
Table 4.4 Source of knowledge vs mean score

Age	Arithmetic means of overall score (x/16)	Std dev.
Family/Guardians	11.34	2.71
Social media	11.33	2.74
Peers/Friends	11.31	2.57
School	11.28	2.60
Mass media	11.13	2.81
Print media	10.49	2.42

4.4 A Comparison of Age, Family as a Source of Knowledge and Scores

As shown in Table 4.4, family as a source of HIV knowledge had the highest mean score. Figure 4.2 illustrates that family was a significant source of knowledge for respondents aged 21 years and below. After age 21, respondents who did not use family as a source of knowledge showed an upward trend in their scores compared to those who continued to rely on family as their source of knowledge.

The dissemination of HIV knowledge through peers and friends could also be combined with dissemination through social media, given their positive impact as respondents grew older. Overall, older respondents had higher knowledge scores, especially those who had attained tertiary education. This trend was observed regardless of marital status.



0 = Other sources of knowledge (mass media, print media, school, peers and friends, social media)
1 = Family (parents and guardians)

Figure 4.2 A comparison of age, family as a source of knowledge and scores

4.5 Analysis on HIV prevention practices

Objective 2: To investigate the HIV prevention practices among female youth between 15 -24 years of age in Kisumu County.

HIV prevention practices in this study were assessed through the ABC approach (Abstinence, being faithful, Condom use), knowledge of HIV status, and awareness or use of biomedical interventions such as PEP and PrEP as shown in below.

Out of 404 respondents, 216 (53.5%) reported abstaining from sexual activity, while 188 (46.5%) were sexually active. The mean age at first sexual encounter was 17 years (SD = 2.23). Notably, 100 out of the 188 sexually active respondents (53%) reported having their first sexual experience before the age of 18. Four respondents reported sexual debut

between the ages of 10 and 12, which were identified as outliers as shown in Figure 4.3 below.

Among those who were sexually active, 114 respondents (60.6%) reported using a condom during their first sexual encounter, yet only 43 (22.9%) reported consistent condom use in subsequent sexual activities. Knowledge of HIV status varied with age; 70% of respondents under 18 years did not know their HIV status. However, 103 respondents (54.8%) reported being aware of their partner's HIV status.

The mean number of sexual partners among sexually active youth was 2.28, with 16 respondents having between 3 and 6 partners, classified as outliers. Older respondents tended to report a higher number of sexual partners. High-risk sexual behaviors were prevalent, with 77 respondents (41.0%) indicating engagement in transactional sex or sex in exchange for financial or material benefits.

Table 4.5 HIV prevention knowledge and practices among respondents

HIV prevention practices

Prevention practices	YES N (%)	NO N (%)
Abstain	216 (53.5)	188 (46.5)
Early sexual debut < 18 years	100 (53.2)	88 (46.8)
Faithfulness to one partner	132 (70.2)	56 (29.8)
Use of condoms during the first sexual encounter	114 (60.6)	74 (39.4)
Use of condoms with every sexual encounter	43 (22.9)	145 (77.1)
Knowledge of PEP/Prep	232 (57.4)	172 (42.6)
Knowledge of one's HIV status	234 (58.0)	170 (42.0)
Knowledge of partner's HIV status	103 (54.8)	85 (45.2)
High risk practices (Alcohol use, age disparate relationships, sex for financial/ material rewards)	77 (41.0)	111 (59.0)

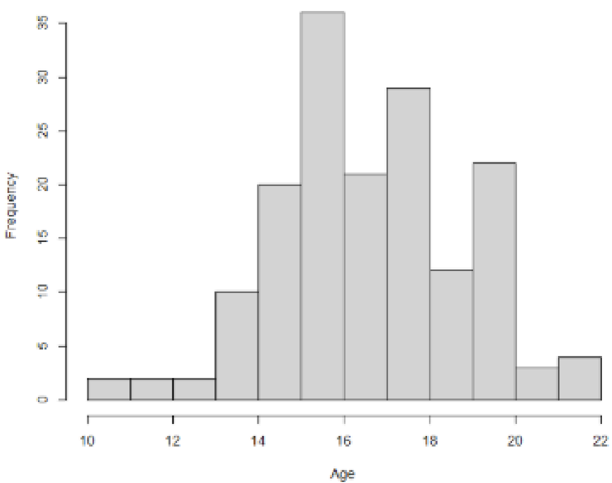


Figure 4.3 Histogram of age during first sexual encounter

4.6 Effect of Knowledge on Prevention Practices

Objective 3: To determine the effect of HIV knowledge on prevention strategies among female youth between 15 -24 years in Kisumu County.

A logistic regression analysis was conducted to examine the association between HIV knowledge levels (categorized as low, moderate, and high) and key HIV prevention behaviors. The analysis was adjusted for age as a potential confounder. Adjusted odds ratios (aOR) and 95% confidence intervals (CI) are presented in Table 4.6.

The results indicated that higher HIV knowledge was significantly associated with a lower likelihood of abstaining from sex. Compared to respondents with low knowledge, those with moderate knowledge had 51% lower odds of abstaining (aOR = 0.49; 95% CI: 0.25–0.96), while those with high knowledge had 72% lower odds (aOR = 0.28; 95% CI: 0.14–0.55). This finding suggests that female youth with greater HIV knowledge were more

likely to be sexually active, which may reflect increased confidence in managing their sexual health or exposure to environments where sexual activity is normalized.

There was no significant association between knowledge levels and age of sexual debut ($p = 0.88$). However, there was a positive but non-significant trend suggesting that higher HIV knowledge may be associated with increased condom use (aOR = 1.30 for moderate knowledge; aOR = 1.65 for high knowledge), pointing to some influence of knowledge on protective behavior.

Youth with high HIV knowledge were significantly more likely to know their partner's HIV status (aOR = 6.82; 95% CI: 2.26–20.59; $p < 0.01$). Similarly, both moderate and high knowledge levels were strongly associated with knowing one's own HIV status (moderate: aOR = 2.07; 95% CI: 1.14–3.77; high: aOR = 3.87; 95% CI: 2.07–7.22; $p < 0.001$). Awareness of biomedical prevention methods (such as PEP and PrEP) was also strongly associated with high knowledge, with those in the high knowledge group having over four times the odds of being aware of these methods (aOR = 4.24; 95% CI: 2.23–8.05).

Interestingly, consistent condom use was lower among youth with high HIV knowledge (aOR = 0.32; 95% CI: 0.12–0.85; $p < 0.05$), revealing a disconnect between knowledge and consistent application of protective behavior. There was no statistically significant association between knowledge level and monogamy ($p = 0.65$). However, high knowledge was significantly associated with reduced engagement in high-risk sexual practices (aOR = 0.47; 95% CI: 0.18–1.27; $p < 0.05$).

These findings suggest that while HIV knowledge has a generally positive influence on certain prevention behaviors, there are notable gaps in translating this knowledge into

consistent and comprehensive protective actions. Understanding the behavioral drivers and contextual barriers that inhibit effective knowledge utilization remains critical for improving HIV prevention outcomes among female youth in Kisumu County.

Table 4.6 HIV prevention behavior

HIV PREVENTION BEHAVIOR	BINARY OUTCOME (YES/NO)	OR (Moderate vs ref. low)	OR (High vs ref. low)	P - value
Abstinence	Yes/ No	0.45 (0.25-0.96)	0.28 (1.14 -0.55)	< 0.001
Sexual debut	Early (<18 yrs) /Late (>18 yrs)	0.95 (0.42 -2.18)	0.90 (0.38 – 2.15)	0.88
Condom use at first sexual encounter	Yes/ No	1.30 (0.52 -3.23)	1.65 (0.66 – 4.12)	0.32
Know Partner HIV status	Yes/ No	2.58 (0.88 – 7.59)	6.82 (2.26-20.59)	<0.01
Know own HIV status	Yes/ No	2.07 (1.14-3.77)	3.87 (2.07 – 7.22)	<0.001
PEP/Prep knowledge	Yes/ No	3.38 (1.79 – 6.39)	4.24 (2.23-8.05)	<0.001
Condom use in the last one year	Every time/ Not every time	0.35 (0.14-0.91)	0.32 (0.12 -0.85)	<0.05
Faithfulness to one partner	One partner/ More than one partner	0.72 (0.21- 2.41)	0.68 (0.20-2.34)	0.65
High- risk behavior	Yes/ No	0.30 (0.10 -0.88)	0.47 (0.18 -1.27)	<0.05

4.6.1 What Prevents Knowledge Utilization

Gaps in knowledge utilization were also observed among respondents who participated in the in-depth interviews. Of the 25 respondents, 16 (64%) experienced sexual debut before the age of 20. Despite possessing accurate knowledge about HIV prevention, several

respondents reported instances where their actions conflicted with this knowledge. This disconnect was evident in their responses to the following interview question:

Question 12: *Have you ever been in a situation where your knowledge conflicted with HIV preventive action?*

A 16-year-old respondent said, *"Yes, my friends say condoms are not good so people should not use them."* And *"My friends discouraged the use of PEP because of side effects."*

A 23-year-old respondent answered, *"Yes, I got HIV when we had sex without a condom."*

A 19-year-old respondent said, *"Yes, I know that sharing sharp objects is not good, but I share needles for making clothes.*

A 17-year-old responded, *"Yes, I was drunk, and we had unprotected sex."*

A 21-year-old said, *"There was no money to buy condoms, so we had sex without protection, and I got pregnant."*

4.7 Challenges to HIV Knowledge and Prevention

Objective 4: To identify challenges faced by female youth between 15 -24 years on HIV knowledge and prevention in Kisumu County.

To assess the challenges in HIV prevention, section three of the questionnaire included a question to assess respondents perceived risk of acquiring HIV and the reasons for this risk. Out of 404 respondents, 144 (36%) reported that they perceived themselves to be at risk of contracting HIV, while 260 (64%) did not consider themselves at risk as shown in Table 4.7

Among the 144 respondents (36%) who perceived themselves to be at risk of contracting HIV, 47 (33%) attributed their risk to external factors such as living in high-risk neighborhoods or having relatives or friends who are HIV positive, while the remaining 97 (67%) cited behavioral factors including engaging with multiple sexual partners, inconsistent condom use, uncertainty about their partner's HIV status, having sex under the influence of alcohol, and sharing sharp objects.

The 260 respondents (64%) who did not perceive themselves to be at risk, 149 (57%) attributed it to abstinence. Other reasons cited included having a single faithful sexual partner, knowing their partner's HIV status, consistent condom use, adequate HIV knowledge, being young and not yet sexually active and having strict or protective parents. These findings highlight varying levels of risk perception among the youth, shaped by both behavioral and environmental factors, and suggest that some respondents may underestimate their risk, particularly those relying solely on abstinence or partner faithfulness without confirming HIV status or practicing consistent preventive behaviors.

Table 4.7 At risk of contracting HIV and why?

		Age	**Age**
		15-17 years	**18-24 years**
At risk of contracting HIV	**Yes**	64	80
	No	144	116

4.7.1 Challenges Faced by Female Youth in Kisumu County

The greatest challenges reported in HIV prevention included peer influence, lack of knowledge, financial dependence, lack of bargaining power in relationships (defined as limited ability to negotiate safer sex practices, such as condom use or refusal of unwanted sexual advances), sexual partner violence, and drug and substance abuse as shown in **Error! Reference source not found.**. In addition, thematic analysis of the key informant i nterviews revealed three major themes, which summarized the barriers female youth face in effectively utilizing HIV knowledge and prevention strategies.

Theme 1: Peer influence and misinformation

Peer pressure and misinformation were frequently cited by health professionals as significant barriers to preventive behaviors. A counselor at Gita Sub-County Hospital noted: *"Their friends have mentioned that there is a mobile app which can tell whether you are HIV negative or positive. You answer some questions, and it gives you the results."*

Similarly, a clinical officer at the same facility reported: *"Young people like me are more resistant to HIV because my immunity can fight better than older people,"* and *"There are herbs which, when taken, prevent people from getting HIV."*

A nurse at Chiga Dispensary observed: *"Tertiary level students are introduced into house partying, and they end up having unprotected sex with people they do not even know,"* and *"They feel left out when others have boyfriends who provide money and gifts."*

Theme 2: Lack of Awareness of Services Offered at Health Facilities

Respondents demonstrated limited awareness of the HIV prevention services available at health facilities, including free testing, PEP, and PrEP.

A clinical officer at Gita Sub-County Hospital shared: *"We encountered someone who tested positive after being raped at a party. She did not come to the hospital for PEP, which could have reduced her chances of getting HIV." "Some will know their HIV status because we test it for everyone who comes to see a doctor, but what of the majority who are not sick? They will never come to ask for the test."*

Additionally, a nurse at Kowino Dispensary explained: *"They do not come because they think that we will tell their parents or teachers that they are having sex."*

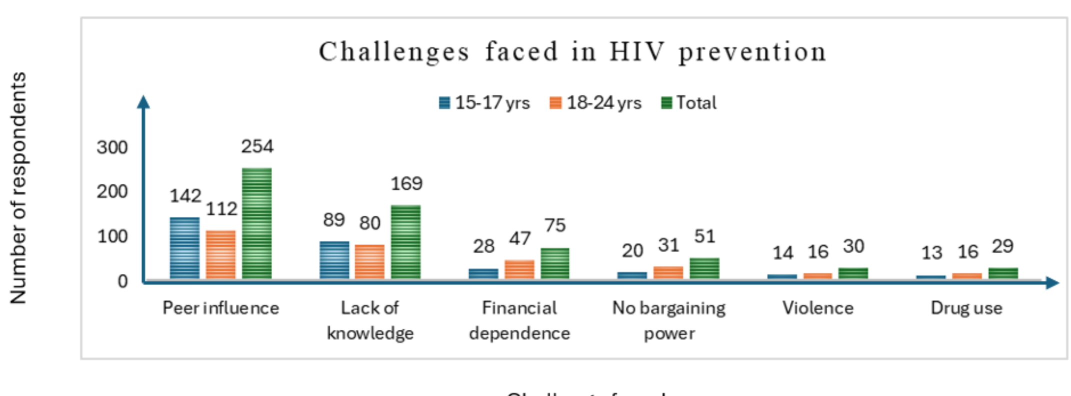


Figure 4.4 Challenges faced in HIV prevention

4.8 Emerging Solutions; How can the Challenges above be Solved?

The both the quantitative and qualitative research was concluded by a question on, *"How can the challenges you have mentioned above be solved?"*

Among the 404 respondents who took part in the quantitative interview, 76% (308) believed that the challenges they faced were within their control, while 24% (96) felt otherwise. Common solutions mentioned included avoiding peer pressure, seeking

guidance and counselling, avoiding abusive relationships, and increasing education and awareness about HIV prevention as shown in Figure 4.5. This was further enhanced by responses obtained from the discussions in the key informant interviews and in-depth interviews, where the themes are discussed as below.

These insights underscore the importance of addressing both structural and behavioral barriers, empowering youth with not only knowledge but also agency and access to services that support HIV prevention.

Theme 3: Strategies for Addressing Gaps in Prevention

Health workers provided several suggestions for bridging the gap between knowledge and practice. A nurse at Chiga Dispensary recommended:

"If correct information can be circulated on social media platforms like TikTok, it can reach many of these young people." *"Having peer educators that teach different groups during school holidays will give them access to people that they can ask questions freely."*

A clinical officer at Gita Sub-County Hospital added: *"Educate them in schools on how to avoid getting HIV after exposure,"* and *"Allocate more funds for sensitization."*

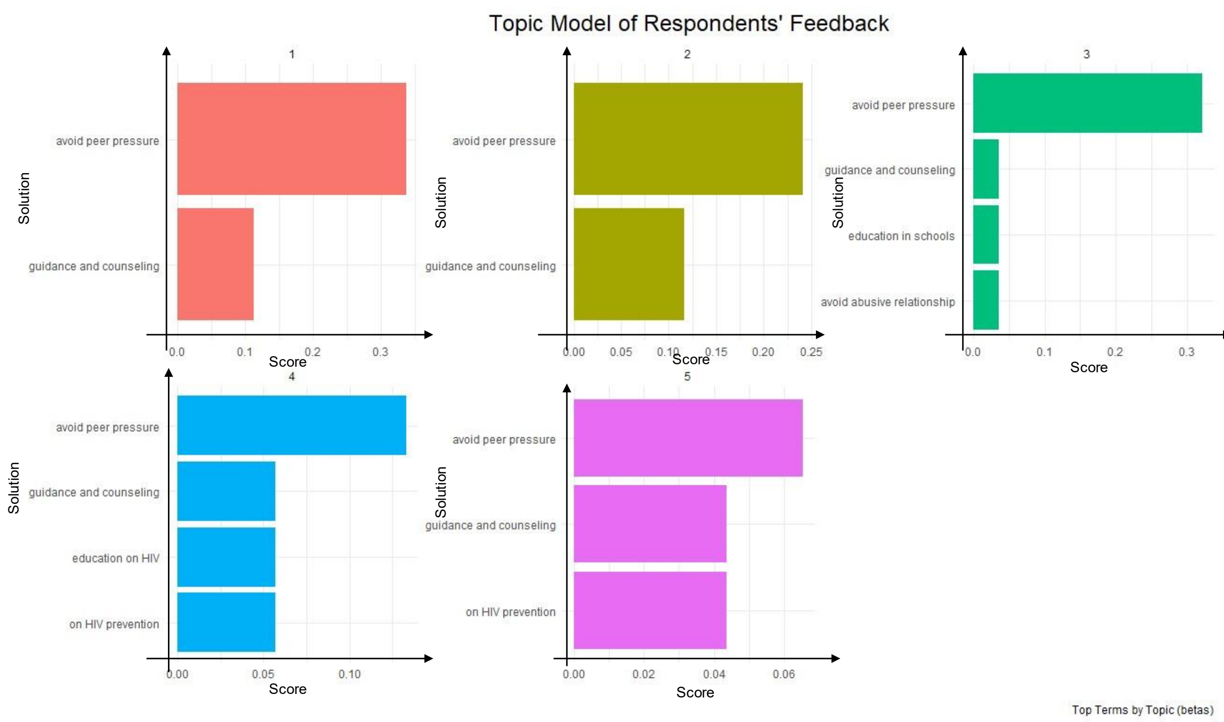


Figure 4.5 Ways of solving challenges to HIV prevention.

CHAPTER 5: DISCUSSIONS

5.1 Introduction

The study explored the influence of HIV knowledge on prevention practices among female youth aged 15–24 in Kisumu County, Kenya. This chapter discusses key findings in relation to the study objectives, compares them to existing literature, and examines their implications in the context of the study's theoretical framework.

Key findings

1. HIV Knowledge: 85% of respondents demonstrated high HIV knowledge, with older participants (especially those aged 18–24), those with higher education, and those with access to mass media scoring higher. Family structure also played a role, with those living with both or single parents scoring better than those not living at all with family. Marital status did not significantly influence HIV knowledge scores, confirming that relationship status had minimal impact.
2. HIV Prevention Practices: The mean age of sexual debut was 17 years and 53.2% of the respondents had initiated sex before age 18. Among the sexually active, 50% of younger respondents did not use condoms at first sex, and many of them lacked knowledge of their or their partner's HIV status. Cases of forced sexual debut were reported, and early debut was linked to lower awareness and poor prevention behavior.
3. Impact of Knowledge: Those with high HIV knowledge were more likely to use condoms at first sex, delay sexual debut, and know about PrEP/PEP. However, no

significant correlation was found between knowledge and consistent condom use or avoidance of risky sexual behavior (multiple or non-regular partners).

4. Challenges: 64% of respondents did not perceive themselves at risk. The top barriers were peer pressure, lack of knowledge, lack of negotiation power, partner violence, and drug use. While 76% felt these challenges were within their control, 24% cited structural issues, access barriers, and confidentiality concerns as limiting factors.

5.2 Discussions

5.2.1 Socio-demographic Characteristics

A total of 404 participants were interviewed, 51.5% (208) were under 18 years, and 48.5% (196) were aged 18-24. The mean age of the respondents was 18 years (SD = 2.86), indicating a relatively narrow age spread and supporting generalizability within the 15-24-year age bracket.

A significant majority, 87.4% (353), of respondents were unmarried, with 11.9% (47) married and 0.7% (3) separated as shown in Table 4.1. These figures are consistent with data from Mozambique, where 80% of 15-24-year-olds were single and 20% married (Muchanga et al., 2024). In contrast, Mathur et al. (2020) found much higher marriage rates among out-of-school AGYW, 32% in Kenya, 53% in Malawi, and 51% in Zambia. This group fell into a “high vulnerability” profile linked to early marriage, transactional sex, and sexual violence. The lower marriage prevalence in this study likely reflects the high school enrollment rate (84.4% secondary/tertiary), aligning with the Social Development Theory,

which links educational engagement to delayed marriage and increased personal agency (Jukes et al., 2008).

Regarding education, 72.0% (291) of participants were in secondary school, 13.6% (55) in primary school, 12.4% (50) in tertiary education and only 2.0% (8) had no formal education as shown in Table 4.1. This mirrors trends in Mozambique, where 86.8% of AGYW attended secondary school, reinforcing the role of educational infrastructure in supporting health literacy and effective prevention (Muchanga et al., 2024).

In terms of living arrangements, as shown in Table 4.1, 70.4% (284) lived with both parents, 21.5% (87) with a single parent, 7.4% (30) with extended family, and 0.7% (3) in other settings. Similarly, 82.9% of AGYW in Uganda reported parental caregiving (Bojo et al., 2025). Under the Ecological Systems Theory, strong familial support structures enhance access to health information and normative support for preventive behaviors (Bojo et al., 2025).

Financial dependency was notably high, 82.7% (334) relied on parents, 8.7% (35) supported themselves, 5.0% (20) depended on spouses, 2.5% (10) on sponsors, and 1.2% (5) on other sources, as shown in Table 4.1. Financial dependence reflected the age and student status of most of the participants. A similar study in Mozambique noted that approximately 70% of AGYW were students who were financially dependent on family (Muchanga et al., 2024). These data highlight participants' socioeconomic homogeneity and emphasize the importance of addressing economic vulnerabilities as part of HIV risk reduction.

This socio-demographic profile can be understood through the lens of the Information-Motivation-Behavioral Skills (IMB) model (Fisher & Fisher, 1992). The participants' educational engagement suggests they possess essential information about HIV transmission and prevention. The high rates of familial support and school attendance likely contribute to motivation, driven by personal beliefs, social norms and authoritative influence from parents and schools. Finally, the living and financial circumstances observed shape the development of behavioral skills such as assertiveness and self-efficacy, which are critical for adopting and maintaining HIV preventive behaviors. Thus, the IMB model provides a comprehensive framework to interpret how these socio-demographic factors interact to influence HIV risk-reduction among AGYW in Kisumu County.

5.2.2 Factors Influencing HIV Knowledge Scores

Age influenced HIV knowledge scores among participants. Respondents aged 24 achieved the highest mean score of 12.70, whereas those aged 15 recorded the lowest at 9.38, with the overall sample mean at 10.75 as shown in Figure 4.1. However, the mean scores had no significant disparity apart from the notable difference between the oldest age (25) and the youngest age (15) as shown in Figure 4.1. This trend reinforces the Information construct of the Information–Motivation–Behavioral Skills (IMB) model, which posits that access to accurate knowledge is foundational to health behavior change (Fisher & Fisher, 1992). Older participants, particularly those with tertiary education, likely benefited from extended exposure to formal education systems and diverse information environments, which in turn strengthened their HIV-related information. These findings align with global patterns observed in Malawi, where age, educational attainment, and socioeconomic status significantly correlated with HIV knowledge (Mandiwa et al., 2020).

While marital status did not significantly influence HIV knowledge scores within this cohort, older respondents consistently scored higher across marital categories. This contrasts with findings from Zambia, where married women had 28% lower odds of comprehensive HIV knowledge compared to unmarried peers (Tsegaw et al., 2024). The discrepancy may stem from the high school enrollment rate (84.4%) in our study, suggesting that structured information environments like educational institutions may mitigate the knowledge gaps often seen in early marriage contexts.

Sources of HIV knowledge were diversified. The most cited in descending order were school (32%), mass media (25%), family (18%), peers/friends (10%), social media (9%), and print media (7%) Table 4.4. These results diverge from studies in Ghana and Uganda, where mass media, particularly radio and television, were primary knowledge sources (Beebwa et al., 2021; Ofori et al., 2022). For example, in Ghana, 41.9% of youth cited radio and 35.6% television as primary HIV information channels, with only 33.6% citing family (Ofori et al., 2022). The emphasis on school as the primary source in Kisumu likely reflects robust investment in school-based sexual and reproductive health (SRH) programs.

Knowledge scores also varied by primary information source. Participants citing print media had below-average scores (mean = 10.49), suggesting that traditional media may be less engaging or accessible for youth. In contrast, among adolescents under 21, those identifying family as their primary source scored higher than peers relying on other channels Figure 4.2. This reflects the Motivation component of the IMB model, where supportive family communication enhances receptivity to health information (Fisher & Fisher, 1992). This effect is supported by evidence that strong parent-child communication

improves adolescent sexual negotiation skills and promotes safer behaviors (Bastien et al., 2011).

As adolescents mature, influence from peers and social media increases. By age 17, these sources begin contributing significantly to HIV knowledge, reflecting the dynamic interplay between social motivation and behavioral skill acquisition as shown in Figure 4.2 (Isaksen et al., 2020). Aspects like assertiveness and self-control which are critical for translating knowledge into behavior are fostered through peer interaction and digital engagement, in line with the behavioral Skills component of the IMB model.

Collectively, these findings highlight the importance of age-appropriate, multi-modal HIV education interventions. Younger adolescents (15-17), particularly those who are out of school or not living with parents, may be at increased risk of informational omissions and motivational deficits. Implementing integrated strategies that combine school-based curricula, parental guidance, and youth-focused media campaigns can strengthen the IMB model's constructs and thereby support sustained HIV risk reduction among AGYW in Kisumu County.

While the IMB model effectively captures the three core elements influencing HIV prevention, this study also reveals areas where the model could be expanded. Structural barriers such as gender-based power imbalances and financial dependence were prominent, yet these are not explicitly emphasized within the IMB framework. Additionally, the persistence of high-risk behaviors among highly knowledgeable youth suggests that motivation and skills alone may not overcome certain socio-cultural and economic

challenges, indicating a need to refine the model for specific local contexts like Kisumu County.

5.2.3 HIV Prevention Behavior

As shown in Table 4.5, a total of 216 respondents (53.5%) reported abstinence, while 188 (46.5%) had already experienced sexual debut. The mean age for first sexual encounter was 17 years, and notably, 53.2% (100/188) occurred before age 18. Four individuals reported very early sexual debut at ages 10 and 12, with one encounter disclosed as non-consensual. These findings of early debut align with trends observed in Kenya and Sierra Leone, where first sex typically occurs between ages 15 and 16 (Osborne et al., 2024; Sing'oei et al., 2023). The presence of forced sexual initiation, even if limited, emphasizes the urgent need for early, comprehensive, and age-appropriate sex education in Kisumu County that explicitly addresses consent and protection against sexual violence. Policy efforts must mandate such education before adolescence to build foundational knowledge and empower youth to make informed decisions about their sexual health.

Nearly 30% (56 respondents) reported having multiple sexual partners, with 16 individuals listing three to six partners. This pattern mirrors the 2022 Kenya Demographic and Health Survey (KDHS), which reported an average of 2.3 partners for women aged 15-24, closely matching our study's mean of 2.28 (KDHS, 2022). Despite the prevalence of multiple partnerships, consistent condom use was low. Only 24% of those with more than two partners reported regular use, and usage declined with age and in non-regular relationships. These findings reflect broader patterns in South Africa and parts of Asia, where age and number of partners are strong predictors of risky behavior (Dendup et al., 2022; Mbele,

2024). In Bhutan, data from the 2016 Global School-Based Student Health Survey revealed that adolescents with multiple sexual partners were significantly more likely to report alcohol use, truancy, lack of parental monitoring and substance abuse (Dendup et al., 2022). In South Africa, a 2024 multilevel analysis of 3,889 never-married youth found that 61.7 % of males and 56.1 % of females had multiple partners, with only around 21 % of 15-19-year-olds using condoms at last sex (Mbele, 2024). These findings confirm that age and number of partners are strong predictors of risky sexual behavior in diverse settings. To mitigate HIV vulnerability, interventions must emphasize condom negotiation skills and ensure easy access to condoms, particularly targeting older youth and those with multiple partners. Incorporating these skills into school curricula and community programs can strengthen both the behavioral skills and motivation components of the IMB model.

Awareness of HIV status was significantly lower among younger participants. Seventy percent of those unaware of their status were under 18, and only 36% of this age group reported knowing their status as shown in Table 4.5. This mirrors KDHS data showing that only 46% of females aged 15-19 had undergone HIV testing (KDHS, 2022). Key informant interviews revealed that confidentiality concerns, such as fear of disclosure to parents, were a significant barrier, consistent with structural barriers reported by Dzinamarira & Moyo (2024). To address these barriers, youth-friendly and confidential HIV testing services must be expanded, ensuring adolescents feel safe and supported when seeking testing. Parental engagement programs could also foster a supportive environment that reduces stigma and encourages open communication about HIV status.

Just over half of sexually active respondents (60.6%) reported using condoms during their first sexual encounter, with higher usage observed among older participants and those with

delayed sexual debut as shown in Table 4.5. However, consistent use declined significantly in subsequent encounters, especially with regular partners, which often leaves condom negotiation skills at a disadvantage. This observation aligns with findings from South Africa, where only 30% of young people reported consistent condom use, yet those with developed negotiation skills were nine times more likely to use condoms consistently and eight times more confident in negotiating for condoms (McCarthy et al., 2024).This highlights the urgent need to incorporate assertiveness and communication training into youth programs, reinforcing the IMB model's emphasis on building behavioral skills to empower adolescents to protect themselves effectively.

High-risk sexual behaviors were identified in 41% (77/188) of sexually active participants, constituting 19% of all respondents as shown in Table 4.5. These included forced sex, transactional sex, relationships with significantly older partners, and substance use. Interestingly, Uye et al. (2023) found that among 14-19-year-old female youth in Kampala's urban slums, substance-using participants were twice as likely to engage in unprotected sex with older or unknown-status partners. These behaviors emphasize the need for integrative interventions that go beyond information dissemination to address motivation and equip youth with practical skills to avoid and navigate high-risk situations. Programs targeting substance use reduction and relationship power dynamics can be instrumental in reducing HIV risk.

Biomedical prevention awareness was relatively high, 57% (232) of participants had heard of PrEP or PEP, while only 2% (8) had ever used them as shown in Table 4.5. Similar low uptake has been reported in Brazil and Ghana, despite awareness levels between 46–54% (Bojo et al., 2025; Queiroz et al., 2024). Studies in Brazil (ages 15–24: 46% awareness),

Thailand (ages 15–24: 54% aware), and Ghana (ages 16–20: 52%) all report similarly low awareness of PrEP/PEP among youth, with barriers including service access, stigma, and adherence concerns (Bojo et al., 2025; Queiroz et al., 2024; Xu et al., 2024). Among Kenyan adolescents involved in transactional sex or with a history of STIs, PrEP uptake was higher, but discontinuation rates remained elevated (Bien-Gund et al., 2022). These findings underscore that even when biomedical prevention is known, structural and social challenges significantly limit sustained use, especially among high-risk youth. Addressing these gaps requires strengthening health service navigation skills and reducing stigma through community support systems, fully embracing the motivation and behavioral skills pillars of the IMB model.

Overall, these findings illustrate the critical importance of a multi-faceted approach to HIV prevention among adolescent girls and young women (AGYW) in Kisumu County. Early, comprehensive sexual education that includes consent, condom negotiation, and risk reduction should be mandated in schools and community programs. Encouraging parental involvement through family-based education initiatives can help create supportive environments that enhance youth motivation and reduce stigma. Simultaneously, youth-friendly HIV testing and biomedical prevention services must be expanded and made accessible, particularly for younger adolescents who face confidentiality concerns.

Developing behavioral skills, such as communication, assertiveness, and health service navigation, through peer support groups, role-playing exercises and mentorship programs is essential to translate knowledge and motivation into effective prevention behaviors. Such an integrated strategy, grounded in the Information-Motivation-Behavioral Skills (IMB)

model, will foster resilience and empower AGYW to make safer sexual health decisions, ultimately reducing HIV vulnerability in this high-risk population.

5.2.4 The Influence of HIV Knowledge on Prevention Practices

An unexpected finding in this study was that youth with higher HIV knowledge were less likely to abstain from sexual activity. Specifically, respondents with moderate HIV knowledge were about 51% less likely to abstain (OR = 0.49, 95% CI: 0.25–0.96), while those with high knowledge showed a 72% lower likelihood of abstinence (OR = 0.28, 95% CI: 0.14–0.55) compared to those with limited knowledge as shown in Table 4.6. Chiao and Mishra (2009), using DHS data from Kenyan youth aged 15–24, found that higher HIV knowledge was linked to increased abstinence. This contrasts with the current study, where greater knowledge correlated with reduced abstinence, suggesting changing behaviors and evolving risk perceptions. However, their work also demonstrated that awareness of condom efficacy was linked to lower rates of abstinence, suggesting that increased knowledge may empower youth to make safer sexual decisions rather than abstain completely (Chiao & Mishra, 2009). This phenomenon aligns with findings from Yang et al. (2025), who observed that greater HIV knowledge correlates with a transition from abstinence to safer sexual practices.

No significant association was found between HIV knowledge levels and age at sexual debut ($p = 0.88$), consistent with Ogutu and Chege's (2023) findings that youth with adequate sexual health knowledge sometimes engage in earlier sexual debut. Among the 188 sexually active participants, 53.2% had their first sexual encounter at or before age 17 of these, 60% reported condom use compared to 72% among those aged 18 and above.

This suggests that delayed sexual debut is positively correlated with condom use, although condom use did not directly correlate with HIV knowledge levels. Age and maturity may influence condom use behaviors more strongly than knowledge alone.

Regarding condom use, youth with moderate and high HIV knowledge had increased odds of using protection (OR = 1.30 and OR = 1.65, respectively). However, consistent condom use over the past year was paradoxically lower among those with high knowledge (OR = 0.32, 95% CI: 0.12–0.85, $p < 0.05$), highlighting a persistent "knowledge–behavior gap." Ajayi et al. (2019) conducted a cross-sectional survey among Nigerian university students aged 17-24, finding that partner trust, perceived partner risk (e.g., partner STI history), and economic factors such as paying for sex were significantly associated with consistent condom use suggesting that awareness alone is insufficient to change behavior without addressing relational and socioeconomic contexts.

HIV knowledge was strongly positively associated with awareness of both personal and partner HIV status. As shown in Table 4.6, those with moderate knowledge were twice as likely to know their own status (OR = 2.07, 95% CI: 1.14-3.77) and those with high knowledge nearly four times more likely (OR = 3.87, 95% CI: 2.07-7.22, $p < 0.001$). High knowledge was also associated with greater awareness of partners' HIV status (OR = 6.82, 95% CI: 2.26–20.59, $p < 0.01$), and increased awareness of biomedical prevention tools such as PEP and PrEP (OR = 4.24, 95% CI: 2.23–8.05). These findings are supported by Ajayi et al. (2019) and Yang et al. (2025), emphasizing that knowledge fosters testing behavior and open communication in relationships. Despite this, the uptake of PEP/PrEP remains low across all knowledge levels, likely due to barriers such as stigma, limited

access, and adherence difficulties (Bien-Gund et al., 2022; Bojo et al., 2025; Queiroz et al., 2024).

High HIV knowledge was significantly associated with reduced engagement in high-risk sexual behaviors (OR = 0.47, 95% CI: 0.18–1.27, $p < 0.05$). Risk behaviors identified included multiple sexual partners, transactional sex, sex under the influence of alcohol or drugs and sex with older or unknown-status partners. Nevertheless, these risky behaviors persisted across all knowledge categories, indicating the critical need for behavioral reinforcement beyond informational interventions. Previous studies in Ghana, Uganda, and South Africa similarly found that female youth using substances, particularly those aged 12–24, were up to twice as likely to engage in condomless sex with older partners of unknown HIV status, highlighting the strong link between intoxication and sexual risk (Mabaso et al., 2018; McCarthy et al., 2024; Uye et al., 2023).

No significant relationship was found between HIV knowledge and fidelity to a single partner ($p = 0.65$), suggesting that relational dynamics, cultural norms, or emotional factors may have more influence over partner fidelity than knowledge alone. This aligns with Ajayi et al. (2019), who argued that social and economic contexts heavily shape sexual behaviors beyond mere information.

These findings illustrate the core premises of the Information-Motivation-Behavioral Skills (IMB) model (Fisher & Fisher, 1992). While information (HIV knowledge) clearly enhances awareness and testing behavior, motivation (trust, partner dynamics, stigma) and behavioral skills (condom negotiation, resisting peer pressure) are essential for translating knowledge into consistent protective behaviors. The “knowledge–behavior gap” observed,

where youth with high knowledge still engage in risky behaviors or inconsistent condom use, highlights the importance of addressing all three IMB components.

In conclusion, while increasing HIV knowledge is a critical foundation, comprehensive interventions must also enhance motivation and equip youth with behavioral skills to navigate complex social and relational challenges. Integrating these elements within the IMB framework can help bridge the gap between awareness and safer sexual practices, ultimately reducing HIV vulnerability among the youth.

5.2.5 Challenges in HIV Prevention

In this study, 36% of respondents perceived themselves to be at high risk of contracting HIV, as indicated in Table 4.6. Among those who considered themselves at risk, the primary reasons included having multiple sexual partners, inconsistent condom use, uncertainty about their partner's HIV status, engaging in sex while under the influence of alcohol, and sharing sharp objects. These factors are well-established HIV risk behaviors, demonstrating that many participants had an accurate understanding of their vulnerability. This finding aligns with Kamire et al. (2022), who reported that adolescent girls aged 15–19 in Western Kenya with HIV-positive partners, partners of unknown status, or recent sexually transmitted infections (STIs) were more likely to perceive themselves at high risk of HIV infection.

However, misconceptions about HIV transmission were also evident, particularly among respondents who reported being sexually inactive. Approximately 33% of those who perceived themselves at risk cited having relatives or friends living with HIV as their reason, reflecting misinformation regarding direct personal risk. Additionally, some

participants believed that strict parental control, religious attendance, or not being male offered protection against HIV infection, highlighting limited risk awareness. Notably, several respondents engaged in high-risk behaviors, such as having multiple sexual partners, uncertain partner status, or inconsistent condom use, yet did not perceive themselves at risk, often because they knew their own HIV-negative status. This discrepancy underscores a critical gap in understanding that personal HIV status knowledge does not eliminate the risk posed by partners with unknown or positive status, mirroring findings by (Muravha et al., 2021), who documented poor risk perception even among individuals exhibiting risky behaviors.

Figure 4.5 further illustrates perceived barriers to HIV prevention, with peer influence ranked as the most significant challenge, followed by lack of knowledge, financial dependence, limited negotiation power in sexual relationships, sexual partner violence, and substance abuse. These barriers interact with components of the Information-Motivation-Behavioral Skills (IMB) model (Fisher & Fisher, 1992), a widely applied framework for understanding HIV prevention behaviors. Peer influence acts as a key motivational factor, shaping youths' attitudes and intentions toward adopting safer sexual practices. The social pressure to conform to peer norms can undermine motivation to engage in protective behaviors despite adequate HIV knowledge.

Moreover, financial dependence and gender-based power imbalances reduce young people's ability to negotiate condom use or refuse unsafe sex, particularly among females aged 18 and above. These structural and relational constraints impair behavioral skills and motivation, vital components for effective HIV prevention according to the IMB model. Economic vulnerabilities and gender dynamics exacerbate HIV risk by limiting youths'

agency in sexual decision-making (Kamire et al., 2022; Muravha et al., 2021). Substance abuse, which impairs judgment and risk evaluation, compounds these challenges, a relationship documented in studies mentioned in the previous discussions above (Mabaso et al., 2018; McCarthy et al., 2024; Uye et al., 2023).

Misconceptions about HIV transmission, such as the belief that contraceptive pills prevent HIV or that mosquitoes transmit the virus, persisted among participants. These erroneous beliefs correspond with findings among AGYW in India and Malawi, revealing a broader pattern of misinformation that limits accurate HIV risk assessment (Inthavong et al., 2020; Mandiwa et al., 2020). Such deficits reflect gaps in the 'Information' domain of the IMB model, underscoring the necessity for targeted, evidence-based education to correct myths and promote accurate knowledge.

Qualitative data from this study enriched the understanding of these quantitative findings. Participants described intense peer pressure to initiate and engage in sexual activity to gain social acceptance, with some reporting experiences of sexual coercion or violence that constrained their capacity to practice safer sex. Others recounted economic hardships limiting their negotiation power, sometimes leading to transactional sex, which increases HIV vulnerability. These narratives illustrate the multifaceted social, economic, and interpersonal influences on HIV risk and prevention behaviors. Enhancing behavioral skills such as assertiveness, condom negotiation, and refusal skills is therefore essential to empower youth to act on their knowledge, a core emphasis of the IMB framework (McCarthy et al., 2024).

Despite 76% of respondents feeling that barriers to HIV prevention were within their control, 24% felt powerless, particularly those experiencing financial dependence, sexual partner violence, or substance use. This variability reflects differences in motivation and self-efficacy, key IMB constructs, that influence behavior change readiness and capacity.

These findings have significant implications for practice and policy. While youth generally possess moderate to high HIV knowledge, misconceptions and motivational barriers limit the translation of knowledge into protective behaviors, perpetuating a "knowledge–behavior gap" widely documented in adolescent sexual health research (Ajayi et al., 2019; Chiao & Mishra, 2009). Interventions grounded in the IMB model are essential to address this gap by simultaneously enhancing accurate information, motivation to act, and behavioral skills.

Policy initiatives should prioritize the dissemination of accurate, comprehensive HIV education through schools, community programs, and mass media campaigns that actively dispel myths and misconceptions. Education content must be culturally relevant and developmentally appropriate to maximize engagement and retention. Programs should also target motivational aspects by leveraging peer networks to promote positive social norms around HIV prevention and gender equity, fostering environments where protective behaviors are supported and valued (Fisher & Fisher, 1992).

Building behavioral skills through experiential learning, such as role-playing, peer mentoring, and communication workshops, can equip youth with practical negotiation and refusal skills, enabling them to navigate complex sexual and social situations effectively. Addressing economic barriers through empowerment initiatives, particularly for young

women, can reduce financial dependence that often limits sexual autonomy and negotiation power (Kamire et al., 2022).

Furthermore, policies must strengthen access to youth-friendly HIV testing, counseling, and biomedical prevention tools such as PrEP and PEP. Training healthcare providers to deliver stigma-free services and community sensitization campaigns can mitigate barriers related to discrimination and fear of disclosure (Bien-Gund et al., 2022; Bojo et al., 2025). Multi-sectoral collaboration among health, education, social protection, and justice sectors is necessary to address the complex, intersecting determinants of HIV risk and prevention behaviors among youth.

In conclusion, this study highlights the nuanced interplay of accurate knowledge, motivational factors, behavioral skills, and structural barriers shaping HIV risk perception and prevention among youth. Integrating these elements within the IMB model provides a robust framework to design interventions that not only inform but also motivate and empower youth to adopt and maintain safer sexual practices. Such comprehensive strategies are critical to reducing HIV incidence and promoting sexual health in this vulnerable population.

Based on the study's findings, several policy and practice considerations emerge. First, targeted interventions are needed to improve HIV risk perception, as 64% of participants did not perceive themselves at risk despite engaging in risky behaviors. Second, youth programs should incorporate behavioral reinforcement strategies—such as assertiveness and condom negotiation skills—given that HIV knowledge alone did not consistently lead to safer practices. Third, although 57% of respondents were aware of PrEP/PEP, only 2%

had used them, highlighting the need for improved access and counseling to promote uptake. Furthermore, HIV testing services must be youth-friendly and confidential, especially for adolescents under 18 who face disclosure concerns. Lastly, peer-led and family-based communication initiatives could help address motivational barriers, stigma, and power imbalances affecting prevention behaviors.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter provides a comprehensive summary of the study's major findings regarding HIV knowledge, sexual behaviors, and prevention strategies among adolescent girls and young women (AGYW) in Kisumu County. Drawing from both quantitative and qualitative data, it offers evidence-based conclusions and practical, policy-relevant recommendations informed by the Information–Motivation–Behavioral Skills (IMB) model. Each recommendation is grounded in the study objectives and informed by comparative literature from Kenya, South Africa, and other global contexts.

6.2Conclusion

This study assessed HIV knowledge, sexual behaviors, and prevention strategies among adolescent girls and young women (AGYW) aged 15–24 in Kisumu County, revealing several critical insights.

Objective one sought to evaluate HIV knowledge levels and sources. Findings showed that most participants demonstrated moderate to high HIV knowledge, particularly through family and school-based education. However, persistent myths and misconceptions about HIV transmission, such as transmission via mosquitoes or proximity to people living with HIV, highlight gaps in accurate information that require targeted educational interventions.

In objective two, despite relatively strong knowledge, risky sexual behaviors were common. Nearly half of the respondents had initiated sexual activity by a mean age of 17 years, with many engaging in high-risk practices like transactional sex and sex under the influence of substances. This disconnect reflects the well-documented knowledge–

behavior gap, emphasizing that information alone is insufficient to promote safer sexual behaviors.

Objective three focused on the relationship between knowledge, motivation, and behavior. While higher HIV knowledge correlated with greater awareness of personal and partner HIV status and biomedical prevention methods like PrEP and PEP, it did not consistently translate into safer sexual practices, such as consistent condom use. These findings reinforce the applicability of the Information–Motivation–Behavioral Skills (IMB) model, demonstrating that knowledge must be accompanied by motivation, such as accurate risk perception and positive peer norms, and behavioral skills including negotiation and refusal abilities to effectively reduce HIV risk.

Objective four identified structural and interpersonal barriers to HIV prevention, including peer pressure, economic dependence, intimate partner violence, and limited negotiation power. Misperceptions of personal risk and misconceptions regarding HIV testing and partner status further complicated prevention efforts. Qualitative data underscored these social and economic challenges, revealing the urgent need for interventions that go beyond information dissemination to empower youth through skill-building, economic support, and legal protections.

Taken together, these findings contribute nuanced insights into the IMB model's application within the Kisumu context. While the model effectively captures key behavioral determinants, it requires complementing with strategies that address broader socio-economic and cultural factors influencing HIV risk among AGYW. This integrated understanding underscores the importance of multifaceted, culturally sensitive

interventions that combine accurate information with motivation enhancement, skill development, and structural empowerment.

Overall, this study highlights the complex interplay of information, motivation, behavioral skills, and contextual influences shaping HIV risk and prevention behaviors among AGYW in Kisumu County. The insights gained provide a robust foundation for designing targeted, evidence-based interventions that can reduce HIV incidence and promote sexual health within this vulnerable population.

6.3 Recommendations

This study makes the following recommendations based on the study findings and objectives, for programs and policies that focus on preventing HIV infections among female youth.

To address early sexual debut (mean age 17) and poor condom use during first sex, the Ministry of Education, school administrators, and civil society should collaborate to integrate HIV, sexuality, and life-skills education into school curricula by Grade 6, ensuring that youth receive accurate, age-appropriate information and behavioral skills before their first sexual experience (Government of Kenya, 2006; McCarthy et al., 2024). This recommendation directly responds to findings under Objective 2 showing early sexual debut and inconsistent condom use among participants.

Given that participants who cited family as their primary source of HIV knowledge demonstrated higher knowledge scores, parenting support programs should be developed to help caregivers initiate open conversations about sex, HIV, and relationships with adolescents, reinforcing accurate knowledge within structured family settings and

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improving early intervention outcomes. This draws explicitly from Objective 1 results linking family communication with higher knowledge levels.

As peer pressure emerged as the top barrier to HIV prevention and yet youth who cited peers as information sources scored relatively high in knowledge, programs should establish and support peer-led HIV education and support services in schools and communities, training peer educators to deliver accurate and relatable information in youth-friendly formats to leverage peer influence as a positive force. These target barriers identified in Objective 4 related to peer influence.

Building on evidence from South Africa where youth empowerment programs have combined knowledge with assertiveness and negotiation skills training to increase confidence and agency (McCarthy et al., 2024), HIV prevention programs in Kenya should integrate skill-building and confidence enhancement modules. This approach addresses the gap identified in Objective 3 where knowledge alone did not translate into safer sexual practices, emphasizing practical empowerment to negotiate for safer sex. Furthermore, this strategy complements the legal protections framework by equipping AGYW with the personal skills needed to assert their rights within sexual relationships.

In response to the findings of forced sexual debut and youth's limited ability to refuse unsafe sex, a review of the enforcement of Kenya's Sexual Offences Act in Kisumu County should be conducted, accompanied by legal literacy campaigns targeting AGYW to ensure that existing protections are known, accessible, and effectively enforced. This recommendation directly addresses Objective 4's findings on sexual coercion and aligns with the need to assess whether legal frameworks adequately protect vulnerable youth.

Since financial dependence and transactional sex were identified as key drivers of HIV vulnerability, stakeholders should introduce economic empowerment programs, such as vocational training, microgrants, and financial literacy initiatives, targeted at out-of-school youth and young mothers to reduce economic vulnerability and strengthen girls' autonomy in sexual decision-making (Ajayi et al., 2019). This addresses structural barriers highlighted in Objective 4 and supported by qualitative data.

Although awareness of PrEP and PEP was relatively high (57%), actual use remained very low (2%), indicating a need to decentralize access to biomedical prevention through schools, youth clinics, and outreach programs, while concurrently addressing structural barriers, stigma, and misinformation that hinder uptake and adherence. This recommendation is informed by Objective 3's findings on the gap between awareness and use of biomedical prevention.

Areas recommended for further research include.

The Role of Family Dynamics in HIV Prevention: Further investigation is needed to explore how different family structures and parenting styles influence HIV knowledge and risk perception among adolescent girls and young women (AGYW), especially given this study's finding that family was a strong source of accurate information.

Effectiveness of Peer-Led Interventions: Research should assess the long-term impact of peer education and support groups on HIV prevention behaviors such as consistent condom use, negotiation skills, and HIV testing uptake among youth.

Barriers to Accessing HIV Testing and Biomedical Prevention: More studies are required to identify and understand the structural, cultural, and psychological obstacles that prevent

AGYW from accessing HIV testing, PrEP, and PEP, particularly in rural or resource-limited settings.

Effectiveness of Legal and Institutional Protections: It is important to assess the implementation and impact of Kenya's legal frameworks protecting AGYW against sexual coercion and violence to determine whether these policies are adequately enforced and effective.

Economic Vulnerability and HIV Risk: Additional research should explore how economic challenges, including financial dependence and transactional sex, influence HIV risk behaviors among AGYW, and how these factors intersect with gender and cultural norms in different communities.

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APPENDIX A: CONSENT FORM FOR PARTICIPANTS OVER 18 YEARS

What is your preferred language?

English ☐ Kiswahili ☐ Dholuo ☐

PART I: INFORMATION SHEET

Title of the Study: The influence of HIV Knowledge on Prevention Practices Among Female Youth aged 15-24 years in Kisumu County, Kenya.

Introduction:

My name is…………..I invite you to participate in this study on the influence of HIV knowledge on prevention practices among female youth aged 15 -24 years in Kisumu County, Kenya. The principal investigator is Tabitha Adhiambo Odero, a Master of Public Health student at Amref International University with the guidance of experts referred to herein as research supervisors.

Purpose of study

The purpose of this study is to examine how knowledge influences decision making regarding preventive strategies against HIV. We will appreciate what knowledge is available on HIV prevention and the various preventive strategies utilized for self-protection. It will also give an understanding of the challenges to HIV prevention before, during and after HIV risk exposure.

Study procedures.

If you join this study, I will ask you questions, and your answers will be kept between us. This interview will include general questions about age, education, financial status, and

sources of knowledge on HIV. Personal questions will focus on knowledge about HIV, sexual behavior, HIV preventive measures/ methods and challenges to HIV prevention. This interview may take about 30 to 45 minutes.

The information collected will be captured in the questionnaire. Participants will only be identified by codes; no names or personal details will be captured therefore the information you give will not be traced to you. The interview will be carried out in a comfortable place and in a language that you are familiar with.

Alternatives to taking part.

Taking part in the study is out of choice and only with your consent. Should you consent to be in the study and change your mind during the interview, you are allowed to discontinue. You are also allowed to withdraw the data that has been collected up to this point, however, the data collected can be included in the study if you give consent.

Costs of being in the study

No cost, apart from 30 - 45 minutes of your time.

There will be no monetary compensation for participating in the study. If any respondent must incur the costs of travel, they will be reimbursed.

Benefits

At an individual level, this study will be beneficial to help identify and understand the various preventive strategies one can utilize against HIV and other sexually transmitted infections. It will also improve access to healthcare services including HIV testing, counselling, and treatment.

At the community level, raising awareness about HIV/AIDS will help reduce stigma and discrimination associated with the disease to foster a supportive environment where individuals feel comfortable seeking HIV-related services and support. It will also help training community members as peer educators or advocates for HIV prevention.

At the world level, these findings will contribute to the global body of knowledge on HIV/AIDS and inform evidence-based interventions and policies. It will also help advocate for improved HIV prevention programs, access to healthcare services, and policy changes at the national and international levels.

Risks

Some questions may be personal and uncomfortable, evoking negative emotions or psychological distress, especially if you have had personal experiences with the disease or have been affected by it negatively in some way. Some questions may be personal and uncomfortable, feel free to communicate during the interview in case of any such questions.

Considering that we are interviewing people from the same area, your neighbors might suspect that you participated in the study. Despite this, the ethics that guide this research do not allow me to inform anyone that you participated in the study, confidentiality is guaranteed, no one will have access to your responses and no information will be traced to you.

Confidentiality and access to your health information

The information collected will be confidential. No names or telephone numbers will be linked to the information provided. You will be identified by a number, not by your

name. Your name will therefore not appear anywhere when study findings and study data are shared. The results of this study will be released to the public without any identifiers.

Approval to undertake this study has been sought from AMIU ESRC, NACOSTI and relevant authorities in the Kisumu County Government.

Who should you contact if you have questions?

If you would like to have more information about the study, you may contact:

Tabitha Adhiambo Odero- Email tabbyodero@gmail.com; Phone: 0707485617.

Dr Tom Marwa - Email Marwa.machera@gmail.com

Dr Collins Owek- Email collins.owek@gmail.com

In case you feel that your rights have been compromised in any way during the study, kindly contact the AMREF Ethical and Scientific review Committee (ESRC) through the channels below.

The Research Officer,

Amref Health Africa in Kenya

Wilson Airport, Lang'ata Road

Office Tel: +254 20 6994000 ; Telephone: 254795746777

Email: esrc.kenya@amref.org

Fax: +254 20 606340 P.O Box 30125-00100 Nairobi, Kenya

Do you have any questions at this time?

PART II: Certificate of consent

I have read the above information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I asked have been answered to my satisfaction. I consent voluntarily to participate in this study.

NAME OF SUBJECT: ______________________________________

SIGNATURE: ______________________________

DATE: ____________________________________

Participant study ID: _________________________

Data collected by: ___________________________

If visually impaired, physically impaired, mentally impaired or illiterate

I have witnessed the accurate reading of the Consent Form to the potential study subject, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

NAME OF SUBJECT: ______________________________________

Thumb/ Foot print of subject: ______________________________________

Signature of witness: [A literate witness must sign and should be selected by the study subject and MUST have no connection to the research team.

____

Date: ______________________________________

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Statement by the researcher/person taking consent.

I confirm that the study subject was given an opportunity to ask questions about the study, and all the questions asked by the study subject have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this Informed Consent Form has been provided to the study subject.

Name of researcher/person taking the consent:

____

Signature of researcher/person taking the consent:

____

Date: ______________________________________

FOMU YA IDHINI KWA WASHIRIKI WALIO NA UMRI WA ZAIDI YA MIAKA 18

Jina la utafiti: Majifunzo ya UKIMWI na Athari Yake kwenye Mazoea ya Kuzuia Miongoni mwa Wanawake Vijana na Wasichana Wachanga wenye Umri wa Miaka 15-24 katika Kaunti ya Kisumu, Kenya: Utafiti wa Msalaba-Wakati.

Utangulizi:

Mhoji anasoma: Jina langu ni .... umealikwa kushiriki katika utafiti huu kuhusu Majifunzo ya UKIMWI na Athari Yake kwenye Mazoea ya Kuzuia

Miongoni mwa Wanawake Vijana na Wasichana Wachanga wenye Umri wa Miaka 15-24 katika Kaunti ya Kisumu, Kenya: Utafiti wa Msalaba-Wakati. Mtafiti mkuu ni Tabitha Adhiambo Odero, mwanafunzi wa MPH katika Chuo Kikuu cha Amref International.

Lengo la utafiti Lengo la utafiti huu ni kuchunguza jinsi maarifa yanavyoathiri kufanya maamuzi kuhusu mikakati ya kuzuia HIV. Utafiti utatusaidia kuelewa ni maarifa gani yanapatikana kuhusu kuzuia HIV na mikakati mbalimbali inayotumika kwa ajili ya kujilinda. Pia, utatupa uelewa wa changamoto zinazohusiana na kuzuia HIV kabla, wakati na baada ya kuwa katika hatari ya kukutana na HIV.

Taratibu za utafiti

Utafiti huu unajumuisha maswali ya jumla kuhusu umri, elimu, hali ya kifedha, na vyanzo vya maarifa kuhusu HIV. Maswali binafsi yanazingatia maarifa kuhusu HIV, tabia za kijinsia, njia za kuzuia HIV, na changamoto za kuzuia HIV. Mahojiano haya yanaweza kuchukua kati ya dakika 30 hadi 45. Taarifa zitakusanywa kwenye maswali. Washiriki watatambulishwa tu kwa njia ya nambari; majina au maelezo binafsi hayatachukuliwa. Mahojiano yatafanyika mahali pazuri na kwa lugha unayofahamu.

Chaguo Mbali za Kushiriki.

Kushiriki katika utafiti ni chaguo lako na ni kwa idhini yako tu. Ikiwa unakubali kushiriki katika utafiti na kubadili mawazo yako wakati wa mahojiano, unaruhusiwa kuacha. Pia, unaruhusiwa kujitoa kwenye data ambayo imekusanywa hadi sasa, hata hivyo, data iliyokusanywa inaweza kujumuishwa katika utafiti ikiwa utatoa idhini.

Gharama za Kushiriki kwenye Utafiti

Hakuna gharama, isipokuwa dakika 30 - 45 za wakati wako.

Hakutakuwa na fidia ya fedha kwa kushiriki katika utafiti. Ikiwa mtu yeyote anapaswa kubeba gharama za usafiri, atalipwa gharama hizo.

Manufaa

Kwa kiwango cha mtu binafsi, utafiti huu utakuwa na manufaa kwa kusaidia kutambua na kuelewa mikakati mbalimbali ya kinga ambayo mtu anaweza kutumia dhidi ya VVU na maambukizi mengine kupitia ngono. Pia, itaboresha upatikanaji wa huduma za afya ikiwa ni pamoja na upimaji wa VVU, ushauri nasaha, na matibabu.

Kwa kiwango cha jamii, kuongeza uelewa kuhusu VVU/UKIMWI kutapunguza unyanyapaa na ubaguzi unaohusishwa na ugonjwa huo ili kuunda mazingira yenye msaada ambapo watu wanajisikia vizuri kutafuta huduma na msaada unaohusiana na VVU. Pia, itasaidia kutoa mafunzo kwa wanajamii kama waelimishaji wenzao au mabalozi wa kinga dhidi ya VVU.

Kwa kiwango cha dunia, matokeo haya yatachangia katika mwili wa maarifa wa kimataifa kuhusu VVU/UKIMWI na kusaidia katika kuanzisha mikakati na sera za msingi wa ushahidi. Pia, itasaidia kufanya kampeni kwa ajili ya programu bora za kuzuia VVU, upatikanaji wa huduma za afya, na mabadiliko ya sera katika ngazi ya kitaifa na kimataifa.

Hatari

Baadhi ya maswali yanaweza kuwa ya kibinafsi na kuchosha, yakileta hisia hasi au dhiki ya kisaikolojia, hasa ikiwa una uzoefu wa kibinafsi na ugonjwa au umeguswa nayo kwa njia hasi fulani. Baadhi ya maswali yanaweza kuwa ya kibinafsi na kuchosha, jisikie huru kuwasiliana wakati wa mahojiano kwa kesi ya maswali kama hayo.

Kuzingatia kwamba tunawahoji watu kutoka eneo moja, majirani wako wanaweza kushuku kuwa umeshiriki katika utafiti. Hata hivyo, maadili yanayoelekeza utafiti huu hayaniruhusu kuwajulisha mtu yeyote kuwa umeshiriki katika utafiti, uhakika wa usiri unahakikishwa, hakuna mtu atakayepata ufikivu wa majibu yako na hakuna habari itakayoweza kufuatiliwa kwako.

Usiri na Upatikanaji wa Taarifa zako za Afya

Taarifa zilizokusanywa zitakuwa za siri. Hakuna majina au namba za simu zitakazounganishwa na taarifa zilizotolewa. Utatambuliwa kwa nambari, sio kwa jina lako. Jina lako hivyo halitatokea popote unapowasilishwa matokeo ya utafiti na data ya utafiti. Matokeo ya utafiti huu yatatolewa kwa umma bila kitambulisho chochote.

Idhini ya kufanya utafiti huu imetafutwa kutoka kwa AMIU ESRC, NACOSTI, na mamlaka husika katika Serikali ya Kaunti ya Kisumu.

Ni nani unapaswa kuwasiliana naye ikiwa una maswali?

Ikiwa ungependa kupata habari zaidi kuhusu utafiti, unaweza kuwasiliana na:

Tabitha Adhiambo Odero-Barua pepe; tabbyodero@gmail.com; Simu: 0707485617

Dr Tom Marwa- Barua pepe; Marwa.machera@gmail.com

Dr Collins Owek- Barua pepe; collins.owek@gmail.com

Ikiwa unahisi kuwa haki zako zimekiukwa kwa njia yoyote wakati wa utafiti, tafadhali wasiliana na Kamati ya Ukaguzi wa Maadili na Kisayansi ya AMREF (ESRC) kupitia njia zifuatazo.

Kamati ya Ukaguzi wa Maadili na Kisayansi (ESRC)

Amref Health Africa nchini Kenya

Sanduku la posta 30125 - 00100

Nairobi, Kenya

Simu: 254795746777 ; Barua pepe: esrc.kenya@amref.org

SEHEMU II: Cheti cha Idhini

Nimeisoma taarifa iliyotolewa hapo juu, au imenisomwa. Nimepata fursa ya kuuliza maswali kuhusu hiyo na maswali yangu yote yamejibiwa kwa kuridhisha kwangu. Natoa idhini kwa hiari yangu kushiriki katika utafiti huu.

JINA LA MTU WA KUHUSIKA: ___________________________

SAHIHI: ___________________________

TAREHE: ___________________________

ID YA MTU ALIYEHUSIKA: ___________________________

Data iliyokusanywa na: ___________________________

Ikiwa una ulemavu wa kuona, ulemavu wa kimwili, ulemavu wa kiakili, au ulemavu wa kusoma na kuandika

Nimeshuhudia kusomwa kwa Fomu ya Idhini kwa mada anayeweza kushiriki katika utafiti, na mtu huyo amepata fursa ya kuuliza maswali. Nithibitisha kuwa mtu huyo ametoa idhini kwa hiari.

JINA LA MWANANCHI: ___________________________

Mkono/ Mguu wa mada: ___________________________

Sahihi ya shahidi: [Shahidi mwenye uwezo wa kusoma na kuandika lazima asaini na lazima achaguliwe na mada ya utafiti na LAZIMA asihusiane na timu ya utafiti.

____

Tarehe: ___________________________

Kauli na mtafiti/anayechukua idhini.

Nathibitisha kwamba mada ya utafiti alipewa fursa ya kuuliza maswali kuhusu utafiti, na maswali yote yaliyoulizwa na mada ya utafiti yamejibiwa kwa usahihi na kwa uwezo wangu bora. Nathibitisha kuwa mtu huyo hakulazimishwa kutoa idhini, na idhini imetolewa kwa hiari na kwa hiari.

Nakala ya Fomu ya Idhini yenye Taarifa iliyotolewa imetolewa kwa mada ya utafiti.

Jina la mtafiti/anayechukua idhini: ___________________________

Sahihi ya mtafiti/anayechukua idhini: ___________________________

Tarehe: ___________________________

<u>LUO - BARUPE MOKET NI JOWUONI MOKALO HIGNI 18</u>

Dhi gi yor mane ilamo kaka luongo maru?

Eng'eleza ☐ Kiswahili ☐ Dholuo ☐

PART I: PAPRUOK MAR TIKO (INFORMATION SHEET)

Nying mar Tiko:

Yie mar Ng'eyo kuom HIV kod Timo mar Rieko e Nyar Moko Moko Manyalo Higni 15–24 e Kisumu County, Kenya.

Kawuono (Introduction):

Nyingna en .... An kawo ni ibed e tije mar loso ng'eyo kuom kaka ng'eyo kuom HIV nyalo kelo timo mar rieko e yawuot nyar gi e Kisumu County. Principal Investigator en Tabitha Adhiambo Odero, jastudent mar Master of Public Health e Amref International University, matiyo gi jopuonjre kaka Supervisors.

Kata Mar Tiko (Purpose of Study):

Jolupo wan wanre ni mondo wamany gi kaka ng'eyo kuom HIV konyo e keto rieko, gi kaka yawuot nyako tim gi chalo rieko kata tije mar kwedo. Wabiro yudo bura mar kaka yawuot nyako penjo rieko, kod chike mowinjore kendo e bedo gi ahinya e yo mar kwedo.

Tije Mowinjore e Tiko (Study Procedures):

Ka inyalo yudo tije e research, wabiro penjo penjo ni, kod weche mowinjore e ng'eyo kuom higni, kar puonj, kata yo modong gi pesa. Penjo moko biro bedo e yo mar joma timo rieko kata ok. Tije biro yudo e kar ka ihero, gi yor mane in konyore gi kaka ilamo.

Weche Ma Nyalo Bed Moko (Alternatives to Taking Part):

Bedi e research en mar chiege. Ka idwaro idhi kodwa, to inyalo weyo kinde moro amora. Biro bedo ni inyalo weyo data ma osekonyore kapok osegol kamano. To ka iyie, data ma oseloso nyalo konyo e tije.

Nyingruok (Costs of Participation):

Ok nitiere pesa moro amora, makmana kinde mari mar ndalo 30-45 minutes.

Ok biro chiwo pesa, to ka idhi e interview gi pesa mari, to ibiro chiwo reimbursement.

Ber Maduong' (Benefits):

Kaka Ng'at Ka In: Ibiro yudo ng'eyo kuom tije maber ma nyalo konyi kwedo HIV gi mag sexual infections. Ibiro konyo mondo ilos yore mar bedo gi ratiro gi testing, counseling.

E Dhoodho: Tije biro konyo kelo ng'eyo kuom HIV/AIDS e piny, ka ywe weche mag stigma, mondo jogi bed gi ng'wono e teko mar yudo services, testing, gi paro.

E Piny Ka Piny: Weche mag tije biro loso ng'eyo piny ka piny kuom timo mar rieko gi yore mag keto chik makel tije maber e giko, piny, gi yo mar policy.

Risks (Rikni Mowinjore):

Penjo moko nyalo bedo kod bedo mar luoro, kata parruok, to inyalo wuoyo gi jang'weny mondo oyie ni penjo ma okonyi. Weche biro loso mondo itimre e yo ma in gi yie gi.

Ka jo muwegi luwo ni ichiwore e tije, to ok anyal nyiso ng'ato ni isewinjore. Tije ber e okonyo weche mag ethics, mondo weche man be en gi sirni mar kende gi personal info.

Sigandruok (Confidentiality):

Data ma wabiro yudo ibiro bedo confidential. Ok wabiro keto nyingni, kata namba mar sim. Ibiro tiyo gi code kende. Jopuonjre kata jowuoth ok ibiro neno nyingni kata weche ni. Tije biro yudore e public kata nying mar ng'ato.

Joma Inyal Penjo (Contact Information):

Ka in gi penjo moro amora kuom tije, inyal lowo gi:

Tabitha Adhiambo Odero - Email: tabbyodero@gmail.com; Sim: 0707485617

Dr. Tom Marwa - Email: marwa.machera@gmail.com

Dr. Collins Owek - Email: collins.owek@gmail.com

Ka iparo ni nyal bedo gi weche ma ok ochiwore maber, inyal lowo:

The Research Officer,

Amref Health Africa in Kenya

Wilson Airport, Lang'ata Road

Office Tel: +254 20 6994000; Sim: 254795746777

Email: esrc.kenya@amref.org; P.O Box 30125-00100, Nairobi, Kenya

PART II: GIERE MAR WINJO (CERTIFICATE OF CONSENT)

Asetemo weche man gi makare kata osenwang'a. Asemiyo penjo, kendo weche ma asepenjo osemedore. Ayie gi chunya duto ni adhi e tije man gi chunya.

NYING JOWUONI: ______________________________________

TIMO SIGNATURE: ______________________________

NINDO: ____________________________________

Namba mar Jowuoni: _________________________

Jalosi Data: ___________________________

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Ka Jowuoni Ok Neno Maber, kata Ok Nyalo Wacho Maber, kata Jachiek:

Asetemo weche duto ni jowuoni gi adieri. Adwaro ni ok okethore, kendo nyiso ni osemiro chuny kod yie. Asetemo tije ma onge gi thurwa moro amora.

NYING JOWUONI: ____

Ratiro mar Agulu kata Tiende: ____

Sign mar WITNESS: ____

NINDO: ____

Wach mar Jatelo Mar Keto Signature:

*Asetemo ni jowuoni osepenjo penjo duto gi tije

amref INTERNATIONAL UNIVERSITY INSPIRING LASTING CHANGE

APPENDIX B: PARENT/GUARDIAN CONSENT FORM FOR PARTICIPANTS UNDER THE AGE OF 18 YEARS

Preferred language

English ☐ Kiswahili ☐ Dholuo ☐

Title of Study: The influence of HIV knowledge on prevention practices among female youth aged 15 -24 years in Kisumu County, Kenya.

Introduction:

Interviewer reads: My name is ....Your daughter has been invited to participate in this study on the influence of HIV knowledge on prevention practices among female youth aged 15 -24 years in Kisumu County, Kenya. The principal investigator is Tabitha Adhiambo Odero, MPH student at Amref International University.

Purpose of the study

The purpose of this study is to examine how knowledge influences making decisions regarding preventive strategies against HIV. The study will help us appreciate what knowledge on HIV prevention is available and various preventive strategies utilized for self-protection. It will also give an understanding of the challenges to HIV prevention before, during and after HIV risk exposure.

Study procedures.

This study involves general questions about age, education, financial status, and sources of knowledge on HIV. Personal questions focus on knowledge about HIV, sexual

behavior, HIV preventive measures/ methods and challenges to HIV prevention. This interview may take about 30 to 45 minutes.

Information will be captured in the questionnaire. Participants will only be identified by codes; no names or personal details will be captured. The interview will be carried out in a comfortable place and in a language that you are familiar with.

Alternatives to taking part.

Taking part in the study is out of choice and only with your consent. Should you consent for your daughter to be in the study and then you change your mind during the interview, you are allowed to discontinue. You are also allowed to withdraw the data that has been collected up to this point, however, the data collected can be included in the study if you give consent.

Costs of being in the study

No cost, apart from 30 - 45 minutes of your daughter's time for the written questionnaire.

There will be no monetary compensation for participating in the study. If any respondent must incur the costs of travel, they will be reimbursed.

Benefits

At an individual level, this study will be beneficial to help identify and understand the various preventive strategies one can utilize against HIV and other sexually transmitted infections. It will also improve access to healthcare services including HIV testing, counselling, and treatment.

At the community level, raising awareness about HIV/AIDS will help reduce stigma and discrimination associated with the disease to foster a supportive environment where individuals feel comfortable seeking HIV-related services and support. It will also help training community members as peer educators or advocates for HIV prevention.

At the world level, these findings will contribute to the global body of knowledge on HIV/AIDS and inform evidence-based interventions and policies. It will also help advocate for improved HIV prevention programs, access to healthcare services, and policy changes at the national and international levels.

Risks

Some questions may be personal and uncomfortable, evoking negative emotions or psychological distress, especially if one has had personal experiences with the disease or has been affected by it negatively in some way. Some questions may be personal and uncomfortable, your daughter is free to communicate during the interview in case of any such questions.

Considering that we are interviewing people from the same area, your neighbors might suspect that your daughter participated in the study. Despite this, the ethics that guide this research do not allow me to inform anyone that she participated in the study, confidentiality is guaranteed, no one will have access to her responses and no information will be traced to her.

Confidentiality and access to your health information

Information collected will be confidential. No names or telephone numbers will be linked to the information provided. The participant will be identified by a number, not by name.

No name will appear anywhere when study findings and study data are shared. The results of this study will be released to the public without any identifiers.

Approval to undertake this study has been sought from AMIU ESRC, NACOSTI and relevant authorities in the Kisumu County Government.

Who should you contact if you have questions?

If you would like to have more information about the study, you may contact:

Tabitha Adhiambo Odero- Email tabbyodero@gmail.com; phone: 0707485617.

Dr Tom Marwa- Email Marwa.machera@gmail.com

Dr Collins Owek- Email collins.owek@gmail.com

In case you feel that your rights have been compromised in any way during the study, kindly contact the AMREF Ethical and Scientific review Committee (ESRC) through the channels below.

The Research Officer,

Amref Health Africa in Kenya

Wilson Airport, Lang'ata Road

Office Tel: +254 20 6994000; Tel: 254795746777

Email: esrc.kenya@amref.org

Fax: +254 20 606340; P.O Box 30125-00100; Nairobi, Kenya

Do you have any questions at this time?

PART II: Certificate of consent

I have read the above information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I asked have been answered to my satisfaction. I give consent voluntarily for my daughter to participate in this study.

NAME OF SUBJECT: ______________________________________

SIGNATURE: ______________________________

DATE: ____________________________________

Participant study ID: _________________________

Data collected by: ___________________________

If visually impaired, physically impaired, mentally impaired or illiterate

I have witnessed the accurate reading of the Consent Form to the potential study subject, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

NAME OF SUBJECT: ______________________________________

Thumb/ Foot print of subject: ______________________________________

Signature of witness: [A literate witness must sign and should be selected by the study subject and MUST have no connection with the study team

____

Date: ______________________________________

Statement by the researcher/person taking consent.

I confirm that the parent/guardian was given an opportunity to ask questions about the study, and all the questions asked by the parent/guardian have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this Informed Consent Form has been provided to the study subject.

Name of researcher/person taking the consent:

____

Signature of researcher/person taking the consent______________________________________

Date: ____

FOMU YA IDHINI YA WAZAZI/MLEZI KWA WASHIRIKI WALIO CHINI YA UMRI WA MIAKA 18

Lugha inayopendelewa

Kiingereza ☐ Kiswahili ☐ Dholuo ☐

Jina la Utafiti: Maarifa ya VVU na Athari Yake kwenye Mienendo ya Kuzuia kati ya Wanawake Vijana na Wasichana Wenye Umri wa Miaka 15-24 katika Kaunti ya Kisumu, Kenya.

Utangulizi:

Msimamizi anasoma: Jina langu ni .... Binti yako amealikwa kushiriki katika utafiti huu kuhusu maarifa ya VVU na athari yake kwenye mienendo ya

kuzuia kati ya wanawake vijana na wasichana wenye umri wa miaka 15-24 katika Kaunti ya Kisumu, Kenya. Mpelelezi mkuu ni Tabitha Adhiambo Odero, mwanafunzi wa MPH katika Chuo Kikuu cha Amref International.

Lengo la utafiti

Lengo la utafiti huu ni kuchunguza jinsi maarifa yanavyoathiri uamuzi kuhusu mikakati ya kuzuia dhidi ya VVU. Utafiti utatusaidia kuelewa ni maarifa gani yanapatikana kuhusu kuzuia VVU na mikakati mbalimbali inayotumiwa kwa ajili ya kujilinda. Pia itatoa uelewa wa changamoto za kuzuia VVU kabla, wakati na baada ya kuwa katika hatari ya VVU.

Taratibu za utafiti

Utafiti huu unajumuisha maswali ya jumla kuhusu umri, elimu, hali ya kifedha, na vyanzo vya maarifa kuhusu VVU. Maswali ya kibinafsi yanahusu maarifa kuhusu VVU, tabia ya kingono, njia/mbinu za kuzuia VVU na changamoto za kuzuia VVU. Mahojiano haya yanaweza kuchukua kama dakika 30 hadi 45.

Maelezo yatakusanywa kwenye maswali. Washiriki watatambuliwa kwa nambari tu; hakutakuwa na majina au taarifa binafsi zitakazokusanywa. Mahojiano yatafanyika mahali penye faraja na kwa lugha unayoelewa.

Chaguzi badala ya kushiriki

Kushiriki katika utafiti ni hiari na tu kwa ridhaa yako. Ikiwa utakubali binti yako ashiriki katika utafiti na kisha ubadilishe mawazo yako wakati wa mahojiano, unaruhusiwa kuacha. Pia unaruhusiwa kujiondoa katika data iliyokusanywa hadi sasa, hata hivyo, data iliyokusanywa inaweza kujumuishwa katika utafiti ikiwa utatoa ridhaa.

Gharama za kushiriki katika utafiti

Hakuna gharama, isipokuwa dakika 30 hadi 45 za muda wa binti yako.

Hakutakuwa na fidia ya pesa kwa kushiriki katika utafiti. Ikiwa mshiriki yeyote atalazimika kubeba gharama za safari, atarejeshewa.

Faida

Kwa kiwango cha mtu binafsi, utafiti huu utakuwa na manufaa kwa kusaidia kutambua na kuelewa mikakati mbalimbali ya kuzuia ambayo mtu anaweza kutumia dhidi ya VVU na maambukizo mengine ya ngono. Pia itaboresha upatikanaji wa huduma za afya ikiwa ni pamoja na vipimo vya VVU, ushauri, na matibabu.

Kwa kiwango cha jamii, kuongeza uelewa kuhusu VVU/UKIMWI kutapunguza unyanyapaa na ubaguzi unaohusiana na ugonjwa ili kukuza mazingira ya usaidizi ambapo watu wanajisikia vizuri kutafuta huduma za VVU na msaada. Pia itasaidia kuwafundisha wanajamii kama waelimishaji wa rika au mabalozi wa kuzuia VVU.

Kwa kiwango cha dunia, matokeo haya yatachangia katika mwili wa maarifa wa ulimwengu kuhusu VVU/UKIMWI na kusaidia kubuni na kutekeleza sera na mikakati ya msingi wa ushahidi. Pia itasaidia kushinikiza kwa ajili ya mipango bora ya kuzuia VVU, upatikanaji wa huduma za afya, na mabadiliko ya sera katika kiwango cha kitaifa.

Hatari

Baadhi ya maswali yanaweza kuwa ya kibinafsi na yenye kutokukubalika, yakitoa hisia hasi au msongo wa akili, hasa ikiwa mtu amepata uzoefu wa kibinafsi na ugonjwa huo au umekuwa umeathiriwa nayo kwa njia fulani. Baadhi ya maswali yanaweza kuwa ya

kibinafsi na yenye kutokukubalika, binti yako yuko huru kutoa mawasiliano wakati wa mahojiano kuhusu maswali kama hayo.

Kwa kuzingatia kwamba tunawauliza watu kutoka eneo moja, majirani zako wanaweza kushuku kwamba binti yako alishiriki katika utafiti. Hata hivyo, maadili yanayoongoza utafiti huu hayaniruhusu kuwajulisha mtu yeyote kwamba ameshiriki katika utafiti, usiri umeahidiwa, hakuna mtu atakayekuwa na ufikiaji wa majibu yake na hakuna taarifa itakayomfikia.

Usiri na ufikiaji wa taarifa zako za afya

Taarifa zilizokusanywa zitakuwa za siri. Hakuna majina au namba za simu zitakazounganishwa na taarifa zilizotolewa. Mshiriki atatambuliwa kwa nambari, si kwa jina. Hakuna jina litakalotokana na mahali popote wakati matokeo ya utafiti na data ya utafiti yanaposhirikishwa. Matokeo ya utafiti huu yatawekwa hadharani bila kitambulisho chochote.

Idhini ya kufanya utafiti huu imeombwa kutoka kwa AMIU ESRC, NACOSTI na mamlaka husika katika Serikali ya Kaunti ya Kisumu.

Ni nani unaweza kuwasiliana nao ikiwa una maswali?

Ikiwa ungependa kupata habari zaidi kuhusu utafiti, unaweza kuwasiliana na:

Tabitha Adhiambo Odero- Barua pepe: tabbyodero@gmail.com; Simu: 0707485617.

Dk Tom Marwa- Barua pepe: Marwa.machera@gmail.com

Dk Collins Owek- Barua pepe: collins.owek@gmail.com

Ikiwa unahisi kwamba haki zako zimekiukwa kwa njia yoyote wakati wa utafiti, tafadhali wasiliana na Kamati ya Mapitio ya Kimaadili na Kielimu ya AMREF (ESRC) kupitia njia zifuatazo.

Afisa wa Utafiti,

Amref Health Africa nchini Kenya

Uwanja wa Ndege wa Wilson, Barabara ya Lang'ata

Simu ya Ofisi: +254 20 6994000; Simu: 254795746777

Barua pepe: esrc.kenya@amref.org; Fax: +254 20 606340

Sanduku la Posta 30125-00100; Nairobi, Kenya

Je, una maswali yoyote kwa sasa?

SEHEMU II: Cheti cha idhini

Nimeisoma taarifa iliyotajwa hapo juu, au imenisomwa. Nimepata fursa ya kuuliza maswali kuhusu hiyo na maswali yoyote niliyouliza yamejibiwa kwa kuridhisha kwangu. Natoa idhini kwa hiari kwa binti yangu kushiriki katika utafiti huu.

JINA LA MTU WA KUHUSIKA: ____

SAHIHI: _______________________________

TAREHE: _____________________________________

ID YA MTU ALIYEHUSIKA KATIKA UTAFITI: __________________________

Data iliyokusanywa na: ____________________________

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Ikiwa una kasoro ya kuona, kasoro ya mwili au kasoro ya kiakili

Nimekuwa shahidi wa kusomwa kwa usahihi kwa Fomu ya Idhini kwa mtu wa kujifunza, na mtu binafsi amepata fursa ya kuuliza maswali. Ninathibitisha kwamba mtu huyo ametoa idhini kwa hiari.

JINA LA MTU ALIYEHUSIKA: ______________________________________

Thambi / Alama ya mguu ya mtu aliye husika:

____

Sahihi ya shahidi: [Shahidi aliyeelimika lazima asaini na lazima achaguliwe na mtu wa kujifunza na HAIWEZI kuwa na uhusiano na timu ya utafiti

____

Tarehe: ______________________________________

Taarifa na mtafiti / mtu anayechukua idhini.

Ninathibitisha kwamba mzazi/mlezi alipewa fursa ya kuuliza maswali kuhusu utafiti, na maswali yote yaliyoulizwa na mzazi/mlezi yamejibiwa kwa usahihi na kwa uwezo wangu bora. Ninathibitisha kwamba mtu huyo hajalazimishwa kutoa idhini, na idhini imepatikana kwa hiari na kwa hiari.

Nakala ya Fomu hii ya Idhini ya Kuelimisha imepatikana kwa mtu anayejifunza.

Jina la mtafiti / mtu anayechukua idhini: ______________________________________

Sahihi ya mtafiti / mtu anayechukua

idhini______________________________________

Tarehe: ______________________________________

BARUPE MOKET NI JOWUONI MOKALO HIGNI 18 KOD MANE PINY

Dhi gi yor mane ilamo kaka luongo maru?

Eng'eleza ☐ Kiswahili ☐ Dholuo ☐

PART I: PAPRUOK MAR TIKO (INFORMATION SHEET)

Nying mar Tiko:

Yie mar Ng’eyo kuom HIV kod Timo mar Rieko e Nyar Moko Moko Manyalo Higni 15–24 e Kisumu County, Kenya.

Kawuono (Introduction):

Nyingna en .... An kawo ni ibed e tije mar loso ng’eyo kuom kaka ng’eyo kuom HIV nyalo kelo timo mar rieko e yawuot nyar gi e Kisumu County. Principal Investigator en Tabitha Adhiambo Odero, jastudent mar Master of Public Health e Amref International University, matiyo gi jopuonjre kaka Supervisors.

Kata Mar Tiko (Purpose of Study):

Jolupo wan wanre ni mondo wamany gi kaka ng’eyo kuom HIV konyo e keto rieko, gi kaka yawuot nyako tim gi chalo rieko kata tije mar kwedo. Wabiro yudo bura mar kaka yawuot nyako penjo rieko, kod chike mowinjore kendo e bedo gi ahinya e yo mar kwedo.

Tije Mowinjore e Tiko (Study Procedures):

Ka inyalo yudo tije e research, wabiro penjo penjo ni, kod weche mowinjore e ng'eyo kuom higni, kar puonj, kata yo modong gi pesa. Penjo moko biro bedo e yo mar joma timo rieko kata ok. Tije biro yudo e kar ka ihero, gi yor mane in konyore gi kaka ilamo.

Weche Ma Nyalo Bed Moko (Alternatives to Taking Part):

Bedi e research en mar chiege. Ka idwaro idhi kodwa, to inyalo weyo kinde moro amora. Biro bedo ni inyalo weyo data ma osekonyore kapok osegol kamano. To ka iyie, data ma oseloso nyalo konyo e tije.

Nyingruok (Costs of Participation):

Ok nitiere pesa moro amora, makmana kinde mari mar ndalo 30-45 minutes.

Ok biro chiwo pesa, to ka idhi e interview gi pesa mari, to ibiro chiwo reimbursement.

Ber Maduong' (Benefits):

Kaka Ng'at Ka In: Ibiro yudo ng'eyo kuom tije maber ma nyalo konyi kwedo HIV gi mag sexual infections. Ibiro konyo mondo ilos yore mar bedo gi ratiro gi testing, counseling.

E Dhoodho: Tije biro konyo kelo ng'eyo kuom HIV/AIDS e piny, ka ywe weche mag stigma, mondo jogi bed gi ng'wono e teko mar yudo services, testing, gi paro.

E Piny Ka Piny: Weche mag tije biro loso ng'eyo piny ka piny kuom timo mar rieko gi yore mag keto chik makel tije maber e giko, piny, gi yo mar policy.

Risks (Rikni Mowinjore):

Penjo moko nyalo bedo kod bedo mar luoro, kata parruok, to inyalo wuoyo gi jang'weny mondo oyie ni penjo ma okonyi. Weche biro loso mondo itimre e yo ma in gi yie gi.

Ka jo muwegi luwo ni ichiwore e tije, to ok anyal nyiso ng'ato ni isewinjore. Tije ber e okonyo weche mag ethics, mondo weche man be en gi sirni mar kende gi personal info.

Sigandruok (Confidentiality):

Data ma wabiro yudo ibiro bedo confidential. Ok wabiro keto nyingni, kata namba mar sim. Ibiro tiyo gi code kende. Jopuonjre kata jowuoth ok ibiro neno nyingni kata weche ni. Tije biro yudore e public kata nying mar ng'ato.

Joma Inyal Penjo (Contact Information):

Ka in gi penjo moro amora kuom tije, inyal lowo gi:

Tabitha Adhiambo Odero- Email: tabbyodero@gmail.com; Sim: 0707485617

Dr. Tom Marwa- Email: marwa.machera@gmail.com

Dr. Collins Owek - Email: collins.owek@gmail.com

Ka iparo ni nyal bedo gi weche ma ok ochiwore maber, inyal lowo:

The Research Officer,

Amref Health Africa in Kenya

Wilson Airport, Lang'ata Road

Office Tel: +254 20 6994000; Sim: 254795746777

Email: esrc.kenya@amref.org; P.O Box 30125-00100, Nairobi, Kenya

PART II: GIERE MAR WINJO (CERTIFICATE OF CONSENT)

Asetemo weche man gi makare kata osenwang'a. Asemiyo penjo, kendo weche ma asepenjo osemedore. Ayie gi chunya duto ni adhi e tije man gi chunya.

NYING JOWUONI: ____

TIMO SIGNATURE: _______________________________

NINDO: ______________________________________

Namba mar Jowuoni: __________________________

Jalosi Data: ____________________________

Ka Jowuoni Ok Neno Maber, kata Ok Nyalo Wacho Maber, kata Jachiek:

Asetemo weche duto ni jowuoni gi adieri. Adwaro ni ok okethore, kendo nyiso ni osemiro chuny kod yie. Asetemo tije ma onge gi thurwa moro amora.

NYING JOWUONI: ____

Ratiro mar Agulu kata Tiende: ____

Sign mar WITNESS: ____

NINDO: ____

Wach mar Jatelo Mar Keto Signature:

*Asetemo ni jowuoni osepenjo penjo duto gi tije

APPENDIX C: ASSENT FORM FOR PARTICIPANTS BELOW THE AGE OF 18 YEARS

Preferred language

English ☐ Kiswahili ☐ Dholuo ☐

Part I: Information sheet

Title of Study: The influence of HIV knowledge on prevention practices among female youth aged 15 -24 years in Kisumu County, Kenya.

Introduction:

Interviewer reads: My name is ....You have been invited to participate in this study on the influence of HIV knowledge on prevention practices among female youth aged 15 -24 years in Kisumu County, Kenya. The principal investigator is Tabitha Adhiambo Odero, MPH student at Amref International University.

Purpose of study

The purpose of this study is to examine how knowledge influences making decisions regarding preventive strategies against HIV. The study will help us appreciate what knowledge on HIV prevention is available and various preventive strategies utilized for self-protection. It will also give an understanding of the challenges to HIV prevention before, during and after HIV risk exposure.

Study procedures.

This study involves general questions about age, education, financial status, and sources of knowledge on HIV. Personal questions focus on knowledge about HIV, sexual

behavior, HIV preventive measures/ methods and challenges to HIV prevention. This interview may take about 30 to 45 minutes.

Information will be captured in the questionnaire. Participants will only be identified by codes; no names or personal details will be captured. The interview will be carried out in a comfortable place and in a language that you are familiar with.

Alternatives to taking part.

Taking part in the study is out of choice and only with your consent. Should you assent to be in the study and change your mind during the interview, you are allowed to discontinue. You are also allowed to withdraw the data that has been collected up to this point, however, the data collected can be included in the study if you give assent.

Costs of being in the study

No cost, apart from 30 - 45 minutes of your time for answering questions on the questionnaire.

There will be no monetary compensation for participating in the study. If any respondent must incur the costs of travel, they will be reimbursed.

Benefits

At an individual level, this study will be beneficial to help identify and understand the various preventive strategies one can utilize against HIV and other sexually transmitted infections. It will also improve access to healthcare services including HIV testing, counselling, and treatment.

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At the community level, raising awareness about HIV/AIDS will help reduce stigma and discrimination associated with the disease to foster a supportive environment where individuals feel comfortable seeking HIV-related services and support. It will also help training community members as peer educators or advocates for HIV prevention.

At the world level, these findings will contribute to the global body of knowledge on HIV/AIDS and inform evidence-based interventions and policies. It will also help advocate for improved HIV prevention programs, access to healthcare services, and policy changes at the national and international levels.

Risks

Some questions may be personal and uncomfortable, evoking negative emotions or psychological distress, especially if you have had personal experiences with the disease or have been affected by it negatively in some way. Some questions may be personal and uncomfortable, feel free to communicate during the interview in case of any such questions.

Considering that we are interviewing people from the same area, your neighbors might suspect that you participated in the study. Despite this, the ethics that guide this research do not allow me to inform anyone that you participated in the study, confidentiality is guaranteed, no one will have access to your responses.

Confidentiality and access to your health information

Information collected will be confidential. No names or telephone numbers will be linked to the information provided. You will be identified by a number, not by your name. Your

name will therefore not appear anywhere when study findings and study data are shared. The results of this study will be released to the public without any identifiers.

Approval to undertake this study has been sought from AMIU ESRC, NACOSTI and relevant authorities in the Kisumu County Government.

Who should you contact if you have questions?

If you would like to have more information about the study, you may contact:

Tabitha Adhiambo Odero- Email tabbyodero@gmail.com; phone: 0707485617.

Dr Tom Marwa- Email Marwa.machera@gmail.com

Dr Collins Owek- Email collins.owek@gmail.com

In case you feel that your rights have been compromised in any way during the study, kindly contact the AMREF Ethical and Scientific review Committee (ESRC) through the channels below.

The Research Officer,

Amref Health Africa in Kenya

Wilson Airport, Lang'ata Road

Office Tel: +254 20 6994000

Telephone: 254795746777

Email: esrc.kenya@amref.org

Fax: +254 20 606340

P.O Box 30125-00100

Nairobi, Kenya

Do you have any questions at this time?

PART II: Certificate of assent

Assent statement (To be signed by the participant once the parent/guardian signs the consent form).

I have read the above information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I asked have been answered to my satisfaction. I assent voluntarily to participate in this study.

NAME OF SUBJECT: ____

SIGNATURE: ________________________________

DATE: ______________________________________

Participant study ID: ___________________________

Data collected by: _____________________________

If visually impaired, physically impaired, mentally impaired or illiterate

I have witnessed the accurate reading of the assent Form to the potential study subject, and the individual has had the opportunity to ask questions. I confirm that the individual has given assent freely.

NAME OF SUBJECT: ____

Thumb/ Foot print of subject: ____

Signature of witness: [A literate witness must sign and should be selected by the study subject and MUST have no connection to the research team:

____

Date: ____

Statement by the researcher/person taking assent.

I confirm that the study subject was given an opportunity to ask questions about the study, and all the questions asked by the study subject have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving assent, and the assent has been given freely and voluntarily.

A copy of this Assent Form has been provided to the study subject.

Name of researcher/person taking the assent:

____

Signature of researcher/person taking the assent:

____

Date: ____

FOMU YA IDHINI KWA WASHIRIKI WALIO CHINI YA UMRI WA MIAKA 18

Lugha iliyopendelewa

Kiingereza ☐ Kiswahili ☐ Dholuo ☐

Sehemu I: Taarifa za Habari

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Kichwa cha Utafiti: Maarifa ya VVU na athari zake kwenye mazoea ya kujikinga miongoni mwa wanawake vijana na wasichana wadogo wenye umri wa kati ya miaka 15-24 katika Kaunti ya Kisumu, Kenya.

Utangulizi:

Mpelelezi anasoma: Jina langu ni .... Umealikwa kushiriki katika utafiti huu kuhusu maarifa ya VVU na athari zake kwenye mazoea ya kujikinga miongoni mwa wanawake vijana na wasichana wadogo wenye umri wa kati ya miaka 15-24 katika Kaunti ya Kisumu, Kenya. Mpelelezi mkuu ni Tabitha Adhiambo Odero, mwanafunzi wa MPH katika Chuo Kikuu cha Kimataifa cha Amref.

Lengo la utafiti

Lengo la utafiti huu ni kuchunguza jinsi maarifa yanavyoathiri uamuzi kuhusu mikakati ya kujikinga dhidi ya VVU. Utafiti utatusaidia kufahamu ni maarifa gani yanapatikana kuhusu kujikinga na VVU na mikakati tofauti ya kujikinga inayotumiwa kwa ajili ya kujilinda. Pia itatoa uelewa wa changamoto za kujikinga dhidi ya VVU kabla, wakati na baada ya kupata hatari ya VVU.

Taratibu za utafiti.

Utafiti huu unajumuisha maswali ya jumla kuhusu umri, elimu, hali ya kifedha, na vyanzo vya maarifa kuhusu VVU. Maswali ya kibinafsi yanazingatia maarifa kuhusu VVU, tabia za kijinsia, hatua/ njia za kujikinga dhidi ya VVU na changamoto za kujikinga dhidi ya VVU. Mahojiano haya yanaweza kuchukua kama dakika 30 hadi 45.

Taarifa zitakusanywa katika maswali. Washiriki watatambuliwa tu kwa nambari; hakutakuwa na majina au maelezo ya kibinafsi yatakayokusanywa. Mahojiano yatafanyika katika eneo lenye faragha na kwa lugha unayoelewa.

Chaguo la kushiriki.

Kushiriki katika utafiti ni kwa hiari na kwa idhini yako tu. Ikiwa unaafikia kushiriki katika utafiti na badilisha mawazo yako wakati wa mahojiano, una ruhusa ya kuacha. Pia una ruhusa ya kujiondoa kutoka kwenye data iliyokusanywa hadi wakati huo, hata hivyo, data iliyokusanywa inaweza kujumuishwa katika utafiti ikiwa utatoa idhini.

Gharama za kushiriki katika utafiti

Hakuna gharama, isipokuwa dakika 30 hadi 45 za wakati wako.

Ikiwa unakidhi vigezo vya kuhudhuria mahojiano ya uso kwa uso, hauitaji kujaza maswali kwa maandishi. Badala yake, unaweza kuchagua mahojiano ya uso kwa uso ambayo itachukua kati ya dakika 30 hadi 45 za wakati wako.

Hakutakuwa na fidia ya pesa kwa kushiriki katika utafiti. Ikiwa mshiriki atalazimika kubeba gharama za safari, watagharamiwa.

Manufaa

Kwa kiwango cha mtu binafsi, utafiti huu utakuwa na manufaa kwa kusaidia kutambua na kuelewa mikakati tofauti ya kujikinga dhidi ya VVU na maambukizo mengine ya zinaa. Pia itaboresha upatikanaji wa huduma za afya ikiwa ni pamoja na vipimo vya VVU, ushauri, na matibabu.

Kwa kiwango cha jamii, kuongeza uelewa kuhusu VVU/UKIMWI kutapunguza unyanyapaa na ubaguzi unaohusiana na ugonjwa ili kukuza mazingira yenye uungwaji mkono ambapo watu wanajisikia vizuri kutafuta huduma na msaada kuhusiana na VVU. Itasaidia pia kutoa mafunzo kwa wanajamii kama waelimishaji wa rika au mabalozi wa kujikinga dhidi ya VVU.

Kwa kiwango cha dunia, matokeo haya yatachangia katika mwili wa maarifa wa kimataifa kuhusu VVU/UKIMWI na kutoa mwelekeo kwa hatua na sera zinazotegemea ushahidi. Pia itasaidia kufanya kampeni kwa ajili ya programu bora za kujikinga dhidi ya VVU, upatikanaji wa huduma za afya, na mabadiliko ya sera katika ngazi ya kitaifa na kimataifa.

Hatari

Baadhi ya maswali yanaweza kuwa ya kibinafsi na kuchosha, yakileta hisia hasi au msongo wa kisaikolojia, hasa ikiwa umewahi kupata uzoefu binafsi na ugonjwa au umeathiriwa naye kwa njia fulani. Ikiwa kuna maswali yanayofanya ujisikie kibinafsi na kuchosha, jisikie huru kuwasiliana wakati wa mahojiano kwa kesi ya maswali hayo.

Kufikiria kwamba tunawauliza watu kutoka eneo moja, majirani zako wanaweza kushuku kwamba umeshiriki katika utafiti. Licha ya hii, maadili yanayoongoza utafiti huu hayaniruhusu kuwajulisha mtu yeyote kwamba umeshiriki katika utafiti, usiri unahakikishwa, hakuna mtu atakayepata upatikanaji wa majibu yako na hakuna habari itakayoweza kufuatiliwa kwako.

Usiri na upatikanaji wa taarifa zako za afya

Taarifa zilizokusanywa zitakuwa za siri. Hakuna majina au nambari za simu zitakazohusishwa na taarifa zilizotolewa. Utatambuliwa kwa nambari, si kwa jina lako. Jina lako halitaonekana popote wakati matokeo ya utafiti na data ya utafiti itakaposhirikiwa hadharani. Matokeo ya utafiti huu yatatolewa kwa umma bila kitambulisho chochote.

Idhini ya kufanya utafiti huu imetafutwa kutoka AMIU ESRC, NACOSTI na mamlaka husika katika Serikali ya Kaunti ya Kisumu.

Unaweza kuwasiliana na nani ikiwa una maswali?

Ikiwa ungependa kupata habari zaidi kuhusu utafiti, unaweza kuwasiliana na:

Tabitha Adhiambo Odero

Barua pepe: tabbyodero@gmail.com

Simu: 0707485617.

Dk Tom Marwa

Barua pepe: Marwa.machera@gmail.com

Dk Collins Owek

Barua pepe: collins.owek@gmail.com

Ikiwa unahisi kwamba haki zako zimekiukwa kwa njia yoyote wakati wa utafiti, tafadhali wasiliana na Kamati ya Ukaguzi wa Kimaadili na Kisayansi ya AMREF (ESRC) kupitia njia zifuatazo.

Afisa wa Utafiti,

AMREF Afya Africa nchini Kenya

Uwanja wa Ndege wa Wilson, Barabara ya Lang'ata

Simu ya Ofisi: +254 20 6994000

Simu: 254795746777

Barua pepe: esrc.kenya@amref.org

Fax: +254 20 606340

S.L.P: 30125-00100

Nairobi, Kenya

Je, una maswali yoyote kwa sasa?

Sehemu II: Cheti cha Idhini

Kauli ya Idhini (Itasainiwa na mshiriki mara tu mzazi/mlezi atakaposaini fomu ya idhini).

Nimemsoma habari zilizo hapo juu, au zimenisomwa. Nimepata fursa ya kuuliza maswali kuhusu hiyo na maswali yoyote niliyouliza yamejibiwa kikamilifu. Ninaidhinisha kwa hiari kushiriki katika utafiti huu.

JINA LA MTU WA KUHUSIKA: ____

SAHIHI: _______________________________

TAREHE: _____________________________________

ID YA ALIYEHUSIKA KATIKA UTAFITI: __________________________

Data iliyokusanywa na: ___________________________

Ikiwa una matatizo ya kuona, ya kimwili, ya akili au usiojua kusoma

Nimemshuhudia mtu anayesoma kwa usahihi Fomu ya Idhini kwa mshiriki wa utafiti wa pishi, na mtu huyo amepata fursa ya kuuliza maswali. Nawahakikishia kwamba mtu huyo ameidhinisha kwa hiari.

JINA LA MWANAFUNZI: ______________________________________

Alama ya kidole/ mguu ya aliyehusika: ______________________________________

Sahihi ya shahidi: [Shahidi mwenye ujuzi wa kusoma lazima asaini na achaguliwe na mshiriki wa utafiti na HAKUNA uhusiano wowote na timu ya utafiti:

____

Tarehe: ______________________________________

Kauli ya mtafiti/mtu anayechukua idhini.

Nakiri kwamba mshiriki wa utafiti alipewa fursa ya kuuliza maswali kuhusu utafiti, na maswali yote yaliyoulizwa na mshiriki wa utafiti yamejibiwa kikamilifu na kwa uwezo wangu bora. Nakiri kwamba mtu huyo hajalazimishwa kutoa idhini, na idhini imepatikana kwa hiari na kwa hiari.

Nakiri kwamba nakala ya Fomu hii ya Idhini imetolewa kwa mshiriki wa utafiti.

Jina la mtafiti/mtu anayechukua idhini: ______________________________________

Sahihi ya mtafiti/mtu anayechukua idhini:

____

Tarehe: ______________________________________

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APPENDIX D: RESEARCH PROPOSAL QUESTIONNAIRE

Participant study ID ....

SOCIO DEMOGRAPHIC CHARACTERISTICS (6 QUESTIONS)

1. Age (in years) ....
2. Religion

   ☐ Christian ☐Muslim ☐Other ....

3. Marital status

   ☐Not married ☐Married ☐Separated ☐Widowed

4. Level of Education

   ☐No schooling ☐Primary ☐Secondary ☐Tertiary

5. Family structure

   ☐Both parents ☐Single parents ☐Extended family ☐Other (specify)

6. Economic status

   Financially independent ☐

   Financially dependent on ☐Parent ☐Spouse ☐Sponsor ☐others ....

HIV KNOWLEDGE (16 QUESTIONS)

Source of knowledge

1. What is your source of HIV knowledge? (select the top 3 sources)

☐Mass media – TV, Radio ☐Print media – Newspapers, magazines

☐School – Teachers ☐Family – Parents, guardians

☐Peers and friends ☐social media

Knowledge on HIV transmission and prevention	True	False	Don't know
2. One sexual encounter is enough to get HIV			
3. Having sex during your monthly period protects you against HIV			
4. One can get HIV by sharing utensils with HIV positive people			
5. Showering/ bathing immediately after sex reduces your chances of getting HIV			
6. You can get HIV through many ways other than sex			
7. Pulling out the penis before ejaculation reduces the chances of HIV			

8. HIV can be transmitted by mosquito bites			
9. It is not easy to know people with HIV by physical appearance			
10. Emergency contraception pills (E-Pills) reduce your chances of HIV if taken within 72 hours.			
11. As soon as you get HIV, symptoms start showing			
12. Lubricating condoms with Vaseline reduce chances of condom tears during sex.			
13. A negative HIV test after exposure should be repeated up to 3 months to ensure one is negative			
14. To prevent HIV transmission, oral and anal sex are safer options than vaginal sex			
15. All children born by HIV positive mothers end up being HIV positive.			
16. ARVs cure HIV			
17. Having sex with a HIV positive person using a condom reduces your chances of getting HIV.			

SEXUAL BEHAVIOUR AND HIV PREVENTIVE PRACTICES (15 QUESTIONS)

1. Age in years of your first sexual experience in your lifetime (Answer with 'never' if not sexually active) ....
2. Did you use protection during your first sexual encounter?

☐Yes ☐No

3. Do you know your HIV status? ☐Yes ☐No

4. Do you know the HIV status of your sexual partner? ☐Yes ☐No

5. Sexual activity in the past 12 months. ☐Abstain ☐Sexually active

6. If one sexual partner, how frequently do you use condoms?

☐Every time. ☐Most times. ☐Sometimes. ☐No condom use at all.

7. If there is more than 1 sexual partner, how many sexual partners (Circle one response)

(2) (3) (4) (5) (more than 5)

8. If more than one sexual partner, how frequently do you use condoms?

☐Every time. ☐Most times. ☐Sometimes. ☐No condom use at all.

9. Have you heard of PEP and Prep? ☐Yes ☐No

10. Have you ever used;

☐PEP ☐Prep ☐None

11. Have you ever had sex under the influence of alcohol/ drugs? ☐Yes ☐No

12. Have you ever had sex for financial/ material rewards? ☐Yes ☐No

13. Have you ever been forced to have sex without your consent? ☐Yes ☐No

14. Have you ever been in a sexual relationship with someone 10 years older than you?

☐Yes ☐No

15. Do you think you are at risk of getting HIV?

☐Yes, why?

....

☐No, why?

....

CHALLENGES TO HIV PREVENTION PRACTICES (3 QUESTIONS)

1. What are the challenges you face **personally** in trying to prevent HIV infections?

   ☐Peer influence ☐Sexual partner violence

   ☐No bargaining power in the relationship ☐Financial dependence

   ☐Drug and substance use ☐Lack of knowledge on HIV prevention

   ☐Others

   ....

2. Are these challenges within your control? ☐ Yes ☐ No
3. In your opinion, how can the challenges mentioned above be solved?

   ....

   ....

   ....

KISWAHILI - MASWALI YA UTAFITI

Kitambulisho cha Mshiriki wa

Utafiti...

MASWALI YA KITAALAMU (MASWALI 6)

1. Uko na miaka ngapi? ....

1. Dini ☐ Mkristo ☐Muislamu ☐Dini nyingine ....

2. Je, umeolewa?

   ☐Sijaolewa ☐Nimeolewa ☐Aliyetengana ☐Mjane

3. Kiwango cha elimu

   ☐Sijasoma ☐Elimu ya msingi ☐sekondari ☐ Elimu ya chuo kikuu

4. Muundo wa familia

   ☐Wazazi wote ☐Mzazi mmoja/ mlezi mmoja ☐Familia pana

   ☐Familia nyingine(fafanua)

   ....

5. Hali ya kiuchumi

   Mwenye uhuru wa kifedha ☐

   Mtegemezi wa kifedha kwa ☐ Wazazi ☐ Mume ☐ Mdhamini/Msaidizi

   ☐ Wengine ....

UJUZI WA VIRUSI VYA UKIMWI (MASWALI 16)

Chanzo cha maarifa

1. Chanzo chako cha maarifa kuhusu virusi vya ukimwi? (chagua tatu)

☐Vyombo vya habari – Televisheni, redio

☐Vyombo vya Habari vya kuchapisha - Magazeti, Vitabu vya Habari

☐Shuleni – Walimu ☐Familia – Wazazi, walezi

☐Marafiki na Wenzi ☐Mitandao ya kijamii

Maarifa kuhusu maambukizi na kinga ya VVU (Virusi vya Ukimwi	Kweli	Uongo	Sijui
2. Mzunguko mmoja wa kujamiiana unaweza kutosha kupata VVU			
3. Kujamiiana wakati wa hedhi inakinga dhidi ya VVU			
4. Unaweza kupata VVU kwa kushirikiana vyombo vya kula na watu wenye VVU			
5. Kuoga mara moja baada ya kujamiiana kunaweza kupunguza hatari yako ya kupata VVU			
6. Unaweza kupata VVU kupitia njia nyingi zaidi ya kujamiiana			
7. Kuvuta uume nje kabla ya kutoa shahawa kunaweza kupunguza hatari ya kupata HIV			

8. HIV inaweza kuambukizwa kwa kuumwa na mbu.			
9. Si rahisi kujua watu wenye HIV kwa muonekano wao wa kimwili			
10. Dawa za uzazi wa dharura (E-Pills) hupunguza nafasi zako za kupata HIV ikiwa zinachukuliwa ndani ya saa 72.			
11. Mara tu unapopata HIV, dalili huoneshwa			
12. Kutumia Vaseline kama mafuta ya kulainisha kondomu hupunguza uwezekano wa kondomu kutokea mikwaruzo wakati wa tendo la ndoa			
13. Matokeo hasi ya mtihani wa HIV baada ya kuwa na hatari yanapaswa kurudiwa hadi miezi 3 ili kuhakikisha kwamba mtu hana maambukizi			
14. Ili kuzuia maambukizi ya HIV, ngono ya mdomo na ngono ya haja kubwa ni chaguo salama zaidi kuliko ngono ya uke			
15. Watoto wote wanaozaliwa na mama mwenye HIV huishia kuwa na virusi vya HIV			
16. Dawa za ARVs huponya virusi vya HIV			
17. Kufanya ngono na mtu mwenye HIV kwa kutumia kondomu hupunguza uwezekano wako wa kupata virusi vya HIV			

MWENENDO WA KIJINSIA NA MBINU ZA KUZUIA HIV (MASWALI 15)

1. Umri katika miaka wa uzoefu wako wa kwanza wa kijinsia maishani mwako (Jibu 'hajawahi' ikiwa hujashiriki ngono) ....
2. Je, ulitumia kinga wakati wa uzoefu wako wa kwanza wa kijinsia? ☐Ndio ☐Hapana
3. Je, unajua hali yako ya HIV? ☐Ndio ☐Hapana
4. Je, unajua hali ya HIV ya mwenzi wako wa kijinsia? ☐Ndio ☐Hapana
5. Shughuli za kijinsia katika miezi 12 iliyopita? ☐Kujizuia ☐ Kuwa na shughuli za kijinsia
6. Ikiwa mwenzi wa kijinsia ni mmoja, mara ngapi unatumia kondomu

   ☐Kila mara. ☐Mara mingi. ☐Wakati mwingine. ☐Situmii

kondomu kabisa.

7. Kama zaidi ya mwenzi mmoja wa kimapenzi, ni wangapi wapenzi wa kimapenzi (Chagua moja) (2) (3) (4) (5) (zaidi ya 5)
8. Kama zaidi ya mwenzi mmoja wa kimapenzi, je unatumia kondomu mara ngapi? ☐Kila mara. ☐Mara mingi. ☐Wakati mwingine. ☐Situmii kondomu kabisa.
9. Je, umesikia kuhusu PEP and Prep? ☐Ndio ☐Hapana
10. Je, umewahi kutumia; ☐PEP ☐Prep ☐Hapana
11. Je, umewahi kushiriki ngono chini ya ushawishi wa pombe/dawa? ☐Ndio ☐Hapana
12. Je, umewahi kushiriki ngono kwa malipo ya kifedha? ☐Ndio ☐Hapana

13. Je, umewahi kulazimishwa kufanya ngono bila idhini yako? ☐Ndio ☐Hapana
14. Je, umewahi kuwa katika uhusiano wa kimapenzi na mtu aliye na miaka 10 zaidi yako?

    ☐Ndio ☐Hapana

15. Je, unafikiri uko katika hatari ya kupata virusi vya HIV?

    ☐Ndio,

    mbona?...

    ☐Hapana,

    mbona?..

CHANGAMOTO ZA MBINU ZA KUZUIA MAAMBUKIZI YA HIV (MASWALI 3)

1. Ni changamoto zipi unazokutana nazo **binafsi** katika kujaribu kuzuia maambukizi ya HIV?

    ☐ Ushawishi wa Rafiki ☐ Vurugu kwa Washiriki wa Kimapenzi

    ☐ Kutokuwa na Nguvu ya Kujadiliana katika Uhusiano

    ☐ Utegemezi wa Kifedha ☐ Matumizi ya Dawa za kulevya

    ☐ Ukosefu wa Maarifa kuhusu Kuzuia Maambukizi ya HIV

    ☐Changamoto zingine

    ....

2. Je, hizi changamoto ziko ndani ya uwezo wako? ☐ Ndio ☐ Hapana
3. Kwa maoni yako, jinsi gani changamoto zilizotajwa hapo juu zinaweza kutatuliwa?

   ....

   ....

   ....

JODI MAG OGANDA KANYO

JODI GI KENYE ....

Dholuok mar dhiyo gi jodhola (Penjo 6)

1. In ja higni adi ....
2. Din ☐ Kristo ☐Muslim ☐Din moro mane................
3. Chal mar keny ☐Ok okenda ☐Okenda ☐Wawere ☐Chi liel
4. Somo ☐Ok adhi sikul ☐Primary ☐Sekondar ☐Sikul mar rang'iny
5. Chal mar ot ☐ Jonyuol te ☐Janyuol achiel ☐Wede ☐Moko (nonri)
6. Yor yuto

   Akonyora kenda ☐

   Ayudo kony kuom ☐Janyuol ☐Jaot ☐Sponsor ☐Moko(nonri)

....

RIEKO MAR HIV (Penjo 16)

Piny mar rieko

1. Piny ang'o ma imi ing'eyo weche mag HIV? *(Yer weche adek mokalo)*

☐ Mediya mar oganda – TV, radio ☐ Mediya ma osekik – barua, magasiin

☐ Sikul – jopuonj ☐ Dhood gi janyuol – jamaa, jodong' wuon/mon

☐ Otimbe kod oger ☐ Mediya ma jo-chako ka – social media

Rieko kuom yweyo gi keto gweno mar HIV	Adier	Rer	Aonge rieko
2. Wek moro amora mar ohero kende nyalo miyo ng'ato rieko HIV.			
3. Timo ratiro e kinde mar chop ok miyo ng'ato rieko HIV			
4. Ng'ato nyalo rieko HIV ka oket chiemo e yo gi ng'ato ma otere gi HIV.			
5. Kwanyo ringruok nyaka sani bang' ratiro dwoko thuolo mar ok keto rieko HIV			
6. Inyalo rieko HIV e yo mamoko mang'eny mokalo ratiro			
7. Kwelo lonyo nyaka oket tek gi ratiro nyalo dwoko thuolo mar ok keto rieko HIV			
8. HIV nyalo yweyogi gi loyo moskito			
9. Ok iseloko kendo chieng' ng'ama otere gi HIV e wang'			

10. Chal mar emergensi (E-pills) nyalo dwoko thuolo mar ok keto HIV ka itiyogo e kinde mar ndalo 3			
11. Ka ng'ato osebiro gi HIV, ranyisi biro aa sani			
12. Konyo kondom gi Vaseline nyalo dwoko thuolo mar ok mi kondom ng'ielo e ratiro.			
13. Ka iriem gi HIV kendo iwinjo ni ok otere, nyaka itim test moko nyaka 3 months mondo inyise ni ok otere			
14. Mondo kik yweyo HIV, timo ratiro gi dho kata duol ber moloyo ratiro gi miny			
15. Nyithindo duto ma onywol gi mon ma otere gi HIV bende biro bedo gi HIV.			
16. ARVs nyalo gwoko ng'ato kuom HIV			
17. Timo ratiro gi ng'ato ma otere gi HIV ka itiyo gi kondom nyalo dwoko thuolo mar ok keto rieko			

DHOLO MAR RATIRO GI KETO GWENO MAR HIV (PENJO 15)

1. Chieng' mar ohero ma oket e kinde mar ohero mag ratiro mar chike (Timbe "ok" ka ok ratiro).

2. Ne itiyo gi kondom? ☐ Ee ☐ Aaa

3. Ing'eyo chal mari mar HIV? ☐ Ee ☐ Aaa

4. Ing'eyo chal osiepni mar HIV ☐ Ee ☐ Aaa

5. Itiyo kondom e ratiro ma oket? ☐ Ee ☐ Aaa

6. Itiyo gi kondom didii (osiep achiel)? ☐ Seche te ☐ Seche mang'eny ☐ Seche moko ☐ ok ati godo

7. Ingi osiepe adi? (2) (3) (4) (5) (Oloyo 5)

8. Itiyo gi kondom didii (osiepe moloyo 1)? ☐ Seche te ☐ Seche mang'eny ☐ Seche moko ☐ ok ati godo

9. Isewinjo kuom PEP kata PrEP? ☐ Ee ☐ Aaa

10. Isetiyo kod PEP kata PreP? ☐ Ee ☐ Aaa

11. Iseterori ka imer? ☐ Ee ☐ Aaa

27. Iseterori ne pesa? ☐ Ee ☐ Aaa

28. Iseterori githuon? ☐ Ee ☐ Aaa

29. Isebedo gi osiep ma ohingi gi igni 10? ☐ Ee ☐ Aaa

30. Be ineno ka in gi hatari mar yudo HIV? (Nang'o)

☐ Ee ………………………………………………………………………

☐ Aaa………………………………………………………………………

PEK MANE MA INENO E GENG'O HIV (PENJO 3)

4. Chalenge ma odhi nyaka koro bedo kendo dunia kuom HIV?

☐ Peer influence ☐ Dhiang' gi sekela mar jodak

☐ Ok ineno kama ochwo mar joma koro ☐ Kwach mar joma ok teremo

☐ Dholoo gi yudi mar thum ☐ Ok ineno mar keto HIV

☐ Moro...

5. Chalenge ma oketo, ineno ni wanyo ni wach mar to? ☐ Ee ☐ A'a

6. E dak ng'ama, kwach ne ng'ato biro teko to chalenge ma oketo moko?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

………………

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APPENDIX E: KEY INFORMANT INTERVIEW GUIDE

INSTRUCTIONS for the Interviewer on how to use the IDI Guide

1. Section topics in bold letters.
2. Instructions/suggestions to interviewer are in italics.
3. Not ALL questions need to be asked. It is up to your discretion if a question should be skipped if the participant has already provided a response to the question earlier in the interview.
4. Please ensure that by the end of the interview, all the topics and key themes have been covered.
5. Turn on the audio recorder provided at the beginning of the interview.

INTRODUCTION (*The interviewer should explain these points*)

The main purpose of this Informant In-Depth interview is to.

- Understand risk perception and HIV prevention practices used by the female youth.
- Gauge knowledge on HIV transmission and myths surrounding it.
- Gaps in addressing HIV knowledge and transmission.

ROLE IN THE COMMUNITY

1. **To get us started, please tell me about the work you do.**

   How long have you been doing this work?

   Describe the community in which you work.

   What is your role in the community?

How often do you interact with this age group under study?

2. Based on your experience, what are some worries or concerns that AGYW in this community have?

   Concerns about HIV transmission/ prevention.

3. What are the myths on HIV transmission/ prevention that you have heard of while interacting with AGYW?
4. How much do you think this age group is at risk of HIV transmission?

   Why?

5. Do you think AGYW understand their vulnerability to HIV infection?
6. Have you encountered cases of unprotected sexual behaviour under the influence of drugs/ alcohol?

   Sex for material rewards?

   Age disparate relationships?

   Rape?

7. When you talk to AGYW about HIV transmission, what do you tell them?
8. What strategies do AGYW use to protect themselves against HIV?

   Knowledge on HIV status of sexual partner.

   How often do they use condoms? In what partnerships?

   Challenges to ABC approach?

   Any interest in PEP/ Prep?

9. What gaps in HIV transmission knowledge have you noted?

   Any suggestions on how to address them?

10. What gaps in HIV prevention knowledge have you noted?

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Any suggestions on how to address them?

Conclusion.

Thank you for taking the time to share your opinions with us today. We truly appreciate your willingness to participate and discuss your thoughts and ideas with us. We have now reached the end of our discussion. Do you have any additional comments about HIV transmission knowledge and prevention among AGYW experiences in your community/clinic/practice setting?

APPENDIX F: IN DEPTH INTERVIEW GUIDE

Title of study; The influence of HIV Knowledge on Prevention Practices Among Female Youth aged 15-24 years in Kisumu County, Kenya.

Introduction (The interviewer reads)

1. Can you please start by telling me a little about yourself?

2. How long have you lived in Kisumu County?

3. Have you ever participated in any HIV/AIDS awareness programs or received any formal education on HIV prevention?

HIV Knowledge

4. What do you understand about HIV/AIDS and describe how HIV is transmitted?

6. What are some misconceptions or myths about HIV/AIDS in your community?

7. Where do you usually get information about HIV/AIDS from?

Prevention Practices:

8. What measures do you take to protect yourself from HIV/AIDS?

9. Have you ever used condoms during sexual intercourse? If yes, what influenced your decision to use them?

10. Have you been tested for HIV? If yes, what prompted you to get tested?

11. How comfortable are you discussing sexual health with your partner or peers?

12. What challenges have you faced in accessing HIV prevention services or resources?

Influence of HIV Knowledge on Prevention Practices:

13. How do you think your knowledge about HIV/AIDS has influenced your prevention practices?

14. Have you ever encountered situations where your knowledge about HIV/AIDS conflicted with your actions or decisions? Can you describe one such situation?

15. Do you think there is a relationship between the level of HIV knowledge in the community and the prevalence of HIV/AIDS? Please explain your answer.

Community and Sociocultural Factors:

16. In your opinion, what are some factors within the community that affect HIV prevention practices among the female youth?

17. How do cultural or religious beliefs influence HIV prevention practices in your community?

18. Are there any social or economic barriers that hinder the female youth from accessing HIV prevention services or information?

Future Recommendations:

19. Based on your experiences and observations, what do you think can be done to improve HIV prevention efforts among female youth in Kisumu County?

20. Are there any specific programs or interventions that you believe would be effective in increasing HIV knowledge and promoting safer practices among this demographic?

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Closing:

21. Is there anything else you would like to add or any final thoughts you would like to share on the topic of HIV/AIDS prevention among female youth in Kisumu County?

APPENDIX G: MAPS

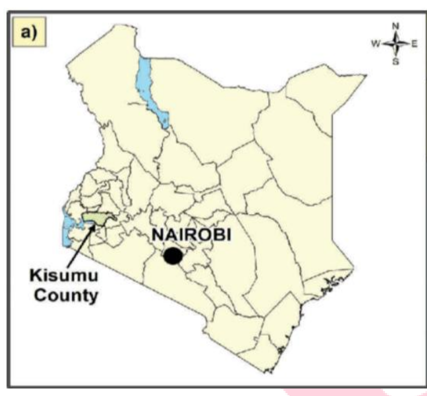

Figure G.0.1: Map of Kenya

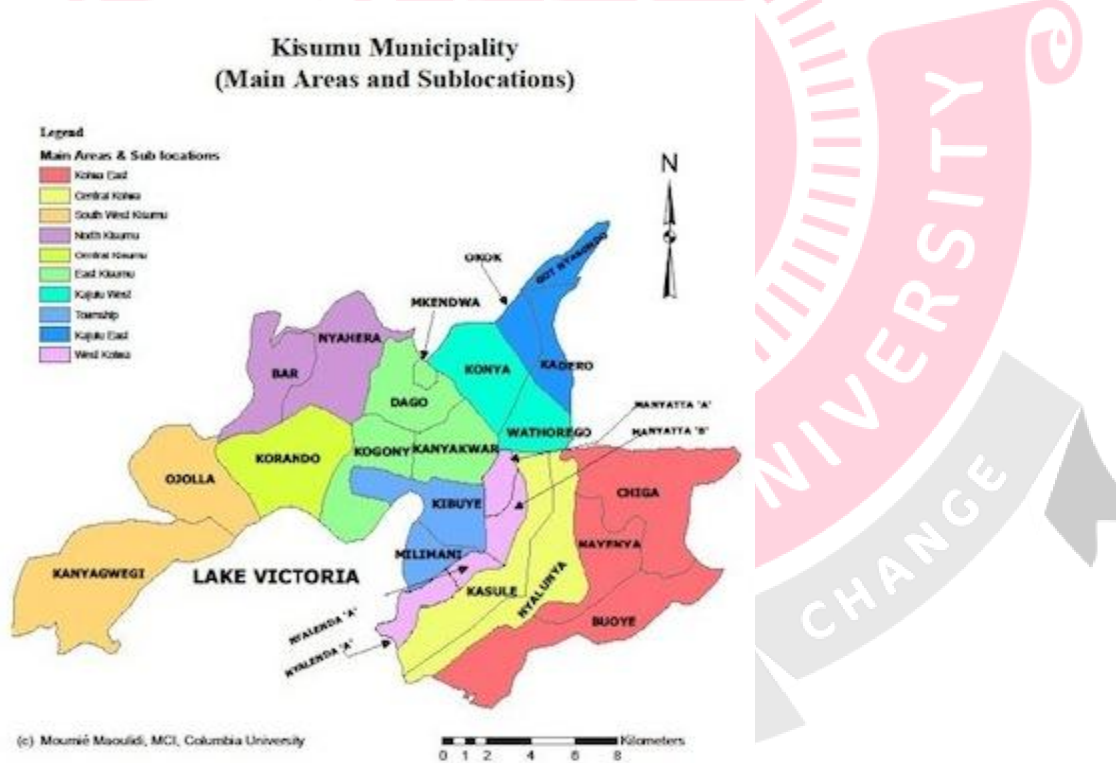

Figure G.0.2: Map of Kisumu

APPENDIX H: ETHICAL APPROVAL – NACOSTI

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **474845**

Date of Issue: **08/April/2024**

RESEARCH LICENSE

This is to Certify that Dr.. Tabitha Adhiambo Odero of Amref International University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kisumu on the topic: HIV Knowledge and Its Influence on Prevention Practices Among Young Women and Adolescent Girls aged 15-24 years in Kisumu County, Kenya: A cross-sectional study. for the period ending : 08/April/2025.

License No: **NACOSTI/P/24/33903**

474845

Applicant Identification Number

Director General

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

APPENDIX I: APPROVAL MINISTRY OF INTERIOR, KISUMU COUNTY

OFFICE OF THE PRESIDENT

MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION
STATE DEPARTMENT FOR INTERNAL SECURITY AND NATIONAL ADMINISTRATION

Telephone: Kisumu 2022219/Fax: 2022219
Email: ckisumucounty@gmail.com

COUNTY COMMISSIONER
KISUMU COUNTY
P.O. BOX 1912-40100
KISUMU

Ref: CC/KC/RES/1/3/VOL.6/06

22nd April, 2024

ALL DEPUTY COUNTY COMMISSIONERS
KISUMU COUNTY

RE: RESEARCH AUTHORIZATION: DR. TABITHA ADHIAMBO ODERO

Reference is made to a letter from the National Commission for Science, Technology and Innovation No. NACOSTI/P/24/33903 of 8th April, 2024 on the above subject matter.

The above named is from AMREF International University. She has been authorized to carry out a research on ***"HIV Knowledge and Its Influence on Prevention Practices Among Young Women and Adolescent Girls aged 15-24 Years in Kisumu County"***. The research period ends on 8th April, 2025.

Kindly accord her any assistance that she may need.

BENSON LEPARMORIJO
COUNTY COMMISSIONER
KISUMU COUNTY

Copy to: Dr. Tabitha Adhiambo Odero
AMREF International University

APPENDIX J: APPROVAL DEPARTMENT OF HEALTH SERVICES, KISUMU COUNTY

REPUBLIC OF KENYA
COUNTY GOVERNMENT OF KISUMU

Telegrams: "PRO (MED)"
Tel: 254-057-2020105
Fax: 254-057-2023176
E-mail: kisumucdh@gmail.com

Director of Public Health & Sanitation
P.O. Box 721 – 40100,
Kisumu.

DEPARTMENT OF MEDICAL SERVICES, PUBLIC HEALTH & SANITATION

Our Ref: GN 133 VOL.XVI /239) **Date:** 18th April, 2024

To:

SCMOH – Kisumu East

RE: APPROVAL TO CONDUCT RESEARCH IN KISUMU COUNTY

The department has reviewed and approved this research titled **'HIV Knowledge and Its Influence on Prevention Practices among Young Women & Adolescent Girls aged 15-24 years in Kisumu County, Kenya'.**

This principal investigator for this research activity is **Dr. Tabitha Adhiambo Odera** and County Co PI **Mr. Fredrick Oluoch.**

Kindly accord them all the necessary support.

COUNTY DIRECTOR OF HEALTH KISUMU

Fredrick O. Oluoch, MPH, MBA, HSC, OGW
County Director Public Health & Sanitation
Kisumu County

CC. Principal investigator - **Dr. Tabitha Adhiambo Odera**
Amref International University

From the office of Director Public Health & Sanitation

APPENDIX K: APPROVAL MINISTRY OF EDUCATION, KISUMU COUNTY

REPUBLIC OF KENYA

MINISTRY OF EDUCATION
State Department for Basic Education

Telegrams:"schooling",Kisumu
Telephone: Kisumu 057 - 2024599
Email: countyeducation.kisumu@gmail.com

When replying please quote

COUNTY DIRECTOR OF EDUCATION
KISUMU COUNTY
PROVINCIAL HEADQUARTERS NYANZA
3RD FLOOR
P.O. BOX 575 – 40100
KISUMU

REF: CDE/KSM/GA/3/24/ VOL.VI/22

17th April, 2024

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION
Dr. TABITHA ADHIAMBO ODERO– NACOSTI/P/24/33903

This is to confirm that Dr. Tabitha Adhiambo Odero has been given approval by NACOSTI under License No. NACOSTI/P/24/33903 to conduct research on the topic ***"HIV Knowledge and its Influence on Prevention Practices among Young Women and Adolescent Girls aged 15-24 years in Kisumu County, Kenya: A cross-sectional study"*** for the period ending **8th April, 2025.**

Any assistance accorded to her to accomplish the assignment will be highly appreciated.

ENOCH S. OKWEMBA
For: COUNTY DIRECTOR OF EDUCATION
KISUMU COUNTY

APPENDIX L: PLAGIARISM REPORT