

**INVESTIGATING UGANDA'S HIGH HIV INCIDENCE AMONG YOUNG WOMEN IN AN ERA
OF WIDESPREAD GAINS IN HIV PREVENTION AND TREATMENT**

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ABSTRACT

INVESTIGATING UGANDA'S HIGH HIV INCIDENCE AMONG YOUNG WOMEN IN AN ERA OF WIDESPREAD GAINS IN HIV PREVENTION AND TREATMENT

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This dissertation examines the factors driving risky sexual behavior associated with reported high numbers of new HIV infections among young women in Uganda, using Mbarara District as a case study. Using the modified Social Ecological Model for Young Women's Vulnerability to HIV Infection, the study investigates the contextual and broader structural factors, their interactions within and across multiple levels, and how they influence the sexual behaviors of individual young women in ways that increase their vulnerability to contracting HIV. The objectives of the study are: 1) Evaluate individual-level factors associated with sexual risk-taking behavior, specifically having unprotected sex, among young women ages 15-35 years; 2) Describe contextual and broader structural factors that make young women vulnerable to HIV-related risky sexual behaviors, and assess how these contextual factors interact with individual-level factors in ways that perpetuate high levels of HIV infection; and 3) Re-examine the connection between poverty and other economic factors to risky sexual behavior and vulnerability in the context of high HIV transmission among young women. The study used mixed qualitative and quantitative methods, combining household surveys, focus group discussions, key informant interviews, and in-depth interviews.

Household survey results show that risky sexual behavior i.e., having sex without a condom, is still high (over 48%) among the unmarried young women ages 15-35 years. Those with primary or some secondary education were at an increased risk of having unprotected sex. Surprisingly, women with tertiary education were at higher risk of engaging in unprotected sex than those who had completed secondary education. Negative binomial regression analyses show that

women with no employment and those with part-time employment were at an increased risk for unprotected sex compared to those with low paying but stable employment. These findings on education and HIV risk call for a careful reexamination of the link between higher education and HIV vulnerability to inform policy. Education policies and interventions need to focus on curricula that incorporate entrepreneurial skills at different educational levels from primary to college. Findings from the qualitative analysis revealed that sociocultural and structural factors, including social norms (premarital sex as taboo, subordination of girls and women), youth unfriendly HIV services (e.g., long waiting times, rude and unprofessional clinic staff), high unemployment rates, sexual harassment, exploitation by male employers, were key factors perceived to drive risky sexual behavior among young women. The findings show that while many young women, especially those with children, engaged in risky transactional sexual behavior to meet basic *needs*, many younger women, including college-level ones, did so to meet materialistic *wants* and to fit-in with peers. Widespread availability of antiretroviral drugs (ARVs) caused complacency among young people. HIV was no longer perceived as life threatening due to ARVs, which prevent progression into full-blown AIDS, morbidity and death. In fact, some young women were more scared of getting pregnant than contracting HIV. We suggest that efforts to reduce new HIV infections among young women and young men should target individual risk perception, and balance HIV treatment and prevention messages.

Findings reveal a complex mix of dynamic and interacting factors operating at different levels that create context specific sexual behavioral risk socioscapes that sustain or accentuate the high rates of new HIV infections among the young women. Using a Social Ecological Model for Young Women's Vulnerability to HIV as a guiding framework, we contend that efforts for addressing the high HIV infections among young women, including sexual behavioral change interventions, economic empowerment programs, should not only aim at individual women but also target factors operating at the sociocultural and structural levels.

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This dissertation is dedicated to my daughter Abigail Asingwire for sticking with mom through the ups and downs of graduate school. Thinking about your future and that of other young girls in Africa kept me motivated to work harder on this research project.

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TABLE OF CONTENTS

LIST OF TABLES.....	xi
LIST OF FIGURES.....	xii
LIST OF ABBREVIATIONS	xiii
CHAPTER 1 INTRODUCTION	1
1.1 Overview	2
1.2 Background.....	3
1.3 Research Objectives	8
1.4 Theoretical Framework	8
1.5 Methods	13
1.6 Study area.....	14
1.7 Ethical approval	16
1.8 Organization of the dissertation.....	16
REFERENCES	19
CHAPTER 2 WHO ARE WE? UNPROTECTED SEX AMONG YOUNG WOMEN IN MBARARA DISTRICT, UGANDA.....	25
Abstract.....	26
2.1 Introduction.....	27
2. 2 Purpose of Study	28
2.3 Methods	29
2.3.1 Study area	29
2.3.2 Sampling strategy.....	29
2.3.3 Data collection	30
2.3.4 Study population.....	31
2.3.5 Measurements	31
2.3.6 Data analysis.....	32
2.4 Results	33
2.5 Discussion and Conclusion	39
REFERENCES	45
CHAPTER 3 SOCIOCULTURAL AND STRUCTURAL FACTORS FACILITATING ENGAGEMENT IN HIV-RELATED RISKY SEXUAL BEHAVIOR AMONG YOUNG WOMEN IN SOUTHWESTERN UGANDA	49
Abstract.....	50
3.1 Introduction.....	51
3.2 Theoretical Framework.....	54
3.3 Methods	57
3.3.1 Study area	57
3.3.2 Study design and sampling.....	58

3.3.3 Data collection and analysis	59
3.4 Results	60
3.4.1 ARVs have caused complacency	60
3.4.2 Conflicting messages on HIV prevention versus treatment.....	62
3.4.3 Women's needs and transactional sex.....	63
3.4.4 Peer pressure and desire for materialistic goods.....	64
3.4.5 Cross-generational sex and unequal power relations	65
3.4.6 Social norms, subordination of women and HIV risk	67
3.4.7 Inadequate knowledge on HIV	68
3.4.8 High unemployment rates, underemployment and sex work for jobs	69
3.4.9 High school dropouts	70
3.4.10 Family instabilities.....	71
3.4.11 Youth unfriendly HIV services.....	72
3.5 Discussion and Conclusion	74
REFERENCES	80

CHAPTER 4 'NEEDS' VERSUS 'WANTS': A QUALITATIVE RE-EXAMINATION OF THE CONNECTION BETWEEN POVERTY AND OTHER ECONOMIC FACTORS TO HIV VULNERABILITY AMONG MBARARA YOUNG WOMEN.....	87
Abstract.....	88
4.1 Introduction.....	89
4.2 Research Methods	92
4.2.1 Research setting.....	92
4.2.2 Sampling and recruitment.....	92
4.2.3 Data collection and analysis	94
4.3. Findings and Discussion	94
4.3.1 Transgenerational sex and young women's "wants"	95
4.3.2 Power differentials and young women's vulnerability.....	97
4.3.3 Peer pressure and "wants"	99
4.3.4 Concurrent multiple sexual partnerships and "wants"	101
4.3.5 Education and HIV awareness versus risky sexual behavior.....	103
4.3.6 Mobility, isolation, and vulnerability	104
4.3.7 "She doesn't like the job, but she has no choice"	105
4.3.8 Desperation to meet basic needs	106
4.4 Conclusion	109
REFERENCES	111

CHAPTER 5 CONCLUSION AND IMPLICATIONS.....	116
5.1 Overview	117
5.2 Summary of Findings and Implications	119
5.3 Intellectual Merit & Broader Impacts.....	124
5.4 Study Limitations and Future Research.....	125
APPENDICES.....	128
Appendix A Survey Questionnaire.....	129
Appendix B Young Women Interview Guide.....	173
Appendix C Key Informant Interview Guide	177
Appendix D Focus Group Discussion Guide.....	182

REFERENCES	187
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LIST OF TABLES

Table 2.1: Differences in sociodemographic characteristics of young women's sexual practice with (N=177) and without (N=191) a condom in Mbarara district, Uganda, 2018.....	35
Table 2.2: Results of negative binomial regression models of the incident rate of having sex without a condom against diverse explanatory sociodemographic characteristics of young women in Mbarara District, Uganda, 2018 (N=368).....	38

LIST OF FIGURES

Figure 1.1: Map of Mbarara District and Study Sub-Counties.....	14
Figure 3.1: Social Ecological Model for Young Women’s Vulnerability to HIV Infection.....	57

LIST OF ABBREVIATIONS

ABC	Abstinence, Be faithful, and Condomize
AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral (drugs)
FGD	Focus Group Discussion
FSW	Female Sex Workers
HIV	Human Immunodeficiency Virus
KFF	Kaiser Family Foundation
KII	Key Informant Interview
MSM	Men Who Have Sex with Men
MoH	Ministry of Health
MSEM	Modified Social Ecological Model
NSP	National Strategic Plan
PEPFAR	President's Emergency Plan for Aids Relief
PLWH	People Living with HIV
PMTCT	Prevention of Mother-to-Child Transmission
PWID	People Who Inject Drugs
SDGs	Sustainable Development Goals

SEM	Social Ecological Model
SEMYWV	Social Ecological Model for Young Women's Vulnerability to HIV Infection
SSA	Sub-Saharan Africa
STD	Sexually Transmitted Disease
TASO	The AIDS Support Organization
UAC	Uganda AIDS Commission
UBOS	Uganda Bureau of Statistics
UDHS	Uganda Demographic and Health Surveys
UN	United Nations
UNAIDS	The Joint United Nations Programme on HIV and AIDS
UPE	Universal Primary Education
UPHIA	Uganda Population-Based HIV Impact Survey
UNICEF	United Nations Children's Fund
USE	Universal Secondary Education
WHO	World Health Organization

CHAPTER 1

INTRODUCTION

1.1 Overview

Sub-Saharan Africa (SSA) has made significant progress in the management of AIDS as a public health threat. Virtually all countries have significantly reduced HIV prevalence, AIDS-related morbidity and mortality, and nearly eliminated mother-to-child HIV transmission (Kharsany & Karim, 2016, Moise et al., 2018). While strides have been made in HIV prevention, the introduction and scale-up of antiretroviral therapy (ART) in countries with the highest HIV burden makes the most prominent contribution to this progress (Mikkelsen et al., 2017). Despite this achievement, the HIV epidemic remains the biggest contributor to Africa's infectious disease burden (UNAIDS, 2017). The sub-Saharan African region accounts for two-thirds of the global burden of new HIV infections, and young women aged 15-24 years are disproportionately affected (Kharsany & Karim, 2016). Young women constitute four in five (80%) of the new HIV infections within the 15-24 age group (UNAIDS, 2019). With this uneven progress in the global fight against HIV and AIDS, the 90-90-90 HIV control targets are likely to take much longer to be met for most sub-Saharan African countries, especially at a time when the emergence of the new global pandemic, COVID-19, competes for already declining global HIV funding and other resources.

In Uganda, persistently high new HIV infections among young women threaten the country's commendable progress to 'fast track' the end of AIDS by the year 2030 (Vithalani, & Herreros-Villanueva, 2018). Prevention interventions have included behavioral change efforts, biomedical prevention measures particularly condom use, HIV testing services and public HIV awareness services, while treatment has focused on measures accelerating access to ART and related-HIV services to ensure adherence to treatment. However, gaps remain in HIV prevention and treatment among young women. According to a UNAIDS report (2019), young women are generally underrepresented and underserved in HIV programs or policies and service delivery. Although there is widespread knowledge of HIV/AIDS among adolescent girls, there is still low

comprehensive knowledge on HIV/AIDS and sexual reproductive health (Renzaho et al., 2017). Young women continue to experience discrimination, oppression and power imbalances at multiple levels aggravating their vulnerabilities to HIV.

The persistence of high rates of infection and the growing status of young women as an at-risk group relative to other demographic groups in the three-decade-plus HIV fight suggests that there are profound, intractable structural problems that have not been addressed effectively. As highlighted in the latest UNAIDS report (2020), there is an urgent need to consolidate the achievements and sharing of the associated benefits equally among all population groups and sub-groups within and among countries in order to enhance chances of meeting the UNAIDS targets and Uganda's fast-track commitment to end the AIDS epidemic by 2030. Our research is based on the contention that without understanding and addressing the underlying social-cultural and broader structural factors behind the high HIV infections among young women, it will be nearly impossible for Uganda to achieve the goals of the Presidential Fast-Track Initiative to End AIDS in the country by 2030 and the attainment of the UNAIDS 90-90-90 targets for HIV prevention.

This research study aims to examine the individual, contextual and broader structural factors that drive persistently risky sexual behavior associated with high HIV infections among young women in Mbarara district of southwestern Uganda and highlight the policy implications and potential entry points for targeted interventions.

1.2 Background

Sub-Saharan Africa has made commendable progress in the fight against HIV and AIDS (Moise et al., 2018). The ultimate marker of this success is the remarkable reduction of AIDS-related deaths and morbidity (prolonged lives) among PLWH. Research shows that this tremendous

achievement is mostly due to the widespread availability and no-fee access to antiretroviral drugs.

According to UNAIDS (2020), most countries hit hard by HIV, particularly of East and Southern Africa, have seen a 27% reduction in new HIV infections among adults, from 930,000 in 2010 to 730,000 in 2019. Despite the remarkable progress in fighting HIV/AIDs over the past three decades, the epidemic remains the biggest contributor to Sub-Saharan Africa's infectious disease and mortality burden (UNAIDS 2017). Of the estimated 38 million people living with HIV globally, more than two-thirds live in Sub-Saharan Africa (KFF/UNAIDS, 2019). Eastern and Southern Africa are heavily burdened with 730,000 of the global 1.7 million new HIV infections as of 2019 (UNAIDS, 2020). Of these new cases, young women (15-24 years) bore the disproportionate burden. In Southern Africa, the risk of HIV infection is six times higher among females than males of the same age, and in Eastern Africa three times higher (Karim, & Baxter, 2019; UNAIDS, 2019).

Over the years, Uganda has been in the vanguard of the global fight against HIV/AIDS, and specifically in SSA (Green et al., 2006). The country has achieved remarkable progress in the key areas of reducing HIV prevalence, morbidity and mortality among people living with HIV (PLWH), early and rapid scale-up of ART and attainment of high coverage levels, and exceptional success in the prevention of mother-to-child transmission of HIV (PMTCT) (Green et al., 2006; Slutkin et al., 2006). HIV prevalence in the general population declined from 15% in 1991 to 6% in 2017, and new HIV infections fell from 160,000 in 2010 to 50,000 in 2017 (UNAIDS-Uganda MoH, 2017). To seal the country's commitment to end HIV/AIDS-related deaths, in 2017 Uganda launched the "Presidential Fast-Track Initiative to End AIDS in the country by 2030" as the major policy blueprint to fight HIV/AIDS (UNAIDS-Uganda, 2017).

However, amidst these gains "HIV prevalence is approximately four times higher among young women (15-24) than young men" (Uganda Ministry of Education, 2017), revealing significant

gender and age disparities. Not only did HIV prevalence increase among young people (ages 15-29) between 2004/5 and 2011, the gender gap between young women and young men also increased among the 20-24 and 25-29 age groups, to the disadvantage of the young women. HIV prevalence among young people aged 20-24 (3.3%) was triple that among the 15-19 (1.1%) age group, while those aged 20-29 had the highest rate (6.3%) among young people (Uganda AIDS Commission, 2015; Uganda Ministry of Education, 2017). The observed gender and age disparities in HIV prevalence in Uganda are consistent with studies from several other countries in SSA. For example, a study by Dellar, Dlamini, and Karim (2015) in South Africa revealed that young women between the ages of 15 and 24 years contributed a disproportionate 30% of all new HIV infections and acquired HIV 5-7 years younger than their male peers. Further, HIV prevalence in UNAIDS priority intervention countries in SSA ranged from 1.3% to 15.6% among young women in the 15-24 age group compared to 0.5-6.5% among their male peers (UNAIDS, 2011). These inequalities in HIV infections have largely been attributed to “age-disparate sexual relationships” (Gouws & Williams, 2017; Schaefer et al., 2017), gender inequality and gendered social norms, social stigma and discrimination, domestic violence, poor/limited livelihood options and low education levels faced by young women (Dellar, Dlamini & Karim, 2015; Fleischman & Peck, 2015; MacPhail & Pettifor, 2016; Pascoe et al., 2015).

Despite the evidence that young women bear a disproportionate burden of new HIV infections, HIV interventions focused on women are predominantly targeted at self-disclosed female sex workers (Brody et al., 2016; Swahn et al., 2016). This leaves out many young women who engage in risky sexual behaviors hidden from the public eye. Even when young women experience high HIV infection levels and are in fact listed as most-at-risk or key populations for HIV infections by some scholars (Dellar, Dlamini, and Karim, 2015; Harrison et al., 2015; Avert Uganda, 2019), most interventions focused on ‘most-at-risk’ populations do not specifically have young women as target populations. For example, the President’s Emergency Plan for AIDS

Relief (PEPFAR), a major global funder of HIV programs in Uganda, does not list young women among their “key populations.” It treats them at a secondary level of risk as sexual partners of men from designated key populations (PEPFAR, 2018). Findings by Sustainable East Africa Research in Community Health (SEARCH), a multinational consortium conducting research in Uganda and Kenya, have been key in informing policy and funding decisions at the local, national and international level. SEARCH lists men who have sex with men (MSM), female sex workers (FSW), and *boda-boda* (bicycle taxi) cyclists as most-at-risk-populations for HIV infections in the study communities, leaving out the young women sub-population. This exclusion of young women from HIV interventions contributes to the elevated HIV infections among this age group. In the context of a fragile domestic economy, and an overstretched, underfunded and donor-dependent healthcare system, current and projected future increases in new HIV infections, the exclusion will undermine or reverse current gains in the HIV fight and dent Uganda’s prospects of attaining the ‘Fast-Track commitment to end AIDS by 2030’ and meet the UNAIDS 90-90-90 targets (Kakaire et al., 2016).

Also, HIV research and interventions in SSA are largely biomedical, epidemiological, and health-facility-based (Fleischman & Peck, 2015). However, a focus on individual-level factors that influence HIV risk, and often using quantitative methods, is a growing trend in HIV-related behavioral research (King, 2017). King (2017) argues that the biomedical framework of HIV focuses on “simple cause-effect” relationships of HIV and the body, ignoring the “social and cultural forces that shape individual possibilities and decision making” (p. 120). While these relationships might help to highlight the factors associated with high new HIV infections, they do not inculcate an understanding of the risk environments and the nature and complexity of interactions among the underlying structural factors that create vulnerabilities to HIV infection among young women. For example, high levels of HIV knowledge do not on their own guarantee the adoption of HIV-prevention behaviors. This is particularly so for young women

given the disabling contexts and environments within which they are born, raised and meet their welfare and livelihood needs (Mojola & Wamoyi, 2019; MacPhail & Pettifor, 2016). The results of the 2016 Uganda Demographic Health Survey revealed that young women aged 15-29 years had high levels of HIV knowledge. On average, 87% of young women had some knowledge of HIV based on the statement “a healthy-looking person can have HIV;” 87% of the women knew that consistent condom use can reduce HIV transmission, and 93% were aware that being faithful to one sexual partner could prevent HIV (UDHS, 2016). Despite these high levels of HIV knowledge and awareness, young women are still experiencing elevated numbers of new HIV infections, indicating a persisting gap between awareness and behavioral change.

While the literature suggests that social stigma, discrimination, and cultural norms and practices are associated with increased HIV risk (King, 2017; Tadesse & Yakob, 2015), how these factors interact with particular sociostructural contexts and other factors operating at multiple scales of the individual, household/familial, community, and broader scales, and how they shape the risk environment for young women to engage in unprotected sex and other HIV-related risky sexual behavior, remain understudied. A full and holistic understanding of the context, and young women’s experiences of the socioscapes within which they lead their daily lives is key for guiding the development of evidence-based policies and interventions to address the persistent or growing challenge of high numbers of HIV infection among this sub-population (Dellar, Dlamini & Karim, 2015; Harrison et al., 2015). Therefore, this research seeks to examine the multi-level factors (including individual, dyad, and household, social, and structural) that shape sexual risk-taking behavior associated with high HIV infections among young women in urban, semi-urban and rural settings of Mbarara district, southwestern Uganda, using a modified Social Ecological Model for Young Women’s Vulnerability to HIV infection (SEMYWV) that is adapted to Ugandan conditions based on Mbarara District.

1.3 Research Objectives

To achieve the research aim, the study sought to address three objectives:

1. Evaluate individual-level factors associated with sexual risk-taking behavior, specifically having unprotected sex, among young women ages 15-35 years old
2. Describe contextual and broader structural factors that make young women vulnerable to HIV-related risky sexual behaviors, and assess how these contextual factors interact with individual-level factors in ways that perpetuate high levels of HIV infection
3. Re-examine the connection between poverty and other economic factors to risky sexual behavior and vulnerability in the context of high HIV transmission among young women.

We analyze contemporary linkages between poverty or economic stress and HIV-related risky sexual behavior by examining diverse risk environments that young women experience as they transition through developmental life stages in rural, semi-urban and urban settings of Mbarara district, southwestern Uganda.

1.4 Theoretical Framework

The Social Ecological Model (SEM): Developmental psychologist Urie Bronfenbrenner introduced the SEM in 1979 in his ecological systems theory as a way of understanding human development. Diverging from the traditional focus on biological factors (brain chemistry, genetic influences, hormone levels, gender, etc.) to explain child development, Bronfenbrenner argued that child development occurred in a “vibrant, complex environment,” largely social and cultural, that played a significant role in influencing how a child developed (Bronfenbrenner, 1994). Bronfenbrenner (1979) asserted that a child’s psychological and biological make-up constantly interacted with factors in their environment to influence human development.

McLeroy et al. (1988) further developed the SEM as a critique to public health interventions focused on individual behavior change to prevent disease and promote health. McLeroy et al. referred to such interventions as “victim-blaming,” and that they disregarded the role of social environmental factors influencing an individual’s behavior. McLeroy et al. (1988) highlighted five levels of influence: intrapersonal, interpersonal, organizational, community, and public policy levels. The SEM asserts that an individual’s health behavior is shaped by factors at multiple scales within their social environment. At the intrapersonal level, individual characteristics including gender, age, self-efficacy, knowledge, education and others influence health outcomes. At the interpersonal level, relationships and processes within groups, including groups of family members, peers, colleagues, and friends that provide social support, shape individual health outcomes. At the organizational level, there are factors including policies, rules, and regulations, that govern individual institutions or organizations, limit or enable actions, processes, opportunities, access to resources and services, and ultimately influence health outcomes. The community level factors look at the relations between the different organisations and institutions while the public policy level focuses on laws and policies at the local and national levels, and how they affect the health outcomes of individuals.

The SEM by McLeroy et al. (1988) has gained attention in public health in the study of health behavior and in informing policy interventions (McCormack et al. 2017; Golden et al., 2015; Ohri-Vachaspati et al., 2015). It is also used in medicine (Harvey et al., 2016), in natural resources management (Chion, 2017) and HIV research (Onono et al., 2015; Yakob & Ncama, 2016; Wilton, Palmer & Maramba, 2014; DiClemente et al., 2007). Thus, the SEM allows a more holistic understanding of the interactions between individuals and their social environments in relation to health outcomes than approaches focusing on individual behavior. In their study, Onono et al. (2015) used the SEM to examine barriers to the uptake and utilization of PMTCT services by women in the Nyanza province of Kenya and found that social factors embedded

within the environment were key in PMTCT uptake. Using the SEM to investigate factors affecting access to and acceptability of HIV/AIDS care in Ethiopia, Yakob and Ncama (2016) recommend that interventions for improved HIV-treatment coverage should consider different social ecological levels in recognition of the importance of contextual factors.

Baral et al. (2013) proposed a modified framework to explain the role of social and structural factors in shaping HIV risk for key populations such as sex workers, people who inject with drugs and men who have sex with men. In the Modified Social Ecological Model (MSEM), Baral et al., explain an individual's HIV risk by examining factors operating at multiple levels, including the individual, social network, community, public policy and the HIV epidemiological level. They argue that holistic understanding of the role that multiple factors play is essential for effective interventions in addressing HIV infections, especially in targeted traditional HIV at-risk populations. However, the model does not consider the important dimension of power structures that mediate women's vulnerability to HIV infection by causing women's disempowerment, subordination, marginalization and exploitation within African contexts including culture. These unequal power relations are embedded and manifest at multiple levels, creating vulnerabilities to HIV infection, including among girls and young women. For example, in Uganda, women traditionally have limited property rights such as access to and ownership of land, yet they play an important role in agriculture (World Bank, 2017). Such unequal access to productive resources for women and girls makes them economically dependent on their male partners or guardians to meet their needs. The ensuing economic subordination of women and girls shapes unequal sexual power relations in favor of men, undermining women's bargaining power and thereby exposing them to elevated HIV risk (Wilton, Palmer & Maramba, 2014).

Theory of Gender and Power (TGP): The Theory of Gender and Power provides the basis for examining the factors underlying sexual inequality and power imbalances between men and women within social structures (Connell, 1987). The TGP consists of three related structures:

sexual division of power, sexual division of labor, and the structure of cathexis. Under the sexual division of power, men are socially assigned more power than women, which gives them an advantage and sense of control over women. This power is maintained at different levels including the dyad, community and in institutions. Research shows that power imbalances in relationships limits women's ability to negotiate condom use, which puts them at an increased risk to HIV infections (Landen, 2005). The sexual division of labor is about the predetermined distribution of work between men and women based on societal norms. The structure of cathexis is characterized by social norms and the socially expected behavior of men and women. Connell (1987) asserts that the three structures are rooted at the societal level where cultural norms dictate gender roles and distribute power between men and women. The cultural norms and gender roles are also maintained at the institutional level within schools, places of worship and at the workplace. Because of these cultural gendered roles, women continue to experience unequal treatment in terms of limited access and control over economic resources, limited bargaining power, and less pay than men (Wilton, Palmer & Maramba, 2014). In their study "examining HIV-related exposures, risk factors and effective interventions for women", Wingood & Di Clemente (2002, p. 213) demonstrated that "the gender-based inequities and disparities in expectations that arise from each of the three structures... generate different exposures and risk factors that influence women's risk for disease." Such gendered power relations are central to the risk environment for young women to HIV in Mbarara, Uganda and many other Sub-Saharan African (SSA) countries.

Social Ecological Model for Young Women's Vulnerability to HIV Infection (SEMYWV): Using the philosophical underpinnings from the social ecological model (SEM) as an organising framework, and insights from the theory of gender and power (TGP), we propose a social ecological model for young women's vulnerability to HIV infection (SEMYWV) that is situated within the local sociospatial and economic contexts of Mbarara where the women are born, live

and derive their livelihoods or wellbeing. The adapted SEMYWV guides integrated analysis of diverse contextual factors operating at six levels of risk for young women—the individual, dyad (couple), friends/peers, family and community, institutions, and policies—and their interactions with individual characteristics, ultimately making young women vulnerable to high levels of HIV infection. Based on research and observations in Mbarara district, the individual level characteristics generally include age, education, marital status, knowledge, and attitudes. At the dyad (couple) level, risk factors include power dynamics, age of sexual partner, transactional sexual encounters (number), and condom use. At the level of friends/peers, the model examines the role of peer influence in shaping an individual's risky sexual behavior. Cultural norms, customs, taboos and practices are considered at the family-community level. The institution level addresses factors relating to (governance) organizational structures, service delivery, rules and regulations. At the policy level, how local, national and international laws and policy influence risk is examined.

Our adaptation of the SEM to create the SEMYWV integrates insights from the TGP into the multiple levels and context-informed considerations of the modified SEM to examine how and the extent to which the imbalances in sexual division of labor and power, and societal expectations of young women influence their vulnerability to elevated HIV infections. Examining the forces at play within and across these social institutional structures is crucial in understanding how unequal divisions of power and labor and other societal norms predispose young women to risky sexual behavior, poor health outcomes and the pronounced gender-based health disparities burdening young women disproportionately. This is particularly so within male-dominated African societies where social and cultural norms and associated gendered power imbalances remain strong and can add to propagation of risky sexual behavior (Bantebya et al., 2014; Luke & Kurz; 2002; and Nkosana & Rosenthal, 2007).

The modified SEMYWV allows examination of power dynamics and societal norms including societal expectations of young women and how these predispose them to risky sexual behaviour, and to a disproportionate burden of poor health outcomes, especially elevated HIV infections. Examining this power related and other socio-institutional and structural factors within and across multiple levels is crucial, particularly within African societies where social and cultural norms remain strong and can propagate risky sexual behaviour among young women.

1.5 Methods

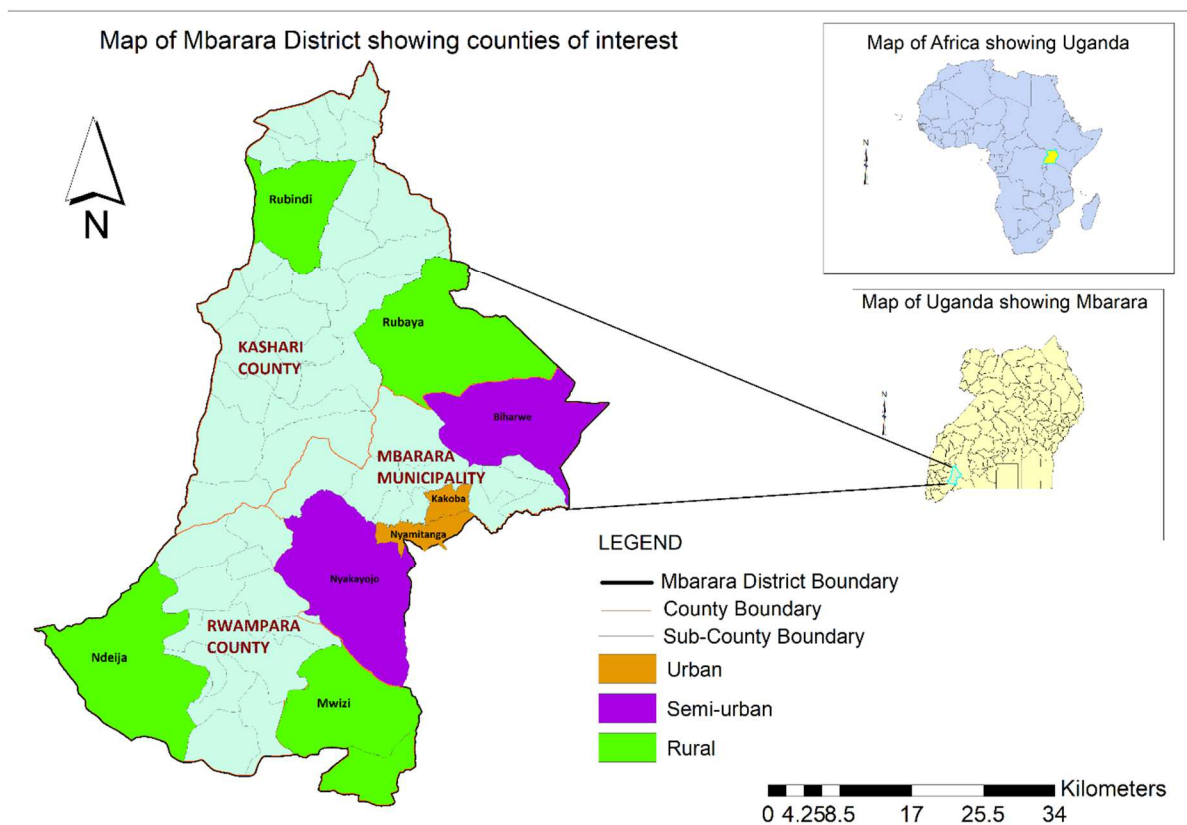
To examine how sociocultural, contextual and structural factors shaping the risk environment associated with unsafe sexual behaviors and help to explain HIV infection rates among young women in Mbarara district, we use mixed quantitative and qualitative research methods guided under the theoretical framework of the modified SEMYWV. The methods used and data collected were a household survey (N=649), 32 focus group discussions, 32 in-depth interviews with young women and 15 key informant interviews, along with secondary data review. The multiple methods helped in maximizing the strengths of both qualitative and quantitative approaches while minimizing their weaknesses and cross-validating findings from multiple methods and sources (Creswell, 2014). Use of multiple methods facilitated the collection of rich data without leaving out important information, which often happens when using a single methodological approach (Morse, 2016; Creswell, 2014).

We use several risky sexual behaviours as proxies for new HIV-infection risk given that HIV in most SSA is transmitted through heterosexual sex. These risky behavioural factors include sexual relationships with much older men (trans/cross-generational sex), no or inconsistent condom use, and having transactional sex and multiple sexual partners (Harrison et al., 2015; Asiseh, 2013).

The research adopted a multi-scalar, multi-stage, cross-sectional sampling technique. The stratified random sampling process resulted in the selection of 16 parishes distributed and differentiated across urban, peri-urban and rural parts of Mbarara district, as shown in Figure 1

1.6 Study area

Figure 1.1: Map of Mbarara District and Study Sub-Counties



The study site is Mbarara district, southwestern Uganda. The district covers 1,788 square kilometres and is located 281 kilometres south-west of Kampala, Uganda's capital city. Mbarara is one of the fastest growing districts in the southwestern sub-region. It had more than 472, 629 people in 2014, and a rapid increase (77%, average 5.1% per year) from 267,500 people in 1991. We chose the district because it has one of the highest HIV-prevalence rates in Uganda,

at 8% (Jain et al., 2014), and is in a high HIV region, the south-west sub-region (UPHIA, 2016/2017). While predominantly agrarian, Mbarara also has rapidly growing small towns or trading centres that increasingly have a busy nightlife, often associated with elevated HIV sexual risk-taking behaviors (Leclerc-Madlala, 2002). Unlike previous HIV research and interventions that have concentrated on Kampala city, the choice of Mbarara district epitomizes neglected but growing small, rural towns where a potential next wave of new HIV cases appears to be emerging. Mbarara district is divided into three counties: predominantly urban and semi-urban Mbarara Municipality, and predominantly rural Rwampara and Kashari counties (see Figure 1). Mbarara Municipality is divided into six sub-counties or divisions; Rwampara is divided into four sub-counties, while Kashari is divided into seven sub-counties. Sub-counties are further sub-divided into parishes (total 90 for Mbarara district), which are comprised of a number of villages or village groups.

The urban/semi-urban/rural residential disaggregation reflects potentially distinct characteristics and dynamics that shape HIV behavioural risk and potentially transmission among the young women. We adapted the Government of Uganda (GoU) definition of urban areas as including city council, municipality and town council jurisdictions (Mukwaya et al., 2011). Rural areas are those that do not fit the classification of urban or sub-urban. We classified semi-urban areas as those sub-counties that were recently added to Mbarara Municipality in 2014 and have mixed urban and rural characteristics. Rural areas are predominantly poor and dependent on agriculture as a livelihood. Urban areas generally have higher wage or salaried incomes; high rural-urban migration and rapid population growth and urbanization; high shares of poor, unemployment youths and crime rates; and growing levels of “night life” (Taremwa, 2013). The HIV epidemic in Uganda has been characterized by higher prevalence among urban than rural settings – 7.1% versus 5.5%, respectively (UPHIA, 2016/2017). However, as rural districts like Mbarara begin to urbanize rapidly, the associated changes in social structures, norms,

practices, lifestyles, and human migration will likely shape or alter the course of HIV infections (Peer, 2015; Hunter, 2007).

1.7 Ethical approval

The study was approved by the Michigan State University Institutional Review Board, Mbarara University of Science and Technology Research Ethics Committee and the Uganda National Council for Science and Technology. All participants above 18 years of age gave written consent and kept a copy of a signed consent form. Respondents below 18 years of age gave child assent, and their parents/guardians gave parental permission.

1.8 Organization of the dissertation

This dissertation is in the format of three publishable academic papers organized by research objective preceded by an overarching introduction chapter and followed by a brief conclusion chapter revisiting the main study findings and key implications for future research, policy and practice. Each of chapters 2, 3 and 4-address one study objective and is in the form of a publishable manuscript in a peer-reviewed journal. Chapter 2 is under review in the journal *Social Aspects of HIV/AIDS (SAHARA-J)*. Chapter 4 is under revision for resubmission to the journal of *Social Dynamics*.

Chapter 1 gives an overview of the HIV epidemic in Sub-Saharan Africa, highlights the problem of the disproportionate new HIV infections among young women in the region. It focuses on elucidating the key gaps in addressing the persistently high HIV infections among Ugandan young women, with particular attention to Mbarara district. This chapter puts forward the problem statement, outlines the study aim and objectives and calls for the examination of contextual and broader structural factors underlying risky sexual behavior associated with high new HIV infections in Uganda. The chapter introduces and gives a description of the theoretical

framework, gives a methods overview, and concludes with a description and rationale for the study area.

Chapter 2 describes the sociodemographic characteristics of young women who engage in unprotected (condom less) vaginal sex, estimates the likelihood of engaging in unprotected sex and identifies factors associated with engaging in unprotected sex. A cross-sectional household survey of young women ages 15-35 years (N=649) was conducted in the summer and fall of 2018. The analysis for this chapter focuses on the sub-category (n=368) of unmarried women or married women who reported engaging in unprotected sex with more than one sexual partner in the 6 months preceding the survey. The results show employment stability, education, native status, age and ethnicity were significant risk predictors. Unprotected sex risk increased with age – 15-16 and 25-29 age groups had the lowest and highest incidence rates of engagement in unprotected sex, respectively. Risk also increased with the 'no employment' and employment security status, being a non-native in the location of residence/work, belonging to a minority ethnicity, and urban residence. The results on education were mixed, with those with higher education and lower education or none at increased risk. The results highlight the value of keeping young women in school, promotion of employment security, and targeting the 22-29 ages to reduce the risk of unprotected sex.

In chapter 3, a modified Social Ecological Model for Young Women's Vulnerability to HIV Infection is used to examine the sociocultural and broader structural factors underlying risky sexual behavior to help explain the elevated risk of HIV infection among young women. Focus group discussions (32 groups involving 220 people in total) with diverse stakeholders including young women, young men, leaders and community members; and in-depth interviews with key informants (n=15) were conducted in the selected parishes of Mbarara district. A grounded theoretical methodology was used to analyze data. Qualitative analysis revealed that unequal power relations, social norms and subordination of women, inadequate knowledge on HIV, peer

pressure, high un/under employment rates, youth unfriendly HIV services, and complacency caused by ARVs were key factors perceived to facilitate engagement in risky sexual behavior among Ugandan young women. The findings highlight the need for a holistic approach that addresses diverse factors and levels facilitating engagement in risky sexual behavior as opposed to only targeting individual's behavior.

Chapter 4 examines the different contextual meanings and drivers of poverty, and how these shape HIV risky sexual behavior among young women in Mbarara. Data from 32 focus group discussions (n=220 participants) were used. Results reveal that while some young women engaged in transactional sex to meet survival *needs* --especially those with children, others did so for material *wants* under peer pressure or the desire to “fit-in” with peers. Some young women, including college students, mostly had sex with older men and often had multiple sexual partners to meet their various needs. The findings call for interventions targeting the improvement of young women's financial independence. There is need for more targeted effort in sex education for young women in school and those out of school.

The final chapter concludes the dissertation with a summary of the three papers. The chapter summarizes key findings, implications for policy and practice by chapter, outlines the study limitations and how these were addressed; and concludes with recommendations for future research.

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CHAPTER 2

WHO ARE WE? UNPROTECTED SEX AMONG YOUNG WOMEN IN MBARARA DISTRICT,
UGANDA

Abstract

This chapter describes the sociodemographic characteristics of young women who engage in unprotected sex in Mbarara District, Uganda and estimates the likelihood that young women will engage in unprotected sex while also identifying risk factors that explain this behavior. A cross-sectional household survey of unmarried women ages 15-35 years (N=368) was selected using a stratified random and systematic sample of households in Mbarara District. A Chi-square and T-tests were used to obtain differential risk profiles of young women who engaged in unprotected sex. Negative binomial regression models were estimated to investigate the likelihood of engaging in unprotected sex for young women living in Mbarara District. Age, education, employment, residential location, ethnicity, and native status were significant risk-profile predictors; religion was not. Risky behavior was high (51.4%-72.7% of women ages 19-35) and increased with age. The 15-16 and 25-29 age groups had the lowest and highest incidence rates of unprotected sex, respectively, compared to ages 30-35. Risk also increased with no/lower education, no/lower employment or employment security, urban residence, being a non-native in the location of residence/work and belonging to a minority ethnicity. Risk behavior was higher among partial/informal 'employed' categories—casual laborer, subsistence farmer, and self-employed—than among 'unemployed', among university (42%) than secondary school (completion) educated women, and among Protestants than Catholics. Risky sexual behavior remains high, increases with age, mobility, and urban residence; the value of higher education is mixed; and employment security is more important than employment *per se*. Keeping young women in school, micro-targeting of the 22-29 age group, and promoting employment security could reduce unprotected sex (and HIV) risk.

2.1 Introduction

Globally, considerable progress has been made in reducing HIV incidence, related morbidity and premature mortality due to AIDS. However, unacceptably high new HIV infections continue to occur, especially in Eastern and Southern Africa (UNAIDS, 2020) threatening to undermine this progress. New HIV infections disproportionately affect young women. In 2019, Eastern and Southern Africa reported 460 new HIV infections each day (approximately 5,520 annually) among adolescent girls (UNAIDS, 2020). In 2018 in Uganda, there were 14,000 new HIV infections reported among young women aged 15-24 years, approximately triple that of new infections for young men of similar age ($n=5,000$) (UNAIDS, 2020). Research has attributed the high number of new HIV infections among young women to behaviors such as early sex initiation, multiple sexual partners, transactional sex, intergenerational sexual relationships and inconsistent/no condom use (Asante et al., 2014; Dellar et al., 2015; Mah & Halperin, 2010; Sathiyasusuman, 2015; Shiferaw et al., 2014; Smith et al., 2014). Despite recent advances to control HIV in the general population, including through health education on condom use outside of marriage (Hardee, 2008) and the wide availability of life-prolonging anti-retroviral (ARV) medications, the elevated new infections among young women persist or worsen in some cases. There is therefore a renewed need to understand under these changing circumstances why some young women continue to engage in unprotected sex and be exposed to HIV. Such knowledge will be important to target interventions that protect young women from HIV/AIDs in Uganda and Africa.

In Sub-Saharan Africa (SSA), population-based studies show a shift in high HIV risk among young women from historically those who reside in urban areas to young women who reside in rural areas, for example in Kenya (Voeten et al., 2004) and Uganda (MoH, 2017). As rural areas in Africa urbanize rapidly, there are associated changes in social structures, including cultural norms and lifestyle behaviors (Hunter, 2007; Peer, 2015). These changes, including migration to

rural trading centers, appear to be reshaping young women's expectations and opportunities associated with more HIV risk-taking behaviors than previously observed (Hunter, 2007; Peer, 2015).

Seeking to enhance understanding of changes in young women's HIV-risk behaviors, this study was conducted in Mbarara, a rapidly urbanizing rural district in southwestern Uganda with a growing number and size of trading towns and an increasingly busy nightlife. Such growing towns can be associated with elevated sexual risk-taking behavior (Leclerc-Madlala, 2002). For instance, a study in five busy trading centers in Mbarara showed high HIV prevalence rates ranging from 7.9% in Ruti to 13.0% in Kijungu and 15.8% in Nyeihanga (Taremwa, 2013). Mbarara had one of the highest district HIV-prevalence rates at 8.0% (Jain et al., 2014). The choice of Mbarara also epitomizes neglected but growing small, rural towns where such changing dynamics can lead to a potential next wave of new HIV infections.

2. 2 Purpose of Study

The purpose of this research is to describe the sociodemographic characteristics of young women who engage in unprotected sex in Mbarara District and identify risk factors for this risk behavior. In sum, we explored which young women living and working in this growing HIV-risk environment engaged in unprotected sex and asked why? This understanding will inform efforts to address the high or growing rates of new HIV infections among young women in rapidly urbanizing areas of Uganda and other SSA countries that threaten the commendable progress to fast track the end of HIV and attain the corresponding sustainable development goals (SDGs) by 2030.

2.3 Methods

2.3.1 Study area

Mbarara District covers 1,788 square kilometers and is located 281 kilometers south-west of Kampala, Uganda's capital city. It is the fastest growing district in the southwestern sub-region of 472,629 people in 2014, reflecting a 77% increase since 1991. Mbarara is divided into three counties: predominantly urban and semi-urban Mbarara Municipality, and predominantly rural Rwampara and Kashari counties. These counties are successively divided into sub-counties and then parishes. Parishes comprise multiple village groups or villages split into local cells of households, the smallest unit. Mbarara Municipality is the largest urban area and there are several semi-urban areas. The urban area is undergoing high rural-urban migration and rapidly growing population and informal settlements. The semi-urban areas of Mbarara Municipality are fast growing and have busy trading towns, including Kijungu and Ruti mentioned above, Kirehe, and Biharwe. Rural areas are predominantly dependent on agriculture as a livelihood source.

2.3.2 Sampling strategy

This investigation is part of a larger study that used a multi-stage, stratified random and systematic sampling of households to select young women (ages 15-35 years) from a population of approximately 89,493 who resided in Mbarara District (UBOS, 2016). The sample size, drawn for that study based on power analysis ($\alpha=0.05$, margin of error 4%), and an extra 8.7% to cover potential loss from errors and flawed questionnaire entries, was 649 young women. The district was stratified by residence type into urban, semi-urban and rural residence to capture potential geographic differences in young women's risky sexual behaviors for HIV transmission. From each stratum, sub-counties were randomly selected, their number proportionate to stratum population size, as follows: two from the urban (Kakoba and Nyamitanga), two peri-urban (Kakiika and Nyakayojo), and four from the rural strata (Ndeija,

Rubaya, Mwizi and Rubindi counties). Thus, eight of the 17 sub-counties of Mbarara District were selected for the study. Two parishes were then selected randomly in each of the selected sub-counties (total, 16 parishes). Eligibility criteria for recruiting the women was first, the household had to have at least one woman aged 15-35 years, and second, enrollment of only one eligible participant from each household to minimize bias. The definition of household used by the Government of Uganda (UBOS, 2016) was adopted: 'a group of usual members who normally live and eat together' and 'have lived in a household for at least 6 months in the past 12 months.

2.3.3 Data collection

On site, a starting point was identified at the center point of each selected parish. Each data collector moved outwards from the center along one randomly selected cardinal campus direction (North, East, South or West), screening, obtaining consent, enrolling and interviewing eligible young women from every 5th household in the rural strata and every 20th household in the semi-urban and urban strata until a minimum of 38 young women was reached per parish. This systematic approach was used because households were more sparsely distributed in the rural than urban and peri-urban strata. If the target number was not met in one cardinal direction, it was supplemented from households in a second random cardinal direction from the center. Young women ages 18+ were asked for informed written consent. Both child assent and parental/guardian consent were required for young women ages 15-17 years. Administered in person, the consent materials and survey questionnaire were in both the local language, Runyankole, and English. Human Subjects approval was obtained from the Michigan State University Institutional Review Board, Mbarara University of Science and Technology Research Ethics Committee, and the Uganda National Council for Science and Technology.

2.3.4 Study population

This particular study focused on a subset (N=368) of the larger sample (N=649) of young women. The subset is limited to (a) unmarried women and (b) married women who reported having unprotected sex with more than one sexual partner. Similar to other studies on risky sexual behavior among young women, married women have been separated from unmarried ones because marital sexual norms influence and differentiate the risk environment of the two sub-groups, as highlighted by Turchik and Garske (2009). We included married young women who reported having unprotected sex with two or more partners because this behavior ‘is the greatest risk factor for HIV’ among young people (Sathiyasusuman, 2015). The sub-sample was more than large enough with sufficient power to allow for a robust statistical analysis as recommended by Green (1991).

2.3.5 Measurements

While there are many types of risky sexual behavior, engaging in unprotected sex, i.e., not using a condom during vaginal sex, is the outcome of interest and the dependent variable in the statistical models in this paper because heterosexual relationships are the main mode of HIV transmission in sub-Saharan Africa (Kharsany & Karim, 2016). In the interview, the following question was asked, ‘*In the past 6 months, how many times have you engaged in vaginal sex without a condom?*’ The answer was coded in two forms: 1) as a dichotomous variable with 1 = had unprotected sex one or more times, and 0 = did not have unprotected sex; and 2) as a count variable capturing the number of sexual encounters in the past six months. Given that discussions about sex and sexual behavior remain taboo in most African cultures (Ndinda et al. 2011; Okafor, 2018), and HIV is a sensitive topic particularly among girls and young women, special attention was taken to hire and train Ugandan research assistants who knew the local language, understood the local community dynamics, and had experience collecting sensitive

data on HIV, while maintaining the stranger characteristic that reassured respondents of anonymity. Privacy was also assured. The young women were interviewed on their own and in the absence of other family or community members and assured of complete anonymity. These measures put the subjects at ease and open, providing assurance in the quality of responses and data collected, including authenticity.

Closed and open-ended questions were asked to learn more about the young women, including information on demographics (location of residence, age, ethnicity, religion, education and employment), and potential risk and extenuating behaviors (age at first sex, perceived age of most recent sexual partner, age when left home age when left school, and age when started work for pay) derived from the literature.

2.3.6 Data analysis

Descriptive statistics were generated to understand the profiles of the unmarried young women who engaged in unprotected sex, using Chi-square tests for categorical and T-tests for continuous explanatory variables. Instead of treating young women as one age category, insights from the lead author's knowledge of the local context and from the literature were used to bin the age data into categories that reflect significant life-cycle and transition stages for girls that are related to sexual relationships as they develop into adolescents (ages 15-17) and then into young and independent adults (≥ 18 years). These life-cycle stages have been shown to influence the young women's risk factors and engagement in risky sexual behavior (Kreniske et al., 2019). Important life-cycle developmental stages range from adolescents transitioning from primary school through secondary school, and tertiary education, to young adults entering/in college, or leaving home and their parents and seeking employment. Finally, to predict the likelihood of engaging in unprotected sex and determine the important driving risk factors, negative binomial regression models were estimated to account for over-dispersed count data in the outcome variable of interest. Incidence rate ratios (IRR) are the reported output from these

models. The IRR is the incidence rate for young women with a particular characteristic or behavior (exposure) participating in unprotected sex divided by the incidence rate for young women who are without that particular characteristic or behavior (unexposed) participating in unprotected sex. The 95% Confidence interval for IRRs is also provided. The model fit was determined using the lowest AIC. All analyses were conducted using IBM SPSS statistics version 25 (2017, Armonk, NY: IBM Corp).

2.4 Results

Forty-eight percent ($n=177$) of young women (mean age 23.8 years) reported engaging in sex without a condom in the preceding six months. These women were slightly older than the 191 young women (mean age 20.3 years) who reported using condoms ($P<.001$). Table 1 shows that both populations of young women had their first sexual encounter between 14 and 21 years (mean, 17 years), which was also in the age range of when they first left home, 14 to 22 years (mean, 17 years). These same young women similarly generally left school between 13 and 19 years (mean, 16 years) and shortly thereafter started work for pay, 15 to 22 years (mean, 19.0 years). The men who they engaged in unprotected sex with during their most recent sexual encounter were slightly older, 20-37 years (mean, 29.4 years) compared to women who used condoms (mean, 28.1 years), although these differences were not statistically significant.

An age group crossover in risk behavior occurred in the 19-21-year age group, with 51.4% of young women engaging in unprotected sex compared to 48.6% who used condoms. Thereafter, a substantial increase in risk behavior was observed in the 22-24-year age group (72.7% unprotected sex vs 27.3%) with a persistently high but slight decrease in trend for young women 25-29 years (62.5% vs 37.5%) and 30-34 years (66.0% vs 34.0%) ($P<.001$).

There were also significant differences in risk behavior by residence, with more and majorities of young women who lived in urban (56.1%) and semi-urban (52.3%) areas engaging in

unprotected sex than in rural areas (40.4%) ($P=.023$) where the rate difference was also the greatest. The most reported ethnicity was Banyankole ($n=255$) followed by Bakiga ($n=60$), Baganda ($n=32$) and other ($n=20$), with very small but significant rate differences between young women who engaged in unprotected sex and those who did not. Young women also reported belonging to four religious' affiliations, Protestant ($n=166$), Roman Catholic ($n=124$), Pentecostal ($n=46$) and Muslim ($n=31$). However, the risk behavior of young women across these affiliations was not significantly different (Table 1).

A majority (233 or 63.3%) of young women reported having completed primary education; more than one-third (36.6%, $n=135$) did not complete primary education and a 15 lacked formal education. A substantial number of young women received some ($n=106$) or completed ($n=18$) secondary education while 44 received an advanced/tertiary education or university degree. There was a crossover in behavioral risk between those with *some secondary* versus those *completing secondary* education, with a higher percentage of young women with some secondary education or less also engaging in unprotected sex. In contrast, a higher percentage of young women completing a secondary education or higher reported using condoms. Having *some secondary education* also had the greatest rate difference (35.8% unprotected vs. 64.2% protected) in risk taking behavior. These education-related differences in risk behavior were significant ($P=.027$).

Nearly two-thirds (110 or 65.8%) of young women reported being self-employed or unemployed ($n=106$), with fewer being student ($n=47$), full-time ($n=36$) or part-time ($n=22$) employed, subsistence farmer ($n=26$) or casual laborer ($n=22$). Majorities of women who were self-employed, subsistence farmer or casual laborer also reported engaging in unprotected sex, with the largest rate difference between those who engaged in unprotected sex and those who did not being among casual laborers (72.7% and 27.3%, respectively). Importantly, over one-half of 'unemployed' women (57.5%) used condoms. Finally, two-thirds (65.5%) of young women

(n=241) reported being born outside Mbarara District. Of these, 56.4% engaged in unprotected sex. In contrast, a majority of young women who reported being native and living or working in Mbarara (68.3%, n=126) used condoms.

Table 2.1: Differences in sociodemographic characteristics of young women's sexual practice with (N=177) and without (N=191) a condom in Mbarara district, Uganda, 2018.

Sociodemographic characteristics		Condom Use		Total	p-value
		Yes	No		
Age, μ (sd) ¹		20.3 (5.25)	23.8 (5.12)	22 (5.5)	0.000***
Age at first sex, μ (sd) ¹		17.6 (3.50)	17.7 (2.99)	18 (3.1)	0.925
Age of most recent sexual partner, μ (sd) ¹		28.1 (8.07)	29.4 (8.09)	29 (8.1)	0.316
Age left home, μ (sd) ¹		17.9(4.37)	18.7(3.94)	18 (4.1)	0.152
Age left school, μ (sd) ¹		16.1 (2.81)	16.4 (3.52)	16 (3.2)	0.477
Age started work for pay, μ (sd) ¹		18.5 (3.84)	19.0 (3.99)	19 (3.9)	0.301
Residence, n (%)	Rural	99 (59.60)	67 (40.4)	166 (45.1)	0.023**
	Semi-urban	42 (47.70)	46 (52.3)	88 (23.9)	
	Urban (base)	50 (43.9)	64 (56.1)	114 (31.0)	
Age, n (%)	15-16	48 (85.70)	8 (14.3)	56 (15.2)	0.000***
	17-18	54 (71.10)	22 (28.9)	76 (20.7)	
	19-21	34 (48.6)	36 (51.4)	70 (19.0)	
	22-24	15 (27.30)	40 (72.7)	55 (14.9)	
	25-29	24 (37.50)	40 (62.5)	64 (17.4)	
	30-35	16 (34.0)	31 (66.0)	31 (8.4)	
Ethnicity, n (%)	Bakiga	34 (56.7)	26 (43.3)	60 (16.3)	0.035**
	Baganda	23 (71.9)	9 (28.1)	32 (8.7)	
	Other	7 (35.0)	13 (65.0)	20 (5.4)	
	Banyankole	126 (49.4)	129 (50.6)	255 (69.5)	
Religion, n (%)	Muslim	13 (41.9)	18 (58.1)	31 (8.4)	0.165
	Roman Catholic	72 (58.1)	52 (41.9)	124 (33.7)	
	Pentecostal	27 (58.7)	19 (41.3)	46 (12.5)	
	Protestant	78 (47.0)	88 (53.0)	166 (45.1)	

Table 2.1: (cont'd)

Education, n (%)	No formal education	5 (33.3)	10 (66.7)	15 (4.1)	0.027**
	Some primary	54 (45.0)	66 (55.0)	120 (32.6)	
	Completed primary	29 (44.6)	36 (55.4)	65 (17.7)	
	Some secondary	68 (64.2)	38 (35.8)	106 (28.8)	
	Completed secondary	10 (55.6)	8 (44.4)	18 (4.9)	
	Advanced/Tertiar/Uni	25 (56.8)	19 (43.2)	44 (12.0)	
Employment, n (%)	Casual labor	6 (27.3)	16 (72.7)	22 (6.0)	0.000***
	Subsistence farmer	10 (38.5)	16 (61.5)	26 (7.1)	
	Self-employed	41 (37.3)	69 (62.7)	110 (29.9)	
	Part-time employment	10 (47.6)	11 (52.4)	21 (5.7)	
	Full-time employment	20 (55.6)	16 (44.4)	36 (9.8)	
	Student	43 (91.5)	4 (8.5)	47 (12.8)	
	Unemployed	61 (57.5)	45 (42.5)	106 (28.8)	
Live/ work in same area of birth, n (%)	No	105 (43.6)	136 (56.4)	241 (65.5)	0.000***
	Yes (base)	86 (68.3)	40 (31.7)	126 (34.2)	

* $p=0.10$; ** $p=0.05$; *** $p\leq 0.01$; *P-values were calculated using t-test for continuous variables and chi-square for categorical variables*
¹*Mean (standard deviation)*

Table 2 shows the results from the negative binomial models. The perceived mean age of young women's most recent sexual partner was 29 years. For every year increase in age thereafter, young women were 5.0% more likely to have sex without a condom (IRR=1.054, 95% CI 1.017-1.091). Young women 25-29 years of age were 79% more likely to engage in unprotected sex (without a condom) compared to older young women aged 30-35 years (IRR=1.79, 95% CI 1.22-2.63), whereas teenagers 15-16 and 17-18 years were 92.0% and 55.0% less likely to participate in unprotected sex than the oldest category of young women, ages 30-35 years (IRR=0.08, 95% CI 0.051-0.124 and IRR=0.454, 95% CI 0.311-0.661), respectively. There were no significant differences in condom use for young women 19-21 or 22-24 years and young women 30-35 years old.

In addition, young women who had some primary (IRR=2.96, 95% CI 2.06-4.250) or completed primary (IRR=2.06, 95% CI, 1.38-3.08) education, or had some secondary education (IRR=1.53, 95% CI 1.06-2.21) were significantly more likely to engage in unprotected sex compared to young women who obtained advanced/tertiary education or university degrees. There appeared to be some protection for young women who completed secondary education (IRR=0.58, 95% CI 0.32-1.05), though not statistically significant. In this study, young women who had full-time employment (IRR=0.41, 95% CI 0.271-0.607) or part-time employment (IRR=0.61, 95% CI 0.372-0.992), or were a student (IRR=0.06, 95% CI 0.04-0.99), were significantly more likely to use condoms compared to unemployed women. In contrast, young women who were employed as casual laborers (IRR=2.35, 95% CI 1.48-3.76) or were self-employed (IRR=1.73, 95% CI 1.38-2.28) were more likely to engage in unprotected sex compared to unemployed women. Also, young women living or working in Mbarara but were born outside of the district were more likely to engage in unprotected sex compared to those born and continuing to live and/or work in Mbarara (IRR=2.17, 95% CI 1.74-2.70).

Finally, the likelihood of using condoms was higher for Bakiga (IRR=0.67, 95% CI 0.504-0.902) and Baganda (IRR=0.33, 95% CI 0.214-0.514) ethnicities compared to Banyankole young women. Young women who reported Roman Catholic affiliation (IRR=0.74, 95% CI 0.588-0.950) were also more likely to use condoms than young women of Protestant affiliation. Young women residing in rural or peri-urban areas were more likely to use condoms than young women residing in urban areas, but this reduced risk was only statistically significant for young women residing in rural areas (IRR=0.76, 95% CI 0.593-0.967), suggesting that young women's risks behaviors may increase as urbanization increases in rural areas.

Table 2.2: Results of negative binomial regression models of the incident rate of having sex without a condom against diverse explanatory sociodemographic characteristics of young women in Mbarara District, Uganda, 2018 (N=368)

Sociodemographic Characteristics	B	IRR [†]	95% CI	p-value
Age ($\mu=22$)	-0.053	0.948	0.896-1.004	0.067*
Age at first sex ($\mu=18$)	0.060	1.062	0.990-1.139	0.095*
Age of most recent sexual partner ($\mu=29$)	0.052	1.054	1.017-1.091	0.003***
Age left home ($\mu=18$)	-0.074	0.929	0.862-1.000	0.051**
Age left school ($\mu=16$)	-0.023	0.978	0.907-1.054	0.554
Age started work for pay ($\mu=19$)	-0.015	0.985	0.913-1.064	0.707
Residence				
Rural	-0.278	0.757	0.593-0.967	0.026**
Semi-Urban	-0.208	0.813	0.611-1.081	0.154
Urban		<i>Ref</i>		
Age				
15-16	-2.529	0.080	0.051-0.124	0.000***
17-18	-0.790	0.454	0.311-0.661	0.000***
19-21	-0.253	0.776	0.531-1.135	0.191
22-24	0.178	1.195	0.802-1.779	0.381
25-29	0.582	1.790	1.219-2.628	0.003***
30-35		<i>Ref</i>		
Ethnicity				
Bakiga	-0.394	0.674	0.504-0.902	0.008***
Baganda	-1.103	0.332	0.214-0.514	0.000***
Other	0.147	1.158	0.772-1.738	0.477
Banyankole		<i>Ref</i>		
Religion				
Muslim	0.174	1.191	0.804-1.762	0.383
Pentecostal	-0.055	0.946	0.677-1.323	0.746
Roman Catholic	-0.291	0.747	0.588-0.950	0.017**
Protestant		<i>Ref</i>		

Table 2.2: (cont'd)

Education				
No formal education	0.575	1.777	0.967-3.263	0.064*
Some primary	1.086	2.962	2.064-4.250	0.000***
Completed primary	0.724	2.062	1.383-3.075	0.000***
Some secondary	0.424	1.528	1.056-2.209	0.024**
Completed secondary	-0.545	0.580	0.320-1.049	0.072*
Advanced/Tertiary/ University		<i>Ref</i>		
Employment				
Casual labor	0.857	2.356	1.477-3.758	0.000***
Subsistence farmer	0.401	1.494	0.963-2.317	0.073*
Self-employed	0.550	1.733	1.318-2.280	0.000***
Part-time employment	-0.499	0.607	0.372-0.992	0.046**
Full-time employment	-0.901	0.406	0.271-0.607	0.000***
Student	-2.764	0.063	0.040-0.099	0.000***
Unemployed		<i>Ref</i>		
Live/ work in same area of birth				
No	0.777	2.174	1.737-2.720	0.000***
Yes		<i>Ref</i>		

* $p=0.10$; ** $p=0.05$; *** $p\leq 0.01$; IRR=Incidence Rate Ratio

2.5 Discussion and Conclusion

This study had two objectives: to describe the sociodemographic characteristics of young women who engage in unprotected sex in Mbarara District, Uganda; and to estimate the likelihood that young women will engage in unprotected sex, while identifying risk factors that explain this behavior. Four important findings from this study are discussed.

First, the high reported levels of young women still engaging in unprotected sex is a major concern given the consistently high levels of awareness of HIV risks and prevention methods, and despite the progress made in combating HIV/AIDS in Uganda overall. The risk of engaging in unprotected sex increased with age as in Stoner et al. (2017). Teens aged 15-16 and 17-18

years who reported having sex in the past 6 months were least likely to have unprotected sex, as also found by Berhan and Berhan (2015) and Darteh et al. (2020), suggesting that strategies that keep young women under the protective care, support, and supervision of their parents and schools as long as possible remain important for these age groups to reduce their vulnerability to risky sexual behavior (Jukes et al., 2008). The findings also highlight the need to micro-target the 19-21 age group — the cross-over demographic into increased risk behavior by age; the 22-24-year age group that had the largest rate difference in risk behavior; and the 25-29-year age group that exhibited substantially elevated risk, likely intersecting with education (see below).

Second, those dropping out of or completing primary education, or having some secondary education, often move from rural areas to trading towns and growing cities in search of employment or marriage and are therefore particularly vulnerable. This study affirms other study findings showing risky sexual behavior decreasing with higher education levels (Baker et al., 2011; Jukes et al., 2008). Additionally, findings reveal a more complex picture that might necessitate reexamining the link between education (especially tertiary education) as a core preventive pathway against risky sexual behavior among young women (Jukes et al., 2008). While some studies show increased risk with higher education levels (Darteh et al., 2020; O’Sullivan et al., 2010), our findings that young women with tertiary education had a higher risk of engaging in unprotected sex than those who completed secondary school, and those with ‘some secondary education’ had the lowest share of at-risk women (35.8%) among all education levels, might reflect a shift in the traditional relationship between education and employment. Most (73.6%, n=44) respondents with tertiary education were either unemployed (31.8%) or self-employed — both high-risk sexual behavior categories. Stagnant employment creation and a job/education mismatch exacerbate Uganda’s growing youth unemployment problem (Wabalayi, 2019), likely increasing educated young women’s vulnerability to risky sexual behavior and HIV infection. The emergent risk profile calls for education policies and strategies

that specifically enhance curricula with entrepreneurial skills training to create more job creators than seekers. Being away from parents' protective shield for extended periods of time while in higher learning institutions might also increase vulnerability to risky sexual behavior, suggesting the need for increased mentorship and support for young women on university and other higher learning campuses.

Third, our findings of a complex employment landscape that differentially exposes young women to risky sexual behavior suggest that the orthodox binary employed/unemployed reductionism fails to adequately capture the day-to-day risk environments associated with employment status that the young women must navigate. Therefore, HIV-prevention interventions focusing narrowly on increasing employment opportunities (Darteh et al., 2020; Ghoneim et al., 2017; Mabaso et al., 2018) might not produce the micro-targeting needed to mitigate the persistently high risky sexual behavior and HIV infections in Mbarara District and similar settings in SSA. Beyond being employed, employment security mattered. The risk of having unprotected sex generally decreased with increasing employment security, with a positive linear trend from unemployment to full-time employment. However, young women employed in partial/informal sector categories of casual laborer, subsistence farmer, and self-employment were more likely to engage in unprotected sex than the self-identified unemployed, while part-time and full-time wage/salaried employment had lower and the least risk of engaging in unprotected sex, respectively. Findings highlight the need to unpack employment as a category and include underemployment to enhance understanding of the differential risk environments they create for young women. In particular, the findings suggest that behavioral-change interventions need to transcend formal job creation into additionally promoting economic/livelihood security within the informal sector while at the same time protecting young women's health.

Fourth, geographically, the risk profile affirms common findings of higher risk in urban than rural areas (Van Donk, 2006), while illustrating the potential expansion of the at-risk young women population as Mbarara District transforms into semi-urban (52.3% at risk) and then urban status (56.1% at risk). Increasing mobility, night life, living standards and accompanying economic pressures expose young women to risky sexual behavior (Taremwa, 2013), including unprotected transactional sex to meet basic needs (Kwena et al., 2012; Solomon, 2017). Such risk is higher for young women working/living in a location where they were not born, where they are often isolated from supportive social networks; hence, their 2.174 times higher incidence rate for unprotected sex than native Mbarara women. Further, finding the highest share (65%) of at-risk women by ethnicity among the 'Other' category—mainly migrant *Batooro* and *Rwandese*—likely reflects increased vulnerability associated with their mobility/migrant or minority status, as Schuyler et al. (2017) found in Uganda's Rakai district, more than their ethnicity *per se*. The geography of these ethnic groups may need further exploration.

Our finding of a significant reduced incident rate of unprotected sex among young Catholic women compared to Protestants, Pentecostals and Muslims is notable given the Catholic Church's doctrine prohibiting the use of condoms. The Catholic Church promotes the A and B parts of the ABC (**A**bstinence, **B**e faithful, and **C**ondomize) HIV-prevention approach used in Uganda (Carey, 2018). Whether the reduced risk reflects the relative success of the **AB** strategy or a higher percentage of young Catholic women using condoms regardless of it is unknown, but findings illustrate the analytical value of desegregation by religious affiliation.

This study has some limitations, including its self-reporting nature, hence, relative subjectivity to reporting bias on the locally taboo topic of personal sexual behavior. While self-reporting is an inherent challenge of nearly all social surveys, using local research assistants with considerable experience in data collection on HIV-research projects and knowledge of Mbarara communities and ensuring privacy during interviews mitigated this challenge. Despite our focus on

unprotected sex, sociodemographic/behavioral variables and exploratory data analysis using descriptive statistics, T-tests, Chi-square tests, and negative binomial regression analysis, other risky sexual behaviors and explanatory variables operating at the individual, family, community and structural level, and interactions among them can also be important (Hosegood, 2009).

Potential new research areas include examining changing patterns of sexual behavioral risk and HIV risk, including using longitudinal life history approaches (Kreniske et al., 2019), interactions among some variables, and specifically empirical analysis of the impacts of the widespread availability of life-prolonging antiretroviral drugs on risky sexual behavior and HIV prevention among the young women. A comparison of risky sexual behavior between married and single young women can also advance understanding of the risk environment and intervention targeting and is the subject of a separate paper under development.

A majority of Mbarara young women across the 19-35-year age categories still engaged in risky unprotected sex. Age, education, employment, residence location, ethnicity, and native status were significant risk-profile predictors, but findings suggest the need for a re-examination of these sociodemographic variables and their relationship to location-specific HIV-related sexual behavioral risk to enhance the micro-targeting needed to address remnant demographic pockets of high risk to new HIV infections in order to reach national and UN SDG goals of eliminating new HIV infections by 2030. This paper contributes to those efforts. The revealed risk cross-over at age 19 and elevated risk-behavior rates among the 22-24 year and 25-29-year age groups demonstrates the need to provide more targeted HIV education for adolescents (before age 18) as they make difficult behavioral decisions and increasing support to young women in their early and late 20s as many face difficulty negotiating the use of condoms, particularly with older men.

Findings on education support the need to encourage young women to continue their education through secondary completion (while remaining under the protective umbrella of parents as long

as possible) to reduce their risk of engaging in unprotected sex. Higher education provided young women the opportunity for higher paid and more secure employment opportunities, but growing unemployment might undermine the benefits. Enhancing education curricula with technical and entrepreneurial skills to create more job creators than seekers would help. Employment interventions should also consider the dominant informal sector, targeting casual laborers, subsistence farmers and self-employed young women, and those who migrate into Mbarara, with HIV education, material and economic support for preventative behaviors, including the proper and consistent use of condoms.

Further research is needed to determine contributions of age/development and employment transitions, and the apparent unexpected impacts of education in explaining the persistently high rates of risky sexual behavior and new HIV infections among young women in Uganda and similarly affected SSA countries while account for gains in combating HIV/AIDS.

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CHAPTER 3

SOCIOCULTURAL AND STRUCTURAL FACTORS FACILITATING ENGAGEMENT IN HIV-RELATED RISKY SEXUAL BEHAVIOR AMONG YOUNG WOMEN IN SOUTHWESTERN UGANDA

Abstract

Although Uganda has made significant progress in the management of HIV/AIDS, new HIV infections among young women remain high. Using a modified Social Ecological Model for Young Women's Vulnerability to HIV Infection, this paper examines the contextual and broader sociostructural factors underlying the continued risky sexual behavior among young women in Mbarara district, southwestern Uganda. We conducted 32 focus group discussions with diverse stakeholders, including young women, young men, elders and community members. We also conducted interviews with 15 purposively selected key informants. The findings reveal that young women continue to engage in transactional sex with older men to meet basic needs (food, shelter, school fees) and for materialistic gains (designer clothes, nice phones, cosmetics). Cross-generational sexual relationships were often characterized by imbalance of power, to the disadvantage of the young women. Social norms that young people should submit to old people and that women are subordinate to men limited the young women's negotiating power for safe sex. Growing unemployment and underemployment even among college graduates were key facilitators of risky sexual behavior among the young women. Dynamics at the health facility, including unprofessional health staff (judgmental, rude), long waiting times, and lack of privacy hindered young women from accessing HIV-health services. The rollout of antiretroviral drugs has reduced the perceived severity of HIV and created a false sense of hope among young people generically. Our findings show that the factors fueling risky sexual behavior among young women are not only multi-faced, but they also operate at different levels and interact within and across levels. The findings highlight the importance of implementing a holistic approach with different interventions at multiple levels, including stakeholders at different levels to address risky sexual behavior among young women.

3.1 Introduction

Uganda has made commendable progress in the fight against HIV/AIDS, particularly in scaling up antiretroviral therapies-ART (UAC, 2019). This has led to a reduction in adult HIV prevalence among those aged 15-64 years from 7.3% in 2007 to 6.2% in 2016/17 (MoH, 2012; MoH, 2019). Early anti-retroviral therapy (ART) initiation and adherence to HIV treatment leads to viral suppression, improves the quality of life for people living with HIV/AIDS (PLWH) and accelerates reduction in AIDS-related deaths (Ford et al., 2018; MoH, 2017; Peltzer et al., 2010). However, despite Uganda's achievements in the management of HIV and AIDS-related deaths, and improvement in ART enrollment, persistently high numbers of new HIV infections, particularly among adolescent girls and young women (MoH, 2017, UNICEF n.d.), threaten to undo Uganda's progress in the fight against HIV. In fact, the "vulnerability of young women" to HIV "is getting worse" (UAC, 2015 pg. 10). Recent statistics in Uganda show that about 570 young women in the 15-24 age group acquire HIV every week (Vithalani & Herreros-Villanueva, 2018; UAC, 2015). In 2018, there were approximately 14,000 new HIV infections among young women in the 15-24-year age group, double the share among young men—5,000 new cases—in the same age group, revealing wide gender disparities (UNAIDS 2020).

Scholars have attributed this trend in new HIV infections among young women to engagement in risky sexual behaviors, including having multiple sexual partners, transgenerational sex, unprotected sex, and inconsistent condom use (Maughan-Brown et al., 2018; Smith et al., 2014; Camlin et al., 2013; Dellar et al., 2010). However, studies tend to treat these risky sexual behaviors individually, with little to no focus on how they interact and create increased HIV risk among young women in particular geographies and contexts. For example, results of a study by Mehra et al. (2014) on inconsistent condom use among Ugandan university students revealed that female students reported higher inconsistent condom use with a new sex partner than male students (49.2% vs 37.4%). Given this finding, the authors recommended interventions focused

on improving communication skills and addressing gender power relations. While this is an important recommendation, it is important to note that young women are not always passive participants in sexual relationships. As reported in recent literature on transactional sex, some scholars, including Leclerc-Madlala (2003) and Hunter (2002), argue that some young women actively make decisions to exploit their sexual partners or relationships in exchange for luxuries or materialistic goods so as to maintain a modern lifestyle, though outside the formal or informal sex trade. Therefore, in order to address risky sexual behavior and prevent new HIV infections among young women, it is vital to study risky sexual behaviors more holistically. In this study, we provide a holistic understanding of the sociostructural and economic factors and contexts that young women experience and navigate every day, and how the factors interact and shape the likelihood of engaging in different risky sexual behaviors associated with high rates of new HIV infections among the young women. Advancing knowledge in this regard can inform better targeted, context appropriate approaches to reducing risky sexual behavior among the young women and the risk of contracting HIV.

Prevention and treatment (mostly through accelerated expansion of ART coverage) are the major necessary policy approaches to strengthen Uganda's fight against HIV/AIDS. Uganda's National Strategic Plan (NSP) 2015/2016 – 2019/2020 against HIV articulated these approaches into four main strategic goals: prevention, care and treatment, social support and protection, and systems strengthening (UAC, 2015). The Ugandan government continues to refine, articulate further, and adapt these goals to changing circumstances, notably through the National Strategic Plan in channeling Uganda's commitment to the United Nations' vision of "Zero new HIV infections, Zero discrimination, and Zero AIDS-related deaths" by the year 2030 (UAC, 2015). Another policy mechanism is the 'Presidential Fast-track Initiative on ending HIV & AIDS in Uganda by 2030' launched in 2017 to align with the UN Sustainable Development Goals on HIV/AIDs. However, although the objective to "increase adoption of safer sexual

behaviors and reduction in risky behaviors” is a major objective under the prevention approach (along with promoting condom use, HIV testing, and abstinence, and strengthening behavior communication UAC, 2015, pg.22), we contend that its implementation has not adequately caught up to changing risk environments to the added demand for more targeted and effective gains needed to finally end HIV/AIDS. Recent studies have shown that young women are not actively or adequately engaging in HIV-prevention interventions, especially consistent condom use (Kanda & Mash, 2018; Mehra et al 2014), HIV testing, and ART initiation/adherence (both as treatment and prevention) at anticipated high levels (UNICEF, 2020, Wong, 2017). Uganda’s National Strategic Plan does not clearly outline the underlying drivers of the multiple risky sexual behaviors and the environment in which these behaviors are produced and reproduced, hampering the fight for reducing risky sexual behaviors, particularly among sexually active young women. HIV scholars and health professionals both at national and international levels concur that adolescent girls and young women are at a higher risk of contracting HIV. This study contributes to answering the question of why many young women (ages 15-35 years) continue to not embrace HIV-prevention measures and to engage in risky sexual behavior.

The scholarly literature has also tended to treat young women as a homogeneous group in examining drivers of risky sexual behavior and responses thereto. To be sure, a few recent studies have identified potential underlying drivers of risk-taking sexual behavior among young women that contribute to the high rates of new HIV infections, including level of education, school attendance, marital status, age, and unemployment (Darteh et al., 2020; Mabaso et al., 2018; Stoner et al., 2017). However, most studies fail to account for the sub-age groups and the developmental and transitional stages that the young women go through from adolescence to adulthood or the differentiated risk environments that they are exposed or have to navigate, which shape their sexual behavior and HIV risk. Furthermore, when some of these factors are addressed, they tend to be examined individually and quantitatively, with fewer qualitative

studies examining holistically the roles of the broader sociostructural contexts in shaping the risk landscapes for young women. This research gap undermines the ability to devise holistic, enduring and effective solutions to ending HIV.

This qualitative study uses a modified Social Ecological Model for Young Women's Vulnerability to HIV Infection as a holistic framework to examine broader sociostructural and contextual factors to explain the continued risky sexual behavior among young women in Mbarara district of southwestern Uganda. Persistently high new HIV infections among the young women despite the progress made in prevention and treatment nationally and in other at-risk groups provides the context. We dig deeply into the lived contexts that expose young women to risky sexual behavior in urban, semi-urban and rural settings of the district, disaggregated by age group and developmental stages. We draw on the voices, narratives, and experiences of the age-differentiated young women themselves and of other relevant actors at district and local levels. We selected Mbarara district as the study area because it is one of the rapidly urbanizing districts in the predominately rural region with rising HIV prevalence in southwestern Uganda. Findings from this study can help practitioners to overcome the paradoxical stagnation (and even reversals) in the number of new HIV cases among young women despite the considerable progress made in other demographic groups and other dimensions of HIV/AIDS (biomedical gains in reduced prevalence, morbidity and deaths) in the hopefully final stretch to defeat HIV.

3.2 Theoretical Framework

Advancing knowledge on the social ecological model (McLeroy et al., 1988), we have modified the applicability of the model on health generically and on HIV/AIDs in particular to address the specific issue of HIV risk among young women, in Mbarara District. The social ecological model (SEM) was first introduced by Bronfenbrenner (1979) as an ecological framework for human development, and further advanced by McLeroy et al. (1988) as an ecological model to study

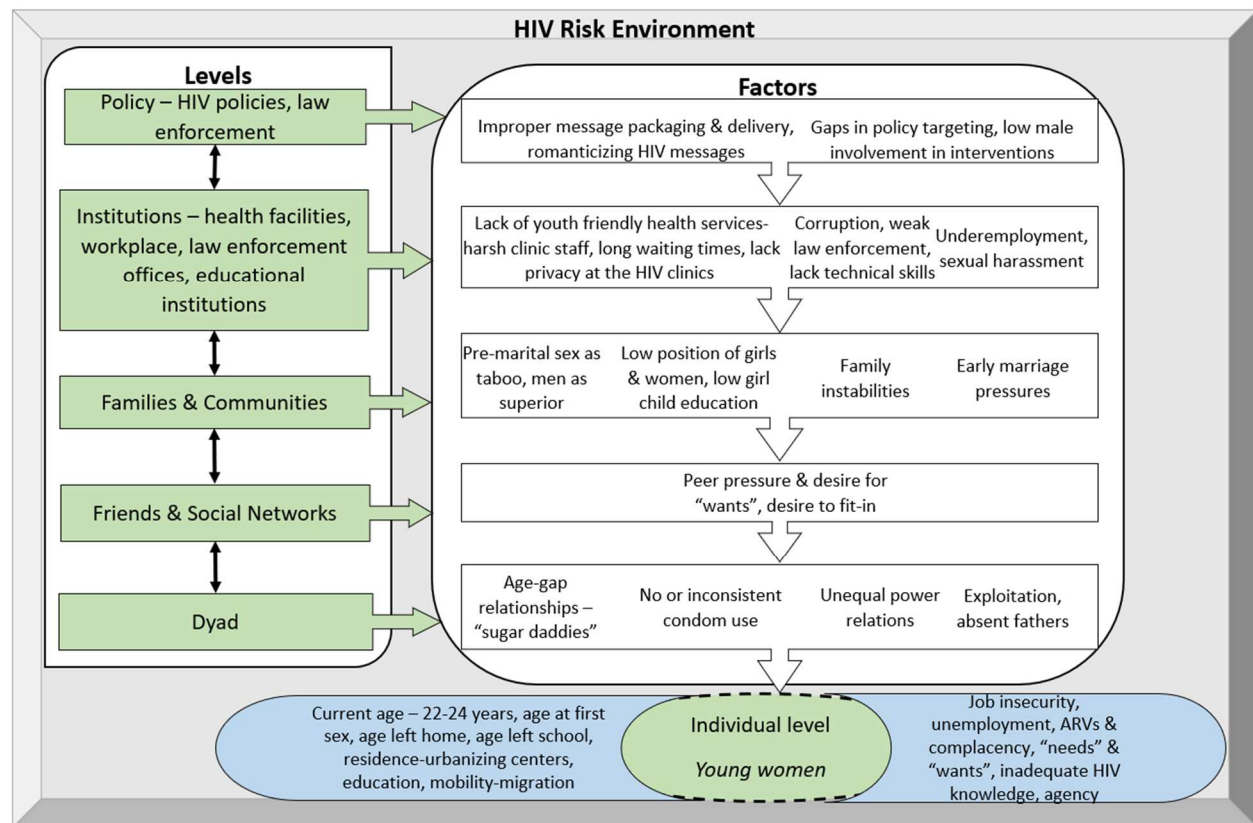
health behaviors. We adapt it to guide socio-epidemiological studies on the dynamic interaction between individual and environment/contextual factors that shape an individual's sexual behavior to inform HIV-prevention strategies for young women. The ecological model has gained popularity in public health (Chisumpa et al., 2017; Golden et al., 2015; Dustin et al., 2009; Robinson, 2008), and has been used to guide policy formulation, intervention development, and evaluation among key populations (CDC, 2020; McCloskey, 2016; Atilola, 2017; Campbell et al., 2007). Cassel (2010) used the SEM to establish multi-level factors driving increasing cases of obesity among Samoans living in New Zealand and the USA. Cassel revealed that the causes of increased obesity among Samoans included Samoan culture and socioeconomic and political changes; and called for multiple level interventions to address the factors that drive the increase in obesity.

Recently, some researchers have adapted the SEM in the study of HIV risk (Cornelius et al., 2018; Baral et al., 2013). Baral et al. (2013) modified the SEM as a guide in the study of HIV risk among men who have sex with men (MSM) and people who inject drugs (PWID). The authors' modified social ecological model (MSEM) adds a sixth organizational level to incorporate the HIV *epidemic stage*, thereby contextualizing the SEM to address the HIV risk environment specifically for MSM and PWID demographic groups. The resulting MSEM provides important clues in the study, design of interventions, and formulation of policies to address HIV infections among MSM and PWID in a holistic manner.

In comparison, we adapt the SEM by modifying the levels of risk and integrating insights from the theory of gender and power (TGP) to a context and culturally relevant framework, which we term the modified Social Ecological Model for Young Women's Vulnerability to HIV Infection (SEMYWV). The integration of insights from the TGP—sexual division of power, sexual division of labor and the structure of cathexis—facilitates the examination of how some cultural norms and expectations make young women vulnerable to HIV infection. The SEMYWV is designed to

capture causal pathways for new or persistent risky sexual behavior that is associated with high new HIV infections within the local contexts in which these young women are born, live or derive their livelihoods. As several scholars argue (e.g., Cornelius et al., 2018; Haberer et al., 2017; Baral et al., 2013), the context or environment in which people are born, live and work plays a central role in shaping individuals' behavior and health outcomes. The SEMYWV is a holistic systems-based framework for examining how diverse context-specific factors at six sociospatial levels of organization and exposure to HIV risk—the dyad (partner), friends/peers, family and community, institutions, and broad-based policies—interact with individual characteristics and create conditions that make young women particularly vulnerable to new HIV infections. Individual level characteristics include age, education level, HIV knowledge, stigma, and attitudes. At the dyad level, factors considered include unequal power dynamics, age-based sexual exploitation, the number of sexual partner(s), the number of transactional sexual encounters, and condom use. Factors at the friends/peers level include peer influence. At the family-community level, factors include family instabilities, cultural norms and practices that advantage men over women, giving them more power and privilege. At the institutional level including implementing agencies, factors include organizational structures, poor service delivery, sexual exploitation of young women and rules and regulations. At the policy level, local and national laws and policies are examined. Interaction among factors happens both within and across the six levels; creating complex causal pathways (see Figure 1 for our SEMYWV adapted for the study sites in Mbarara district). A holistic approach guides examination of the multidimensional factors operating at different scales, and how these interact, creating vulnerabilities for young women. This insight will be key in guiding the formulation of multi-scale targeted interventions, which is critical in addressing the high new HIV infections within the context of Ugandan young women's everyday life.

Figure 3.1: Social Ecological Model for Young Women's Vulnerability to HIV Infection¹



3.3 Methods

3.3.1 Study area

The study was conducted in Mbarara District, a rapidly urbanizing rural district in the southwestern Region of Uganda. Mbarara is located about 290 km from Kampala, the capital city of Uganda. Mbarara covers a land area of 1,778.4 km² and the district center coordinates are 00° 36S, 30° 36E. Mbarara is one of the districts with the highest population growth in the country. Its population increased from 361,500 people in 2002 to 472,600 in 2014 (UBOS, 2016). Mbarara is a predominately rural district with the majority population dependent on

¹ Adapted from: McLeroy et al. (1988) & Baral et al. (2013)

subsistence agriculture as a source of livelihood. However, the district has of late experienced growing urban trading centers, providing the conditions for small-medium retail businesses to thrive. Although HIV/AIDS in Uganda and other Sub-Saharan African countries has been a disproportionately urban disease (Moise et al., 2018; Zulu et al., 2014; Voeten et al., 2004); recent surveys in Uganda suggest that rural, rapidly urbanizing areas might become the new hotspots for new HIV cases as rates decline rapidly in urban areas (MoH, 2017). In particular, the southwestern region went from having the lowest HIV prevalence rate of 5.9% (versus 8.5%, 8.2*, 6.9% and 6.5% for the Central, Mid-Northern, Mid-Western, and East-Central regions, respectively) in 2004 /5 (MoH, 2017) to having the second highest prevalence in 2017 at 7.9%, only behind the Central region at 8.0% (UPHIA (2017)).

3.3.2 Study design and sampling

Qualitative data were collected October 2018 through September 2019 as part of a cross-sectional study conducted in 16 parishes of Mbarara district. Mbarara district was first stratified into urban, semi-urban and rural settings. Using a combined random and purposive sampling technique, 8 of the district's 17 sub-counties were selected. The selected sub-counties are distributed based on the county share of district population size as follows: two from the urban stratum, two semi-urban, and four from the rural stratum. A total of 32 Focus Group Discussions (FGDs) were conducted – four in each selected sub-county. One of the four FGDs was with young women ages 15-24 years, one with young women ages 25-35, one with young men ages 15-35, and one with a mixed group of community members, local leaders, parents, teachers and elders. The choice of the four group types and the purposive selection of participants within the groups was meant to broaden participation and representation as much as possible, based on age, education, socioeconomic status, role in the community, and marital status, as appropriate for the research question at hand. The age division of the FGDs with female youth is meant to reflect main local relational and transitional stages among young women, and potential

differential exposure to sexual behavioral risk. In Uganda, 15-24-year-old young women are at the lifecycle stages when they are generally starting to gain independence from their parents/guardians as they leave home for boarding schools, in search of employment opportunities, or for marriage. The unique pressures and youth experiences in these early transitional stages might make young women in the 15-24 age group uncomfortable to share their perspectives in the presence of older women (ages 25-35 years). The inclusion of diverse participant categories in the FGDs provided an interactive platform to assess levels of consensus on diverse contextual factors, insights, themes and trends that shape the sexual behavioral risk environment that young women experience daily and exposes them to the risk of HIV infections, focusing on economic pressures.

FGDs provided an interactive platform and an opportunity to assess levels of consensus (Cresswell, 2015). They helped to uncover community insights and narratives on the sociostructural and other factors that form risk socioscapes of sexual behavior in relation to contracting HIV that might help to explain the persistently high numbers of new HIV infections among young women, and to inform targeted solutions. Each FGD had 6-8 participants. Some 220 people participated in all the 32 FGDs. Interviews were also conducted with 15 purposively selected and locally informed key informants: four social workers, four peer educators, three Village Health Team (VHT) members, two counselors, and two local medical officers.

3.3.3 Data collection and analysis

Data were collected and transcribed by three trained and seasoned researchers in qualitative data collection on sensitive topics, including HIV/AIDS and sexual behavior. All three research assistants are natives of the study area, speak the local language, have worked in the communities, and are familiar with local community dynamics. Semi-structured interview guides were used to guide KIs and FGDs. Participants were first asked about the general health concerns in their community. We then probed in detail about HIV, the sub-population most

affected by HIV, drivers of new HIV infections, HIV services offered in the community, challenges in accessing the HIV services, and suggestions for addressing the high HIV infections especially among young women.

The FGDs and KIIs were conducted in the local language, *Runyankole*, audio recorded with permission from the participants, translated and transcribed in English by the researchers who conducted the data collection. The use of the same research team for data collection and transcription was meant to minimize language differences and interpretation errors, as discussed by Van Nes et al. (2020). In addition, the lead author (a native *Runyankole* speaker) reviewed the translations and transcriptions for quality assurance. Data were analyzed using thematic analysis in ATLAS ti 8 qualitative analysis software (2006, GmbH, Berlin). We conducted an iterative process of open and axial coding and examined codes and themes that reflect emerging patterns and relationships among concepts (as in Cresswell, 2015; Miles et al., 2014; Durepos, Mills & Wiebe, 2010). Word clouds were also to supplement the axial coding to identify main themes and sub-themes. Emergent codes were added to the codebook iteratively, and related codes arranged by theme, and interpreted. Illustrative narratives and quotes were extracted and used to explain the themes.

3.4 Results

3.4.1 ARVs have caused complacency

One of the greatest markers of success in the HIV fight in Uganda also turned out to be a major cause of complacency among young women for continued sexual risk-taking behavior in Mbarara district. A recurring narrative among diverse FGD and KII participants was that the increasingly widespread availability of life prolonging anti-retroviral drugs (ARVs) free of charge has reduced the fear of contracting HIV because it was no longer perceived as a 'death sentence'. During the research discussions, almost all the participants reported that HIV was no

longer perceived as serious a disease as before because it had ceased to be an automatic death threat. A young woman in the 15-24 years' age group from an urban area remarked: *"most people don't fear HIV these days because they brought HIV drugs for us... They think HIV does not kill at a young age. In case they get sick, they will go and get HIV drugs."* A rural male social worker elaborates on the issue of complacency induced by the availability of ARVs:

"...there is a perception that there are now ARVs that prolong life when someone has HIV. You hear the youth saying, 'I was not created to live forever. Either way, I will die one day.... If I can live for twenty years with HIV, then why should I be so worried about contracting it?'" (Male, social worker)

The resulting separation of being infected with HIV and developing into full-blown AIDS and then dying, or passing HIV to a baby, has translated into a downgrading in the perception of HIV/AIDS risk among many in the young generation. A narrative by an urban young woman (15-24-year age group) is illustrative: *"If I can conceive and give birth to HIV negative children when I am HIV positive on ARVs, then what should stop me from enjoying my love life?"* In addition, many younger *Millennials* (25-40 years) and *Generation Z* (9-24 years) young people do not perceive HIV as life threatening since they have not seen emaciated people with AIDS in their communities, as narrated by a 24-year-old social worker:

"What is fueling high HIV infections among young people is detachment from reality; the truth that HIV kills. They lack the facts that AIDS is [still] life threatening. It is surprising that I, at my age of 24 years, I do not know that HIV kills because I have never attended a burial where they disclosed that this person died of AIDS. When a person dies, they say s/he died of a heart attack, stroke or other disease, but you will not hear any mention of HIV/AIDS anywhere." (Female, social worker)

As opposed to the pre-ARV era (before 1997) when very ill AIDS patients were easily identified by their 'slim' physical appearance, in the ARV era, PLWH look healthy outwardly. An urban female 15-24 years old shared that *"in this ARV era, once you are infected with HIV, but you're taking your medications on time, feeding and drinking very well with no stress all the time, no*

one can tell you have HIV. In fact, some people who have HIV look healthier than those who do not." This has led to lack of fear among young people. In fact, some young women were said to worry more about getting pregnant than contracting HIV/AIDS. *"Adolescent girls fear getting pregnant [more] than contracting HIV," observed a social worker.*

Respondents used various rationalizations for continued or new engagements in risky sexual behavior in the era of ARVs. Justifications included belittling the importance of HIV versus other diseases (e.g., equating it to the flu or portraying HIV/AIDS as less serious than other incurable diseases), and the ability for many PLWH to live reasonably long lives, citing examples of infected people who have lived such long productive lives, including giving birth to HIV-free babies. A male social worker explained:

"The availability of ARVs has given young people confidence to engage more in risky sexual behavior. Someone told me that HIV is now like flu... That instead of getting cancer or hepatitis B, they would rather contract HIV." (Male, social worker)

3.4.2 Conflicting messages on HIV prevention versus treatment

A dimension of this theme was the imbalance in information between the benefits of ARVs for treatment and the continued need for HIV prevention. Participants revealed that dominant current HIV/AIDS messages promoting HIV testing and extolling benefits of living positively with AIDS have the unintended effect of creating laxity and a premature sense of hope among young people. A young woman (15-24 year age group) from a semi-urban area explains the unintended dangers of such contradicting messages between HIV prevention and treatment:

"instead of advising the youth to be careful and use condoms, and for the girl child to know about protection, you find someone saying, 'if you find yourself with HIV, you just go to TASO

and get free drugs [ARVs].² Another young woman shared the story of her aunt who has been living with HIV for over three decades.

“When I was born, I found my aunt with HIV; she has lived for 30 years and more. Whenever someone in the family dies, she always says that they have all died before her. People no longer fear HIV after the introduction of ARVs because they know that as long as they are taking their HIV medicines; they will live for long.” (Female, 15-24 years, urban setting)

3.4.3 Women’s needs and transactional sex

Young women exchanging sex for direct and indirect financial gains to help meet basic needs including food, shelter, school fees, and personal hygiene supplies (Hagues, 2019; Camlin et al. 2013), was also a common narrative in Mbarara district. Financial hardships forced some young women into transactional sex for survival while their limited negotiating power and abuse from some male clients constrained or prevented them from adopting safe sex behaviors and measures. Men who were often older and well off induced young women into having unprotected sex with the promise of more money than if they used a condom, an offer that is too tempting for many needy young women to turn down. This puts young women at the direct risk of contracting HIV in a region and country where HIV prevalence and incidence rates are still relatively high. Shared experience by a young woman illustrates this dilemma:

“...a man will give you 20,000 shillings [\$6 USD] for protected sex. When you get there, he will say, ‘let me give you 30,000 shillings [\$8 USD] for unprotected sex.’ When you accept, you find that you have acquired HIV. We accept to have sex because we are stranded; we do not have jobs yet we need rent [money]; we need to eat, dress, and sleep. So we give in to [having] sex because we have nothing else to do... If a man

² TASO is The AIDS Support Organization of Uganda.

comes and says he wants to have sex with you for 20,000 shillings [\$6 USD], how do you say no, yet you don't even have Vaseline?" (Female, 25-35 age group, urban setting)

3.4.4 Peer pressure and desire for materialistic goods

While some women engaged in exchange sex to meet immediate basic needs, others did so for purposes of having *materialistic goods* and a *good life*. Most participants recounted cases of younger women, especially those aged up to 24 years, engaging in risky exchange sex due to a “*desire to have a particular lifestyle that they cannot afford,*” including the desire for luxury goods such as smart phones, cosmetics, shoes, jewelry and designer clothing. An urban young man (15-35 age group) had this to share:

“Girls are greedy for money and that begins when she gets like in senior three [high school] since that is when she begins to see nice things like phones and shoes. She knows her parents did not give her money to buy such things. Boys of the same age are poor so she has to give in to sugar daddies who can afford the items she wants. In the process, she contracts HIV.”

It was evident from the discussions that risky sexual behavior was common among younger women irrespective of their education attainment, social class and economic background, as illustrated in this quote about an educated college student:

“...when a girl gets to college, she wants to have a nice room with a TV set, which the parents cannot afford. If she gets someone who can give it to her for ‘free’, she takes it. These old men are willing to pay any price for sex; so this eventually puts the girls at increased HIV risk” (rural male peer educator)

Participants virtually unanimously agreed that peer pressure and influence was a major driver of young women’s desire to acquire luxury items. The urge to “fit in” with peers by acquiring *materialistic* items such as fashionable clothes and shoes that peers donned made adolescent

girls vulnerable to exploitation by older men. Mampane (2018) in his study described this relationship between young women and older married men as the “blesser and blessee” phenomenon. Wealthy, generally older married male (blessers) entice young women (blesses) into sexual acts by promising them luxurious gifts, which elevates the women’s HIV risk. As narrated by a rural male social worker and urban female (15-24 age group), respectively:

“The major reason is the desire to have a particular lifestyle they cannot afford. This easily entices them to go with rich older men...Older men like having sex with young women, especially those around 17 years of age because they are easily deceived by small gifts like phones.”

“I will see my friend with nice vaseline [skin lotion] that I cannot afford. When I meet a man who shows interest in having sex with me, I will accept so that I can also be able to buy the good vaseline,”

As also argued by Cherie & Berhane (2012) and Selikow et al. (2009), negative peer pressure is a major facilitator of risky sexual behavior among adolescent girls and young women. In connection to involvement in transactional transgenerational sex, many young Mbarara women reported engaging in sex with multiple sexual partners to be able to meet their various needs. In the words of an urban woman (25-35 years age group):

“If you are friends with women who dress so well, and you do not have the money to afford such nice clothes, to fit in, I will find a way. If I meet a man who offers to give me 50,000 shillings [\$14 USD], I will give him sex and use the money he gives me to buy a dress. Then I will also want money for hair. I will give sex to another man so that he gives me money for hair.”

3.4.5 Cross-generational sex and unequal power relations

Another major theme was the role played by cross-/trans-/inter-generational sex in elevating HIV risk among adolescent girls and young women. Young women having sex with older women is a worldwide phenomenon that is not limited to Uganda, and likely a function of male dominance in patriarchal societies (Bantebya et al., 2014; Nkosana & Rosenthal, 2007; and Luke & Kurz; 2002).

There were common accounts of older men or “sugar daddies” targeting young women apparently because they ‘had simple needs to be met’, were easily “convinced” and “tempted with money” or “blinded by money” compared to older women (a 59-year-old male social worker). Most participants highlighted age-disparate sexual relationships that resulted in limited negotiating power for the young women as the “sugar daddies” had the upper hand in dictating the terms of the sexual relationship or transactions. These unequal power dynamics put the young women at an increased risk of unsafe sex and HIV infection. An urban young woman (15-24-year age group) articulates this open observation:

“The infected rich men always reach out for us the young girls. Most girls of my age are easily tempted with money and other gifts. The old men take advantage of our young age. When it comes to the sex act, in most cases the girls fear to insist on condom use.”

Participants revealed a common social belief that men knew more about sex, which gave them an upper hand in making decisions in sexual relationships. This normally was done at the disadvantage of the young women in terms of their ability to demand safe sex, leading to exploitation and increased exposure to HIV infection, STDs and unwanted pregnancies. In addition to monetary inducements, older men exploited cultural inequities—particularly the norm for the young to respect older people and for women to respect men—to shame, silence, trick, take advantage of, and intimidate young women into accepting unprotected sex. When young women insisted on condom use, they were often labelled as “prostitutes” and “disrespectful.” Narratives from an urban female social worker and a rural male peer educator who speculated about proportions of young women engaging in unprotected sex, respectively, illustrate the potency of the sociostructural role of culture in perpetuating power inequities that expose young women to risky sexual behavior and elevated risk of HIV infection:

“When it is time to have sex and you suggest condom use, he thinks that you have really disrespected him. He starts saying you are a prostitute for telling him to use a condom. You have no say in the relationship. You keep silent and allow him to make all the

decisions even if it means having sex without a condom and putting yourself at risk of HIV.”

“...In 100 young women, about 10 would have the confidence to insist on condom use. Of the 10 young women who insist on condom use, 80% of the men they have sex with will conclude they are prostitutes. They will say, ‘how can a woman face me and say I put on a condom?’ Men see themselves as the only ones who should be making decisions in relationships. Most of the women have also come to believe that men are the ones who are supposed to be deciding on whether to use a condom or not. The community has normalized the thinking that men are the ones to decide on condom use, or even whether to have sex or not. This disadvantages the girl child a lot, exposing them to infections and unwanted pregnancies.”

In such circumstances, blame is often put on the young women engaging in transgenerational sex while the older men are not held accountable for their sexual predatory actions.

3.4.6 Social norms, subordination of women and HIV risk

Conversations revealed consensus that local cultural norms had a major role in facilitating risky sexual behavior among young women. In addition to the cultural norms at the intersection of age, gender and societal respect, discussions of premarital sex remained a taboo and a contributing problem to risky sexual behavior and HIV infection. A male social worker narrated that in the past, unmarried girls were expected to be virgins. If one was not a virgin, worse so on the taboo subject of a young woman getting pregnant out of wedlock, there was always some punishment. *“In Kabale, when a girl had sex before marriage, they would throw her over a cliff as a punishment to teach other girls to restrain from premarital sex,”* explained the social worker. Some female participants invoked the belief that sex is “sacred” and not for unmarried girls. These cultural expectations kept young women from openly talking about sex with their parents/guardians, resulting in having limited knowledge on the topic of sex, which disadvantaged them in negotiating for safe sex with men. *“Sex is sacred and should not be discussed among the unmarried. Young people end up engaging in sexual activities without any*

knowledge of how to protect themselves from sexually transmitted diseases and unwanted pregnancies,” rationalized an urban female social worker. The cultural norm of sex talk among young people as taboo (Bastien et al., 2011; Ndinda et al., 2011; and Okafor, 2018) denied girls (and young men) crucial guidance on how to protect themselves from STDs and unplanned pregnancies.

“In the African culture, parents do not openly and freely discuss with their children about sex. At 15 years, a parent should come in and openly start discussing with their children about sex. Advise them, ‘if a man approaches you for sex, say “NO”. If you cannot say “NO,” please insist on condom use every time you have sex.’ But if this youth does not have this information, she will find herself having unprotected sex with this old man and that is how they are contracting HIV and conceiving unwanted pregnancies.” (Rural female social worker)

3.4.7 Inadequate knowledge on HIV

Narratives of inadequate HIV knowledge, often intersecting with culture, as shown in the previous section, were common as drivers of risky sexual behavior (often mediated by unequal power in sexual relations) among young women. This was surprising given more than three decades after the onset of the HIV epidemic and reports of high rates of awareness in the general population. Inadequate knowledge and crucial information on how HIV is transmitted, and measures to protect oneself from contracting it increase the likelihood of a young woman engaging in, or being “easily deceived” into, having unprotected sex.

“A man will say, ‘look at how healthy I am. Do you think someone who looks this healthy has HIV?’ If this girl does not have the right information that you cannot diagnose a person with or without HIV from appearance, [and] that HIV can only be diagnosed by taking an HIV test, you find such a girl accepts the lie and ends up having unprotected sex.” (Rural male peer educator)

Inadequate knowledge also resulted in misconceptions about the value of and how to use condoms properly. These included negative preconceptions or beliefs, and even misinformation,

about condoms among young female and male youth. Sharing her experiences in her day-to-day interactions with young people, a rural female social worker recounts such persistent and worrying manifestations of knowledge gaps: *“when I am going through the communities talking to young people about condom use, they tell me, ‘teacher, I cannot use a condom because it has some toxic fluids that cause cancer.’ The men say that when you have a condom on, you will not enjoy sex since there is no skin-to-skin contact.”*

3.4.8 High unemployment rates, underemployment and sex work for jobs

Most participants pointed to high unemployment rates among young people as an important indicator of participating in risky sexual behavior. Currently, Uganda is experiencing increasingly high youth unemployment even among college graduates (Nabayego, 2014; Pletscher, 2015). As new graduates continually overwhelm the job market, stiff competition for the few white-collar jobs usually preferred by college graduates ensues. The high unemployment rates are causing desperation among job seekers. Some employers take advantage of this situation by sexually exploiting young women by promising them employment in exchange for sex. The following local narratives are illustrative:

“You graduate and start applying for jobs. When you think you have a job, your boss will ask you to have sex with him to maintain your job position. Since you have been jobless for a long time, you will fear to insist on condom use. So, because you want a job, you will accept to have sex with him.” (25-35 age group, rural setting).

“... she becomes desperate for a job. Once she gets a job opportunity, the employer tells her, ‘if you want this job, you must first give me sex and I will give you the job.’ I call this “down” interview. Remember this lady desperately needs a job; so, she finds herself giving in to sex demands in exchange for a job.” (Social worker, urban setting)

Underemployment. In addition to the high unemployment rates, underemployment was commonly reported as a driving factor among young women, especially those involved in casual

work. Poor working conditions and insufficient pay to meet young women's numerous needs and wants made them vulnerable to engaging in sex for extra money.

"I live near a bar and there are many girls who work there. Their boss [bar owner] only gives them lunch, but for supper, they have to fend for themselves. These girls have basic needs and want to look nice with lipstick, nice clothes. If a man wants sex from such a girl, the following day he will buy for her Katogo [a plate of food] for 2,000 shillings, and then go with her. This girl will go with the man, spend a night at his place; she will sleep with a full stomach and in a comfortable bed. In the morning, the man will give her money for breakfast. All these things, she might not be able to get with her small pay at the bar." (Male, 15-35 age group, FGD, urban setting)

Despising casual work as 'dirty'. There were narratives of young women who looked down on casual jobs. They often despised jobs that they perceived to be low class since they did not want potential suitors to see them get dirty. This kind of behavior pushed them deeper into poverty and vulnerability to risky sexual behaviors. A female participant narrates,

"...we young people don't want to work. When someone offers you to work in their small restaurant, you will look at your fingernails, you look at yourself and then say, 'how will the guys in town see me holding charcoal and peeling matooke [green bananas], my hands getting dirty, no way I will not do that.' They want to get easy money without necessarily going through the hustle of hard labor" (female, 25-35 age group, FGD, urban setting)

3.4.9 High school dropouts

Participants often indicated that dropping out of school was an important marker of vulnerability to risky sexual behavior among adolescent girls. Young women from poor families were more vulnerable to dropping out of school due to lack of school fees, school supplies and personal hygiene products. Once no longer in school, they faced immense pressure from parents and community members to marry. This created a feeling of "hopelessness" and desperation to leave home, increasing the chances of landing in the hands of exploitative men who promise

them stable relationships, marriage and provision. The following narrative explains the ordeal faced by such young women:

“Most parents in the rural areas do not have stable incomes and are not able to meet all the needs of their children. If a girl is in her menstruation, goes to school and she messes her uniform, other students laugh at her; she will not go back to school. In staying at home, that is when the pressure of getting married and the hopelessness kick in, and she ends up getting men offering her all sorts of gifts in order to coerce her into unsafe sex.” (Male, peer educator, rural setting)

In addition, it was easy for men to actively lure adolescent girls from poor families to drop out of school and move in with them, promising them marriage. Such young women are sometimes abandoned by the men, left without income; or they are stuck in unhappy or abusive relationships with the men, unable to go back to school and fearing to face their furious parents back home. In either case, they are particularly vulnerable to unsafe sexual behavior. The following narratives exemplify the predicament:

“HIV is becoming high among young girls due to increasing school dropout rates. Sometimes they escape from school with the help of their men friends who promise them marriage and a better life away from the poverty at their parents’ home. Most of the times, they get them pregnant and or even get them sick and dump them” (male, 15-35 age group, FGD, semi-urban setting)

“...women who do not have any income generating activities, this makes those who have some money, especially old men, to take advantage of them and coerce them into sexual activities even when they are still young. This puts them at high risk of contracting HIV.” (Rural peer educator, male)

3.4.10 Family instabilities

Key informants cited instability in many homes as a key driver of risky sexual behavior among young women. Unsolved marital problems between parents sometimes caused one or both to abandon their children. The children are forced to fend for themselves and their siblings in child-

headed households or have limited support and supervision from a single parent. The girls are vulnerable to sexual exploitation by men promising them provision.

“When we go visiting homes, we find only children at home without any parent around. When you ask where the parents are, they say, ‘maama had misunderstandings with taata and decided to leave.’ Taata has another wife somewhere, so he does not care about us” So you find there are many child-headed families in the community. The older children have to struggle looking for food for their younger siblings, and this makes them vulnerable to exploitation by men who have the money to get them food.” (Female, social worker, urban setting)

3.4.11 Youth unfriendly HIV services

Many participants reported that lack of youth friendly HIV services at the health facilities was hindering young people from accessing HIV-related services freely. Concerns about provision of youth unfriendly services ranged from poor services, lack of youth friendly structures, to unethical conduct of health facility staff.

Unprofessional health staff. Many young women perceived health staff as “harsh,” unprofessional and judgmental. This was worsened by the fact that the health workers were from the same communities as the young women and knew their families. An urban young woman (15-24-year age group) recounts a recurring experience during visits to a health facility: *“If an adolescent girl asks for condoms, you find the service provider asking you, ‘a young girl like you, what do you want the condoms for?’* Experiences, news and claims of such negative treatment scared many young women (those 15-24 years of age) away from accessing preventive health services at health facilities such as HIV testing, increasing the likelihood of unsafe sexual behavior.

“Young people fear to go to the health center for HIV testing. If you go to the health center, you will find there a service provider who knows you and your parents. Instead of welcoming and thanking you for coming to test for HIV, she will put you in a room and

start asking you why you are involving yourself in premarital sex at a young age. The health worker will look at you as being promiscuous. Once you leave the health center, you will never go back to test.” (Female, social worker, urban setting)

In addition to limiting access to HIV-preventive services to promote safe sex behavior, there were also many accounts of the fear of being seen at the HIV clinic, causing young women to hesitate in seeking HIV treatment. In addition, this was so to avoid word about their HIV status spreading in the community, leading to judgment by community members in relation to the continuing social stigma surrounding HIV. In addition to putting the lives of the women at risk from foregoing treatment, the reverse in risky sexual behavior also happens – the young women being the potential spreaders of HIV to men.

Healthcare facility setting and privacy. Both young women and men pointed out that the health facility setting was a barrier to accessing services although “*most government health facilities provide free HIV services, including testing*” (male rural youth 15-35-year age group). Young women and men cited various challenges. These included long queues and wait times at the health center, lack of privacy and consequent fear of unethical health officials or other health-center attendants disclosing their HIV status, and the unavailability of segregated (from adults or older people) youth-friendly clinic settings and HIV services. The spatial location or temporal scheduling (e.g., a specific day of the week) of HIV services, and lack of separation in the provision of preventive and treatment services also undermined privacy and repelled some female and male youth from seeking such services. While these challenges in clinic setting are particularly pronounced in the case of ART treatment services, as shown in the narratives below, they remain barriers for accessing preventive health services as well and can undermine the ability to practice safe sex behavior.

“...the problem is that the youth are not catered for. I cannot imagine myself seated next to an old man waiting for my HIV results or even picking HIV drugs. There is need for some privacy at the HIV clinic.” (Male, 15-35 age group, FGD, urban setting)

“HIV was given its own day at all health centers. In Kakoba, the HIV clinic is Friday, and everyone watches you go to the ART room and knows you are HIV positive. If there is someone who knows you, they will go spreading the rumor in the whole community that you have HIV and are on HIV drugs. The secret you have kept to yourself is now disclosed to everyone in the community. People will start talking about you when you pass-by. That is why young people drop out of HIV care...” (Female, 15-24 age group, FGD, urban setting)

3.5 Discussion and Conclusion

Through their experiences and opinions, participants in this study highlight the perceived and observed major drivers of risky sexual behavior that might help to explain the persistently high numbers of new HIV infections among young women in Mbarara District. Our study provides a qualitative analysis of the individual and multi-level factors associated with risky sexual behavior that advance understanding of the young women’s vulnerability to HIV infection. Using the focused modified Social Ecological Model for Young Women’s Vulnerability to HIV Infection (SEMYWV, Figure 1) allowed us to examine holistically the numerous factors operating at multiple scales and how they interact in almost intractable ways and help to explain why young women engage in risky sexual behavior that exposes them to increased risk to HIV infection. The persistence of the problem of risky sexual behavior and high numbers of new HIV infections among young women despite three decades of gradual progression in other measures and demographic groups to address it suggests that there remain underlying social and structural causes. By focusing on understanding the context and risk socioscapes which young women experience and navigate daily to meet their welfare and livelihood needs, this study contributes to the literature on risky sexual behavior and HIV risk among adolescent girls and young women. The study provides much needed context-based evidence, as recommended by Mojola & Wamoyi, (2019) and Mampane (2018), to address the high HIV infections among young women in Uganda and the rest of SSA. The targeted Social Ecological Model for Young

Women's Vulnerability to HIV Infection offers policy makers and intervention program planners a platform for focused prevention policies and intervention programs. Each level of the SEMYWV is a point of influence and a crucial entry point for prevention policies and programs. To reduce risky sexual behavior and the associated high new HIV infections among young women, it is imperative to design and implement policies and intervention programs that can mitigate risk and enhance protective factors at each of the different levels of the SEMYWV.

At individual, dyad and community levels, transactional sex and cross-generational sex or 'sugar daddy' relations are well-documented key drivers of HIV transmission among young women in Sub-Saharan Africa (Bantebya et al. 2014; Nkosana & Rosenthal, 2007; Luke & Kurz, 2002). However, important gaps remain in understanding why young women continue to engage in such risky sexual behaviors. While the results of our study affirm that some young women engage in risky sexual behavior for survival, they further show and unpack the relatively neglected (in the literature) materialistic drive to meet their desires. As in other studies in Tanzania (Hagues, 2019) and Kenya Camlin et al., 2013), some young women in our study engaged in risky sexual behavior for basic needs, including food, school fees, personal hygiene supplies and shelter. Most such women were from poor families or had children and dependents to fend for. However, participants also reported some younger women, especially those below 24 years of age, engaged in transactional sex for materialistic gains such as designer clothes, shoes, cosmetics, phones and others as also documented by Moore et al. (2007), Hunter (2002). Younger women felt the pressure to 'fit in' with peers by acquiring non-essential fancy items in 'pursuit of modernity,' according to Leclerc-Madlala (2003). Transactional sex creates a strong cycle of control and economic dependence on the side of the young women, which they often find challenging to break from, further exposing them to high HIV risk (Fox et al. 2007). Furthermore, cross-generational sex was characterized by power imbalances typified by older 'sugar daddies' exploiting vulnerable young female 'sugar babies' based on their young age

and low economic status (Mampane, 2018). The young women's inferior position in sexual relationships undermines their negotiating power to insist on condom use, which has continued to elevate their risk to HIV infections as also reported by Bantebya et al. (2014).

At the individual level, despite the common belief and reports that awareness rates are high on how HIV can be transmitted and how to protect oneself from catching it, or treat it when infected, and it was only behavior change that lags in the general population, our findings suggest knowledge levels among young women are lower. In Uganda, studies of general levels of HIV knowledge among young people reveal mixed results. The results of a cross-sectional household survey among 10-24-year-old Ugandans by González et al. (2019) showed that more than 82% displayed sufficient knowledge on STIs, HIV and family planning, whereas Bago & Lompo (2019) reported that in a study on mass media and HIV awareness among 15-19-year-old Ugandans, less than half had adequate knowledge regarding HIV transmission. This finding highlights the need for targeted, clear and more accessible information on HIV awareness among young people in Uganda and other countries in similar situations.

At the policy level, our findings show that despite its benefits in the treatment of AIDS and in prevention, the introduction of ART in Uganda in 1997 and its subsequent rollout in 2004 has caused negative implications for HIV/AIDS prevention efforts. There was virtual unanimity on increasing complacency, a false sense of security against or more willingness to take the risk of contracting HIV through continued or increased risky sexual behavior among young women (and men). Early in the fight against HIV in Uganda, pictures of coffins and wasting AIDS patients were used as a deterrent in HIV-prevention campaigns to scare the masses into practicing safe sex and sexual abstinence. This approach registered commendable progress in curbing new HIV infection rates, earning Uganda international recognition as a model country for its success in fighting HIV. ART introduction and scaling up, with its many benefits in reducing morbidity and death of PLWH, nearly eliminating mother-to-child transfer, and also

serving as a preventive measure by reducing the ability of PLWH to transmit HIV to others, is perhaps the largest change and advancement in the three-decade fight against HIV/AIDS in Uganda, and SSA since the early 2000s (Ford et al., 2018; Moise et al., 2018; Thirumurthy et al., 2012). Thus, the finding that widespread free access to life saving ARVs has reduced the perceived threat of HIV as an incurable disease and resulted in laxity in embracing HIV prevention measures can help to explain the puzzling persistence or increase in risky sexual behavior and new HIV cases among the young women despite the progress. The Chairman of the Uganda AIDS Commission also acknowledged this risk in 2013 (Asimwe, 2013). This highlights the growing need for HIV-prevention efforts among young people to target personal HIV-risk perception. As long as young people underplay the severity of HIV/AIDS, they will continue to engage in risky sexual behaviors resulting in frustration of HIV prevention efforts and waste of public resources being injected into prevention and treatment.

Dynamics at the health institutional and HIV-service delivery level also emerged as important in shaping risky sexual behaviors. Our findings that youth unfriendly HIV services are a major obstacle to accessing HIV services, including counseling, HIV testing, condom access, ART initiation and ART adherence by young women affirm similar findings by Wong et al. (2017) and (Moise et al. (2017) for Burundi. Common youths' concerns over the unprofessional conduct of health personnel (harsh, rude, unethical, judgmental, limited confidentiality), the physical setting of the health facility settings which undermined privacy, the limited capacity of the facilities resulting in long lines and wait times kept youth away from safe-sex and health seeking behaviors. This is a call for youth friendly HIV services that include restructuring of HIV clinic facilities and timing to include safe, private spaces for young people especially young women where they can freely receive HIV services and talk about their experiences. There is also need to improve the interpersonal and ethical skills to make the health facilities more welcoming for

young people seeking essential HIV services to enable preventive safe sex behaviors as also cited by Alli et al. (2013), Moise et al. (2017), and Reed (2016).

Our findings revealed a complex relationship between education, economic vulnerability and risky sexual behavior among individual young women. In contrast to research aptly touting the benefits of girl child education and empowerment in the HIV fight, our study revealed that young women with college degrees were perceived to be at an increased risk of unsafe sexual behaviors, as were school dropouts. These findings illustrate the value of nuanced analysis at multiple scale (Figure 1) in understanding young women's vulnerability to inform targeted responses. Thus, while young women's empowerment through education (Eynon, 2017) and through improving their economic independence, negotiating power and communication in sexual relationships is key in the fight against HIV (Gerritzen, 2016; UNAIDS, 2015), economic empowerment and responsible/safe sexual behavior are not automatic outcomes of education.

High and growing unemployment among college graduates (and other young women) in Uganda exposed desperate job seekers to sexual exploitation by employers based on promises of jobs and job security, pointing to the need for broader based solutions including job creation, credit access and entrepreneurship training. Findings also suggest that higher education promoted a materialistic culture among young women that increases the peer-pressure based temptation to engage in transactional, and sometimes, unsafe sex to gain money to meet their materialistic desires (Hunter, 2002; Leclerc-Madlala, 2003; and Moore et al. 2007), although most other studies have focused on the poverty/transactional sex linkage. This requires differentiated solutions, including those targeting employment opportunities, engaging men, challenging male normative behaviors and positive support groups and role models. In addition, our study findings that high school dropout rates among adolescent girls made them more vulnerable to risky sexual behavior and HIV infection, still emphasize the need for interventions that promote girl child education as a corrective strategy. Indeed, Baker et al. (2010) found that

increased years of schooling reduced the likelihood of engaging in unprotected sex. These interventions should be complemented with the development and promotion of an entrepreneurship school curriculum that creates job-ready students and job makers rather than job seekers.

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CHAPTER 4

**'NEEDS' VERSUS 'WANTS': A QUALITATIVE RE-EXAMINATION OF THE CONNECTION
BETWEEN POVERTY AND OTHER ECONOMIC FACTORS TO HIV VULNERABILITY
AMONG MBARARA YOUNG WOMEN**

Abstract

African countries have made remarkable progress in combating HIV/AIDS. Yet the HIV/AIDS epidemic remains a major contributor to Sub-Saharan Africa (SSA's) infectious disease mortality and morbidity burden. Young women constitute a disproportionate share of new HIV infections in the hard-hit countries — eight times higher than among male counterparts. Poverty is a major underlying driver of HIV among women in SSA, and the women-poverty–transactional sex perspective dominates conceptualization of the link. Yet the manifestation of poverty and its intersectionality with HIV risk among young women is inadequately understood. This study examines the evolving contextual meanings of poverty and how they shape HIV-risk sexual behavior among 15-35-year-old young women in Uganda to advance Uganda's and the UNAIDS' goals to combat HIV. Our qualitative analysis draws on narratives from 32 focus group discussions with young women, young men, and community members in Mbarara district. Diverse factors, including the women's developmental stages, peer pressure, consumeristic desires, and transgenerational sexual relationships shaped the dynamic materialization of poverty and associated sexual behavioral risk environments that the young women experience. Findings both affirm and transcend orthodox poverty notions of desperate victims struggling to meet basic *needs* to include agency among relatively educated and at times wealthy young women engaged in risky sexual behavior to meet consumeristic desires or *wants*. Findings can enhance the micro-targeting of HIV interventions, including HIV-prevention messages and economic empowerment initiatives to overcome the high new HIV infections among young women.

4.1 Introduction

HIV/AIDS remains the biggest contributor to Africa's infectious disease and mortality burden in Sub-Saharan Africa, SSA. In 2018, more than two-thirds of the global estimated 37.9 million people living with HIV were in SSA (KFF, 2019). In hardest hit Eastern and Southern Africa regions, there were 800,000 new HIV infections and 380,000 AIDS-related deaths in 2017 (UNAIDS, 2018). Poverty exacerbates the already dire situation. In 2017, an estimated 9.2 percent of the world's 7.6 billion people lived on less than \$1.90/day. Of these, an estimated 433 million people lived in SSA (World Bank, 2020) where 87% of the world's poorest population is projected to be located by 2030 (Roser, 2019). That poverty is a major underlying driver of HIV/AIDS in SSA is indisputable (Whiteside, 2002; Gillespie, 2008). However, positing poverty as a singular, linear causal factor has been challenged as simplistic and inaccurate.

Observations show that wealthier individuals and countries in SSA tend to report higher HIV prevalence rates, there is wide variation of impact across countries and local contexts, and that the impact is relational as it often requires proportions of people who are wealthy and others who are poor to perpetuate sexual risk networks that spread HIV (Auerbach et al., 2011). Still, poverty, combined with gender inequalities, unequal power relations, unequal access to and control over productive-resources, and powerlessness in decision-making, continue to pressurize many women into exchange sex to meet basic needs, thereby increasing their risk to contracting HIV (Ghosh & Kalipeni, 2005; McFerson, 2010; Mojola, 2014). Among women, adolescent girls and young women are particularly vulnerable to exploitation by male sexual partners due to women's generally limited bargaining power (Austin et al., 2017). Such socioeconomic vulnerability perpetuates risky sexual behavior (Ghosh & Kalipeni, 2005; Gillespie, 2008) and the high numbers of new HIV infections among young women despite the considerable progress made in HIV prevention and treatment generically.

Uganda stands out in SSA as an early star performer in reducing HIV prevalence, morbidity and death. Yet new infections among young women remain persistently high compared to males of similar age. A 2004/2005 national HIV/AIDS survey revealed that young women aged 20-24 years had an HIV prevalence rate of 6.3% compared to 2.4% for male age mates, and those aged 25-29 had a prevalence of 8.7% compared to their male peers at 5.9% (Uganda-Ministry of Health, 2006). This disproportionate burden persists, and appears to worsen for new infections, effectively (though not officially) making young women an HIV “most-at-risk” sub-population, as HIV prevalence and new cases decline considerably in the general population and in other demographic groups. For example, in 2018, 14,000 of the 53,000 new HIV infections recorded (26.4%) were among young women aged 15-24 (UNAIDS-Uganda, 2018). HIV has been termed a “pandemic of the poor” based on its perceived linear relationship with poverty (Pellowski et al., 2013). Camlin et al., (2013), for instance, highlight the role played by economic and social vulnerability in driving migrant women into “sex-for-fish in Kenya,” a practice also well documented for fueling HIV infections among fishing communities in other SSA countries (Béné & Merten, 2008; Kwená *et al.*, 2012). Ghosh & Kalipeni (2005) articulate a “women-poverty-transactional sex - HIV risk” nexus using the case of Malawi as a dominant theoretical perspective in explaining women’s vulnerability to HIV infection.

However, the “women-poverty–transactional sex” concept has been critiqued by some scholars as being insufficient in explaining the different structural factors driving women into exchange sex, and for portraying them narrowly as “poor vulnerable women” and victims shorn of any agency, “forced” into sex as a desperate survival strategy (Leclerc-Madlala, 2003; Swidler & Watkins, 2007; Verheijen, 2011). In reality, transactional sex relationships are more complex than suggested by the “women-poverty-transactional sex” perspective and dynamic across contexts. Masvawure (2010) shows various ways in which women negotiate transactional

sexual relationships, sometimes juggling multiple sexual partners in ways that challenge assumptions of the traditional “women poverty-transactional sex” thesis.

Whether engagement in transactional sex is out of desperation for survival (orthodox) or a consumeristic strategy, scholars agree that the ensuing risky sexual behavior is characterized by multiple sexual relationships, inconsistent or no condom use, transgenerational sexual relationships, and power imbalances subjugating the women, and violence. Together, these behavioral outcomes create increased HIV vulnerabilities, particularly among young women in patriarchal African societies where women are generally subordinated to men (Ghosh & Kalipeni, 2005). However, determining whether or to what extent transactional sex is based on basic needs, hereinafter referred to as “*needs*,” or on consumeristic/materialistic desires, referred to here as “*wants*,” for different sociodemographic groups would enhance the micro-targeting needed to overcome the stagnation in progress on reducing new HIV infections among young women. In particular, enhancing understanding of what happens to the HIV-risk environment related to sexual behavior and to poverty as young women transition from adolescence to adulthood, from staying at home with parents to relative independence as they enter higher learning institutions, and as they transition from being students to seeking employment and being (self-) employed, will be important to enhance HIV-prevention strategies.

Using qualitative data from 32 focus group discussions (FGDs) of young women, young men and community members and local experts in southwestern Uganda, we analyze contemporary linkages between poverty or economic stress and HIV-related risky sexual behavior by examining differentiated risk environments that young women experience as they transition through developmental life stages in rural, semi-urban and urban settings of Mbarara district, southwestern Uganda. Findings can inform Uganda’s and other SSA countries’ efforts to meet the goal of ending HIV/AIDS by 2030, alongside attaining UN Sustainable Development Goals (SDG) of “No Poverty”, “Zero Hunger”, “Good Health”, and “Gender Equality.” The study

highlights the need to transcend the monolithic understanding of the transactional sex - HIV risk perspective into a nuanced and locally informed understanding of the forms, manifestations, experiences and meanings of poverty and how they shape sexual behavior risk environments in relation to HIV transmission among young women. The enhanced knowledge can help to address the persistent sources of HIV vulnerability through better targeted behavioral change interventions.

4.2 Research Methods

4.2.1 *Research setting*

The study was conducted in Mbarara District, the fastest urbanizing district in rural southwestern Uganda. Its population was 472,629 people in 2014 and growing at 5.1% per annum (UBOS, 2016). The district has a young population, with 75% aged 0-30 years. Mbarara has a high illiteracy rate of 72% among those aged 10 years and above. The district is predominately rural with rapidly growing trading towns. More than 69% of the population depends on subsistence agriculture as a source of livelihood, and only 27% depend on wage/salaried incomes. The semi-urban and urban areas are characterized by “active night life,” bars, and growing slums with shack-like structures. Rural-urban migration is high as people from the villages come to the trading towns and urban centers in search of employment and better living standards. Southwestern Uganda where Mbarara is located is a high HIV prevalence region. Some 7.9% of people ages 15-64 years are infected, higher than the national prevalence rate of 6.2% (Uganda-MoH, 2019).

4.2.2 *Sampling and recruitment*

This paper is a component of a larger cross-sectional study on socio-structural dimensions of persistently high-risk sexual behavior among female youth in Mbarara district. This qualitative component involved 32 focus group discussions (FGDs) with young women, young men and

community members and experts. Each FGD had 8-10 participants from sixteen sub-district parishes of Mbarara district selected using multi-stage, stratified random and systematic sampling. We first stratified by urban, semi-urban and rural settings to capture geographic differences in risky sexual behaviors and associated factors. We randomly selected eight of the 17 Mbarara sub-counties across Mbarara's three counties, distributed proportionally to population size: two sub-counties from the urban (Kakoba and Nyamitanga), two semi-urban (Kakiika and Nyakayojo), and four from the rural (Ndejja, Rubaya, Mwizi and Rubindi) strata. We conducted four FGDs in each selected sub-county (32 in total), one each for: 1) young women aged 15-24, 2) young adults aged 25-35, 3) young men aged 15-35, and 4) a mixed group of community leaders and members. We selected participants for each group type purposively with help from Local Council 1 (LC1) chairpersons. Each FGD had 6-8 participants. Recruitment targeted a diverse mix by age, education, income and social status, additionally ensuring wide representation in mixed groups by gender and community role – parents, elders, council/community leaders, teachers, and others.

The age division of the youth FGDs is meant to reflect main local relational and transitional stages among young women, and potential associated differential exposure to sexual behavior risk. In Uganda, 15-24-year-old young women are generally starting to gain some independence from their parents/guardians as they leave home for boarding schools, to search for employment, or for marriage. The unique pressures and experiences of the youth in these early transitional stages might make young women in the 15-24 age group uncomfortable to share their perspectives with the older young women (ages 25-35 years); hence, the need to separate the age groups. The inclusion of diverse participant categories in the FGDs provided an interactive platform to assess levels of consensus on diverse contextual factors, insights, themes and trends that shape the sexual behavioral risk environment that young women

experience daily and exposes them to the risk of HIV infection. We focus on socioeconomic pressures.

4.2.3 Data collection and analysis

Data were collected in Oct.2018-Sept. 2019 using a semi-structured FGD guide. The group discussions were facilitated by the first author and two trained research assistants with expertise in conducting qualitative research on HIV. We asked about individual, familial, community and other contextual dynamics that shape risky sexual behaviors individually or in relation to other factors at multiple scales, and probed perceptions on socioeconomic factors shaping vulnerability to HIV-related risky sexual behavior. We audio-recorded discussions, with participants' permission. The transcribed data were analysed using qualitative analysis software, ATLAS ti 8 (2006, GmbH, Berlin). We used an iterative process of open and axial coding and examined codes and themes that reflected emerging patterns and relationships among concepts (as in Miles et al., 2014; Cresswell, 2015). We iteratively added emergent and related codes to a codebook, arranged by theme, and interpreted them descriptively. We extracted narratives and quotes that illustrate the emerging codes relating to the nature, extent, context, and drivers of risky sexual behaviour among young women, and the role and manifestations of poverty and economic insecurity in shaping the risk environments.

4.3. Findings and Discussion

Experiences and narratives of young women and community members reveal diverse and shifting manifestations and underlying drivers of the nexus of poverty, economic insecurity and risky sexual behavior that shape vulnerability to HIV infection. Findings reveal more complex risk environments than can be explained by the orthodox women-poverty-transaction sex hypothesis. We present the findings by major emerging themes relating poverty or economic insecurity to risky sexual behavior. We contend that enhanced understanding of the diversity of

the risk environments and their pervasiveness across contexts and developmental stages of the young women can help to explain the persistence of risky sexual behavior and high rates of new HIV infections among young Mbarara women and reveal opportunities for addressing them.

4.3.1 Transgenerational sex and young women's "wants"

FGD participants commonly cited transgenerational sexual relationships between much younger women and older men (locally, "sugar daddies") as a major sexual risk practice that contributed to high HIV infection rates among young women. Although some studies also link transgenerational sex to increased risks of unwanted pregnancies and of contracting other sexually transmitted diseases (Adogu et al., 2014; Evans et al., 2016), the discussions reflected a practice and risk that were persistent or growing. Most views of young women and community members on transgenerational sex focused on the lower age groups (below 24 years of age), citing the pursuit of material gains as the main reason these younger women engaged in transgenerational sex, as also reported by Nkosana & Rosenthal (2007). Participants explained that younger women accepted sexual advances from older men because they believed that such men could give them money for their "*needs*" and "*wants*". Once in transgenerational sexual relationships, the "sugar daddies" exploited the young women promising them gifts that at times they did not deliver. Girls "*like to dress well, [have] nice food, a nice phone, and money in their pockets. The only person who can give her those things is an old man like me,*" opined a rural adult male. A young woman elaborates:

"From what we have been seeing, old men like our fathers, are having sex with young girls of about sixteen years... I think these old men from forty years onwards are the ones who are infecting young women because of deceiving them with some money... You find a girl is just a student in a secondary school with little or no pocket money...; she is studying with rich girls with everything they need and enough pocket money."
(Kakooba, urban, 25-35 age group)

An older man highlights the vulnerability of school-/college-going young women to transgenerational sex and elevated HIV risk, including potential intentional infecting of young women by older men:

“The youths are the ones that are most affected by HIV; youth at school and those at the university...If I have my property, a car, and at 60 years old, by the time I reach my home, I will have gotten a young girl. The girl will also accept [sex] because if they go to the boys, they will not get what they want. Why I say girls are the most affected is because just one HIV infected man can lure 50 girls and infect them, just because he has money and property. The more money and property he has, the more he will infect many girls with HIV.” (Rubindi, rural setting)

Yet HIV-prevention interventions are often mis-targeted in the sense that the older men (so-called sugar daddies) who constitute the other side of the coin and wield the power in inequitable trans-generational sex that puts young women at greater risk of engaging in risky sexual behavior and contracting HIV, are rarely targeted as such (Dana & Sisay, 2019; Matheson, 2017). The young women often bear the brunt of the blame as potential instigators, leaving the older men out. Even in the common scenario where the young women are portrayed as victims of older men’s abuse—as per the women-poverty-transactional sex perspective and as explained by the theory of gender and power), —under patriarchy, interventions rarely target the men. The theory of gender and power (Connell, 1987) posits societal structures and norms (cathexis) over sexual division of power assign men more power, which many men can and use to sexually exploit and abuse women. In particular, African cultural norms that dictate that young people “respect their elders” and women respect men exacerbate the sexual exploitation and sexually abuse of young by men. Yet interventions aimed at ending transgenerational sex that only target young women and not the “sugar daddies” and their diversity in age do not generate long term impacts, as shown in The Sugar Daddy intervention, a large-scale evidence-based research and intervention program funded by the Global Innovation Fund and implemented by two NGOs (Young 1ove and Evidence Action) in 2016 in Botswana to test an innovative peer

education approach to empower girls in secondary school and reduce their risk of HIV/AIDS infection and unintended pregnancies (Levy et al., 2018). Our findings highlight the need to close this HIV-prevention gap in existing policies, by devising strategies that target the older men in transactional transgenerational sexual relationships to reduce sexual exploitation, violence against women, and HIV-transmission risk, including targeted stronger laws and improved law enforcement protecting young women from underage sex. Men, especially the older men engaging in trans-generational sex while also including younger sugar daddies (Levy et al., 2018), should be targeted as part of the solution in order to get out of the trap of blaming women while letting men go without accountability.

4.3.2 Power differentials and young women's vulnerability

In another theme, FGD participants linked high sexual behavior HIV-risk among Mbarara young women to multi-dimensional power differentials favoring men within sexual relations and transactions. Mbarara and Ugandan society is generally deferential to older age, and women are deferential to men within predominantly patriarchal relations. Local narratives largely affirm and contextualize findings from other studies, such as Bantebya, et al., (2014), that young women in cross-generational sex often find themselves in positions of powerlessness to negotiate condom use.

In addition to these traditional age and gender disparities, men's advantage in financial resources further accentuated the power differentials. This allowed the men to dictate the terms in their sexual relationships with young women. While some research has also shown that the powerlessness of adolescent girls in transgenerational sex relationships to negotiate for safe sex puts them at increased risk of contracting HIV (e.g., Nkosana, & Rosenthal, 2007), the narratives of these young Ugandan women commonly specified older men in transgenerational or transactional sexual relationships and encounters as offering more money or gifts specifically to have sex without a condom. *"They know about condoms, but men sometimes give them*

[young women] conditions that he will give you only 2,000 shillings (less than \$1) to have sex with a condom and 40,000 (about \$11) without it,” observed an urban (Nyamitanga township) female youth. An urban (Kakooba) female discussant (25-35 age group) encapsulates the unique vulnerability of school-/college-going young women:

“So the old man who is [HIV] infected and is capable of giving her fifty thousand shillings [\$13] while she is going to school... when at home they are giving her just five thousand (\$1.50). She will be tempted to have sex with him, and because she is young, she will not be in a position to insist on using a condom. The man will give you the money and at the same time infect you with HIV.”

The combined impact of the power differential and intergenerational sex perspectives on sexual behavioral risk also demonstrates the importance of recognizing and treating these young women among key ‘most-at-risk’ populations in terms of HIV prevention efforts. According to UNAIDS, key populations include transgender people, prisoners, men who have sex with men, and sex workers and people who inject with drugs (UNAIDS, 2020). The categorization excludes young women. In Uganda, lack of clarity on who constitutes HIV most-at-risk populations or key populations has been blamed for the limited targeted support to such groups, and therefore in undermining the fight against HIV (Reliefweb, 2014). Adolescent girls and young women are also excluded from Uganda’s designated key populations or / high-risk groups, which include sex workers, truck drivers, men sleeping with men, and fisher folk (Baylor-Uganda, 2020). PEPFAR (2018) added motorcycle taxi operators, orphans and other vulnerable children, and expectant mothers to the at-risk group, but not young women. This categorization is material because sound HIV-prevention interventions should prioritize these at-risk groups. In this case the targeting neglects these young women (who are not sex workers) among whom risky behavior and new HIV infections remain high. Insufficiently targeted action will hold back attainment of national and international goals to eradicate HIV/AIDS.

Our findings indicate that the identification and classification of key at-risk populations is best done nationally and refined locally based on existing dynamics rather than being defined globally and then imposed on local situations. National and sub-national interventions then can use this information for fine-tuned targeting of these young women as a key population at risk to elevated new HIV infections in order to address such resistant pockets of new HIV infection to meet Uganda national and global 2030 HIV eradication and sustainable development goals generally. HIV-prevention interventions should be flexible to empower nested local level health workers to identify and prioritize new HIV infections to brunt continued spread of the pandemic. Such an approach would elevate the young women as a key population and allow appropriate re-allocation of human and financial resources to the group for HIV-prevention interventions. However, adding young women into at risk groups might have implications including who is at the table in addressing the sexual behavior risk, reallocation of resources for effectiveness compared to the current Uganda plan, and the need to balance an at-risk classification with the needs of young women. The findings also call for caution in adopting international definitions of who are key at-risk populations and the need to customize them to local conditions for them to contribute to effective HIV prevention among young women.

4.3.3 Peer pressure and “wants”

Peer pressure was another emergent major theme among the young women and community members as a driving force behind risky sexual behavior. FGD participants often linked this risk to transgenerational sex and mostly for adolescent or school and college going younger women. Discussions revealed that such young women, still living with parents/guardians and irrespective of their area of residence, often desired to “fit-in” with their peers by seeking to acquire luxurious items that their wealthier friends or those engaging in intergenerational sex, owned. Since many of their parents/guardians could not afford such ‘wants’ as designer clothes, shoes, and make-up, some resorted to having sex in exchange for money to acquire them. *“What usually causes*

that is peer pressure and groups, wanting to be like others,” asserted a male rural (Rubindi) adult about school/university level young women engaging in risky transgenerational sex.

Narratives from two women (15-24 age group) reflect this recurrent perspective:

“For a young woman ...in her class, everyone has a Gucci sweater, so when a man comes and says that he will give her 100,000 shillings in return for sex, she will accept because she wants to buy the same Gucci sweater. This is how old men infect young girls with HIV.” (Mwizi, rural setting)

“Maybe you have seen Sarah [not real name] with a nice dress, yet you don’t have money to buy it; so, you will look for a man to give you the money in return for sex so you can go ahead and buy the same dress...” (Ruti, urban setting)

This same perspective was shared by many young men, as the narrative below illustrates:

“The problem is that girls admire nice things. When a girl asks a friend how she got a nice hairstyle, she will say that she met a man in the market who gave her some money after sex, and she acquired the hairstyle. This girl will forget that her friend may have used a condom, and yet for her, she will not use it and she ends up contracting HIV.” (Male youth, Ndeija, rural setting)

This “wants” driven peer pressure motivating *“the desire to have nice things when actually you cannot afford them”* (urban young woman, Nyamitanga) tended to be more pronounced among urban than rural young women. Apart from fancy clothes, owning a smart mobile phone has come to epitomize the must-have ‘want’—chief among perceived quintessential trappings of a modern young woman in the era of social media. It has become both the source of peer pressure and currency for transgenerational and transactional sexual relationships. Young women in the 15-24 age group, which includes secondary school and college students, and job-seeking/newly employed young women, were perceived to be impressionable and vulnerable to such pressure. Discussants largely agreed that the result was likely catching HIV, sometimes with no guarantee of the anticipated material gain.

“You see your friends dressed up smartly, they own smart phones, and you ask yourself why you are suffering. The moment you go there, you do not know the HIV status of the person you have gone with. You may not even get the smart phone you wanted, the nice clothes, but you end up being infected with HIV.” (Female, 15-24 age group, Nyamitanga, urban setting)

Peer pressure or influence has been shown in other studies to play a significant role in shaping HIV risk-taking behavior among adolescents. However, little work has been done to examine the intersection of peer pressure and poverty, specifically, as a driver. To be sure, some studies highlight the desire to “fit-in” and to be socially accepted by peers, seeking popularity or status, and conforming to perceived sexual relationship norms, as vulnerability points for young people to engage in risky sexual behaviors (Suleiman & Deardorff, 2015). Singh and Saini (2007) link peer influence among adolescents to increased likelihood of engaging in drug abuse and unprotected multiple sexual relations, exposing them to HIV infections. Some report peer pressure to disregard HIV-prevention messages, including the ABC’s (**A**bstain, **B**e faithful, **C**ondomize) strategy and delaying sexual debut among 13-14-year olds in South Africa (Selikow et al., 2009). However, findings in Mbarara linking peer pressure for material desires (wants and some needs) to risky sexual behavior contribute to answering Suleiman and Deardorff’s (2015: 765) call for the need for future research to “explore multiple types of peer influence in order to better inform interventions” that shape adolescents’ sexual behavior positively. Thus, HIV prevention messages for adolescent girls should put more focused on fostering peer networks within and outside schools to effect positive sexual behavior change, as Mpofu (2012) and Suleiman & Deardorff (2015) also recommend. More targeted approaches are needed for young women in higher learning institutions where strong peer-pressure for ‘wants’ is strong.

4.3.4 Concurrent multiple sexual partnerships and “wants”

Engaging in sexual relations with multiple concurrent partners is a well-known high-risk sexual behavior for HIV transmission in SSA (e.g., Mah & Halperin, 2010; Steffenson et al., 2011).

However, contrary to the dominant “women poverty-transactional sex” rationalization for such behavior, discussions in Mbarara district showed that even young women from relatively wealthy families engaged in this behavior for consumeristic material gain. Some female secondary school and university students from wealthy families engaged in concurrent multiple sexual relationships for reasons including money and other material gains, companionship, and love. There was a shared perception that such behavior had not declined, or that it was even on the rise. This was despite the relatively high level of awareness of HIV dangers and prevention measures, and the progress achieved in prevention among other population groups, treatment, and in the reduction of deaths. Young women also specified facing special pressures to engage in unprotected sex. A young woman’s (15-24 age group) narrative aptly encapsulates this multiple sexual partner/material ‘wants’ intersectionality in relation to sexual risk behavior among young women from relatively wealthy families, and illustrates the limitations of the poverty-transactional sex thesis:

“Girls of these days, we love money so much. You find a university girl; she is from a rich family. Her parents give her money, but she finds that it is not enough. She wants money from different men. She has a man for her hair, a man for rent, and a man for clothes. She will go with the first man when she does not know his status, the second man, the same.” [Kakooba, urban setting]

This observed theme of transaction sex for wants is affirmed elsewhere. Although not specifically addressing HIV risk, Masvawure (2010) found university female students in Zimbabwe to have multiple sexual relationships to meet different needs, for instance, a young boyfriend for true love and one or more “sugar daddies” to provide money and “flashy” *materialistic* items. Reaching this category of young women with effective HIV-prevention interventions might require different approaches from those designed to reach poor ones seeking basic survival. Findings suggest the need for fostering positive support groups.

4.3.5 Education and HIV awareness versus risky sexual behavior

While scholars and policy makers have highlighted higher education attainment as important in reducing HIV vulnerability (Painter et al., 2012; De Neve et al., 2015), our findings suggest that higher education alone might not be sufficient. As shown earlier, some young women engaged in multiple concurrent sexual relationships while at university, and for some, even after completing university education. Many FGD participants singled youth unemployment even among university graduates as a growing problem that leads some young women to give in to pressures for transactional sex, particularly from potential employer demands for sex in exchange for jobs. This narrative by a 25-35-year-old rural woman from Bisya exemplifies this perspective:

“For sure poverty has contributed a lot. For example, you have finished your university degree. Then you go and search for a job, but you cannot find it. You go to a school [seeking a teaching job] and the headmaster says that you must first open your legs. Because you don’t have a job and you have been searching for one for long, you accept and open up.”

The FGDs aptly capture national recognition that youth unemployment is a major and growing challenge in Uganda, and that it has diminished the value of attaining higher education qualifications. A weak economic base and a jobs/skills mismatch exacerbate the problem (Wabalayi, 2019). Survey findings in the study site (Namanya et al., in review) affirm this perception. They showed that the risk of having sex without a condom decreased with education until high school completion, then increased after attaining university education. Being in school (ages of 15-18) appeared to provide girls relative shelter from having unprotected sex.

Conversations revealed that awareness of causes of HIV and prevention methods, including condom use, was generally high. However, participants indicated that the many factors discussed above made many young women still take the risk of engaging in unprotected sex for more money to meet basic needs or wants.

4.3.6 Mobility, isolation, and vulnerability

Another common theme linked risky sexual behavior to young women's mobility, especially migration into towns and cities, and consequent social isolation. In Uganda, as rural adolescent girls drop out of or complete primary or secondary school and transition into young adults, many move to urban(izing) areas in search of employment. A small proportion transitions to higher institutions of learning. Discussions highlighted this social-cum-spatial transition as providing (relative) independence to the young women that separates them from the strict or "protective eye" of parents and guardians or of schools/teachers (as also in Jukes et al., 2008) over their behavior and from the socioeconomic provisioning of parents/guardians and broader social support networks. The combined social, geographic and economic isolation makes such young women particularly vulnerable to risky sexual behavior in the form of transactional sex.

Struggling for employment and with no means to meet their basic needs in the towns, some young women endure sexual exploitation by male employers in exchange for jobs and job security. Others take on jobs such as bartending and itinerant trades, which also come with risks of risky sexual behavior (see below). A 26-year-old woman's experience captures the vulnerability to sexual exploitation by potential male employers.

"When there is no job, there is no money and where there is no money, you have to look for it. [Sometimes] you have to get money from your boss. When you get there, he will give you money, but he will dictate the terms. That has happened a lot. He will demand to have sex with you and if you refuse, he will kick you out of the job. It's like you are bribing him by giving him sex, but in the process, you're contracting HIV." (Rwamuhigi, rural setting)

Our findings are similar to Schuyler et al.'s (2017) recent study in Rakai, Uganda, which showed young women's mobility to increase chances of engaging in risky sexual behavior and the risk of contracting HIV. Young women sometimes feel trapped when they move from their villages to towns and cannot afford to go back home are embarrassed to go back with nothing; and so,

they take whatever comes their way. A 15-24-year-old rural (Mwizi) participant narrates the entrapment angle of mobility and sexual behavior risk for a bartender: *“She does not like the job but [stays] because she has no choice, she has no money [for transport] to go back home.”* She is stuck and vulnerable.

4.3.7 “She doesn’t like the job, but she has no choice”

Under this theme, FGD participants linked risky sexual behavior among young women, especially those under 25 years in age, to poor job quality, underemployment and job insecurity. This was particularly so for trading towns and urban centers where accounts of young female adults struggling to get well-paying jobs were common. Some young women indicated that even when they had jobs, the jobs did not provide sufficient money to meet their basic needs for food, shelter and other requirements. It was a common perception that many young women in such insecure jobs are pressurized into transactional sex to supplement their meagre incomes, thereby exposing themselves to higher HIV risk. Insecure jobs and underemployment included part-time or temporary employment, self-employment in trades with uncertain income streams, domestic work (e.g., being a housemaid), and other unskilled work. Most participants considered bartending a particularly insecure and risky job in terms of pressure for transaction sex and catching HIV. Respondents characterized the job as being very low paying, having no benefits or job security or protections from employers, working in unsafe and abusive conditions around inebriated men, and where transactional sex is nearly an expected way to make up for the poor pay. A rural young woman illustrates the vulnerability:

“Remember barmaids are paid little money and at times they are paid late. She also has needs to meet, including rent, food, transport and even looking nice. The job is not nice, but she will still work. In the process, a rich old man comes by who will offer to buy her food, give her some money. Once the man asks for sex, the girl has no choice but to accept because she worries that the man will stop providing for her. In the process, she will get infected with HIV.” (15-24-year-old woman, Mwizi, rural setting)

Further, young women in bartending face sexual exploitation, abuse and violence both from male employers and from transactional sex clients. They are pressured into transaction sex to earn more money from clients or forced into unprotected sex via sexual abuse and sometimes assaults from both their employers or minders and clients. A rural young woman from Bisya articulates this compounded risk:

“So, you decide to go and work in a bar. In the bar, the boss will not give you a job without first having sex with you. Now that man who first wants to have sex with young girls, is he safe without HIV? Next, you must find your way around. In the bar, they only provide lunch; you must fend for yourself when it comes to supper. So, when you get someone to buy for you katogo [food] for 1,000 shilling [\$0.26] and a piece of meat, and perhaps a soda, will you refuse to have sex with him? So another man comes, he wants to have sex for 10,000 shillings [\$3], and also rent a room, you will accept [having sex]; so, you think you will escape HIV?”

4.3.8 Desperation to meet basic needs

The theme of financial desperation and risky transactional sexual behavior was expressed most strongly by young women who have children, especially single mothers. They indicated that the desire for money to meet basic needs including food, shelter (rent), and children’s school fees and others to provide for their children forced them to take desperate measures, including engaging in risky transactional sex. The desperation is so dire that that some women admitted to being willing to have transactional sex with an HIV-infected man to meet such immediate needs, as the following quotes illustrate:

“...you are a mother. Your children are at home. They don’t have food and they are crying. The landlord wants rent and you don’t have it. That means you will have sex with any man so that you get money.” (Female, urban, 25-35 age group)

“So, if I see an [HIV] infected person looking good, I will not fear. If a man offers me 200,000 shillings [about \$52], yet I don’t have school fees, I will just give in and give that man sex so that I get money to pay school fees for my child.” (Female, rural, 25-35 age group)

The problem of poverty-related transactional sex was not limited to single women or female household heads. There was near consensus that men’s neglect of their responsibilities as main family providers facilitated married women’s involvement in transactional sex outside marriage.

The following woman’s narrative is illustrative:

“I do not work [formally]; I just stay at home... sometimes my husband leaves me with five thousand [shillings, ~\$1.50], and at times ten thousand [\$3]. This money is not enough, after giving you instructions not to use his money towards rent. You must look for other means because you also have your needs as a person. If you get another man who is willing to give you money for your needs, you will accept that money. You think there is free money? No; you have to give him some sex so that he can always support you with what your husband does not give you.” (Female, urban, 25-35 age group,)

Unpacking the day-to-day experiences of young women from their own narratives enhances understanding of the complex HIV risk environments and how these shape their sexual behavior. Our findings affirm the essence of the women-poverty–transactional sex perspective as an important economic explanation for risky sexual behavior among young women.

Anecdotes of economically destitute young women worrying more about meeting immediate needs than the risk of contracting HIV illustrates this primal link. However, while the findings affirm that many young women who are desperate, powerless, exploited and poor are pressured into transactional sex and exposed to elevated HIV risk, they also demonstrate that the orthodox HIV-women-poverty model is insufficient to adequately explain prevalent sexual risk environments.

The women’s narratives reveal that driving factors for such risky sexual behavior are more complex and need a nuanced understanding at the intersection of diverse factors including

economic, sociostructural, and young women's developmental or transitional stages. We contend that distinguishing young women's economic motivations for engaging in risky transactional sex into "*needs*"—aligned with meeting immediate basic needs reflected in the women-poverty–transactional sex perspective—and "*wants*", acknowledging the reality of a significant share of young women's agency and materialistic motivations, will advance a fuller understanding of the socioeconomic drivers of unsafe transactional sex and the risk environments that young women navigate in relation to HIV/AIDs. Further, tracing shifts in the sexual behavior risk environments over space and time, and across different sociodemographic sub-groups, including their age groups and developmental stages (as opposed to treating female youths as a monolithic category), can help to advance research beyond the orthodox "women-poverty–transactional sex" model. The knowledge generated can enhance micro-targeting and differentiated, context-and group-appropriate HIV-prevention strategies and policies that are needed to overcome the persistently high rates of new HIV infections among young women for Uganda.

Our findings point to the need to strengthen and target more smartly by sociodemographic sub-groups of young women and by context (factors that shape the sexual behavior risk environments). HIV-prevention methods aimed at enhancing young women's economic empowerment are key. Economic empowerment reduces financial dependence on men and enhances young women's agency, especially control over their sexual lives (as in Kim et al., 2008; Fleischman, & Peck, 2015) — For the young women driven into risky sexual behavior by peer pressure and *wants*, findings suggest that fostering positive support groups and cultivating and using role models would be an important additional component of prevention strategy. Further, there is need for empirical research to examine impacts of the availability of ARVs on the efficacy of HIV-prevention measures broadly, and on the incidence (of new HIV cases in particular. Initial qualitative analysis suggests that the widespread availability of free ARVs has

created complacency and a false sense of security against the dangers of HIV and facilitated engagement in risky sexual behavior including transactional sex with multiple sexual partners among poor, economically stressed and wealthier materialistic-minded young women in Mbarara district. As Moise et al., (2018) note, there is need to balance targeted messages on the need for ARVs for treatment and prevention to keep the uninfected majority from contracting HIV until effective vaccine/s and cures are available, if Uganda's goals, those of other SSA countries, and international UN SDGs objectives to fight HIV and eradicate poverty by 2030 are to be met.

4.4 Conclusion

We used qualitative analysis and the lived experiences and narratives of young women, young men, community members and local leaders and experts to enhance understanding of how poverty and economic insecurity shape sexual behavior risk socioscapes in relation to HIV transmission among young women in rural southwestern Uganda. Findings reveal that the women-poverty-transactional sex model's essentialist focus on poverty and desperate poor women who are posited to have little, or no agency is inadequate. It misses emerging economic pressures beyond poverty and women's agency that influence risk behavior, specifically young women strategically using men/sex to meet their *materialistic wants*, or to attain and maintain a desired social status or living standard. Acknowledging that the concept of *needs* and *wants* are relative and there is no absolute threshold in monetary terms separating the two, findings support our core contention that a nuanced analysis of poverty and its locally contingent manifestations, including both the *needs* and *wants* of young women as economic drivers of risky sexual behavior, is needed to micro-target differentiated interventions to overcome the stagnant (sometimes reversed) progress in reducing high-risk sexual behavior and new HIV infections among young women in rural Mbarara. This will have broader applicability for the rest of Uganda and SSA countries in similar settings. Targeted interventions should include

reinvigorated implementation of the *ABC* strategy and going beyond to include economic empowerment initiatives, fostering peer networks within and outside schools and colleges to effect positive sexual behavior change. HIV-prevention messages should balance the value of ARVs for treatment without compromising the greater value of HIV prevention and reduced rates of new infections as Uganda and other SSA countries seek to meet national and UN HIV goals to eradicate HIV/AIDS by 2030.

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CHAPTER 5

CONCLUSION AND IMPLICATIONS

5.1 Overview

This chapter gives a summary of the key research findings on the underlying factors facilitating risky sexual behavior associated with high HIV infections among young women in southwestern Uganda and implications for scholarship and policy locally in Uganda and other SSA countries in similar settings. The results and implications are organized under the three objectives, which are: 1) evaluate individual-level factors associated with sexual risk-taking behavior, specifically having unprotected sex, among young women ages 15-35 years, 2) describe contextual and broader structural factors that make young women vulnerable to HIV-related risky sexual behaviors, and assess how these contextual factors interact with individual-level factors in ways that perpetuate high levels of HIV infection, and 3) examine the connection between poverty and other economic factors to risky sexual behavior and vulnerability in the context of high HIV transmission among young women.

This research dissertation examined why young women (15-35 years of age) continue to engage in risky sexual behavior amidst elevated levels of HIV risk. This epitomizes the situation of young women in Sub-Saharan African countries who are disproportionately affected in recent HIV transmission (Kharsany & Karim, 2016). In 2019, in SSA, young women aged 15-24 years accounted for 24% of all new HIV infections, with 4500 cases weekly (UNAIDS, 2020). In Uganda, an estimated 570 young women (15-24 years of age) contract HIV every week (Vithalani & Herreros-Villanueva, 2018). In addition, young women (aged 15-24 years), especially the unmarried, continue to lag behind in terms of delivery and access to HIV services (testing, counseling, ART initiation and poor adherence) and sexual reproductive health services.

In this research, we used Mbarara, a rural but now rapidly urbanizing district in southwestern Uganda where HIV prevalence is high (Jain et al., 2014) in order to examine the factors that shape sexual risk-taking behavior associated with high levels of new HIV infections among

young women. We use a holistic, modified and locally situated Social Ecological Model for Young Women's Vulnerability to HIV Infection to examine the multi-level factors that drive the risky sexual behavior among young women to help explain the persistently high or increasing numbers of new HIV cases in three settings of Mbarara District: rural, urban, and semi-urban. We use mixed research methods under a multi-scalar, multi-stage, cross-sectional sampling technique to determine and understand the sociocultural, economic, structural and environmental context and factors driving risky sexual behaviors and, by proxy, high HIV infections among the young women. We collected data via a household survey (N=649), in-depth interviews with young women (n=32), key informant interviews (KIIs) of village and local official health workers, peer educators, social workers and counsellors (n=15), and focus group discussions (FGDs) (n=32 groups with a total of 220 participants) in 16 parishes of Mbarara district. Four FGDs were conducted in each selected sub-county, one with young women (age 15-24 and another with the 25-35 age group, one FGD with young men in similar age groups (age 15-35) and one with a mixed group of community members, including local leaders, parents, teachers and elders.

To address research objective 1, we analyzed the social survey data quantitatively using the Chi-square test for categorical variables, T-test for continuous variables, and negative binomial regression on count data—the number of times the young women had sex without a condom in the previous six months as the dependent variable (Chapter 2).

We used qualitative analysis on data from both FGDs and KIIs to address objective 2 (Chapter 3), and the FGD data to answer questions under Objective 3 (Chapter 4). The summary of key findings and implications for research and policy are presented below, organized by objective.

5.2 Summary of Findings and Implications

Objective 1: *Evaluate individual-level factors associated with sexual risk-taking behavior, specifically having unprotected sex, among young women ages 15-35 years.*

Despite high levels of self-reported awareness about HIV and improvements in scaling-up of antiretroviral therapy in the country, nearly half (48%) of Ugandan young women continue to engage in unprotected sex. Our study results reveal that the risk of engaging in unprotected sex increased with age. Unprotected sex was reported by 51.4% of young women 19-21 years of age. Those aged 22-24 years exhibited the highest risk, with 72.7% reporting engagement in unprotected sex. These findings underscore the importance of nuanced understanding of the shifting behavioral risk environments as young women transition through the various life-cycle stages in the local context to guide interventions that are better targeted, in this case with a focus on the 22-24 and the 19-21 year age groups.

In addition, both residential location type and mobility were interconnected key predictors of engagement in risky sexual behavior. Young women living in urban and semi-urban settings were more vulnerable to risky sexual behavior compared to those living in rural ones. Those urban young women who had migrated from rural areas (compared to urban-born ones) were particularly vulnerable after they left their families and social support networks behind in rural areas and moved to semi-urban (trading) and urban areas in search of jobs and better living conditions.

In contrast to previous research, the results of our study reveal that education (including higher education) *per se* did not necessarily offer protection against engagement in risky sexual behavior. In fact, college students were at an increased risk of risky sexual behavior than those with secondary education attainment. This calls for a reexamination of the link between high

education and HIV risk among young women. These results underscore the need to emphasize incorporation of an entrepreneurial education package in curricula at all educational levels.

From our study, young women who provided casual labor or were self-employed were more likely to engage in unprotected sex compared to those with full-time or part-time employment, or even the unemployed. This finding highlights the importance of considering employment security or stability (including underemployment) beyond simply being employed. The orthodox binary employed/unemployed categorization does not fully explain the complex daily risk environments that young women go through to make a living. Findings suggest the need for poverty eradication interventions to offer extension support including access to regulated credit and government protection, especially for those in the informal sector.

These findings contribute towards enhancing our understanding of the nature and intensity of the factors associated with sexual risk-taking behavior and how these change as young women transition through developmental stages. Transition from adolescence to adulthood, and from staying with parents/guardians to leaving home in search of employment, and from leaving home to go boarding to school far away from the guidance, provisioning and protecting eye of their parents; all reveal different risk environments for young women that need targeted preventive strategies. Behavior change interventions targeting young women have often treated them as a homogeneous group.

Objective 2: *Describe contextual and broader structural factors that make young women vulnerable to HIV-related risky sexual behaviors and assess how these contextual factors interact with individual-level factors in ways that perpetuate high levels of HIV infection.*

To address objective 2, we used the adapted Social Ecological Model for Young Women's Vulnerability to HIV Infection (SEMYWV) as a holistic approach to examine the multi-level factors that underlie continued engagement in risky sexual behavior by young women amidst

elevated HIV risk. Although the widespread distribution and availability of antiretroviral drugs has significantly reduced AIDS-related morbidity and death (Mikkelsen et al. 2017), our findings from focus group discussions and key informant interviews reveal a growing downside that the ARV availability has caused complacency especially among young people who no longer perceive contracting HIV as the automatic “death sentence” that it once was. ARVs have had the effect of watering down the severity of HIV/AIDS as a serious disease, resulting in laxity in adopting and embracing HIV-prevention behaviors, including safe sex and abstinence. HIV treatment campaigns that overshadow HIV prevention seem to give young people a false invincibility.

Similar to previous research (Wong et al. 2017), services that are unfriendly to youth continue to be a key factor hindering young people from accessing HIV services. Reports of rude and unethical behavior among health workers, long waiting times, lack of privacy and safe spaces for the youth were commonly cited obstacles. This common research finding calls for the need to restructure health facilities to meet the needs of young people. Interventions include providing safe spaces, reduction of waiting times, training sessions for health staff to equip them with skills and knowledge on how to effectively provide HIV related services to young people.

The study findings also reveal that the inability to meet basic needs, including food and shelter (rent) drove many young women into desperate situations and forced them into unconventional ways of securing a living and related needs, including transactional sex, unprotected sex, cross-generational sex and having multiple sexual partners. Scarce employment opportunities (unemployment) or being forced to accept insecure low paying jobs (underemployment), were commonly cited causes. Much of this needs-based risky sexual behavior was among young women who were not sex workers, contrary to the tendency in the literature to reduce the response of women in such economic distress to sex work.

There was near consensus that a significant and growing share of young women, especially those 24 years of age and younger, engaged in exchange sex for materialistic gains, *wants* which was mostly driven by peer pressure and the desire to fit in with peers.

Despite Uganda's exemplary role in the fight against HIV, including antiretroviral treatment rollout, reduction in HIV-related morbidity and mortality, and increased HIV knowledge in the general population (Green et al., 2006; Slutkin et al., 2006), our study findings show that there is insufficient HIV knowledge among young women ages 15-25 years. Misconceptions about condom use, including claims that it causes cancer were reported among young women. The situation was aggravated by social and cultural norms that promote the notion that men are superior and know everything, which made women leave decision-making even on sexual relationships and encounters to men. Discussion around sex among the unmarried young women is still seen as taboo in the local community, which continues to deny them knowledge on safe sex from parents, guardians, elders and teachers. Old men took advantage of the young women's low HIV knowledge and inferior societal positions relative to men, based on their young age and deference given to men in this patriarchal society, to coerce them into unsafe sexual encounters exposing them to HIV infection.

These study findings make three key contributions to literature and policy. First, we advance knowledge on HIV-related risk-taking behavior by proposing a modified social ecological model for young women's vulnerability (SEMYWV) to HIV infection, a theoretical framework that is suited to the local context and guides examination of factors underlying new HIV infections among young women. The SEMYWV to HIV can be used in different contexts in Uganda and in other SSA countries. Second, using the SEMYWV, we contribute to literature on HIV risk by looking at sexual behavior, HIV prevention and public health by shedding light on the various factors operating at multiple levels and how they interact within and across levels, creating HIV vulnerabilities for young women in Mbarara district and other places with similar settings. Third,

the study findings contribute much needed evidence to guide interventions and policy to meet the targets set under the “The Presidential Fast-track Initiative on Ending HIV & AIDS in Uganda by 2030” and the UNAIDS’ fast track strategy to end AIDS by 2030.

Objective 3: *Re-examine the connection between poverty and other economic factors to risky sexual behavior and vulnerability in the context of high HIV transmission among young women.*

Contrary to the traditional women-poverty–transactional sex perspective that reduces the socioeconomic drivers of risky sexual behavior and of HIV infection to economic desperation and the ensuing overriding motivation to meet immediate *needs*, our findings show that there is an additional major economic driver among such young women – the materialistic desire to meet *wants*, including relative luxuries.

Transactional sex for “wants”. Adolescent girls and young women 15-24 years of age, including those with higher education attainment and from relatively wealthy families, mostly engaged in transactional sex out of the desire to acquire luxurious items such as designer clothes, shoes, cosmetics, and smart phones they had seen some of their peers possess. Such young women were often drawn into having sex with older men or sugar daddies who they perceived to have more money to address their numerous desires and wants. Cross-generational sexual relationships were often characterized by unequal power relations and exploitation, which limited the negotiating power of the young women in sexual encounters or relationships, leading to unprotected sex and exposure to elevated HIV risk. Some of these men preferred to have sex without a condom, and pressured young women or lured them by offering more money to have unprotected sex. Under this dimension of transactional sex, some young women were not fully passive ‘victims’ as portrayed by the traditional women-poverty-transactional sex perspective. They were active participants who assert themselves and often actively take advantage of old rich men (including having several such relationship) to meet their numerous *needs*.

Transactional sex for “needs”. Economic hardship forced many young women from poor families, single mothers, and those with absentee spouses into having transactional sex, including unprotected sex and other forms of risky sexual behavior for survival. These young women were particularly vulnerable after they left their families and social support networks in rural areas and moved to semi-urban (trading) and urban areas in search of jobs and better living conditions. Women in such economic situations were more vulnerable to men’s sexual exploitation, were more dependent on men, and had limited power to negotiate safe sex. Beyond the traditional ‘women-poverty-transactional sex’ argument, young women often found themselves in positions where they had to navigate joblessness which made them vulnerable to sexual exploitation by employers who were in most cases older married men.

These findings emphasize the danger of limiting transactional sex to descriptions of poor desperate women looking for survival while excluding young women’s agency and interconnected economic pressures that shape risky sexual behavior. We argue that there is need for a refined examination of poverty and its various manifestations in the local context in order to guide micro-targeted interventions to reduce high-risk sexual behavior and associated new HIV infections among young women in Uganda and SSA. Additional research investigating transactional sex for “wants” would help to illuminate not only the complex nature of the poverty/HIV risk relationship, but also in unpacking the extent to which the young women’s agency as active agents in risky sexual behavior in such transactional sexual relationships goes in shaping the behavioral risk environment to HIV infection.

5.3 Intellectual Merit & Broader Impacts

The study provides timely qualitative evidence on the sociostructural determinants of HIV risk among young women to guide the development of evidence-based policies and interventions—a call by scholars including Dellar, Dlamini, and Karim (2015); King (2017), advances theoretical

knowledge and innovation in health geography, social epidemiology, public health, interdisciplinary health studies, and related fields, contributes methodologically by integrating quantitative and qualitative methods to advance a holistic understanding of multi-level factors driving increased HIV risk, provides a holistic understanding of the nature, context, extent and geographic variation in the drivers of risky sexual behavior, and contributes to scholarly work to advance HIV/AIDS research and practice.

5.4 Study Limitations and Future Research

Our study had some limitations. First, discussions around sex, especially for unmarried young women, are still considered taboo in local Ugandan culture, as in most societies in SSA. In addition, HIV is a sensitive topic, and discussing it in relation to risky sexual behavior is particularly challenging since young people might not feel free to openly share their experiences of risky sexual behavior for fear of disclosure to their parents and the community. To minimize bias and collect accurate accounts, our study hired research assistants with experience in working in the local community, understanding the local dynamics, and speaking the local language. Interviews with the young women were arranged in private isolated locations and focus groups were among peers as close in age as possible. Thus, ultimately, there were no known or reported problems from and with the research subjects, including being unable to speak candidly on the issues under study. In addition, all research assistants were trained on study protocol, questionnaire and interview guides, and had up-to-date collaborative Institutional Training Initiative (CITI) completion certificates on file. Further, the results are based on perceptions, not direct observations. While perceptions have limitations of relative subjectivity, they constitute the main information collected in most survey and interview-based studies, and still offer important insights to understanding the challenge of continued high rates of risky sexual behavior and new high level of HIV infection. They are particularly an important source of information to address the broader social and structural factors that explain risky

sexual behavior. The key informant interviews might not be fully representatives of the views of young women in the two age categories, and young men and local community members and leaders. However, the relatively large number of focus groups (32) and the stratified sampling for the selection of numbers and locations of focus groups helps to enhance geographic and random representation of KII participants. The number of types of issues identified from the KII reached saturation, suggesting that adding more groups might not have added significant new information. In addition, the power analysis for the study was affected as the calculation was based on the full sample (N=649) while analysis was based on a sub sample of 368 sexually active single young women and married women who had engaged in sex with more than one partner. Although the total sample size remained relatively large for the quantitative analyses done and the number of variables relatively small, thus mitigating any adverse implications on the representativeness of the sample and reliability of findings, caution should be taken to avoid generalizing the findings, and particularly to the entire country.

Second, the study results raise an important question, which we do not adequately address in this dissertation: which risk factors are important at each sub-age group? The results reveal that as young women go through the developmental stages, their risk-taking behavior changes and they are exposed to new vulnerabilities and risk socioscapes in relation to risky sexual behavior and eventually contracting HIV. An interesting direction for future research could be aimed at improving understanding of differential risk exposure based on examination of the different risk environments and the key factors that shape them and influence sexual risk-taking behavior among women at different developmental stages. This would allow a mapping of behavioral risk socioscapes, using empirical analysis, as the young women transition from adolescence to adulthood; knowledge that is useful to guide targeted interventions, Third, further research could focus on unpacking the extent of young women's agency in shaping risky sexual behavior.

Lastly, it would be interesting to conduct multi-site and multi-country studies for comparative analysis.

APPENDICES

Appendix A

Survey Questionnaire

Increased HIV incidence among Young Women in Uganda

Survey Flow

Standard: Block 6 (1 Question)
Standard: Survey Identification Information (1 Question)
Standard: Introductory Statement (1 Question)
Block: Demographic Survey (34 Questions)
Standard: Sexual Risk Survey (38 Questions)
Standard: Alcohol and Substance Use (12 Questions)
Standard: HIV/AIDS Knowledge, Attitudes and Perceptions (25 Questions)
Standard: Section 5: Sexuality-related Attitudes (20 Questions)
Standard: Section 6: Stigma and Discrimination (5 Questions)

Page Break

Risk Sexual Behavior Questionnaire for Young Women in Uganda

End of Block: Block 6

Start of Block: Survey Identification Information

Survey Identification Information

End of Block: Survey Identification Information

Start of Block: Introductory Statement

Introductory Statement:

Hello, my name is _____ thank you for accepting to participate in our survey. These are questions for a PhD research project at Michigan State University that we are conducting to better understand the determinants for risk taking sexual behavior among young women in Mbarara district. This survey has four sections including Demographic Information, Sexual Risk Survey, Alcohol and Substance Use survey, stigma and HIV Knowledge, Perceptions and Attitudes survey. This survey should take approximately 60-120 minutes to complete. Your responses to this survey are anonymous and cannot be identified to you in any way. You may skip any question that you are not comfortable answering but it will help us if you responded to as many questions as possible.

Thank you, we really appreciate you participation.

End of Block: Introductory Statement

Start of Block: Demographic Survey

Section 1: Demographic Survey

Interviewer: This part of the survey collects respondent demographic information. Please be sure to collect information to all the questions.

Q1 Age (years)

Q2 What month and year were you born?

	Month	Year
Select month and year of birth (1)	▼January (1 ... December (12)	▼1980 (1 ... 2004 (25)

Q3 Religion

☐ Roman Catholic (1)

☐ Protestant (2)

☐ Pentecostal (3)

☐ Muslim (4)

☐ None (5)

☐ Other (please specify): (6) _____

Q4 In the past 12 months, how often do you usually attend religious services?

- ☐ Every day (1)
- ☐ At least once a week (2)
- ☐ At least once a month (3)
- ☐ At least once a year (4)
- ☐ Never (5)

Q5 How important is religion in your life?

- ☐ Extremely important (1)
- ☐ Important (2)
- ☐ Undecided (3)
- ☐ Moderately important (4)
- ☐ Not important (5)

Q6 Ethnicity (choose the one you most identify with)

- ☐ Banyankole (1)
- ☐ Bakiga (2)
- ☐ Baganda (3)
- ☐ Batooro (4)
- ☐ Others (5) _____

Q7 Respondent Education

- ☐ No formal education (1)
- ☐ Some primary education (2)
- ☐ Completed primary education (3)
- ☐ Some secondary education (4)
- ☐ Completed secondary education (5)
- ☐ Advanced level/ Vocational/ Tertiary (6)
- ☐ University and above (7)

Q8 How old were you when you left school, college or university?

- ☐ Age (years) (1) _____
- ☐ Still in school (2)

Q9 Respondent employment Status

- ☐ Unemployed (1)
- ☐ Self-employed (3)
- ☐ Stable full-time employment (4)
- ☐ Stable part-time employment (5)
- ☐ Casual labor (6)
- ☐ Student (7)

Q10 What is your primary/main source of livelihood?

Q11 What is your secondary source of livelihood?

Q12 How old were you when you started working for pay?

Q13 How much did you earn in the past 12 months in UGX? (Note to interviewer. If weekly income is reported, calculate monthly income and then multiple by 12 months)

- ☐ <50,000 (1)
- ☐ 50,000- 100,000 (2)
- ☐ 110,000- 300,000 (3)
- ☐ 310,000- 500,000 (4)
- ☐ 510,000- 1,000,000 (5)
- ☐ >1,000,000 (6)

Q14 Now I have some questions about your family. Is your father alive?

- ☐ No (1)
- ☐ Yes (2)
- ☐ Don't know (3)

Q15 Does he live in the same household as you? (If NO, father is not alive, ask if he lived in the same household as respondent when he was still alive)

☐ No (1)

☐ Yes (2)

Q16 Have you ever talked to your father/male guardian/male figure (uncle, brother etc) about sensitive issues in your life? (sensitive issues like marriage, sexual relationships)

☐ No, why (1) _____

☐ Yes, who was it? (2) _____

Q17 How would you characterize these conversations with your father/male guardian/male figure? (If NO to not talking about important things with father/ male guardian/ male figure, don't ask this question)

☐ Very easy (1)

☐ Easy (2)

☐ Average (3)

☐ Difficult (4)

☐ Very difficult (5)

Q18 How frequently have you discussed sex-related matters with your father/male guardian/male figure?

- ☐ Never (1)
- ☐ Rarely (2)
- ☐ Sometimes (3)
- ☐ Often (4)
- ☐ Always (5)

Q19 Is your mother alive?

- ☐ No (1)
- ☐ Yes (2)
- ☐ I don't know (3)

Q20 Does she live in the same household as you? (If NO, mother is not alive, ask if she lived in the same household as respondent when she was still alive)

- ☐ No (1)
- ☐ Yes (2)
- ☐ Not alive (3)

Q21 Have you ever talked to your mother/female guardian/female figure (aunt, sister etc) about sensitive issues in your life? (sensitive issues like marriage, sexual relationships)

- ☐ No, why (1) _____
- ☐ Yes, who was it? (2)

Q22 How would you characterize these conversations with your mother/female guardian/female figure? (If NO to not talking about sensitive issues with mother, don't ask this question)

- ☐ Very easy (1)
- ☐ Easy (2)
- ☐ Average (3)
- ☐ Difficult (4)
- ☐ Very difficult (5)

Q23 How frequently have you discussed sex-related matters with your mother/female guardian/female figure?

- ☐ Never (1)
- ☐ Rarely (2)
- ☐ Sometimes (3)
- ☐ Often (4)
- ☐ Always (5)

Q24 What is the primary occupation or employment status of your father or your primary guardian?

- ☐ Unemployed (1)
- ☐ Self-employed (3)
- ☐ Stable full-time employment (4)
- ☐ Stable part-time employment (5)
- ☐ Casual labor (6)
- ☐ Other (please specify) (7) _____
- ☐ Don't know (8)

Q25 What is the primary occupation or employment status of your mother or your primary guardian?

- ☐ Unemployed / Housewife (1)
- ☐ Self-employed (3)
- ☐ Stable full-time employment (4)
- ☐ Stable part-time employment (5)
- ☐ Casual labor (6)
- ☐ Other (please specify) (7) _____
- ☐ Don't know (8)

Q26 How much is your yearly household Income in UGX (Note to interviewer. If weekly income is reported, calculate monthly income and then multiple by 12 months)

- ☐ <50,000 (1)
- ☐ 50,000- 100,000 (2)
- ☐ 110,000- 300,000 (3)
- ☐ 310,000- 500,000 (4)
- ☐ 510,000-1,000,000 (5)
- ☐ >1,000,000 (6)
- ☐ Don't know (7)

Q27 Currently living

- ☐ Alone (1)
- ☐ With parents (2)
- ☐ With relatives/ guardian (3)
- ☐ With spouse (4)
- ☐ With another sexual partner (5)
- ☐ With friends (6)

Q28 If not currently living with parent/ guardian, at what age did you leave home?

Q29 What was the main reason you left home?

- ☐ Looking for work/job (1)
- ☐ Get married (2)
- ☐ For school (3)
- ☐ Looking for new farmland (5)
- ☐ Escaping problems (6)
- ☐ Other (please specify) (7) _____

Q30 Do you live and/or work in the same area you were born?

- ☐ No (1)
- ☐ Yes (2)

Q31 How do you describe your place of original residence/place where you were born?

- ☐ Rural area (1)
- ☐ Small town/trading center (2)
- ☐ Big town (3)
- ☐ Capital City (4)
- ☐ Big City/town (other than capital city) (5)

Q32 Marital status

- ☐ Single (1)
- ☐ Married (2)
- ☐ Co-habiting (3)
- ☐ Separated (4)
- ☐ Widowed (5)
- ☐ Divorced (6)
- ☐ Engaged/ Committed relationship (7)

Q33 How long have you lived in this sub-county?

- ☐ <6 months (1)
- ☐ 1 year (2)
- ☐ 2-4 years (3)
- ☐ 5 years (4)
- ☐ >5 years (5)

End of Block: Demographic Survey

Start of Block: Sexual Risk Survey

Section 2: Sexual Risk Survey

Instructions:

For each of the following statements, record the number that is true for you over the past 6 months on the blank/ space provided. If you do not know for sure how many times a behavior took place, try to estimate the number as close as you can. Please enter the number and not words. If the question does not apply to you, enter "Not Applicable/N/A" and please enter a "0" if you do not engage in the activity on the blank/space provided. "Sex" includes vaginal, oral and

anal except where specified and "sexual behavior" includes fondling, cuddling, passionate kissing, hand-to-genital stimulation, oral-to-anal stimulation.

Please again be reminded that all your responses will be treated as anonymous. By anonymous I mean no one not even the researchers will be able to link the response back to you.

Q34 Have you ever had vaginal sex?

- ☐ No (1)
- ☐ Yes (2)

Q35 How old were you when you first had vaginal sex? [ask if yes, to Q34]

Q36 With whom did you have sex the first time?

- ☐ Boyfriend who is unmarried (1)
- ☐ Husband (2)
- ☐ Stranger (3)
- ☐ Relative (specify relationship) (4)

- ☐ Friend/Acquaintance (5)
- ☐ Married man (6)

☐ Other, (please specify) (7) _____

Q37 Was your first sex encounter out of your will?

- ☐ Yes (1)
- ☐ No (2)
- ☐ Not sure (3)
- ☐ N/A (4)

Q38 What was the age of the person you had sex with the first time? (Note: if the respondent is not sure, ask them to estimate)

- ☐ Many years younger than me (2)
- ☐ Few years younger than me (3)
- ☐ About my own age (4)
- ☐ A few years older than me (5)
- ☐ Many years older than me (6)
- ☐ I do not know (7)

Q39 Where did you have sex the first time? (i.e., lodge, bush, night club etc)

- ☐ Lodge (2)
- ☐ Bush (3)
- ☐ Night club (4)
- ☐ His house (5)
- ☐ Other (please specify) (6) _____

Q40 Under what circumstances did you have sex the first time? (i.e., was raped, drunk, coerced etc)

- ☐ Was raped (1)
- ☐ Was coerced (2)
- ☐ Was drunk (3)
- ☐ Wanted to have sex (4)
- ☐ Other (please specify) (6) _____
- ☐ N/A (7)

Q41 How did you first learn about sex?

- ☐ Friends/Peers (1)
- ☐ At school (2)
- ☐ Social media (e.g., Facebook) (3)
- ☐ Parents (4)
- ☐ Other relative (please specify) (7) _____
- ☐ TV shows (9)
- ☐ Books (10)
- ☐ Pornographic movies (11)
- ☐ Other (please specify) (12) _____

Q42 How would you have preferred to learn about sex?

- ☐ Friends/Peers (1)
 - ☐ At school (2)
 - ☐ Social media (e.g., Facebook) (3)
 - ☐ Parents (4)
 - ☐ Other relative (please specify) (6)
-

☐ TV shows (7)

☐ Books (8)

☐ Other (please specify) (10) _____

Q43 In the past 6 months, how many partners have you engaged in sexual behavior with but not had sex with?

Q44 In the past 6 months, how many times have you left a social event with a man you just met?

Q45 In the past 6 months, how many times have you "hooked up"(having any form of intimacy with a man who is not your partner) but not had sex with someone you didn't know or didn't know well?

Q46 In the past 6 months, how many times have you gone out to bars/parties/night clubs/social events with the intent of "hooking up" and engaging in sexual behavior but not having sex with someone?

Q47 In the past 6 months, how many times have you gone out to bars/ parties/night clubs/social events with the intent of "hooking up" and having sex with someone?

Q48 In the past 6 months, how many times have you had an unexpected and unanticipated sexual experience?

Q49 In the past 6 months, how many times have you had a sexual encounter you engaged in willingly but later regretted?

Q50 For the next set of questions, follow the same instructions as before. However, for questions 49-61, if you have never had sex (vaginal, oral, anal), please put a "0" on each blank space provided.

In the past 6 months, how many sexual partners have you had sex with?

Q51 In the past 6 months, how many times have you had vaginal sex without a condom?

Q52 In the past 6 months, how many times have you had vaginal intercourse without protection against pregnancy?

Q53 How many times have you given oral sex on a man without him putting on a condom?

Q54 In the past 6 months, how many times have you had anal sex without a condom?

Q55 In the past 6 months, how many people have you had sex with that you know but are not involved in any sort of relationship with (i.e., "friends with benefits", "fuck buddies")?

Q56 In the past 6 months, how many times have you had sex with a man you don't know or just met?

Q57 In the past 6 months, how many times have you or your partner used alcohol or drugs before or during sex?

Q58 In the past 6 months, how many times have you had sex with a new partner before discussing sexual history, HIV drug use, disease status, and other current sexual partners?

Q59 In the past 6 months, how many times (that you know of) have you had sex with someone who has had many sexual partners?

Q60 In the past 6 months, how many partners (that you know of) have you had sex with who had been sexually active before you were with them but had not been tested for STIs/HIV?

Q61 In the past 6 months, how many partners have you had sex with that you didn't trust?

Q62 In the past 6 months, how many times (that you know of) have you had sex with someone who was also engaging in sex with others during the same period?

Q63 In the past 6 months, how many times have you had sex without a condom for extra money or gift?

Q64 In the past 6 months, how many times have you had sex during or after watching pornography?

Q65 In the past 6 months, how many times have you had sex after sexting?

Q66 What is the age of your most recent sexual partner? (Note: if the respondent is not sure, ask them to estimate)

☐ Age (years) (1) _____

☐ I don't know (2)

☐ N/A (3) _____

Q67 Where did you meet your most recent sexual partner?

☐ Bar/club (1)

☐ Social event (2)

☐ School (3)

☐ Through a friend (4)

☐ Other (5) _____

☐ N/A (6) _____

Q68 When you use a condom, what is the main reason for using it?

- ☐ Avoid pregnancy (1)
- ☐ Avoid STDs other than HIV (2)
- ☐ Avoid HIV (3)
- ☐ Don't trust my sexual partner (4)
- ☐ Partner said we should use condom (5)
- ☐ I don't know my partner's HIV status (6)
- ☐ I have never used a condom (7)
- ☐ Other (please specify) (8) _____
- ☐ N/A (9) _____

Q69 When you don't use a condom, what is the main reason for not using it?

- ☐ I trust my partner (1)
- ☐ I know my partner's HIV status (2)
- ☐ For sexual pleasure (3)
- ☐ Partner said we shouldn't use a condom (4)
- ☐ I can't afford buying a condom (5)
- ☐ I fear/ashamed of buying a condom (6)
- ☐ I fear telling my partner that we use a condom (7)
- ☐ Other (please specify) (8) _____

Q70 In the past 6 months, if you or your partner used drugs before or during sex, which drugs were used?

- ☐ Cocaine/ Crack (1)
- ☐ Heroin/Embaawo (2)
- ☐ Marijuana/Enjagga/Weed (3)
- ☐ Mairungi/ Khat (4)
- ☐ Kuber (5)
- ☐ Petrol and Glue fumes (6)
- ☐ Other (7) _____
- ☐ N/A (8)

End of Block: Sexual Risk Survey

Start of Block: Alcohol and Substance Use

Section 3: Alcohol and Substance Use

This part of the survey collects information on a respondent's Alcohol and Substance Use. Please be sure to collect information to all the questions. Alcohol also includes local brew and waragi. Please be sure to collect information to all the questions (beer, wine, hard liquor, mukumbot, omuramba, kwete, malwa or any other beverage that contains alcohol. The only exception to this is small amounts of communion wine or wine that you receive at church or any religious ceremony. Energy drinks are not alcohol.

Q71 How old were you when you started to drink alcohol? (Note to interviewer: If respondent does not take alcohol, put N/A and skip to question 78)

Q72 How many alcoholic drinks did you have on a typical day when you started drinking?

	Enter Number of servings per type of alcoholic drink
	Servings (1)
Beer (1)	
Wine (2)	
Hard Liquor e.g., waragi, vodka, whiskey, rum etc) (3)	

Q73 In the past 6 months, how often on average do you drink alcohol?

☐ Multiple times a day (specify times) (1)

☐ At least once everyday (specify times) (2)

☐ At least once a week (specify times) (3)

☐ At least once a month but more than once a week (specify times) (4)

☐ More than once a year but more than once a month (specify times) (8)

☐ Once a year or less (specify times) (5)

☐ Never (6)

Q74 In the past 6 months, on a typical day (meaning within 24 hours) When you drink alcohol, how many servings of each type do you usually drink at any one time/drinking episode?

	Number of servings per alcoholic drink
	Servings (1)

Beer (1)	
Wine (2)	
Hard Liquor e.g., waragi, vodka, whiskey, rum etc) (3)	

Q75 How does your current drinking (the past six months) compare with the past?

- ☐ I am drinking much less than in the past (1)
- ☐ I am drinking slightly less than in the past (4)
- ☐ I am drinking about the same as in the past (5)
- ☐ I am drinking slightly more than in the past (6)
- ☐ I am drinking much more than in the past (7)

Q76 If there is a change in drinking. What year did it start?

Q77 What caused the change in alcohol drinking?

Q78 Do you take drugs? (e.g., cocaine, heroin, marijuana etc) (Note to interviewer: If respondent does not take drugs, skip to section 4

- ☐ No (1)
- ☐ Yes (2)

Q79 If yes, how old were you when you started taking drugs?

Q80 Under what circumstances did you take drugs the first time?

☐ Peer pressure (1)

☐ Was forced (2)

☐ Felt stressed (3)

☐ I wanted to try drugs (4)

☐ Other (please specify) (5) _____

Q81 In the past 6 months, how often on average do you take each of the following drugs?

	Click to write Column 1						
	Multiple times a day (1)	Everyday (2)	At least once a week (3)	At least once a month (4)	Multiple times a year (5)	Once a year or less (6)	Never (7)
Cocaine/Crack (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heroin/embaawo (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marijuana/enjagga/weed (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mairungi/Khat (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kuber (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Petrol and Glue fumes (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Alcohol and Substance Use

Start of Block: HIV/AIDS Knowledge, Attitudes and Perceptions

Section 4: HIV/AIDS-related Knowledge, Attitudes and Perceptions Survey

Read to respondent: This part of the survey collects information on a respondent's HIV/AIDS-related Knowledge, Attitudes and Perceptions.

Interviewer: Please be sure to collect information to all the questions. Do not prompt respondents or lead them to any response.

Q82 Now I would like to ask you some questions about your knowledge, attitudes and perceptions of HIV. Have you ever heard of an illness or disease called HIV/AIDS?

☐ No (1)

☐ Yes (2)

Q83 From where you did first hear about HIV/AIDS (select all that apply)

☐ Radio (1)

☐ Television (2)

☐ Newspaper (3)

☐ At school (4)

☐ Health facility (5)

☐ Friend (6)

☐ Parents and family (7)

☐ Church/Mosque (9)

☐ Other (please specify) (10) _____

Q84 If you heard about HIV/AIDS through a family member, who did you hear from? (Select all that apply)

☐ Father (1)

☐ Mother (2)

☐ Aunt (3)

☐ Uncle (4)

☐ Brother (5)

☐ Sister (6)

☐ Other (please specify) (7) _____

Q85 How would you prefer to hear about HIV/AIDS-related messages

Q86 A person can be infected with HIV and not show signs of disease for many years

☐ True (1)

☐ Neither true nor false (2)

☐ False (4)

Q87 You can tell if a person has HIV by his or her looks

☐ True (1)

☐ Neither true nor false (2)

☐ False (3)

Q88 Have you ever heard of HIV drugs called ARVs?

- ☐ No (1)
- ☐ Yes, where +did you first hear about them (2)
-

Q89 In which ways can a person protect themselves from getting infected with the HIV/AIDS virus?

- ☐ Abstinence from vaginal sex (1)
- ☐ Persistent condom use (2)
- ☐ Being faithful to one sexual partner (3)
- ☐ Avoid sex with persons who have multiple sexual partners (4)
- ☐ Ask sexual partner to take an HIV test (5)
- ☐ I don't know (6)
- ☐ Other (please specify) (7) _____

Q90 One can contract the HIV/AIDS virus through the following ways (select all that apply)

- ☐ Having multiple sexual partners (1)
- ☐ Through vaginal sex (2)
- ☐ Through anal sex (3)
- ☐ Through oral sex (4)
- ☐ Sharing sharp objects with an HIV infected person (5)
- ☐ Through kissing an infected person (6)
- ☐ Mosquito bite (7)
- ☐ Through blood transfusion (8)
- ☐ Through witchcraft or other supernatural means (10)
- ☐ Other (please specify) (11) _____

Q91 Can people contract the HIV/AIDS virus by sharing food with a person who has HIV/AIDS?

- ☐ No (1)
- ☐ Yes (2)
- ☐ I don't know (3)

Q92 Is it possible for a healthy-looking person to have the HIV/AIDS virus?

- ☐ No (1)
- ☐ Yes (2)
- ☐ I don't know (3)

Q93 Can the HIV/AIDS virus be transmitted from a mother to her baby (e.g., during pregnancy, delivery, breastfeed)?

- ☐ No (1)
- ☐ Yes (2)
- ☐ I don't know (3)

Q94 Are there any special drugs that a doctor or nurse can give to a woman infected with the HIV/AIDS virus to reduce the risk of transmission to the baby?

- ☐ No (1)
- ☐ Yes (2)
- ☐ I don't know (3)

Q95 Have you ever tested for HIV/AIDS? (If NO, skip to question 98)

- ☐ No (1)
- ☐ Yes (2)
- ☐ I don't know (3)

Q96 If YES, how long ago was your most recent HIV test?

- ☐ Less than a month (1)
- ☐ 1-3 months (2)
- ☐ Less than a year (3)
- ☐ More than a year (4)
- ☐ Never (5)

Q97 For your most recent HIV test, what was the main reason you tested?

- ☐ Was pregnant (1)
- ☐ Was sick (2)
- ☐ Did not trust my sexual partner (3)
- ☐ HIV positive sexual partner (4)
- ☐ Had multiple sexual partners (5)
- ☐ As part of a regular clinic visit (6)
- ☐ Other (7) _____

Q98 If NO, what is the reason for not testing for HIV?

- ☐ I don't know where to test from (1)
- ☐ I don't want to test (2)
- ☐ I can't afford the HIV testing services (3)
- ☐ The HIV services are far away from my village (4)
- ☐ I don't trust the accuracy of HIV services offered in this community (5)
- ☐ I don't want to be seen at the HIV clinic testing (6)
- ☐ I don't trust the health service providers at the clinic in this community (7)
- ☐ I don't want to be seen at the clinic testing (8)
- ☐ Other (please specify) (9) _____

Q99 If NO, do you know of a place where HIV testing services are offered?

- ☐ No (1)
- ☐ Yes (2)

Q100 Is HIV/AIDS the most serious disease in Uganda?

- ☐ No, why (1) _____
- ☐ Maybe, why (2) _____
- ☐ Yes, why (3) _____

Q101 Have you ever heard about sexually transmitted infections?

- ☐ No (1)
- ☐ Yes (2)

Q102 In the past 6 months, have you had a sexually transmitted infection/disease?

- ☐ No (1)
- ☐ Yes (2)
- ☐ I don't know (3)

Q103 Sometimes women experience a bad smelling abnormal genital discharge. During the past 6 months, have you had a bad-smelling abnormal genital discharge?

- ☐ No (1)
- ☐ Yes (2)
- ☐ I don't know (3)

Q104 Sometimes women have a genital sore or ulcer. During the last 6 months, have you ever had a genital sore?

- ☐ No (1)
- ☐ Yes (2)
- ☐ I don't know (3)

Q105 The last time you had bad smelling abnormal genital discharge, genital sore or ulcer, did you seek any kind of treatment?

- ☐ No. Why (1) _____
- ☐ Yes. Where? (2) _____
- ☐ Not Applicable (3)

End of Block: HIV/AIDS Knowledge, Attitudes and Perceptions

Start of Block: Section 5: Sexuality-related Attitudes

Q106 In your culture, is a woman justified in refusing to have sex with her partner/husband when she knows he has multiple sexual partners?

- ☐ No (1)
- ☐ Yes (2)

Q107 To what extent do you agree with your response to "is a woman justified in refusing to have sex with her partner/husband when she knows he has multiple sexual partners"?

- ☐ Strongly Agree (1)
- ☐ Agree (2)
- ☐ Undecided (3)
- ☐ Disagree (4)
- ☐ Strongly Disagree (5)

Q108 In your culture, if a woman knows her sexual partner has a disease that she can contract during sexual intercourse, is she justified in asking that they use a condom when they have sex?

☐ No (1)

☐ Yes (2)

Q109 To what extent do you agree with your response to "if a woman knows her sexual partner has a disease that she can contract during sexual intercourse, is she justified in asking that they use a condom when they have sex"?

☐ Strongly Agree (1)

☐ Agree (2)

☐ Undecided (3)

☐ Disagree (4)

☐ Strongly Disagree (5)

Q110 In your culture, is it acceptable for a woman to say no to sex if she does not want to have sexual intercourse with her husband?

☐ No (1)

☐ Yes (2)

Q111 To what extent do you agree with your response to "is it acceptable for a woman to say no to sex if she does not want to have sexual intercourse with her husband"?

- ☐ Strongly Agree (1)
- ☐ Agree (2)
- ☐ Undecided (3)
- ☐ Disagree (4)
- ☐ Strongly Disagree (5)

Q112 In your culture, is it acceptable for a woman to ask her partner/husband to use a condom if she wanted him to?

- ☐ No (1)
- ☐ Yes (2)

Q113 To what extent do you agree with your response to "is it acceptable for a woman to ask her partner/husband to use a condom if she wanted him to"?

- ☐ Strongly Agree (1)
- ☐ Agree (2)
- ☐ Undecided (3)
- ☐ Disagree (4)
- ☐ Strongly Disagree (5)

Q114 Do you agree or disagree with the following statement? "Female teenagers and adolescents should be taught about using condoms to avoid sexually transmitted infections/diseases and unwanted pregnancies".

- ☐ Strongly Agree (1)
- ☐ Agree (2)
- ☐ Undecided (3)
- ☐ Disagree (4)
- ☐ Strongly disagree (5)

Q115 Do you feel you are in control of your sexual life?

- ☐ No (1)
- ☐ Yes (2)

Q116 If NO, why not?

Q117 Have you ever bought a condom?

- ☐ No (1)
- ☐ Yes (2)

Q118 If no, why not?

- ☐ Don't know where to get some condoms (1)
- ☐ Afraid/shy of what they would think about me (2)
- ☐ Man's responsibility to buy/ bring condoms (3)
- ☐ Afraid that would be labeled promiscuous (4)
- ☐ I don't like using condoms (5)
- ☐ Sexual partner does not like to use condoms (6)
- ☐ It's against my religion to use a condom (7)
- ☐ It is embarrassing for a young woman to buy a condom (9)
- ☐ I don't know how to use a condom (8)
- ☐ Other (please specify) (11) _____

Q119 If a person is in possession of a condom, it implies they are planning to have sex?

- ☐ No (1)
- ☐ Yes (2)

Q120 Using a condom reduces sexual pleasure?

- ☐ No (1)
- ☐ Yes (2)
- ☐ I don't know (3)

Q121 A man will be offended if a woman insists that he should use a condom?

- ☐ No (1)
- ☐ Yes (2)
- ☐ I don't know (3)

Q122 In your culture, is it acceptable for a man to have more than one sexual partner?

- ☐ No (1)
- ☐ Yes (2)

Q123 To what extent do you agree with your response to "is it acceptable for a man to have more than one sexual partner"?

- ☐ Strongly Agree (1)
- ☐ Agree (2)
- ☐ Undecided (3)
- ☐ Disagree (4)
- ☐ Strongly Disagree (5)

Q124 In your culture, is it acceptable for a woman to have more than one sexual partner?

- ☐ No (1)
- ☐ Yes (2)

Q125 To what extent do you agree with your response to "is it acceptable for a woman to have more than one sexual partner"?

- ☐ Strongly Agree (1)
- ☐ Agree (2)
- ☐ Undecided (3)
- ☐ Disagree (4)
- ☐ Strongly Disagree (5)

End of Block: Section 5: Sexuality-related Attitudes

Start of Block: Section 6: Stigma and Discrimination

Q126 If you knew you were HIV positive, would you tell your sexual partner your HIV status before having sex with them?

☐ No, why (1) _____

☐ Yes, why (2) _____

Q127 Would knowing that there are now medicines that you can take when you are HIV in order to prolong and make your life better change your answer to the question that I just asked you?

☐ No, my answer would be the same (1)

☐ Yes, my answer would be different (4)

Q128 If you knew you were HIV positive, would you go to seek for HIV care/services?

☐ No, why (1) _____

☐ Yes, why (2) _____

Q129 If you tested HIV positive, would you disclose your HIV status?

☐ No, why (1) _____

☐ Yes, why (2) _____

Q130 If yes, who would you disclose your HIV status to first?

☐ Close family (please specify) (4)

☐ Extended family (please specify) (5)

☐ Spouse (6)

☐ Another sexual partner (11)

☐ Friend (12)

☐ Other (please specify) (10) _____

End of Block: Section 6: Stigma and Discrimination

Appendix B

Young Women Interview Guide

Introduction

Hello. Once again, my name is _____ (name of interviewer).

Thank you for speaking with me today. We are going to be discussing about your experiences and opinions about sexual relationships and HIV/AIDS. I will be asking questions to help me understand your sexual relationship experiences, and thoughts on factors that put young women at a higher risk of acquiring HIV. I will use a unique identifier instead of your name to make sure your responses remain anonymous. During the interview, you are free to pause the interview, ask me to skip any question you are not comfortable answering, ask that we postpone the interview or even stop participating in the interview.

Qn1. Have you ever heard about HIV/AIDS?

Probe:

- Where did you first hear about it? What did you hear about HIV/AIDS? [*probe for details and depths*] What age were you when you first heard about HIV/AIDS? What did you first hear about HIV/AIDS? [*probe for details and depths*] What do you think about HIV/AIDS? What comes to your mind when you hear that someone has HIV/AIDS? [*please explain your response*]
- Have you ever heard about ARVs (drugs that are taken by people who have HIV/AIDS)? Where did you first hear about them? What did you hear about them? What do you know about ARVs? If YES, now that you know about ARVs, does this change the way you think about people who have HIV/AIDS? Does this change the way you perceive HIV/AIDS?

Qn2. Have you ever had a sexual encounter (vaginal)?

Probe:

- How old were you when you first had sex? With whom did you first have sex?
How old was the person you first had sex with? [*ask for age estimate*] Please tell me what happened [*probe for the circumstances under which sex happened e.g., forced, coerced, willing...get details and depth of the full account of what happened*]
- How old were you when you first heard about sex? Where or who first told you about sex? What did they tell you about sex? [*probe for depth and details*]

Qn3. Let us now talk about your most recent sexual relationship. Please tell me about your most recent sexual relationship. [*probe each response for depth and details*]

Probe:

- How old is your sexual partner? [*estimate age*] How long have you been in a sexual relationship with this partner? Where did you meet? Do you live with him? Do you use condoms with this sexual partner? If YES, what is the most reason you use a condom? If NO, what is the most reason you do not use a condom? Please tell me more about that. [*probe more on response*]

Qn4. Statistics show that young women have high HIV infections. What do you think could be the reason for this?

Probe:

- Cultural factors including norms, beliefs and practices
- Social factors including stigma, discrimination
- Financial factors including lack of employment; low education levels
- Policy-related factors

Qn5. What recommendations do you have for helping reduce HIV infections especially among young women in your community?

Q6. Is there anything you might want to add?

Thank you very much for coming here today. I appreciate your thoughts and opinions.

Appendix C

Key Informant Interview Guide

Introduction

Hello. My name is _____. First, I want to thank you all for taking the time to be with us today.

We will be discussing your thoughts and ideas about the drivers of high HIV infections and sexual risk-taking behavior among young women. The information from our discussion will contribute to an understanding of the factors fueling risk taking behavior leading to persistently high and increased HIV infections among the youth particularly young women in Uganda. This is important in guiding policy and strategic interventions to address this problem of high HIV infections especially among young women.

We will be audio recording our interview, because I do not want to miss any of your responses. These recordings will be written out into text and those will be read by the study team to get the most out of what you are sharing today. In those documents, the text is de-identified- which means that names or anything that would lead to someone being able to guess any one's identity. All of the material from the discussions is kept confidential, only reviewed by the research team members, and any presentation of results based on this discussion would never identify anyone here today by name or anything else that would give away someone's identity.

Does anyone have any questions?

Health concerns

Q1. What would you say are the greatest health concerns in your community?

[If HIV/AIDS is not mentioned as a health concern, ask specifically about HIV/AIDS]

Q2. What do people in this community feel about HIV/AIDS?

HIV/AIDS concerns

Q3. What would you say about HIV/AIDS in this community?

Probe:

- Is HIV/AIDS a big concern in your community?
- Who is mostly affected by HIV/AIDS in this community? (e.g old men, old women, young men, young women, etc)
- Why? (explain your response)

Q4. Results of the Uganda national surveys have shown that there are high HIV infections among young women in (15-35) years of age in Uganda, what are some of the factors fueling high HIV infections among young women in your community?

Probe:

- Cultural factors including norms, beliefs and practices
- Social factors including stigma, discrimination
- Financial factors including lack of employment; low education levels
- Policy-related factors

Q5. What HIV/AIDS-related services are offered in your community?

Probe:

- How many places offer HIV/AIDS-related services in your community?
- Where are they offered? (mostly government facilities or private facilities)
- Are HIV/AIDS services paid for in your community?
- Are HIV/AIDS services freely available to all? (please explain your response)
- What challenges are there especially for the young women in accessing HIV/AIDS-related services in your community?

Q6. What challenges are faced by young women in your community in accessing HIV/AIDS related services?

Probe:

- Cultural factors including norms, beliefs and practices
- Social factors including stigma, discrimination
- Financial factors including lack of employment; low education levels
- Policy-related factors

Wrap-up

Q7. What recommendations do you have for helping reduce HIV infections especially among young women in your community?

Q8. Is there anything you might want to add?

Thank you very much for talking to me. I appreciate your thoughts and ideas.

Appendix D

Focus Group Discussion Guide

Introduction

Hello. My name is _____ (*name of FGD facilitator*). First, I want to thank you all for taking the time to be with us today.

We will be discussing your thoughts and ideas about the drivers of high HIV infections and sexual risk-taking behavior among young women. The information from our discussion will contribute to an understanding of the factors fueling risk taking behavior leading to persistently high and increased HIV infections among the youth particularly young women in Uganda. This is important in guiding policy and strategic interventions to address this problem of high HIV infections especially among young women.

Before we begin, I would like to explain what a focus group is and then give you some information about this specific focus group. As some of you probably already know, a focus group is like a discussion group. In a focus group, people are asked to discuss their thoughts and ideas about a subject. I will introduce a subject by asking the group a question. There are no right or wrong answers to the questions. What I am looking for is an informal discussion about how people think or feel. I encourage you to just jump into the conversation with how you feel about the subject I bring up or about other people's responses. Just like there is no right or wrong response, there is also no single opinion for any subject. I am interested in hearing what each of you think and feel about our discussion topic.

In order for this group to be as engaging as possible for everyone, there are a few "ground rules" I am hoping we can all agree to before starting. (i) Please put your phone in silence or turn it off to avoid interrupting the discussion, (ii) please respect each other's opinions, (iii) please speak out one at a time so we can listen to each other, (iv) please protect each other's confidentiality and privacy. Do not go back and start telling other people what so and so mentioned in this discussion. Are there any questions or concerns about these ground-rules?

We will be tape recording the discussion today, because we do not want to miss any of your comments. These recordings will be written out into text and those will be read by the study team to get the most out of what you are sharing today. In those documents, the text is de-identified- which means that names or anything that would lead to someone being able to guess any one's identity. All of the material from the discussions is kept confidential, only reviewed by the research team members, and any presentation of results based on this discussion would never identify anyone here today by name or anything else that would give away someone's identity.

Does anyone have any questions?

Warm-up

Before we start recording, let us begin by getting to know a little about each other. Please say your name and the name of the village you come from.

Thank you! Let us now start our discussion.

Health concerns

Q1. What would you say are the greatest health concerns in your community?

[If HIV/AIDS is not mentioned as a health concern, ask specifically about HIV/AIDS]

Q2. What do people in this community feel about HIV/AIDS?

HIV/AIDS concerns

Q3. What would you say about HIV/AIDS in this community?

Probe:

- Is HIV/AIDS a big concern in your community?
- Who is mostly affected by HIV/AIDS in this community? (e.g. old men, old women, young men, young women, etc)
- Why? (explain your response)

Q4. Results of the Uganda national surveys have shown that there are high HIV infections among young women in (15-35) years of age in Uganda, what are some of the factors fueling high HIV infections among young women in your community?

Probe:

- Cultural factors including norms, beliefs and practices
- Social factors including stigma, discrimination
- Financial factors including lack of employment; low education levels
- Policy-related factors

Q5. What HIV/AIDS-related services are offered in your community?

Probe:

- How many places offer HIV/AIDS-related services in your community?
- Where are they offered? (mostly government facilities or private facilities)
- Are HIV/AIDS services paid for in your community?
- Are HIV/AIDS services freely available to all? (please explain your response)
- What challenges are there especially for the young women in accessing HIV/AIDS-related services in your community?

Wrap-up

Q6. What recommendations do you have for helping reduce HIV infections especially among young women in your community?

Q7. Is there anything you might want to add?

Thank you very much for coming here today. We appreciate your thoughts and ideas.

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