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Trading in sexual currency

Transactional sex, sexual coercion and sexual behaviors among young people in Uganda

VIKAS CHOUDHRY

FACULTY OF MEDICINE | DIVISION OF SOCIAL MEDICINE AND GLOBAL HEALTH
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Trading in sexual currency

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Faculty of Medicine

Trading in sexual currency

Transactional sex, sexual coercion and sexual behaviors
among young people in Uganda

Vikas Choudhry



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DOCTORAL DISSERTATION

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To be defended at Aula, CRC, Malmö on April 17 2015 at 9:00 AM.

Faculty opponent: Professor Pius Okong, Uganda Christian University, Kampala,
Uganda

Supervisor: Associate Professor Anette Agardh, Lund University, Sweden

Co-supervisor: Professor Per-Olof Östergren, Lund University, Sweden

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Abstract The growing incidence and prevalence of sexually transmitted infections among young people, particularly HIV, is a public health concern in Uganda. There is increasing evidence that Ugandan youth engage in risky sexual behaviors, transactional sex, and experience sexual coercion. Most research on sexual behaviors has been limited to inter- and intra-personal factors that influence sexual behaviors. Prior research on transactional sex has often concentrated only on young girls, their motivations for receiving gifts, money, or favors in exchange for sex along with unsafe sex and sexual coercion due to power differential in such relationships. The general aim of this thesis was to gain a detailed understanding of the range of ecological factors that influence HIV-related sexual risk behaviors among the youth in Uganda, with a special focus on transactional sex. The findings of this thesis can help inform evidence-based interventions that are locally relevant and culturally adaptable in order to prevent the spread of HIV among Ugandan youth. The thesis is based on a mixed-method approach that includes quantitative cross-sectional and qualitative studies. Data was obtained from a questionnaire study conducted in 2010 among university students in Uganda (Studies 1 and 2); qualitative focus group discussions with students at a Ugandan university in 2014 (Study 3); and a nationally representative population-based survey of HIV sero-status carried out in 2011 (Study 4). Logistic regression was used as the main tool for analysis in the cross-sectional studies, while grounded theory was used for analysis of qualitative data. Study 1 revealed that alcohol consumption in relation to sexual activity was associated with such risky sexual behaviors such as multiple sexual relationships and inconsistent condom use with new partners. The findings of Study 2 show that sexual coercion, physical violence, and mental health were associated to a statistically significant degree with transactional sex among university students in Uganda. The qualitative findings showed that macrosystems such as cultural sexual scripts, gendered sexual scripts, poverty, and globalization influence the contexts in which young people engage in sex, not excluding transactional sex among university students. Finally, Study 4 revealed that among young women, receiving something for sex, and among young men, paying something for sex was associated with multiple concurrent relationships. Moreover, HIV positive sero-status was significantly associated with paying for sex among young men. The findings of this thesis suggest that there is need for HIV interventions, which address the multiple factors that influence sexual behaviors and transactional sex. Both sexes are equally vulnerable to sexual coercion and HIV risks associated with transactional sex, and therefore both should be targeted in intervention programs. A nuanced and flexible approach is needed. Young people should be actively engaged in the design and implementation of interventions that incorporate gender transformative approaches by critically challenging the implicit assumptions about traditional gender norms and socio-cultural factors that promote and facilitate sexual risk behaviors and transactional sex.		
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Transactional sex, sexual coercion and sexual behaviors among young people in Uganda

Vikas Choudhry



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Abstract

The growing incidence and prevalence of sexually transmitted infections among young people, particularly HIV, is a public health concern in Uganda. There is increasing evidence that Ugandan youth engage in risky sexual behaviors, transactional sex, and experience sexual coercion. Most research on sexual behaviors has been limited to inter- and intra-personal factors that influence sexual behaviors. Prior research on transactional sex has often concentrated only on young girls, their motivations for receiving gifts, money, or favors in exchange for sex along with unsafe sex and sexual coercion due to power differential in such relationships. The general aim of this thesis was to gain a detailed understanding of the range of ecological factors that influence HIV-related sexual risk behaviors among the youth in Uganda, with a special focus on transactional sex. The findings of this thesis can help inform evidence-based interventions that are locally relevant and culturally adaptable in order to prevent the spread of HIV among Ugandan youth. The thesis is based on a mixed-method approach that includes quantitative cross-sectional and qualitative studies. Data was obtained from a questionnaire study conducted in 2010 among university students in Uganda (Studies 1 and 2); qualitative focus group discussions with students at a Ugandan university in 2014 (Study 3); and a nationally representative population-based survey of HIV sero-status carried out in 2011 (Study 4). Logistic regression was used as the main tool for analysis in the cross-sectional studies, while grounded theory was used for analysis of qualitative data. Study 1 revealed that alcohol consumption in relation to sexual activity was associated with such risky sexual behaviors such as multiple sexual relationships and inconsistent condom use with new partners. The findings of Study 2 show that sexual coercion, physical violence, and mental health were associated to a statistically significant degree with transactional sex among university students in Uganda. The qualitative findings showed that macrosystems such as cultural sexual scripts, gendered sexual scripts, poverty, and globalization influence the contexts in which young people engage in sex, not excluding transactional sex among university students. Finally, Study 4 revealed that among young women, receiving something for sex, and among young men, paying something for sex was associated with multiple concurrent relationships. Moreover, HIV positive sero-status was significantly associated with paying for sex among young men. The findings of this thesis suggest that there is need for HIV interventions, which address the multiple factors

that influence sexual behaviors and transactional sex. Both sexes are equally vulnerable to sexual coercion and the HIV risks associated with transactional sex, and therefore both should be targeted in intervention programs. A nuanced and flexible approach is needed. Young people should be actively engaged in the design and implementation of interventions that incorporate gender transformative approaches by critically challenging the implicit assumptions about traditional gender norms and socio-cultural factors that promote and facilitate sexual risk behaviors and transactional sex.

Keywords: Uganda, youth, university, transactional sex, alcohol, risky sexual behaviors, sexual coercion, gender norms, sexual scripts, globalization, bio-ecological systems

To family, friends and teachers

“To love. To be loved. To never forget your own insignificance. To never get used to the unspeakable violence and the vulgar disparity of life around you. To seek joy in the saddest places. To pursue beauty to its lair. To never simplify what is complicated or complicate what is simple. To respect strength, never power. Above all, to watch. To try and understand. To never look away. And never, never to forget.”

— Arundhati Roy, *The Cost of Living*

Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
AIC	AIDS Indicator Survey
ART	Antiretroviral Therapy
BST	Bio-ecological Systems Theory
CDC	Centre for Disease Control
CSE	Comprehensive Sexuality Education
DHS	Demographic Health Survey
FGD	Focus Group Discussions
GTA	Gender Transformative Approach
HIV	Human Immunodeficiency Virus
HSCL-25	Hopkins Symptom Checklist- 25
ICPD	International Conference on Population and Development
IRC	Institutional Review Committee
MoH	Ministry of Health
MUST	Mbarara University of Science and Technology
OR	Odds Ratio
SCL-90	Symptom Checklist 25
SRHR	Sexual and Reproductive Health and Rights
SSA	Sub-Saharan Africa
STI	Sexually Transmitted Infection
UAIS	Uganda AIDS Indicator Survey
UBOS	Uganda Bureau of Statistics
UDHS	Ugandan Demographic and Health Survey

UK	United Kingdom
UN	United Nations
UNFPA	United National Population Fund
US	United States of America
WHO	World Health Organization

List of Publications

1. **Choudhry V**, Agardh A, Stafström M, Östergren P-O: Patterns of alcohol consumption and risky sexual behavior: a cross-sectional study among Ugandan university students. *BMC Public Health* 2014, 14(1):128.
2. **Choudhry V**, Östergren P-O, Ambresin A-E, Kyagaba E, Agardh A: Giving or Receiving Something for Sex: A Cross-Sectional Study of Transactional Sex among Ugandan University Students. *PLoS ONE* 2014, 9(11):e112431.
3. **Choudhry V**, Pettersson KO, Emmelin M, Muchunguzi C, Agardh A: 'Relationships on campus are situationships': A Grounded Theory study of sexual relationships at a Ugandan university (*In manuscript*)
4. **Choudhry V**, Ambresin A-E, Nyakato VN, Agardh A: How risky is transactional sex? Evidence from a cross-sectional national survey among young people in Uganda (*Manuscript submitted to Global Health Action journal*)

Contents

Abstract	5
Abbreviations	9
List of Publications	11
Introduction	15
Sexual and Reproductive Health and Rights	16
Sexual behaviors, sexual coercion and HIV trend among youth in Uganda	17
Transactional sex paradigm	20
Alcohol consumption and sexual behaviors	23
Rationale	24
Aims	27
General aim	27
Specific aims	27
Conceptual and Theoretical framework	29
Bio-ecological Systems Theory framework	29
Sexual Scripting Theory	31
Material and Methods	33
Study populations and study designs	35
Data collection and ethical considerations	36
Studies 1 and 2	36
Study 3	36
Study 4	37
Study measures	38
Outcomes measures	38
Demographic and socioeconomic variables	39
Alcohol-related variables in study 1	40
Explanatory variables in study 2	41
Sexual behavior variables in study 4	42
Statistical analysis	43

Results	47
Study 1	50
Study 2	54
Study 3	56
Study 4	58
Discussion	63
Prevalence across samples	66
Transactional sex and sexual coercion: A trade-off	67
Aspirational youth cultures and economic vulnerability amid traditional gender roles	69
Peer influences and adulthood redefined	72
Alcohol and sex: A “heady” mix	73
Transactional sex, sexual behaviors and HIV	74
Methodological considerations	76
Conclusions and recommendations	81
Summary in Swedish	85
Acknowledgements	89
References	91

Introduction

The demographic transition of the past few decades has led to the highest proportion of young people aged 10 to 24 years than ever before in human history. They are an estimated 1.8 billion, roughly a quarter of the world's population, with the majority living in low to middle income countries (United Nations Population Fund 2014). However, fertility rates in many parts of the world are falling. A country with both increasing numbers of young people and declining fertility has the potential to give an economic boost to its national productivity with the growing numbers of people in the workforce relative to the number of dependents – referred to as the 'demographic dividend' (United Nation Population Fund and Population Reference Bureau 2012). Several international agreements, including the International Conference on Population and Development (ICPD) in 1994, have articulated the importance of a healthy and successful transition from adolescence into adulthood in reaping this 'demographic dividend' (United Nations 1979, 1989, 1994, 2000, 2012, 2014; United Nations Population Fund 2012).

However, the majority of youth in sub-Saharan Africa (SSA) are growing up in contexts of widespread poverty, rapid urbanization, limited educational opportunities, globalization, and increased access to worldwide information through the internet and social media. The transitions into adulthood in this region are increasingly influenced by rapid socio-cultural transformations in the form of changing social controls and a breakdown of traditional norms (Blum et al. 2012; Kabiru, Izugbara, and Beguy 2013). These factors may have far ranging implications for the health and wellbeing of youth thereby, affecting the ability of the nations to garner their 'demographic dividend' (United Nation Population Fund and Population Reference Bureau 2012).

Young people are perceived as healthy and often neglected in public health programs and policies on the national and international agenda (Gore et al. 2011). Investing in their health in general can help prevent the estimated 2.6 million deaths that occur globally every year in this age group (Patton et al. 2009). Life-course public health research is increasingly pointing to evidence that disorders of adulthood, including cancers, cardiovascular disease, and neuropsychiatric disorders, have their origins in childhood and youth (Santelli and Galea 2011). SSA has one of the highest mortality and morbidity rates among youth, with poor

sexual and reproductive health contributing to ill health among this age group (Gore et al. 2011; Patton et al. 2009).

Youth continue to face widespread challenges related to sexual and reproductive health and rights (SRHR) despite growing chances of survival into old age. Although HIV transmission is declining worldwide, in young people ages 15–24 years it remains a growing concern: 33% percent of all new cases globally among persons of reproductive age occurring in this age group. Young women face a disproportionate burden of the HIV pandemic. In 2013, almost 60% of all new HIV infections among youth occurred among young women. Globally, 15% of women living with HIV are young women, of whom 80% live in SSA (UNAIDS 2010, 2014).

Sexual and Reproductive Health and Rights

Sexual and reproductive health is not only about disease morbidity and mortality, it also includes a collection of health and human rights issues. SRHR encompasses the right of all individuals to make decisions about their sexual activity and reproduction free from discrimination, coercion, and violence as per the Program of Action at ICPD, 1995 (United Nations 1994). In spite of all the observations and commitments of the ICPD, young people, especially girls, continue to face widespread violations of their SRHR. In addition, there is need for research to fill in the existing gaps in our knowledge of the social and cultural determinants of SRHR among young people and a pressing need for further research and evaluation of evidence-based and effective SRHR intervention packages (Chandra-Mouli et al. 2015; Santhya and Jejeebhoy 2015).

The forms, meanings, values, and motivations of sexual expressions can vary across cultures as well as within particular populations (Leclerc-Madlala 2003). Through constant social interaction and negotiation, youth adopt sexual norms that are characteristic of their social groups and individual needs (Harper et al. 2004; Bell 2011). The sexual interactions of young people are closely related to the meanings they attach to sexual relationships and their sense of which behaviors are socially acceptable (Boileau et al. 2008). Sexuality research has been criticized for neglecting interpersonal, community, cultural, and structural influences (Mmari and Blum 2009), and instead contextualizing sexuality as a set of individual sexual behaviors (MacPhail and Campbell 2001). This critique poses further challenge for the design and implementation of holistic youth-led sexual health programs (Bell and Aggleton 2012).

Socio-cultural constructions of masculinity and femininity are specific norms which constitute an overarching framework within which young people enact their sexuality (Harrison 2008). Traditional gender roles are based on power differentials between men and women, thereby aggravating existing health inequalities among men and women (Wingood, Scd, and DiClemente 2000). Hierarchical gender roles, such as notions of male sexual entitlement, the low social value and power of women, and ideas of manhood linked to the control of women, result in lower levels of education among women; few public roles for women; the lack of family, social and legal support for women; and the lack of economic power for women (Farré 2013). Institutionalized economic inequalities keep money, land, and other resources out of women's reach, causing women to be financially dependent on men, more likely to practice transactional sex, less likely to be able to negotiate safe sex or condom use with a partner, and more at risk of violence (Shearer et al. 2005). These gender power imbalances in different SSA countries have been identified as one of the major reasons for unwanted pregnancies, sexually-transmitted infections (STI) including HIV, and sexual coercion among youth that often disproportionately affects young women in that region (Ramjee and Daniels 2013).

Girls and boys in SSA, as is the case worldwide, are reaching puberty earlier and marrying at later ages, resulting in a greater likelihood that sexual debut will be experienced prior to marriage (Chandra-Mouli et al. 2015; Nalwadda et al. 2010). There is evidence that pre-marital sexual activity often occurs in contexts of risky sexual behaviors including multiple and concurrent sexual partnerships, inconsistent condom use, cross-generational and transactional sexual relationships, and sexual coercion. Furthermore, limited access to health services along with little or no information on safe sexual practices due to lack of comprehensive sex education for young people create an environment that increases one's vulnerability to unsafe sex. These behaviors and contexts have been implicated as drivers of poor SRHR outcomes such as unwanted pregnancies, unsafe abortions, and STIs, including HIV, among SSA youth (Bearinger et al. 2007; Napierala Mavedzenge et al. 2011; Napierala Mavedzenge, Doyle, and Ross 2011; Doyle et al. 2012).

Sexual behaviors, sexual coercion and HIV trend among youth in Uganda

Uganda was hailed as success story for HIV prevention in the 1990s but has experienced setbacks since the year 2004. National level surveys seem to indicate that HIV prevalence has stalled and even risen slightly since the early 2000s (Green et al. 2006; Kirby 2008). Youth continue to suffer most from the HIV

epidemic in Uganda, as reflected in the increase of HIV prevalence among youth, from 3% in between 2004 and 2005 to 4% in 2011, indicating that HIV incidence might be increasing in this age group. Uganda, like the rest of SSA, has a similar pattern of significant gender disparity in HIV acquisition. Among young women, HIV prevalence in 2011 was 2.8% in 15 to 19 year olds and 6.3% in 20 to 24 years olds while HIV prevalence was 1.1% in men 15 to 19 years old and 3.2% in men 20 to 24 years old (Uganda Ministry of Health and ICF International 2012).

Multiple concurrent sexual relationships, inconsistent condom use, sexual coercion and violence, and exchange of sex for money, gifts, or favors – referred to as transactional sex - have been implicated as possible drivers of the HIV epidemic among young people in SSA including Uganda (Uganda Aids Commission 2007; Uganda Bureau of Statistics 2012; Higgins et al. 2014; Santelli et al. 2013; Chatterji et al. 2007; Luke and Kurz 2002). In addition to increasing HIV risk behaviors, a shift of HIV prevention strategies from reduction to more testing and greater treatment services has been suggested as a potential factor for greater HIV transmission in Uganda (Green et al. 2013), along with “prevention fatigue” or a decreasing risk perception among younger people who have less personal experience with HIV (Gray et al. 2006). Furthermore, the availability of antiretroviral therapy (ART) might exacerbate sexual risk-taking behaviors among youth as a result of “treatment optimism”, as has been observed in high-income countries (Crepaz, Hart, and Marks 2004).

Although young people in Uganda are now engaging in sexual activity at a later age than in the past, the age at sexual initiation is still early. According to Uganda Aids Indicator Survey 2011 (UAIS), 62% of women as compared to 63% women in 2004-05 and 42% of men as compared to 47% in 2004-05, had had sex before the age of 18. The percentage of people who had an early sexual debut, defined as first sexual activity before age 15, remains alarmingly high (Uganda Ministry of Health and ICF International 2012). Young people between 15 to 19 years of age, among all people surveyed, are most likely to use condoms at their last sexual activity but this percentage is still low. The increased vulnerability to HIV infection is still compounded by the fact that most sexual encounters take place in the context of concurrent sexual partners and without the benefit of consistent and correct condom use (Uganda Bureau of Statistics 2012; Uganda Ministry of Health and ICF International 2012). According to the latest Uganda AIDS Indicator Survey (UAIS), prevalence of certain sexual behaviors among youth in Uganda is as shown in Table 1.

Table 1. Prevalence of sexual behaviors among 15-24 years old men and women

Indicator	Young men	Young women
Age at first sex below 15 years	12%	13%
Two or more sexual partners in last 12 months	9.2%	2.8%
Cumulative prevalence of concurrent partners in last 12 months	6.3%	2.1%
Ever physically forced to have sex against will	4.1%	12.2%
Ever coerced to have sex against will but without physical force	6.3%	13.8%
Condom use at last sex among never married	46.0%	42.0%
Transactional sex *	2.3%	2.7%
Reported an STI in last 12 months	9.1%	15.8%

* Men were only asked if they had ever paid for sexual intercourse while women were only asked if they ever gave sex in exchange for goods or services in the last 12 months

(Source: Uganda AIDS Indicator Survey- 2011)

In a national survey in Uganda, 23% of adolescent girls reported forced or coercive sexual initiations (Neema et al. 2004). Key factors associated with an increased likelihood of coercion in SSA (including Uganda) consisted of age-disparate sexual relationships, younger age (generally below 25 years), as well as at sexual debut specifically (being 15 years or younger), and the use of alcohol or drugs in the sex act (Kalichman et al. 2007; Koenig, Lutalo, et al. 2004; Luke 2003; Mehra et al. 2014; Moore, Biddlecom, and Zulu 2007; Zablotska et al. 2009). The prevalence of sexual coercion among males and females in a study done among secondary school students in Uganda found that almost two-thirds of the girls and more than half of the boys been involved in some form of sexual coercion, with 47% of the males reporting victim experiences and 25% of females reporting perpetration behavior (Ybarra et al. 2012). Similarly, a study done earlier among university students in Uganda also showed that almost one-third of the young men and women reported some form of sexual coercion in their lifetime (Agardh, Odberg-Pettersson, and Ostergren 2011). SRHR outcomes correlated with sexual coercion include STIs (including HIV), unintended pregnancy which can possibly lead to unsafe abortions, as well as associations with risky behaviors such as other nonconsensual sexual experiences, multiple concurrent sexual relationships and unprotected sex (Agardh, Odberg-Pettersson, and Ostergren 2011; Koenig, Lutalo, et al. 2004; Koenig, Zablotska, et al. 2004; Moore et al. 2007a).

Transactional sex paradigm

In public health, transactional sex is often differentiated from commercial sex work since participants do not identify themselves as “prostitutes” and “clients”. Exchanging gifts for sex is often a part of a broader set of obligations that might not involve a predetermined payment or contract (Hunter 2002). The meaning attached to transactional sex varies widely within SSA. The exchange of gifts or money for sex may signify 1) a committed relationship, 2) an acknowledgement of respect, 3) an expression of affection, 4) an obligation fulfilled, or perhaps 5) a display to impress other men (Chatterji et al. 2007; Dunkle et al. 2007a; Dunkle et al. 2004b; Leclerc-Madlala 2003).

Research indicates that transactional sex is common among young girls in Uganda. A study in four sub-Saharan African countries reported transactional sex to be a common practice among more than two-thirds of the young women in Uganda. About one-third of the young men in Ghana and Uganda reported having received gifts from a recent sex partner in exchange for sexual intercourse (Moore, Biddlecom, and Zulu 2007). The Adolescent Girls Vulnerability Index report, developed by UNICEF and Population Council (Amin 2013), states that a national average of 12.7% of all sexually active women (aged 15 to 19) have had sex with partners who are ten or more years older than themselves. In the research literature, a broad range of prevalence rates of transactional sex have been reported. One study reports 11.8% of all girls aged 15 to 19 and 18.6% of all girls aged 20 to 24 participate in transactional sex with older partners (Kelly et al. 2003), whereas another study reports much higher incidences of cross-generational relationships, showing 85% of secondary school girls (aged 12 to 20) have been involved in sexual relations for money or gifts (Nyanzi, Pool, and Kinsman 2001).

Factors associated with transactional sex include age discrepancies: older men, called “sugar daddies”, are often involved with young girls and, although occurring less often, older women involved with young men are referred to as “sugar mummies” (Chatterji et al. 2007; Luke 2003; Luke and Kurz 2002; Meekers and Calves 1997). But contrary to popular belief, “sugar daddies” in transactional sexual relationships are not as widespread as often assumed. Transactional sex has also been reported among youths close in age, often 5 to 7 years apart, where it may be characterized as a casual partnership (Luke 2005). The exchange of gifts and money has also been described as an incentive in regular partnerships (Dunkle et al. 2007a; Luke 2003; Meekers and Calves 1997; Moore et al. 2007b; Moore, Biddlecom, and Zulu 2007).

Transactional sex, especially among young women, has been linked to poor sexual and reproductive health outcomes such as unintended pregnancies, unsafe abortions, STIs (including HIV), and sexual coercion (Dunkle et al. 2004a;

Silberschmidt and Rasch 2001; Wojcicki 2002; Moore and Biddlecom 2006). Quantitative cross-sectional studies, mostly done in South Africa, point towards significant associations between transactional sex and risky sexual behaviors. The latter include multiple sexual partners, sexual concurrency, increased coital frequency, reduced condom use, and sex while intoxicated (Côté et al. 2004; Dunkle et al. 2007a; Dunkle et al. 2004b; Pettifor et al. 2005; Simbayi et al. 2004; Kalichman et al. 2007). Several qualitative studies have shown that women may be fearful of refusing sex with partners on whom they rely for material support and may be likely to have sex in situations where they might otherwise refrain if financial or material gain were not at stake (Hunter 2002; Leclerc-Madlala 2003; MacPhail and Campbell 2001; Nyanzi, Pool, and Kinsman 2001; Sadgrove 2007; Samara 2010; Wamoyi et al. 2011; Wojcicki 2002). Research conducted among men supports the association between risk behaviors associated with HIV transmission, sexual coercion, and transactional sex, but these studies have been few and limited to sub-populations of men in universities, schools, or drinking establishments (Dunkle et al. 2007a; Townsend et al. 2011).

Transactional sexual relationships have been influenced by great many socio-cultural, economic, and political conditions. Transactional sex has conventionally been linked to poverty: vulnerable women are forced into transactional sex to fulfill basic survival and subsistence needs, leading it to be often termed “survival sex” (Hunter 2002; Luke 2003; Moore, Biddlecom, and Zulu 2007; Wojcicki 2002). More recently, a counter discourse has also emerged that describes young women who are relatively well-off economically, but who also get involved in transactional sex for higher grades, employment opportunities, luxury consumables that raise their status in peer circles, and sometimes access to social networks. This is referred to as “consumption sex”. It has been identified in contexts of increasing capitalism, consumerism, globalization, and desire for modernity among contemporary societies in SSA (Hunter 2002; Leclerc-Madlala 2003; Nyanzi, Pool, and Kinsman 2001; Sadgrove 2007; Samara 2010; Selikow, Bheki, and Cedras 2002; Stoebe et al. 2011). Also, these studies often describe the motivation for transactional sexual relationships as an active process, more often employed by women, to gain social power in cultures by using sexuality as a valued commodity (Hawkins, Price, and Mussa 2009; Kaufman and Stavrou 2004; Kuato-Defo 2004; Leclerc-Madlala 2003; Samara 2010; Wamoyi et al. 2011). However, the method of inquiry, research setting (country of research, urban or rural), age, and gender of participant, varies within both set of studies that report these different motivations for transactional sex.

To further understand the practice of transactional sex it is helpful to conceptualize such relationships on a “continuum of volition”, from a balanced give-and-take to a coerced relationship that disrupts the ability of both partners to protect themselves and each other from abuses of power and increases HIV risk (Figure

1). The continuum of volition has been originally conceptualized by Save the Children, UK, to describe the cross-generational relationships among young women in SSA. It has been used to design interventions based on different motivations for engaging in such relationships (Weissman et al. 2006).

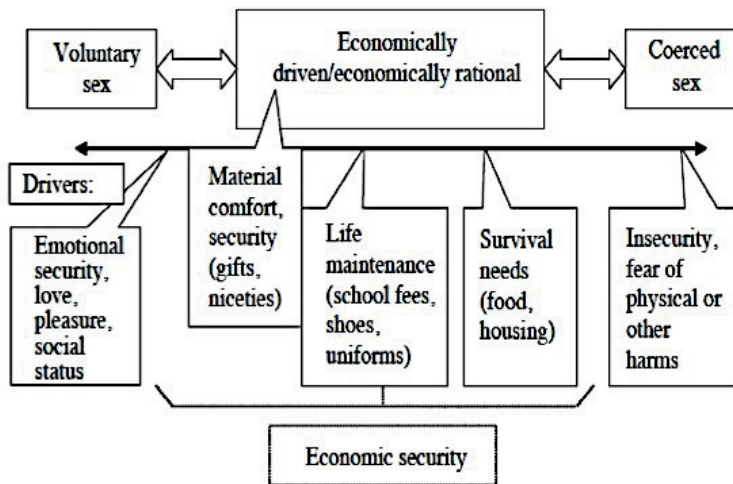


Figure 1. Sexual Agency Continuum (Source: Weissman et al. 2006)

The socio-cultural influences associated with the notion of material gift exchange for sex have been described in anthropological studies for decades. Early research into HIV by anthropologists suggested that transactional sexual relationships were rooted in historical, socio-cultural, and gendered practices and needed to be differentiated from traditional notions of prostitution held in the Western world (Hunter 2002; Leclerc-Madlala 2003, 2008). The display of wealth and ability to provide might be tied to the long-standing culture of bride-wealth, gender roles and masculine identity in traditional SSA societies (Leclerc-Madlala 2008; Nobelius et al. 2010; Jewkes, Morrell, et al. 2012; Leclerc-Madlala 2009).

Alcohol consumption and sexual behaviors

According to the global report on alcohol use, Ugandans are the highest per capita consumers of alcohol in Africa. A large number of abstainers in general population indicate that those people who do drink tend to consume substantial amounts of alcohol with young people in Uganda following a similar pattern of alcohol consumption (World Health Organization 2011). Uganda lacks a clear national alcohol policy, has weak and poorly enforced laws, and is the scene of widespread marketing by alcohol companies directed towards youth. Research has shown that alcohol marketing efforts in Uganda, such as providing free alcohol to young people, appears to be strongly associated with current alcohol consumption, problem drinking, and drunkenness among youth in the country (Swahn, Palmier, and Kasirye 2013; Uganda Youth Development Link 2008). Alcohol is easily available to students at Uganda's universities and, according to local reports, alcohol consumption is considerable, particularly during celebrations (Uganda Youth Development Link 2008).

The contribution of alcohol to risky sexual behavior (multiple sexual relationships or unprotected sex) has been implicated in the spread of STIs, including HIV (Cook and Clark 2005; Kalichman et al. 2007; World Health Organisation 2005). It has been suggested that heavy drinking patterns may influence sexual risk-taking by affecting judgment and reducing inhibitions, thereby diminishing perceived risk or excusing behaviors otherwise considered socially unacceptable (Critchlow 1986). Alcohol myopia theory (Steele and Josephs 1990), described as the restriction of cognitive capacity where the person focuses on the salient situational cues of sexual initiation and ignores the peripheral ones, suggests that alcohol consumption in an initiate situation when arousal is high may limit a person's ability to identify potential dangers, including the risk of STIs, unwanted pregnancy, or sexual coercion. By contrast, the alcohol expectancy model proposes that an individual's behavior after drinking is driven by preexisting beliefs and expectations about possible effects of alcohol in the manner of a self-fulfilling prophecy and may result in lower risk perceptions, unsafe intentions, and various forms of risky sexual behavior (Bryan et al. 2005). Researchers have used confounding variables, such as personality factors of sensation seeking or compulsivity, in attempting to explain the association between alcohol and STIs, including HIV and AIDS (Kalichman et al. 2002).

Rationale

Uganda is one of the youngest nations in the world. It has one of the most rapidly growing populations, at annual population growth rate of 3.2% and an estimated total population of 35.4 million people, of which 34% are between 10 and 24 years of age (Uganda Bureau of Statistics 2012). The health problems and needs of adolescents and youth in Uganda include such issues as sexual and reproductive health, alcohol abuse, and mental ill-health (Population Secretariat 2013).

Uganda has made progress in education. More and more young people are enrolling in universities, although the number is still low as in comparison to international statistics (National Council for Higher Education 2013). Data is lacking on prevalence and determinants of poor SRHR outcomes such as STIs (including HIV), sexual coercion, transactional sex, and other risky sexual behaviors within sub-populations like university students, since routine sources of data (such as HIV surveillance and national population-based AIDS indicator surveys) cannot be used to obtain information which are specific to these sub-populations (Lake Victoria Basin Commission - East African Community 2010).

Although there is evidence of increasing transactional sex among young people in Uganda including university students, little is known about how young people view these relationships. Previous epidemiological research among youth mainly consisted of quantitative and cross-sectional studies that have reported prevalence, determinants, and associations of risky sexual behaviors with poor SRHR outcomes. The few qualitative studies to address transactional sexual relationships have generally been limited to understanding the motivations of only young women who participate in such relationships along with economic and power differentials that characterize their dynamics. It is unclear whether young people who provide gifts or money differ from young people who receive gifts, money or things of value in exchange for sexual relations. The role of alcohol in facilitating transactional sex has been well-established in countries with generalized HIV epidemics like South Africa. Despite the imminent threat of STIs, including HIV and AIDS, the issue of alcohol use and sexual risk-taking among university students in Uganda has also been largely unaddressed. Hence, it is important to gain further insight into the relationship between alcohol and risky sexual behavior including transactional sex.

Furthermore, there is increasing evidence that sexual coercion impacts sexual health and sexual behaviors of young men. This population seems to have been left out of research on associations between sexual coercion, transactional sex, and risky sexual behaviors, particularly in the context of Uganda. In addition, although transactional sex is prevalent among young people in Uganda, the restricted scope of the majority of the studies raises the question of generalizability. Given the high

prevalence and increasing incidence of HIV, and the growing trend of transactional sex among young people, a better understanding of the sexual behaviors of Ugandan youth is needed to develop effective interventions.

In order to understand the nuances and complexities of different situations and contexts within which young people in and out of universities may engage in transactional sex and other risky sexual behaviors, the present thesis seeks to explore and understand the role of sexual relationships and sexual behaviors. It specifically aims to gain an understanding of the role of transactional sexual relationships and their association with risky sexual behaviors among young people in Uganda in general, and also among sub-population of young people in a Ugandan university in particular. This thesis aims to fill in this knowledge gap that may inform intervention programs seeking to reduce HIV transmission by addressing safe sexual behaviors, preventing sexual coercion, and decreasing gender inequalities.

Aims

General aim

The overall objective of the thesis is to gain a detailed understanding of the range of ecological factors that influence HIV-related sexual risk behaviors among the youth in Uganda, with a special focus on transactional sex. It aims to fill a knowledge gap by studying the forces that shape sexual relationships and sexual behaviors of Ugandan youth. Its intention is to inform evidence-based interventions that are locally relevant and culturally adaptable in order to prevent the spread of HIV among Ugandan youth.

Specific aims

1. To analyze the association between alcohol use and risky sexual behaviors (at a global, situational and event level) among Ugandan university students with sexual experience (Study 1).
2. To assess the prevalence of transactional sex and explore the various risk factors associated with it on a university campus in Uganda (Study 2)
3. To explore the role of sexual relationships in the life of students at a Ugandan university (Study 3)
4. To examine the prevalence of transactional sex and determine the associations between transactional sex, risky sexual behaviors, and HIV sero-status among youth in Uganda (Study 4)

Conceptual and Theoretical framework

Bio-ecological Systems Theory framework

The Bio-ecological Systems Theory (BST) framework (Bronfenbrenner 2005; Bronfenbrenner 1986; Bronfenbrenner 1977) conceptualizes sexual behaviors as a product of dynamic and reciprocal interplay of individual characteristics (ontological or intra-personal factors) and a range of systems such as microsystems, mesosystems, exosystems, macrosystems, and chronosystems. The use of BST enables an understanding of sexual behaviors of young people in their social context and explorations of various interactions between young people and their environment. Occurrences and attributes of one system can affect other systems, which in turn, affect the motivations, decision, behaviors, and outcomes of sexual interactions among youth. Figure 2 illustrates the various ecological factors that have been analyzed in the four studies in this thesis, with the aim of understanding sexual behaviors among Ugandan youth. However, the ecological factors analyzed in the study are in no way comprehensive or exhaustive.

Intra-personal or ontological characteristics refer to the biological, cognitive, emotional, and behavioral characteristics of an individual youth. Typical examples of such characteristics included in our analysis are age, socio-economic status, role of religion on one's life, marital and employment status, risky alcohol use and mental health status.

A microsystem is any immediate environment that contains the developing individual. A microsystem typically consist of family, peers, and partners (Bronfenbrenner 1977). Micro-systemic interactions promote the transmission of values about sexual behaviors. At the family level, the effect of young people growing up with single parents and the educational attainment of the head of the household were studied. At the partner level, the age difference of the individual and the current sexual partner(s) were analyzed.

A mesosystem is composed of the interactions that take place between the microsystems within an individual's life (Bronfenbrenner 1977). Multiple microsystems impact sexual behaviors of individuals differently. The interaction

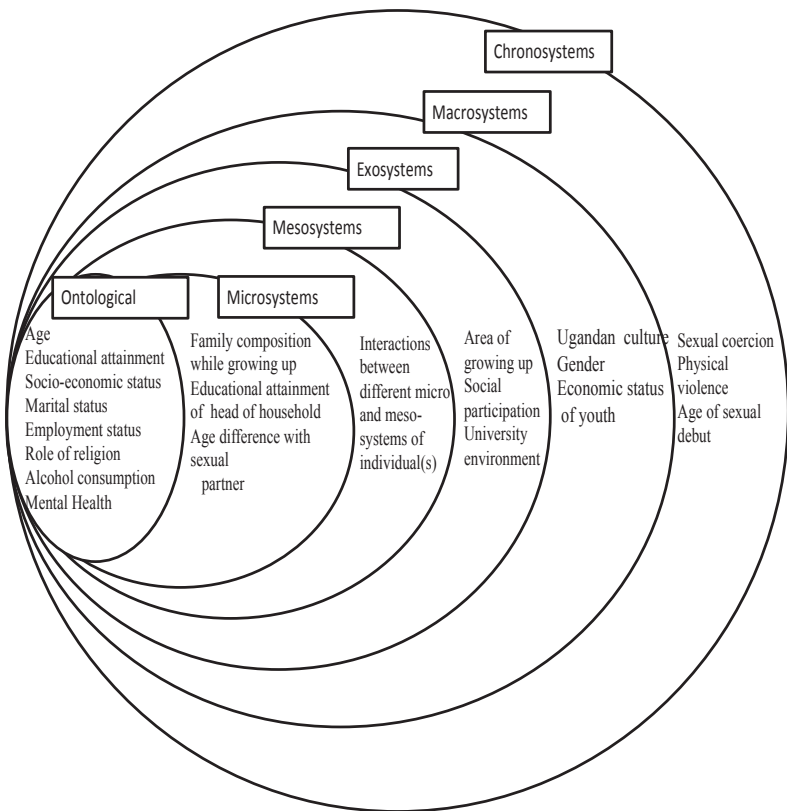


Figure 2. Bio-ecological Systems Theory framework for sexual behaviors among Ugandan youth (Source: Bronfenbrenner 1977; 1986)

of microsystems of different individuals are referred to as mesosystems. A typical example of a mesosystem interaction might be the pattern of sexual behavior reinforced by experiences of peers at a university or the exposure to liberal urban environments, such as in universities, while growing up in a rural setting.

An exosystem includes institutions that influence an individual's daily settings but are not part of that individual's immediate environment. Typical examples of such exosystems are university and school environments (analyzed in the study), media images and access to healthcare institutions.

A macrosystem is comprised of cultural and societal principles that create contexts and patterns within the outermost setting (Bronfenbrenner, 1977). It can influence the prevailing beliefs and messages regarding sexual behaviors. Macrosystems include gender norms, culture, ethnicity, and religion.

A chronosystem involves temporal changes or events in a lifespan that influence a person or their environment (Bronfenbrenner, 1986). These temporal changes are related to the sexual and reproductive lifecycle, such as pubertal age, sexual initiation, or such events as being a victim of sexual coercion or physical violence that might influence the future sexual behavior of an individual.

Sexual Scripting Theory

To specifically understand the socio-cultural influences on sexual behaviors and sexual relationships (Study 4), we used the sexual scripting theory of Simon and Gagnon (1984; 1986), according to which people derive expectations about sexual behaviors (i.e., sexual scripts) from their social contexts. Individuals learn to follow a sexual script like a script of a play about who has sex with whom, when, where, how, and why. These sexual scripts occur at three major levels: cultural, interpersonal, and intra-psychic. The authors argue that sexual activities are constructed from the interplay between these three levels of scripting. Cultural scripts like gender norms are guidelines that represent a social understanding of the collective meanings of sexual behaviors; interpersonal scripts represent the negotiations of the actors with others, drawing heavily upon cultural scenarios and involving symbolic elements expressive of such scenarios; intra-psychic scripts refer to personal understandings of the sexual self that guide behavior and enable reflection and revision from time to time (Simon and Gagnon 1986).

Material and Methods

The current thesis utilizes a mixed-method approach in order to gain a detailed understanding of the range of ecological factors that influence HIV-related sexual risk behaviors among the youth in Uganda, with a special focus on transactional sex. Various samples, data sources, and analytic methods are used to explore the role of sexual relationships and report the prevalence and correlates of risky sexual behaviors, including transactional relationships. Table 2 provides an overview of the aims, study design, data sources, and analytical approach of the papers included in the thesis.

Table 2. Overview of the thesis studies: aims, study design, population sample, data sources and analytical approach

Study	Aims	Study design	Population sample	Data sources	Statistical analysis
1	To analyze the association between alcohol use and risky sexual behaviors at a global, situational and event level among Ugandan university students with sexual experience	Cross-sectional	The total study sample comprised 1954 students. For this study we analyzed only 693 males and 486 females who reported sexual experience	Self-administered questionnaire	Descriptive statistics, bivariate, and multivariate logistic regression
2	To assess the prevalence of transactional sex and explore the various risk factors associated with it in a university campus in Uganda	Cross-sectional	All those who responded to the questionnaire were included in this study (1087 males and 867 females)	Self-administered questionnaire	Descriptive statistics, bivariate, and multivariate logistic regression
3	To explore the role of sexual relationships in the life of students in a Ugandan university	Qualitative	Purposive sampling of undergraduate students (33 females and 31 males)	Focus-group discussions (9 in number)	Grounded-theory analysis
4	To examine the prevalence of transactional sex and determine the associations between transactional sex, risky sexual behaviors and HIV sero-status among youth in Uganda	Cross-sectional	The total study sample comprised of 3479 males and 4627 females. For the purpose of this study we selected 1516 men and 2824 women who reported sexual activity in the 12 months prior to the survey	Private face to face interviews with structured questionnaire	Descriptive statistics, bivariate, and multivariate logistic regression

Study populations and study designs

Uganda has five public and twenty-nine private universities. Many more Ugandan youth are now enrolled in universities than in the past. For most young people in Uganda, university life marks the beginning of independent living in hostels on and off campus, far from their parental homes. According to the report on higher education, there were 198,066 university students in Uganda in 2011, 44% of whom were women (National Council for Higher Education 2013). Most undergraduates at these schools are between the ages of 20 and 24, live off campus, and are supported privately according to an HIV/AIDS sero-behavioral survey done at six universities in Uganda (Lake Victoria Basin Commission - East African Community 2010).

The first three studies in this thesis were carried out at Mbarara University of Science and Technology (MUST) in south-western Uganda, which had an undergraduate population of 2870 students in 2014. It is located in the centre of Mbarara, approximately 350 km to the southwest of the capital city, Kampala.

Studies 1 and 2 employ a cross-sectional study design. The target population for these studies consisted of students enrolled in different undergraduate programs throughout various faculties at MUST in the year 2010. The total sample for these studies comprised of 2706 individuals, 1954 of whom participated in the study (72% of all registered undergraduates). The respondents included 1087 males (55.6%) and 867 females (44.4%).

Study 3 employed a qualitative study design. A purposive sampling technique was employed to obtain maximum variation among the study participants in terms of gender, age, year of study, and faculty of study in order to reflect the diversity present among undergraduate students at MUST.

Study 4 was a cross-sectional study whose data were drawn from the UAIS, a nationally representative, population-based survey of HIV serological status. It was carried out between February and September 2011 by the Ministry of Health (MoH), Uganda, working with ICF International, the US and the Uganda Bureau of Statistics (UBOS). A representative probability sample of 11,750 households was selected for the survey, which utilized a two-stage sample design. The first stage involved selecting clusters from the list of enumeration areas covered in the 2002 population census. This resulted in identification of 470 clusters consisting of 79 urban and 391 rural points. The second stage involved systematic sampling of 25 households per cluster from the list of households recorded by UBOS. Further details on the survey and sampling methodology have been published elsewhere (Uganda Ministry of Health and ICF International 2012). All women and men ages 15 to 59 who were either permanent residents of a household or

visited the household on the night before the survey were eligible for inclusion in the interviews. A total of 12,153 women (response rate 98.0%) and 9588 men (response rate 96.0%) were interviewed. The analysis of the study was restricted to men and women between the ages of 15 to 24 years who had been sexually active in the past 12 months (1516 men and 2824 women).

Data collection and ethical considerations

Studies 1 and 2

The present study was a follow-up to a survey conducted at MUST in 2005 using the same questionnaire (Agardh et al. 2010; Agardh, Odberg-Pettersson, and Östergren 2011a). The questionnaire was administered in English and consisted of 132 items; it addressed alcohol and other substance use, social capital, self-rated health, mental health, sexuality, and sexual relations. In addition, there were questions on basic socio-demographic characteristics, such as age, sex, area of growing up, religious affiliations, and the role of religion in the family life of the individual during childhood and adolescence. The questionnaire was developed in 2005 and based on focus group discussions held with students at the same university (Agardh, Östergren, and Liljestrand 2004) in addition to instruments validated in other studies (Lewin 1998).

Ethics approval for the project was granted by the Institutional Review Committee at MUST (IRC-MUST). The entire undergraduate student body at MUST was invited to take part in the survey. Prior to distribution of the questionnaire, a consent form was circulated describing the purpose of the study, and students were asked to sign if they agreed to participate. The research team informed the students that participation in the survey was voluntary and anonymity would be assured. The contact details of the project's principal investigator and the research assistant were provided in case students had any personal questions. The signed consent forms and completed questionnaires were deposited to a sealed box by each student.

Study 3

A total of nine Focus Group Discussion (FGDs) (three with men, three with women, and three with both men and women) were held from June 2014 to July 2014. Students were approached individually with the help of peer educators from Mbarara Peer Project or contacted through notice boards on campus. The total

number of FGDs was determined by the saturation of ideas that is, the point when no new information was elicited from further FGDs. Each of the nine FGDs consisted of six to eight students and lasted between 1.5 and 2 hours.

All discussions were conducted in English and audio-recorded with the permission of the participants. The FGDs were conducted amid quiet, private surroundings in a project house (LUMUST house: Lund University and Mbarara University project house). All the FGDs were facilitated by one person (VC) with the assistance of four Mbarara Peer Project (MPP) educators (3 males and 1 female). One MPP peer educator was present to take notes during each FGD. All participants were encouraged to actively participate in the discussions, although efforts were made to not single out any one participant so that no one would feel uncomfortable. After each FGD, an allowance of between 10,000 UGX (\$4) and 25,000 UGX (\$10) was provided to each participant to cover travel expenses.

The semi-structured topic guide for the FGDs included open-ended questions on the kind, dynamics, and motivations of various sexual relationships that students engage in, along with risk perceptions associated with those relationships. Prior to the data collection, two informal FGDs were conducted to ensure the adequacy of the topics to be discussed and refine the FGD technique. The facilitator conducted the focus group as a discussion of sexual relationships on campus in general, enabling students to respond in the third person to avoid feeling that they were being interrogated about their own sexual behavior.

The IRC-MUST granted permission to conduct the study. The Uganda National Council of Science and Technology also approved the study design. Before the start of the FGDs, consent forms were distributed to the participants, who were assured confidentiality and anonymity. Participants were informed that they could withdraw from the study at any time. They were also told that they could request the moderator to switch off the audio recorder at any point. All names and other identifiers of participants were erased from the transcripts, which, together with the audio-recordings were stored in a password-protected file accessible only to two of the researchers (VC, AA). Participants were informed that counseling services were available, should they become psychologically distressed during the course of the discussions.

Study 4

Private face-to-face interviews using structured questionnaires were conducted with participants. The contents of the questionnaires were based on a) the standardized AIDS Indicator Survey (AIS) questionnaire developed by Demographic Health Survey (DHS), and b) the questionnaire used in 2004–2005

Uganda HIV/AIDS Sero-Behavioral Survey (Uganda Ministry of Health and ICF International 2012). Data collection included social-demographic characteristics (age, marital status, area of residence, highest educational level, religion, economic level of the household, and employment status), self-reported sexual behaviors, and sexual coercion. Questions on transactional sex were determined by the sex of the individual. Age of recent sexual partner and whether gifts, favors, or money were received in exchange for sex were asked of women only, and questions about having paid in exchange for sex were asked of men only. HIV status was determined from blood samples obtained during interviews from consenting respondents, to whom anonymity and confidentiality of test results were assured. Data from individual interviews and HIV sero-status were linked through unique identifiers for each respondent.

The protocol for blood specimen collection and analysis was reviewed and approved by the Science and Ethics Committee of the Uganda Virus Research Institute, ICF Macro's Institutional Review Board, and a review committee at the US Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia. Ethics committee of the Uganda National Council of Science and Technology also approved the national survey. Permission to use the data for this study was obtained from ICF International.

Study measures

Outcomes measures

Multiple sexual partnerships (Study 1) was based on the question: "How many sexual partners have you had in the last 12 months?" The open-ended question was later dichotomized into fewer than two, or two or more, sexual partners; the latter was classified as 'multiple sexual partnerships'.

Inconsistent condom use with a new partner (Study 1) was based on the question: "How often do you use a condom with a new sexual partner?" The alternatives to this question were as follows: (1) always; (2) often; (3) sometimes; (4) never; or (5) The question does not apply to me. The alternatives were then dichotomized as 'consistent condom use with a new partner' only for students who answered 'always' and 'inconsistent condom use' for all other responses.

Having ever accepted money or gifts for sexual relations (Study 2) was based on the question: "Have you ever accepted money, a gift, or some other form of compensation as payment for sexual relations?" The two negative options, 'No, it never happened to me', or 'No, but I have fantasized about it' were combined as

‘not having ever accepted’ while the positive option ‘yes’ was categorized as ‘having accepted money, gifts, or some other form of compensation for sex’.

Having paid or given a gift or otherwise compensated for sex (Study 2) was categorized either as ‘yes’ or ‘no’.

Having received money or gifts in return for sex in the last 12 months (Study 4) was based on the following questions: 1) “Did you ever give sex in exchange for goods or services? 2) Did you ever give sex in exchange for money? 3) Did this happen in the last 12 months?” The above questions asked only of women. If the respondent answered ‘yes’ for either question 1 or 2 and ‘yes’ to question no. 3, she was categorized as ‘yes’ while otherwise was categorized as ‘no’.

Having paid for sex in last 12 months (Study 4) was based on the question: “In the last 12 months, did you pay anyone in exchange for having sexual intercourse?” The question was limited to men in the sample and the options were categorized as ‘yes’ or ‘no’.

HIV sero-status (Study 4) was categorized as “HIV positive” or “HIV negative”, depending on test results from the blood samples of individual respondents.

Demographic and socioeconomic variables

Age for Study 1 was divided into “ ≤ 22 or > 22 years”, based on the median of the sample while study 2 employed the WHO definition of youth as a cut-off dividing the respondents into of “ ≥ 24 years and < 24 years”. For Study 4, age was categorized as “15 to 19 years” and “20 to 24 years”.

Area of growing up (Studies 1 and 2) sought to determine whether students grew up in an urban, semi-urban, or rural setting. Combining urban and semi-urban into one category and rural into another dichotomized the variable.

Role of religion (Study 1) was based on the question “What role did religion play in your family when you were growing up?” The response alternatives were dichotomized so that “religion played a major role” and “religion was relatively important” were coded as ‘major role of religion when growing up’; “religion was not so important” and “religion was not important at all” were coded as ‘minor role’.

Religious affiliations (Study 4) were categorized as ‘Catholic’, ‘Protestant’, ‘Other Christians, including Pentecostals and Seventh Day Adventists’, ‘Muslims’, and ‘Others religions’.

Educational level of head of household (Study 2) was dichotomized so that “did not finish primary school” and “completed primary school” were coded as ‘ $\leq$ primary school’ and any education above that as ‘ $>$ primary school’.

Educational attainment of the respondent (Study 4) was categorized as ‘ $>$ primary’ or ‘ $\leq$ primary’.

Marital status (Study 4) was classified as ‘never married’, ‘currently married or living with partner’, or ‘divorced, widowed, or separated’.

Employment status of the respondent in the last 12 months (Study 4) was classified as ‘yes’ or ‘no’.

Economic level (Study 4) was categorized as ‘belonging to highest wealth quintile (richest)’, ‘belonging to middle two wealth quintiles’, or ‘belonging to lowest two quintiles (poorest)’. In the original dataset, the survey population was divided into five wealth quintiles based on household assets, using principal component analysis (Uganda Ministry of Health and ICF International 2012).

Alcohol-related variables in study 1

Alcohol use over the past 12 months was based on the question “How often have you consumed alcohol during the past 12 months?” The alternatives to this question were as follows: (1) four times a week or more; (2) two to three times a week; (3) three to four times a month; (4) once a month or seldom; and (5) never. The first three alternatives were coded as ‘frequent alcohol use’, whereas the fourth was categorized as ‘seldom alcohol use’. Those who responded with the fifth alternative were classed as ‘abstainers’.

Alcohol use in relation to sexual activity was based on the question “How often do you drink alcohol before having sexual intercourse?” The response options were as follows: (1) always or almost always; (2) over 50% of the time; (3) around 50% of the time; (4) less than 25% of the time; and (5) almost never or never. This variable was then dichotomized by combining the first three alternatives as ‘alcohol used in relation to sexual activity’ and the last two as ‘non-use of alcohol in relation to sexual activity’.

Alcohol use on the last occasion of sexual intercourse was based on the question “Had you been drinking any alcohol the last time you had sexual intercourse?” The alternatives were defined as ‘yes’ or ‘no’.

Explanatory variables in study 2

Heavy episodic drinking was based on answers to the question “How often do you drink six glasses or more of alcohol on the same occasion?” Three responses, ‘daily’, ‘every week’, and ‘every month’, were coded as ‘heavy episodic drinking’ while ‘never’ and ‘abstainers of alcohol’ were coded as ‘no heavy episodic drinking’.

Mental Health status was measured using the Hopkins Symptom Checklist (HSCL-25), which assesses symptoms of anxiety (10 items) and depression (15 items) during the week preceding the administration of the checklist, on a scale from 1 (‘not at all’) to 4 (‘extremely’). In addition, 10 items from the Symptom Checklist-90 (SCL-90) subscale reflecting psychoticism were included. The SCL-90 is a self-reporting instrument for the assessment of psychiatric symptoms on a scale of 0 to 4. For each item students were asked, “How much has this problem bothered or distressed you during the last week, counting today?” Both the HSCL-25 and the SCL-90 have previously been used in Africa, including a population-based study in the same region of Uganda (Lee et al. 2008; Lundberg et al. 2009). A standardized mean score for anxiety, depression, psychoticism, and total mental health symptom scores was obtained for each respondent. This was based on the individual’s total score for that measure divided by the number of items answered. Following a similar procedure used in a Ugandan setting, variables were dichotomized as ‘high score’ (i.e., poor mental health status) versus ‘low score’ (i.e., satisfactory mental health status). An average score was arrived at based on a median-split of the distributions of the summary scores for each measure.

Growing up with parents was based on the question “Which adults did you live with most of the time while growing up?” The options ‘my mother’, ‘my father’, and ‘others’ was categorized into ‘growing up with single parent and others’, while the option ‘mother and father’ was categorized as ‘growing up with both parents’.

Social participation was classified on the basis of participation in a variety of 12 social activities in recent months. Based on the median, the total scores of those who answered ‘yes’ (maximum total score 12) were dichotomized into ‘high’ (above the median) and ‘low’ (below the median).

Victim of physical violence in the last 12 months was based on responses of ‘yes’ and ‘no’ to the question “Have you at any time in the last 12 months been a victim of physical violence?”

Ever experienced sexual coercion was based on a response of ‘yes’ to any of the following questions: “You have been forced to show your sexual organ”, “Someone has forced you to let them touch your sexual organ”, “Someone

forced you to let them suck or lick your sexual organ”, “Someone has forced you to let them show you their own sexual organ”, “You have been forced to watch someone masturbate”, “You have been forced to masturbate someone”, “You have been forced to take part in oral sex or to lick someone’s sexual organ”, “You have been forced to take part in sexual intercourse with the penis in the vagina, or someone has inserted an object into your vagina”, or “You have been forced to pose for a sex photo or sex film”. In the absence of any affirmative answer to the above questions and affirmative answer to the statement “you have not been forced into any of these”, the individual was classified as ‘unexposed’ to sexual coercion. Using this set of questions as a measurement of sexual coercion has been validated in previous studies in Uganda and Sweden (Lewin 1998; Agardh et al. 2012).

Age disparity of the transactional partner was based on the question “What was the age of the person from whom you last accepted money or some other form of compensation as payment for sex?” The options “Older than me but not more than ten years older” and “Older than me by more than ten years” was categorized as ‘having an age-disparate transactional partner’, while the option “About the same age as me” was categorized as ‘same age transactional partners’.

Sexual behavior variables in study 4

Lifetime number of sexual partners was based on the question: “In total, how many different people have you had sexual intercourse with in your lifetime?” The options were then categorized into ‘ ≤ 2 partners’, ‘3 to 5 partners’, or ‘ > 5 partners’.

Multiple and concurrent sexual partnerships in the last 12 months were defined as ‘ < 2 partners’, ‘ ≥ 2 partners but not concurrent’, or ‘ ≥ 2 partners and concurrent’. Cumulative concurrent partnerships were defined as participation in overlapping sexual partnerships in the 12 months before the UAIS survey was conducted.

Age at sexual debut was based on the question: “How old were you when you had sexual intercourse for the first time?” The options were divided into two categories ‘ < 15 years’ and ‘ ≥ 15 years’, based on the WHO definition of risky sexual debut.

Condom use at last sexual activity with most recent partner was categorized as ‘yes’ or ‘no’.

Condom use at last sexual activity with the transactional partner was categorized as ‘yes’ or ‘no’.

Ever experienced sexual coercion in this study was based on a response ‘yes’ to any of the following questions: “Were you ever physically forced to have sex

against your will?” or “Were you ever coerced to have sex, that is, against your will but without the use of physical force?” For ethical reasons, the questions on sexual coercion and violence were restricted to one randomly selected male or female member per household. In our study, 1010 women and 522 men were included in the analysis for this variable.

Statistical analysis

Quantitative Statistics

The statistical analysis was done using IBM–SPSS Version 20.0. Descriptive analyses were described separately for men and women in all three quantitative studies. In Studies 1 and 2 differences in proportions were calculated using chi-square tests. The percentages reported in the descriptive tables for study 4 were weighted in order to account for the complex survey methodology. The significance level was accepted at $p < 0.05$, two-tailed. Confidence intervals (CI) were calculated at the 95% level to estimate statistical significance.

Bivariate logistic regressions were performed separately for men and women to calculate the crude odds ratios (OR_{crude}) for the effect of various risk factors on the outcome variables for all three quantitative studies.

A step-wise multivariate logistic regression analysis was performed to adjust for potential confounders in our studies. The adjusted odds ratio (OR_{adjusted}) was calculated in order to determine the associations between risky sexual behaviors and outcome variables for the various studies. The multivariate logistic regression analysis in Study 2 was adjusted for sex of the student, while in Studies 1 and 3 the analysis was performed separately for men and women.

In Study 1, the potential confounders that were identified for adjustment were age, area of growing up, and role of religion in the process of assessing the associations between alcohol use over the past 12 months (global association), alcohol use in relation to sexual activity (situational association), alcohol use on the last occasion of sexual intercourse (event-level association), and risky sexual behaviors (two or more sexual partners or inconsistent condom use with new sexual partner).

In Study 2, all variables such as sex, age, area of origin, educational attainment of head of the household, mental health, growing up with a single parent, low social participation, together with interaction between physical violence in last 12 months and gender of an individual, and interaction between an experience of sexual coercion and gender of an individual, were mutually adjusted to explore the individual associations with transactional sex among male and female students at a Ugandan university.

In Study 4, the OR_{adjusted} was calculated in order to determine the associations between risky sexual behaviors and self-reported transactional sex among men and women. Co-linearity of risky sexual behaviors was also assessed. As a result, lifetime number of sexual partners was removed from the final model. The socio-demographic characteristics included in the analyses were age, marital status, area of residence, and educational attainment of the respondent. Finally, a logistic regression analysis was performed to estimate the association between transactional sexual behavior and HIV status before and after adjustment for socio-demographic factors and such sexual behaviors as lifetime number of sexual partners and age at sexual debut. Age of recent partner was an additional variable that was adjusted for in the multivariate logistic modeling for HIV status among women.

Grounded-theory analysis in Study 3

The transcripts were analyzed using grounded theory methods (Charmaz 2014) in a progression from open and selective coding to forming sub-categories and building categories (Table 3). The appearance of various areas of interest was developed using a reflexive research journal, kept by the primary researcher (VC) after listening to the audio recording within a day of conducting the FGD. The reflexive journal contained the emerging area of interests as possible categories during each FGD, as also agreed upon by some of the members of the research team. Finally, FGDs were open-coded. The codes were compared; using a selective coding process that focused on predominant issues that were raised across FGDs. Coding sought to categorize the text according to type of sexual relationship and gender in order to identify differences and similarities in values and beliefs among young men and women. Discussions were held within the research team to identify and explore a core category using the constant comparison method of going back and forth between codes, sub-categories, and categories. The resulting core category was linked to other categories by axial coding (Charmaz 2014). Based on the analysis, representative quotations were selected to support the analysis.

Table 3. An example of the analytic process used in Study 3

Text	Codes	Example of a sub-category	Category (built with other sub-categories)
	→	→	→
“Most of the girls in the campus want more. And in that process you cannot get from one person because you need to get benefits all over, in all fields. So with campus students (boys) you cannot get financial benefits though you can get help in academics. . . . but you need some older man outside there who is ready to take the responsibility of your being in the university who can provide you for your finance”. (local English)	1. Girls wanting more 2. Not getting everything from one partner 3. Maximizing benefits 4. Getting more partners 5. Campus boy for academic assistance 6. Campus boys being broke 7. Girls needing financial assistance 8. Older man taking responsibility	Covering bases for all situations	Accepting sexual relations as trading currency

Results

The total sample for our Studies 1 and 2 comprised 2706 Ugandan university students, of whom 1954 participated in the study (72% of all registered undergraduates). The respondents included 1087 males (55.6%) and 867 females (44.4%). Table 4 describes the distribution of the socio-demographic factors, alcohol consumption (in general and in relation to sexual activity), mental health, and risky sexual behaviors (inconsistent condom use with new partner, and number of sexual partners in the last 12 months), including the experience of sexual coercion.

A majority of females (63.1%) in our sample were younger than age 22, the mean age of the sample being 23 years. A total of 63% of those in our sample stated that religion played a major role in their family of origin. A greater proportion of women (54.5%) than men had mental health scores indicating poor mental health status. Men (10.7%) reported being victims of physical violence in last 12 months slightly more often than women (9.8%).

As indicated in the Table 4, frequent alcohol consumption over the past 12 months along with heavy episodic drinking was more common among male students. About 20% of those who drank reported using alcohol in conjunction with sexual activity; a significantly higher proportion of them were males.

Approximately 33% of all students reported having had two or more sexual partners in the last 12 months. Again, this was more prevalent among males. Among women, about 50% reported inconsistent condom use with a new partner, whereas only 37% of the males reported the same. Experience of sexual coercion was high (29%) in both sexes, although a significantly greater proportion of women (35.4%) reported having experienced one form of sexual coercion at some point of time in their lives. The involvement of men and women differed regarding transactional sex. While more women than men reported being involved in receiving something valuable for sex (15.2% vs. 10.1%), a greater proportion of men reported paying for sex (22.7% vs. 6.2%). More than one-third of all students failed to answer any of the questions on transactional sex. Missing cases analysis showed a higher proportion of men than women (41.7% vs. 34.3%) did not answer the questions on transactional sex or sexual coercion.

Table 4. Prevalence of socio-demographic factors, alcohol consumption, mental health, and risky sexual behaviors, including transactional sex, among Ugandan university students

		All n (%) N = 1954	Male n (%) N = 1087	Female n (%) N = 867	Chi- square <i>P</i> value
Age	≤ 22	1042 (55.5)	521 (49.6)	521 (63.1)	< .001
	> 22	835 (44.5)	530 (50.4)	305 (36.9)	
	Missing	77	36	41	
Area of growing up	Urban	1067 (55.1)	551 (51.2)	516 (60.1)	< .001
	Rural	869 (44.9)	526 (48.8)	343 (39.9)	
	Missing	18	10	8	
Role of religion	Major	1232 (63.5)	650 (60.3)	582 (67.5)	.001
	Minor	708 (36.5)	428 (39.7)	280 (32.5)	
	Missing	14	9	5	
Educational level of head of household	> Primary education	1382 (72.7)	730 (68.9)	652 (77.5)	< .001
	≤ Primary education	518 (27.3)	329 (31.1)	189 (22.5)	
	Missing	54	28	26	
Living arrangements while growing up	Both parents	1020 (52.2)	554 (51.0)	466 (53.7)	.240
	Single parent/others	934 (47.8)	533 (49.0)	401 (46.3)	
Mental health score	Low (satisfactory)	920 (50.4)	549 (54.5)	371 (45.5)	< .001
	High (poor)	904 (49.6)	459 (45.5)	445 (54.5)	
	Missing	130	79	51	
Social participation	High	778 (39.8)	454 (41.8)	324 (37.4)	.051
	Low	1176 (60.2)	635 (58.2)	543 (62.6)	
Alcohol use in the last 12 months	Abstainers of alcohol	1017 (56.2)	514 (49.9)	503 (64.5)	<.001
	Seldom users of alcohol in last 12 months	632 (34.9)	403 (39.1)	229 (29.4)	
	Frequent users of alcohol in last 12 months	161 (8.9)	113 (11.0)	48 (6.1)	
Heavy episodic drinking	No	1547 (79.1)	840 (77.2)	707 (81.5)	<.001
	Yes	205 (21.9)	151 (22.8)	54 (18.5)	

		All n (%) N = 1954	Male n (%) N = 1087	Female n (%) N = 867	Chi- square <i>P</i> value
Alcohol consumption in relation to sexual activity ^{1,2}	Seldom or never	391 (79.0)	245 (76.6)	146 (83.4)	.002
	Often	104 (21.0)	75 (23.4)	29 (16.6)	
	Missing	95	68	27	
Alcohol use at the latest occasion of sexual intercourse ^{1,2}	No	360 (72.9)	227 (70.7)	133 (76.9)	.001
	Yes	134 (27.1)	94 (29.3)	40 (23.1)	
	Missing	96	67	29	
Victim of physical violence	No	1687 (89.7)	930 (89.3)	757 (90.2)	.542
	Yes	194 (10.3)	112 (10.7)	82 (9.8)	
	Missing	73	45	28	
Ever experience of sexual coercion	No	1143 (71.0)	671 (76.3)	472 (64.6)	<.001
	Yes	467 (29.0)	208 (23.7)	259 (35.4)	
Condom use with new partner ¹	Consistent	603 (57.8)	387 (62.6)	216 (50.8)	<.001
	Inconsistent	440 (42.2)	231 (37.4)	209 (49.2)	
	Missing	136	75	61	
No. of sexual partners in last 12 months ¹	0–1 partners	680 (66.4)	356 (58.5)	324 (77.5)	<.001
	2 or more	344 (33.6)	250 (41.3)	94 (22.4)	
	Missing	155	87	68	
Exchanging sex by providing gifts, money, or compensation	No	1115 (85.1)	534 (77.3)	581 (93.9)	< 0.001
	Yes	195 (14.9)	157 (22.7)	38 (6.2)	
	Missing	644	396	248	
Exchanging sex by receiving gifts, money, or compensation	No	1123 (87.5)	597 (89.9)	526 (84.8)	< 0.001
	Yes	161 (12.5)	67 (10.1)	94 (15.2)	
	Missing	670	423	247	

¹ Only analyzed among individuals who had sexual intercourse

² Only analyzed among individuals who have consumed alcohol

Study 1

Tables 5, 6, and 7 show the results of multivariate logistic regression analysis performed to account for possible confounding in the association between alcohol use and risky sexual behavior at global (Table 5), situational (Table 6) and event level (Table 6). As per Table 5, among students who frequently consumed alcohol in the last 12 months, both females (OR adjusted, 4.08; CI, 1.77–9.41) and males (OR adjusted, 3.55; CI, 2.12–5.96) were at higher risk of having had more than one partner during that period than students who abstained from alcohol use.

Table 6 presents the adjusted relationships between alcohol use in relation to sexual activity and risky sexual behavior among the students. After adjustment for confounders, male (OR adjusted, 1.75; CI, 1.01–3.08) and female students (OR adjusted, 2.35; CI, 0.91–6.08) who consumed alcohol often in relation to sexual activity were found to have a higher risk of inconsistent condom use with a new partner.

As per Table 7, both male (OR adjusted, 2.52; CI, 1.48– 4.30) and female students (OR adjusted, 5.47; CI, 2.30– 12.97) who had consumed alcohol at the time of last sexual intercourse were found to have a higher risk of multiple sexual partnerships over the previous 12 months.

Table 5. Multivariate associations (adjusted odds ratio [OR_{adjusted}], 95 % confidence intervals [CI]) between use of alcohol over past 12 months with risky sexual behavior in a sex-stratified sample of Ugandan university students with prior sexual experience

Characteristics	Multiple sexual partnerships			Inconsistent condom use with new partner		
	All	Females	Males	All	Females	Males
Abstainers	1 (ref)	1 (ref)	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Seldom users of alcohol	1.48 (1.10–2.01)	1.50 (.89–2.54)	1.33 (.92–1.95)	.80 (.60–1.07)	.83 (.54–1.30)	.85 (.58–1.25)
Frequent users of alcohol	4.16 (2.71–6.40)	4.08 (1.77–9.41)	3.55 (2.12–5.96)	1.11 (.74–1.67)	1.31 (.60–2.86)	1.24 (.75–2.04)
Older (> 22 years)	.68 (.51–.90)	.65 (.40–1.08)	.77 (.54–1.10)	1.25 (.96–1.64)	1.12 (.74–1.72)	1.21 (.85–1.72)
Rural residence while growing up	.80 (.60–1.07)	.74 (.44–1.24)	.78 (.55–1.11)	1.81 (1.39–2.37)	1.79 (1.16–2.73)	1.96 (1.38–2.8)
Minor role of religion while growing up	1.31 (.98–1.74)	1.14 (.69–1.92)	1.29 (.90–1.82)	1.04 (.80–1.37)	.90 (.57–1.40)	1.25 (.89–1.78)

The bold font indicates statistical significance at $p < .05$

Table 6. Multivariate associations (adjusted odds ratio [OR_{adjusted}], 95% confidence intervals [CI]) between socio-demographic factors and use of alcohol in relation to sexual activity with risky sexual behavior in a sex-stratified sample of Ugandan university students with prior sexual experience

Characteristics	Multiple sexual partnerships			Inconsistent condom use with new partner		
	All	Females	Males	All	Females	Males
Non-Use of alcohol in relation to sexual activity*	1 (ref)	1 (ref)	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Use of alcohol in relation to sexual activity*	4.18 (2.50–7.00)	5.65 (2.09–15.23)	3.47 (1.90–6.35)	1.78 (1.11–2.86)	2.35 (.91–6.08)	1.75 (1.01–3.08)
Older (> 22 years)	.90 (.60–1.36)	1.02 (.50–2.12)	.90 (.54–1.47)	1.32 (.90–1.96)	1.58 (.81–3.08)	1.12 (.68–1.86)
Rural residence while growing up	1.01 (.68–1.53)	1.32 (.62–2.80)	.84 (.52–1.37)	2.18 (1.47–3.25)	2.68 (1.33–5.40)	2.20 (1.34–3.60)
Minor role of religion while growing up	1.50 (.99–2.22)	1.51 (.73–3.14)	1.48 (.90–2.42)	.98 (.65–1.44)	1.05 (.54–2.05)	1.00 (.61–1.65)

*Abstainers of alcohol during the last 12 months have been excluded from this analysis
The bold font indicates statistical significance at $p < .05$

Table 7. Multivariate associations (adjusted odds ratio [OR_{adjusted}], 95% confidence intervals [CI]) between socio-demographic factors and use of alcohol on the most recent occasion of sexual intercourse with risky sexual behavior in a sex-stratified sample of Ugandan university students with prior sexual experience

Characteristics	Multiple sexual partnerships			Inconsistent condom use with new partner		
	All	Females	Males	All	Females	Males
Non-Use of alcohol at most recent occasion of sexual intercourse*	1 (ref)	1 (ref)	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Use of alcohol at most recent occasion of sexual intercourse*	3.25 (2.07–5.10)	5.47 (2.30–12.97)	2.52 (1.48–4.30)	1.50 (.98–2.32)	2.23 (.99–5.05)	1.35 (.80–2.27)
Older (> 22 years)	.88 (.59–1.32)	.94 (.45–2.00)	.88 (.54–1.45)	1.45 (.97–2.13)	1.75 (.90–3.44)	1.18 (.71–1.95)
Rural residence while growing up	.99 (.66–1.48)	1.56 (.72–3.42)	.75 (.46–1.22)	2.04 (1.40–3.02)	2.57 (1.28–5.15)	1.97 (1.20–3.20)
Minor role of religion while growing up	1.62 (1.08–2.42)	1.70 (.80–3.66)	1.58 (.97–2.58)	1.02 (.69–1.50)	.94 (.48–1.85)	1.13 (.70–1.85)

*Abstainers of alcohol during the last 12 months have been excluded from this analysis
The bold font indicates statistical significance at $p < .05$

Study 2

Table 8, reports the multivariate logistic regression analysis between various factors associated with reports of paying and accepting money, gifts, or other form of compensation in return for sex. As shown in the table, women had a higher probability of accepting money, gifts, or some other form of compensation for sex after adjustment for all factors in the final multivariate logistic model (OR adjusted 8.13, CI 3.57–18.50). Having accepted money, gifts, or some other form of compensation for sex was associated with sexual coercion for men (OR adjusted 10.90, CI 5.08–23.42) and women (OR adjusted 5.06 CI 2.72–9.40), as well as with poor mental health status among all students (OR adjusted 1.97, CI 1.20–3.22).

Being an older male (OR adjusted 1.94, CI 1.38–2.85) was significantly associated with having paid, or given a gift, or otherwise compensated someone for sex. Also, being a victim of physical violence in the last 12 months for men (OR adjusted 2.25, CI 1.26–4.00) and women (OR adjusted 2.58 CI 1.09–6.14), poor mental health status (OR adjusted 2.09, CI 1.40–3.13), and heavy episodic drinking (OR adjusted 1.67, CI 1.14–2.44) were associated with an experience of having paid, or given a gift, or other compensation for sex.

Table 8. Multivariate logistic regression analysis* of transactional sex among sample of university students in Uganda

Characteristics	Accepting gifts, money or compensation for sex		Paying money, gifts or compensating for sex	
	OR _{adjusted}	95% CI	OR _{adjusted}	95% CI
Female sex	8.13	3.57–18.50	.03	.01–.09
Age ≥ 24years	1.24	.80–1.94	1.94	1.38–2.85
Rural residence while growing up	1.43	.82–2.05	1.05	.71–1.56
Educational attainment of parents ≤ primary school	.76	.93–2.22	.55	.35–.85
Heavy episodic drinking	1.50	.97–2.23	1.67	1.14–2.44
Poor mental health status	1.84	1.16–2.92	2.09	1.40–3.13
Growing up with single parent or others	1.35	.89–2.05	1.26	.87–1.84
Low social participation	.80	.52–1.20	1.48	1.01–2.17
Victim of physical violence over the past 12 months #				
Male (Ref- Male not a victim of physical violence)	2.20	1.08–4.45	2.25	1.26–4.00
Female (Ref- Female not a victim of physical violence)	1.20	.59–2.50	2.58	1.09–6.14
Ever experience of sexual coercion ##				
Male (Ref- Male with no experience of sexual coercion)	10.90	5.08–23.42	1.53	.98–2.40
Female (Ref- Female with no experience of sexual coercion)	5.06	2.72–9.40	3.50	1.42–8.60

* Adjusted Odds ratio [OR_{adjusted}], 95% Confidence Intervals (CI). All variables have been adjusted for each other.

Sex-specific ORs from interaction between victim of physical violence in last 12 months and sex of individual.

Sex-specific ORs from interaction between ever experience of sexual coercion and sex of individual.

Bold font indicates statistical significance at $p < .05$

Study 3

‘Relationships on campus are situationships’ is an in-vivo code that emerged as the core category of the grounded-theory analysis of the FGDs held with university students in the Study 3. The core category describes a range of sexual situations that are negotiated by university students. The motivation for these ‘situationships’ varied between ‘fulfilling aspirations’ to ‘being forced into trading sex’. Negotiations in these sexual situations seem to be influenced by socio-cultural and normative factors in two categories: ‘accepting sexual relationships as trading currencies’, and ‘viewing men as providers and women receivers’. A student’s university years together with the campus environment was described in two categories as ‘exploring and experimenting during campus years’ and ‘letting your self loose’, both of which facilitated the various situations of sexual relationships among undergraduates. ‘Anticipating the ideal relationship’ also emerged as a category that indicates what students expect from a relationship after leaving the university, that is, one conforming to societal norms of marriage, financial security within relationships, and romantic notions of love, trust, and respect. The conceptual model in Figure 3 summarizes the analysis of the Study 3 depicting the core category and other categories (in bold) with their sub-categories (in italics), and the reciprocal relations that influence sexual interactions among students at a Ugandan university.

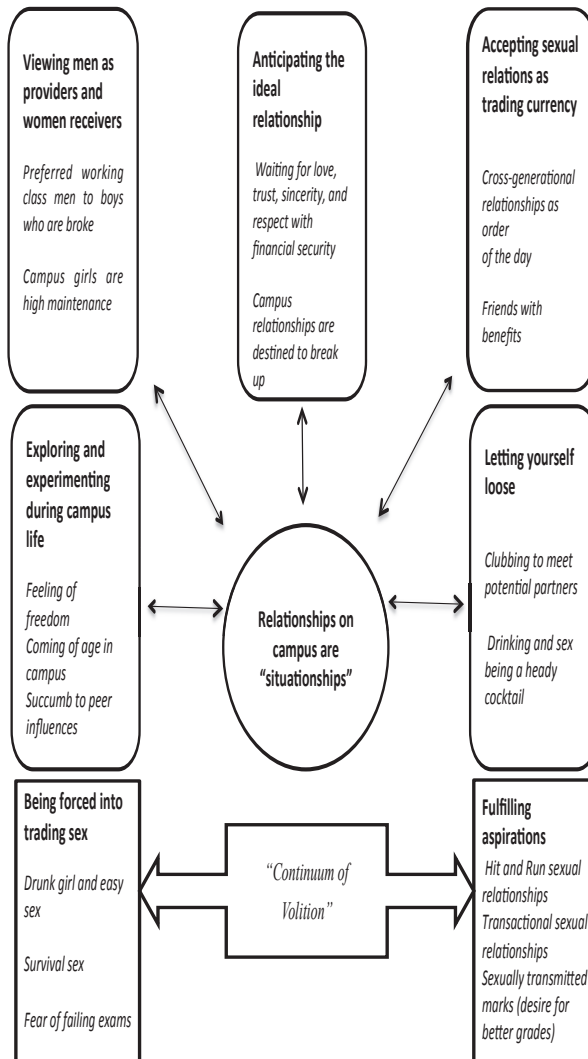


Figure 3 Conceptual Model for role of sexual relationships in lives of Ugandan university students

Study 4

Table 9 presents the differences in distribution of socio-demographic characteristics in a sample of young people in Uganda by gender and paying for sex (men only) or receiving gifts, favors, or money for sex (women only). In total, 5.2% of the men reported paying for sex, while 3.7% of the women reported having received gifts, favors, or money in exchange for sex.

Table 10 shows sexual behaviors and HIV status among young people in Uganda by participation in transactional sex. A greater percentage of those men who reported paying for sex, as compared to women who reported having received gifts, favors, or money for sex, had more than five lifetime sexual partners (males 65.8% vs. females 12.4%), concurrency of sexual partners in the past 12 months (44.9% vs. 15.2%), and did not use a condom at last sexual activity (34.6% vs. 21.9%). Among those individuals who reported transactional sex, a greater percentage of women, as compared to men, also reported being sexually coerced (females 36.4% vs. males 28.6%) and did not use a condom with their transactional partner at their last sexual activity with the transactional partner (49.0% vs. 32.0%).

Table 11 reports the multivariate logistic regression analysis between various factors associated with transactional sex in men and women. Lower educational attainment was associated with paying for sex among young men (OR adjusted 3.25, CI 1.10–9.60). Young men who had experienced sexual coercion had an almost three times greater OR of paying for sex in the last 12 months (OR adjusted 2.83, CI 1.07–7.47) than men who had not experienced sexual coercion. Having had more than two sexual partners with concurrency in the past 12 months was associated with having paid for sex among young men (OR adjusted 5.60, CI 2.08–14.95) and with having received gifts, favors, or money in exchange for sex among young women (OR adjusted 8.04, CI 2.55–25.37).

Table 12 reports associations between sexual behaviors (including transactional sex) and HIV status among young men and women. Paying for sex was significantly associated with HIV positive sero-status among men, even after adjusting for socio-demographic and other risky sexual behaviors (OR adjusted 8.30, CI 3.64–18.86). Among women, having 3 to 5 lifetime sexual partners (OR adjusted 2.12, CI 1.50–3.03) was associated with being HIV positive after adjusting, for socio-demographic and other risky sexual behaviors.

Table 9. Socio-demographic characteristics of sexually-active young people in Uganda reporting transactional sex in preceding 12 months prior to the survey

Characteristics	Men 15–24 (N=1516)		Women 15–24 (N=2824)	
	Didnot pay for sex (N = 1437) n (%)	Paid for sex (N = 79) n (%)	Received no gifts, favors or money for sex (N = 2719) n (%)	Received gifts, favors or money for sex (N = 105) n (%)
Age groups				
15–19 years	459 (31.9)	24(30.8)	915 (33.7)	54 (51.4)
20–24 years	978 (68.1)	54(69.2)	1804 (66.3)	51 (48.6)
Area of Residence				
Urban	315 (21.9)	17 (21.5)	641 (23.6)	22 (21.0)
Rural	1122 (78.1)	62 (78.5)	2077 (76.4)	83 (79.0)
Educational attainment				
> Primary school	598 (41.6)	26 (32.9)	927 (34.1)	20 (19.0)
≤ Primary school	839 (58.4)	53 (67.1)	1791 (65.9)	85 (81.0)
Marital Status				
Never married	873 (60.8)	48 (60.7)	681 (25.0)	46 (43.8)
Married	501 (34.9)	24 (30.4)	1830 (67.3)	42 (40.0)
Divorced/widowed/ separated	63 (4.3)	7 (8.9)	208 (7.7)	17 (16.2)
Employment status in past year				
Working	1177 (81.9)	68 (86.1)	1785 (65.6)	65 (62.5)
Not working	260 (18.1)	11 (13.9)	934 (34.4)	39 (37.5)
Wealth quintiles				
Highest- Richest	380 (26.4)	21 (26.3)	780 (28.7)	25 (23.8)
Middle two	527 (36.7)	43 (54.9)	970 (35.7)	45 (42.9)
Lowest two	530 (36.9)	15 (18.8)	968 (35.6)	35 (33.3)
Religious affiliations				
Catholic	590 (41.1)	29 (37.2)	1055 (38.8)	45 (42.9)
Protestant	477 (33.2)	33 (42.3)	918 (33.8)	41 (39.0)
Other Christians	131 (9.1)	7 (9.0)	334 (12.3)	8 (7.6)
Muslims	226 (15.7)	9 (11.5)	394 (14.5)	10 (9.5)
Other Religion	12 (0.9)	0 (0.0)	17 (0.6)	1 (1.0)

(All percentages are weighted)

Table 10. Sexual behaviors and HIV status of sexually-active young people in Uganda reporting transactional sex in preceding 12 months prior to the survey

Characteristics	Men 15–24 (N=1516)		Women 15–24 (N=2824)	
	Didnot pay for sex (N = 1437) n (%)	Paid for sex (N = 79) n (%)	Received no gifts, favors or money for sex (N = 2719) n (%)	Received gifts, favors or money for sex (N = 105) n (%)
Life time number of sexual partners				
≤ 2 partners	595 (41.4)	8 (10.1)	2047 (75.3)	52 (49.5)
3–5 partners	549 (38.2)	19 (24.1)	624 (22.9)	40 (38.1)
> 5 partners	294 (20.4)	52 (65.8)	48 (1.8)	13 (12.4)
Multiple and concurrent sexual partnerships in last 12 months				
< 2 partners	1143 (79.6)	28 (35.9)	2605 (95.8)	76 (72.4)
≥ 2 partners but not concurrent	110 (7.7)	15 (19.2)	35 (1.3)	13 (12.4)
≥ 2 partners and concurrent	183 (12.7)	35 (44.9)	79 (2.9)	16 (15.2)
Age at sexual debut				
≥ 15 years	1194 (83.1)	51 (64.6)	2231 (82.1)	68 (64.8)
< 15 years	243 (16.9)	28 (35.4)	488 (17.9)	37 (35.2)
Condom use at last sexual activity with recent partner				
Yes	966 (67.2)	51 (65.4)	2306 (84.8)	82 (78.1)
No	471 (32.8)	27 (34.6)	413 (15.2)	23 (21.9)
Sexual coercion [#]				
No	442 (89.7)	20 (71.4)	751 (77.6)	21 (63.6)
Yes	51 (10.3)	8 (28.6)	217 (22.4)	12 (36.4)
HIV status				
Negative	1375 (98.0)	66 (83.5)	2490 (94.0)	92 (88.5)
Positive	28 (2.0)	12 (15.2)	160 (6.0)	12 (11.5)

(All percentages are weighted)

[#]Data includes respondents questioned about sexual coercion (n = 522 men and n = 1010 women)

Table 11. Multivariate logistic regression analysis (Adjusted Odds Ratio [OR_{adjusted}]; 95% Confidence Intervals [CI]) for transactional sex among sexually-active young people in Uganda in the 12 months prior to survey

Characteristics	Men 15–24 Paid for sex in past 12 months		Women 15–24 Received gifts, favors, or money for sex in past 12 months	
	OR _{adjusted}	95% CI	OR _{adjusted}	95% CI
Age groups				
15–19	1 (Ref)		1 (Ref)	
20–24	1.60	.50–5.02	1.50	.65–3.36
Area of Residence				
Urban	1 (Ref)		1 (Ref)	
Rural	.83	.25–2.70	1.25	.46–3.44
Educational attainment				
>Primary School	1 (Ref)		1 (Ref)	
≤ Primary School	3.25	1.10–9.60	1.73	.65–4.60
Marital Status				
Never married	1 (Ref)		1 (Ref)	
Married	.40	.13–1.20	.60	.22–1.60
Divorced/widowed/ separated	1.25	.30–5.80	1.50	.40–6.00
Multiple and concurrent sexual partnerships in last 12 months				
< 2 partners	1 (Ref)		1 (Ref)	
≥ 2 partners but not concurrent	5.32	1.70–16.04	8.90	2.50–31.20
≥ 2 partners and concurrent	5.60	2.08–14.95	8.04	2.55–25.37
Age at sexual debut				
≥ 15 years	1 (Ref)		1 (Ref)	
< 15 years	.50	.20–1.59	1.34	.60–3.20
Condom use at last sexual activity				
Yes	1 (Ref)		1 (Ref)	
No	.84	.32–2.23	2.15	.80–5.95
Sexual coercion [#]				
No	1 (Ref)		1 (Ref)	
Yes	2.83	1.07–7.47	1.86	.85–4.08

* All variables mutually adjusted, [#] Data includes respondents questioned about sexual coercion (n = 522 men and n = 1010 women), The bold font indicates statistical significance at p < .05

Table 12 Unadjusted Odds Ratio (OR_{crude}) and Adjusted Odds Ratio (OR_{adjusted}) at 95% Confidence Interval (CI) for associations between HIV serostatus and sexual behaviors including transactional sex among sexually-active young people in Uganda in the 12 months prior to the survey

Characteristics	Men 15–24		Women 15–24	
	OR _{crude} (95% CI)	OR _{adjusted} (95% CI)*	OR _{crude} (95% CI)	OR _{adjusted} (95% CI)*
Transactional sex in last 12 months [#]				
No	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
Yes	8.72 (4.30–18.00)	8.30 (3.65–18.86)	1.97 (1.05–3.70)	1.65 (.82–3.33)
Lifetime number of sexual partners	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
≤ 2				
3–5	2.09 (.90–4.93)	1.46 (.62–3.44)	2.57 (1.87–3.53)	2.12 (1.50–3.03)
> 5	3.40 (1.42–8.08)	1.60 (.62–4.08)	2.60 (1.13–6.00)	2.24 (.99–5.01)
Age of sexual debut				
≥ 15 years	1 (Ref)	1 (Ref)	1 (Ref)	1 (Ref)
< 15 years	.82 (.35–2.00)	.62 (.24–1.60)	1.20 (.85–1.80)	1.14 (.76–1.70)
Age of recent partner [‡]	–	–		
Younger or same age			1 (Ref)	1 (Ref)
Older by 5–9 years			1.06 (.74–1.53)	1.04 (.72–1.50)
≥ 10 years older			1.78 (1.22–2.60)	1.50(.99–2.30)

*All variables mutually adjusted for each other and for age, area of residence, educational attainment and marital status

[#]Transactional sex in men was defined as paying for sex and in women was defined as receiving gifts, favors or money for sex

[‡]Data unavailable for male respondents

The bold font indicates statistical significance at $p < .05$

Discussion

The findings of this thesis identified a range of factors at multiple systemic levels influencing various HIV-related sexual risk behaviors (Figure 4). The BST model that was used as the conceptual framework for the thesis underscored intrapersonal (ontological), interpersonal (meso and micro- systems); institutional and community (exosystems); socio-cultural, gender and policy (macrosystems); the temporal influence of a specific event such as sexual coercion; early age of sexual debut; and being a victim of physical violence (chronosystems) as determinants of sexual risk behaviors, including transactional sexual interactions.

The sexual scripting theory that was used in the Study 3 also fits in to the BST model. Experiences within each microsystem may contribute to the repertoire of personal intra-psychoic sexual scripts surrounding sexual behaviors. The interpersonal sexual scripts (mesosystems) seem to emerge from interactions between various microsystems and their interactions with exosystems to influence the sexual behaviors of a young person. The socio-cultural influences (macrosystems), described as cultural scripts in the sexual scripting theory, were grounded in traditional gender norms and gender roles. At the same time, the growing influences of globalization and consumerism on Ugandan youth seem to indicate that wanting to fulfill material and sexual aspirations were exerting an influence on intra-psychoic sexual scripts of young adults. Interpersonal sexual scripts such as redefined adulthood roles and peer influences in a university environment often facilitated these transitions in intra-psychoic sexual scripts.

The multi-faceted approach in the thesis, using a variety of methods and different data sources, provided the opportunity to examine the sexual behaviors of Ugandan youth (particularly transactional sex). These included the survey approach in sub-population of university youth (Studies 1 and 2), a standardized AIDS indicator survey in general youth population (Study 4), and a qualitative approach in a sub-population of university youth (Study 3). The survey approach was particularly helpful in eliciting information about the prevalence of sexual coercion and transactional sexual interactions among men and women and associations between them and with a number of ecological factors at various levels. The inclusion of young men and the comparison of risk factors and associations of both receiving and providing gifts, money or favors in exchange for sex as forms of transactional sex is a key feature of this thesis. The exploratory

qualitative approach provided information on the role and motivations of various sexual relationships in the life of Ugandan university students, through the use of FGDs. The thesis also raises issues regarding the meaning, definition, and measurement of the practice of transactional sexual relationships.

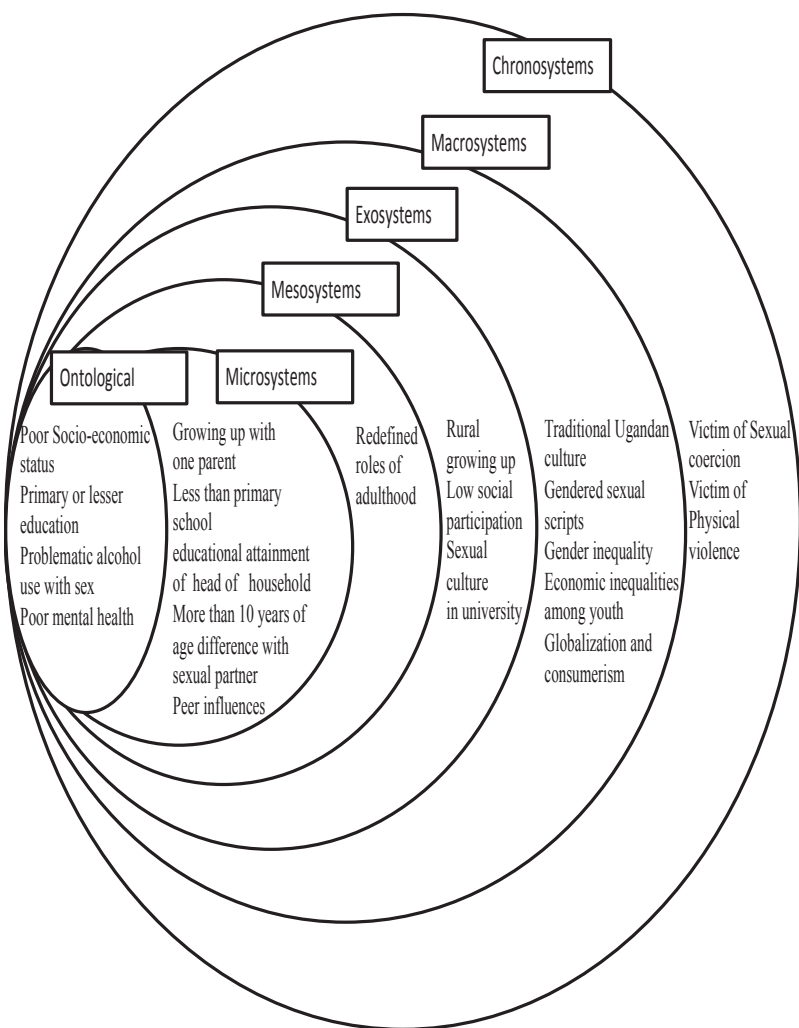


Figure 4. Bio-ecological systems influencing sexual behaviors (including transactional sex) among Ugandan youth

Prevalence across samples

The current thesis includes three prevalence studies of transactional sex, sexual coercion, and sexual behaviors (multiple sexual relationships and inconsistent condom use) among Ugandan university students (Studies 1 and 2) and Ugandan youth in general (Study 4). However, it is difficult to make comparisons of the prevalence in the two study samples (university vs. national) because of the different assessment methods, the framing of questions on the topics, the contexts of the behaviors studied and varying time periods of exposures.

The results of our thesis estimated a much higher prevalence of transactional sex among university students than the national survey of Ugandan youth, which states the figures at 5.2% in men and 3.7% in women. The study sample indicates that accepting money, gifts or favors in return for sex was more common among women (15.2%) than men (10.1%), while university men had a higher prevalence of providing gifts, money, or favors in exchange for sex (22.7% vs. 6.2%). However, the questions asked of those respondents who gave or received the gifts, favors, or money in exchange for sex were based on the gender of the respondent in the national sample derived from the AIDS indicator survey. Yet, the previous study's findings from a university in Uganda (Study 2) shows that both forms of transactional sex, i.e., giving and receiving something in exchange for sex, are prevalent among both men and women in Uganda. Hence, we believe that questions pertaining to transactional sex in surveys such as DHS and AIDS indicator surveys should be similar for men and women in order to develop parallel measures and indicators for both sexes. STRIVE, a research consortium at the London School of Hygiene and Tropical Medicine, working on structural drivers and pathways to HIV recommended that a modified definition and set of additional questions be used for both sexes with regards to transactional sex in DHS surveys across SSA (STRIVE 2014). We also recommend the adoption of questions similar to those suggested by STRIVE in DHS and AIS.

Sexual coercion is reported to be a driver of the HIV epidemic in SSA. However, little is known about extent of coercion among young males because of the gendered nature of research in this field. To address this gap, the present thesis estimated the prevalence of sexual coercion in both the sexes across all samples. Our findings suggest that females are more likely than males to report experiences of coercive sex at universities (35.4% vs. 23.1%) as well as in the general youth population (13.8% vs. 6.3%). Contrary to popular belief, however, young men were found to be at high risk of sexual coercion too. The prevalence of sexual coercion was higher among university samples, perhaps due to the varied definition of sexual coercion used in the sample of university students (Lewin 1998), as compared to DHS measurement of sexual coercion (Uganda Ministry of

Health and ICF International 2012). The survey study among university students utilized a definition of sexual coercion that included a range of implicit and explicit behaviors related to sexual interactions. However, the DHS survey use a definition that might only have captured the experience of forced sexual intercourse against one's will, with or without the use of physical force. This might have led to under-reporting some of the behaviors that have been classified as coercive events in the sample of university students. Thus, research and interventions aimed at reducing sexual coercion and abuse must include both young men and young women.

Transactional sex and sexual coercion: A trade-off

The findings of this thesis indicate that sexual coercion and transactional sex, including both receiving and paying gifts, favors, or money in exchange for sex, are associated behaviors among Ugandan youth. The results of Study 2 are congruent with findings from other studies in Africa, including Uganda, which have concluded that women who have had coercive experiences were more likely to exchange sex for money and other material gifts (Clowes et al. 2009; Kalichman and Simbayi 2004; Moore, Biddlecom, and Zulu 2007). Some research shows that young people, especially women who have previously been sexually coerced, are at risk for self-harm or risky sexual behaviors, including involvement in transactional sex, as a coping mechanism (Messman-Moore, Walsh, and DiLillo 2010). However, analysis of the national sample in Study 4 could not demonstrate the statistically significant association between sexual coercion and receiving gifts, favors, or money in exchange for sex among young girls. This could be due to the underreporting of transactional sex and sexual coercion because of the definitions of sexual coercion used and the survey methodology, which employed face-to-face interviews. Also, the analysis for the study was based on sexually-experienced women, while research indicates that substantial amount of sexual coercion happens in the context of non-penetrative sexual relationships. One also cannot rule out the possibility that physical violence and sexual coercion may be a regular occurrence in transactional sexual relationships, either due to power asymmetries within these relationships or the expectations of providers not being fulfilled (Watt et al. 2012). A study on “sugar daddies and sugar mammas” found that in circumstances where women are dependent on their partners for financial security, they are more susceptible to sexual coercion (Kuat-Defo 2004).

Studies from high-income countries in Scandinavia have shown that adolescent males reported accepting money, gifts or compensations for sex more often than

females (Pedersen and Hegna 2003; Svedin and Priebe 2007), which is contrary to the findings in this thesis, although in Study 2 a stronger association was found between the experience of sexual coercion and report of accepting money, gifts, or some other form of compensation for sex among men than among women. Prior research in the US shows that men who have experienced sexual coercion, particularly in childhood, often have adverse health and psychosocial consequences, including an increase in risky sexual behaviors, anxiety about sexual orientation, and a crisis of masculine identity (French, Tilghman, and Malebranche 2014). In high-income countries, selling sex by young men often involves older men on the buyers' side, contexts of alcohol and drug use, and is associated with psychosocial problems among those young men (Pedersen and Hegna 2003; Svedin and Priebe 2007). A study done among South African men in a rural district pointed to the fact that the perpetration of both physical and sexual intimate partner violence was one of the strongest predictors of transactional sex, regardless of whether the man provided the gifts or received them- suggesting that "transactional sex should be viewed as part of a cluster of closely related violent and controlling practices". Thus, although it may seem counterintuitive to expect that receiving resources would represent a form of controlling behavior, there is the possibility that these relationships turn physically or sexually violent if the anticipation of financial rewards or gifts is thwarted (Dunkle et al. 2007a). It might be true in the case of Ugandan young men, too. While this thesis cannot determine whether the male behavior of accepting money, gifts, or some other form of compensation for sex is a part of sexual exploration, survival need, or an established form of commercial sex work, the results suggest that males reporting having accepted money, gifts, or some other form of compensation for sex, in universities may have a profile, which is particularly vulnerable. The discussions around 'sugar mamma' relationships in Study 3 indicate such behavior among young men might be more nuanced and complex. Further studies in the general youth population and sub-populations of youth may lead to a better understanding of the profile of young men reporting accepting money, gifts, or some other form of compensation for sex and the associated risks.

The experience of sexual coercion was also found to be associated with paying for sex among young men in Studies 2 and 4. The experience of sexual coercion or violence, particularly during childhood, has also been associated with the perpetration of rape in adulthood (Jewkes, Morrell, et al. 2012; Jewkes et al. 2011). A childhood experience of sexual or physical violence, may particularly reduce the ability to form emotionally intimate relationships with members of opposite sex, and as a result may encourage preference for sexual coercion and impersonal transactional sex (Knight and Sims-Knight 2003).

In Study 2, young women in universities who had had experiences of sexual coercion or physical violence, also had a higher likelihood of reporting having

paid, or given a gift, or otherwise compensated someone for sex. However, as stated above, we cannot rule out that the coercion, violence, and abuse remains a real possibility if the anticipation of gifts or money in exchange for sex is not met for the male transactional partner. Alternatively, it is likely that women who provide their sexual partners with money are a part of the controlling relationship pattern, which involves demands of money and gifts from the sexual partner to initiate or sustain the relationship (Dunkle et al. 2007a).

Men may also engage in transactional sex with other men. Those individuals represent a substantially different population than those individuals who engage in transactional sex with women. A study among males in South Africa indicated that an experience of sexual coercion from a member of the same sex was strongly associated with paying for sexual services (Dunkle et al. 2007b). In countries like Uganda, where homosexuality is stigmatized, access to healthcare and HIV prevention services may be limited for men who engage in transactional sex with other men, thereby increasing their vulnerability to HIV, as well as increasing the spread of the disease (Semugoma, Beyrer, and Baral 2012). Unfortunately, most studies, including our own, fail to identify particular experiences and contexts of sexual coercion and transactional sex among men who have sex with men. Qualitative studies may be able to define the complex relationship between sexual coercion, transactional sex, and HIV risk in young men.

The chronosystem, according to the BST is made up of environmental events and transitions that occur throughout life, including any socio-historical events, and may influence sexual behaviors. In the present thesis, sexual coercion and victim of physical violence seem to form the chronosystems sphere of influence on sexual behaviors, particularly transactional sex.

Aspirational youth cultures and economic vulnerability amid traditional gender roles

The finding of this thesis that young women are largely driven into sexual relationships (especially transactional ones) because of luxury wants, social status, and a desire to gain access to social networks agrees with previous findings in the same area (Nyanzi, Pool, and Kinsman 2001; Sadgrove 2007; Samara 2010). While young girls may use “sex as a trading currency”, context of socio-economic environments in which they live is also influenced by globalization and, increasingly consumerist cultures (Hoeffnagel 2012; Stoebenau et al. 2011). Globalization has contributed to a situation in which material desires are often considered “needs” and young people develop a sense of relative poverty, as has

been shown in prior anthropological research across SSA (Hunter 2002; Leclerc-Madlala 2003). In such a scenario, it may seem that sex is a valuable commodity that could be traded as a currency in various situations. This view is also supported by several studies in SSA universities that have shown how young women actively strategize to simultaneously engage multiple sexual partners for a variety of material benefits, or better grades, or access to social networks, a practice referred to as consumption sex (Hunter 2005; Shumba, Mapfumo, and Chademana 2011; Silberschmidt and Rasch 2001; Shefer, Clowes, and Vergnani 2012; Gukurume 2011).

The studies argue that in the current scenario of increasing globalization, young people in countries with high HIV prevalence, including Uganda, are often acculturated from an early age to view their bodies as assets and sex as a commodity: therefore having or giving sex for free would be foolish (Green et al. 2013; Leclerc-Madlala 2008). This belief may also be upheld by parents and peers (Wamoyi et al. 2011) and combined with masculine identities that are based on a man's ability to attract a woman by providing her with resources (Dunkle et al. 2007a; Jewkes, Morrell, et al. 2012).

The culturally acceptable scripted understanding of transactional exchange might enable young females to gain social status and accrue material benefits in a setting where there are limited means of material gain outside transactional sex. This may also provide the young girl with an ambiguous form of empowerment; a finding supported by a study in Uganda that showed young women directly associated sexual exchange with their own self-worth (Nobelius et al. 2010). Additionally, older men may prefer young girls, based on perceived physical attractiveness and their lower likelihood of having HIV/AIDS, which also may contribute to considering sexuality as a means to gain economic or material resources among young girls (Luke and Kurz 2002).

However, the findings of the thesis also indicate that all young girls may not be necessarily active agents in these exchanges, but may be passive victims of transactional sex fuelled by socio-economic vulnerabilities. The Adolescent Girls' Vulnerability Index recently developed by the Population Council and UNICEF (Amin 2013) indicates that such adolescent girls generally face vulnerability both at the individual and at the community level, which exposes them to high levels of poverty. The limited money and employment available to Ugandan youth, particularly women, may drive them to engage in survival sex. A similar finding emerged from studies performed in northern Tanzania and Kenya, where economic asymmetries often pushed young women into cross-generational and transactional sexual relationships (Wamoyi et al. 2010; Luke 2005). Perhaps if young women had equal access to resources as young men in terms of parental support or income generating options, they may reject transactional sex. Hence, it

is not surprising that accepting money, favors, and other gifts in exchange for sex emerged as more common among young girls than young men in university sample. It can be speculated that it would be more common among young girls than young boys in general youth population, even though this aspect of transactional sex in national surveys, as indicated in Study 4, is limited to asking this question from women only.

The young men also cited that sex is an incentive for gaining as well as giving favors or material resources in Study 3. A few men discussed their sexuality as a valued resource in relationships with ‘sugar mammas’, though often transaction was discussed to be motivated by gaining access to resources to be able to provide for a young girl at campus. Young men in our qualitative study discussed strategies employed when providing favors such as “academic help” and “pocket money” in return for receiving sex from young girls at the university. In the quantitative studies, paying or compensating for sex was more common among men. However, the societal allowance for this exchange is often tied to traditional gender roles. The expectation of almost a guaranteed sexual interaction through transactional relationships is, may be, a means of enacting a masculinity norm among young men. (Wamoyi et al. 2011; Jewkes, Morrell, et al. 2012). A prevailing masculinity norm is having a provider role in a relationship, where the notion of sexual entitlement is a central part of that role and is often a pivot on which the masculine identities are built and measured (Jewkes, Morrell, et al. 2012). A study in rural Malawi argued that rich men have long had an ethical obligation or social imperative to share some of their wealth on a scale appropriate to their social standing. Transactional sexual relationships among rich men and poorer young women are an application of the same phenomenon in a sexual arena (Swidler and Watkins 2007). The finding of this thesis of an expectation among young people that a man should show his appreciation of a sexual relationships by sharing material resources or other forms of favors, is in agreement with a study that explored contextual factors for HIV transmission among members of non-governmental organizations in southern African region. The author also argues that the growing trend towards transactional sex can be tied to the long-standing tradition of bride wealth (Leclerc-Madlala 2008; 2009). The discussions in our Study 3 show that women also expect men to assume a provider role and they explained the preference for dating older men because of their better ability to provide material gifts and resources to their young girlfriends. Similarly, a study in South Africa showed that young women preferred dating and marrying men who could provide for and protect them (Talbot and Quayle 2010).

Young people may face the challenge of maintaining their traditions while adopting the ways of the larger globalized culture. Some studies done in SSA that included Uganda show that more and more young people in this region are developing bicultural identities that combine their local identity with one linked to

global culture (Arnett 2002; Nsamenang and Nsamenang 2002), something that Study 3 referred to as a cultural script in transition. It appears that emerging cultural scripts or macro-system factors like increasing material aspirations and globalization amid prevailing macrosystems factors like patriarchal society and gendered sexual scripts, create circumstances, or what the university students described as ‘situationships’, for transactional sex and other risky sexual behaviors among Ugandan youth.

Peer influences and adulthood redefined

A growing number of Ugandan youth are entering a phase of life that has been internationally described in research literature as “emerging adulthood” (Arnett 2000; Nsamenang and Nsamenang 2002). This period extends from the late teens to the mid-twenties and is often characterized by exploratory behaviors in sexual interactions, love, work, and worldviews. It can also be characterized by a period of confusion (Arnett 2000). For Ugandan youth, this emerging adulthood is characterized by a delay in transitions into traditional adult roles of marriage and parenthood due to a higher proportion involving themselves in schools and universities. At the same time, they are engaged with “redefining adulthood” roles.

Young people in rural Uganda actively pursue sexual relationships that run contrary to the dominant moral values of the country that deplore pre-marital sexual activity. Sex generally takes place secretly, away from adult surveillance, and is an example of young people’s agency within restrictive confines of a society (Bell 2011). University students in Uganda, like students globally, find themselves surrounded by a campus culture of sexual exploration and opportunities to interact with the opposite sex, away from parental supervision, and that may facilitate pre-marital sexual activity (Sadgrove 2007; Shefer, Clowes, and Vergnani 2012).

The influence of peers on sexual relationships in such environments is visible in the qualitative analysis of the FGDs. Peer pressure to acquire sexual experience for males, or luxury goods for females, has been identified by both qualitative and quantitative research literature (Chatterji et al. 2007; Bell 2011). Both young men and women in the university sample for the qualitative study discussed the role of multiple concurrent sexual partnerships in fulfilling student’s aspirations. In contrast to females, who discussed fulfilling multiple needs and desires through sequential or simultaneous sexual partnering, a singular masculinity script of fulfilling sexual desires and gaining sexual experience was ascribed to males who participated in multiple sexual relationships. A study among youth in Uganda found that a socially recognized masculinity role emphasized independence from

the parental home, the acquisition of money and sexual promiscuity (Nyanzi, Nyanzi-Wokholi, and Kalina 2008). These aspirations are also linked with peer pressure to conform to particular groups and achieve social standing in these groups. Thus, transactional sex was associated with multiple concurrent sexual relationships in the national sample of young men in Study 4.

However, despite opportunities for sexual activity, the impact of education was found to be protective against paying for sex among young men in the national sample analyzed in Study 4. This stands in contrast to a study done in 12 SSA countries that reported school attendance was not associated with participation in transactional sex among young men (Chatterji et al. 2007). However, a study analyzing associations between community environments and risky transactional sex among sexually active men in Malawi, Nigeria, and Tanzania, reported less likelihood of participation in risky transactional sex with increasing educational levels. Low levels of education among men may be a barrier to receiving information on safe sexual behaviors in transactional sexual relationships (Stephenson, Winter, and Elfstrom 2012).

There was no association found between in-school status and receiving money or gifts for sex among young women. This result is similar to the study that studied the impact of in-school status on adolescent girls in 12 SSA countries (including Uganda) and transactional sex (Chatterji et al. 2007). The research literature has shown the protective impact education has on protective sexual behaviors (Stephenson, Simon, and Finneran 2014). On the other hand, a scenario of reverse causality has also been found: the in-school status or being in a university, as is shown in the qualitative study, may cause young girls to exchange transactional sex for tuition fees and other material benefits (Chatterji et al. 2007).

The transition from adolescence to the new roles of adulthood involves withstanding enormous peer-pressure to conform to particular behaviors. These mesosystems also interact with microsystems, including family factors such as number of parents, and educational attainment of parents; and characteristics of one's sexual partner such as age or sexual experiences. Together they shape the sexual behaviors of young people in Uganda and possibly elsewhere.

Alcohol and sex: A “heady” mix

Alcohol is clearly implicated in risky sexual behaviors and in facilitating transactional sexual relationships in the university sample of young people. Study 1 found an association between alcohol consumption in general and in relation to sexual activity involving multiple sexual relationships. Students that consumed

alcohol often in relation to sexual activity were likely to engage in unsafe sex through inconsistent use of condoms with new partners. These findings are consistent with those of recent studies, showing that men and women who report consuming alcohol in sexual situations were likely to engage in unsafe sex (Simbayi et al. 2004; Fritz et al. 2002). Although we did not find an independent association between problematic alcohol use and transactional sex in Study 2, the qualitative study in this thesis and prior research has established the fact that transactional sex is often common at bars (Norris, Kitali, and Worby 2009) where alcohol is used as a currency for initiating such relationships (Townsend et al. 2011). It seems that alcohol and sexual risk-taking is influenced by a complex interplay of factors such as alcohol related sex expectations, alcohol myopia, the disinhibiting effects of alcohol and individual personality traits. Alcohol use and alcohol dependency contribute to risky sexual behavior, including early initiation of sexual activity, multiple sexual partners, inconsistent condom use (Stafström M and Agardh A 2012; Benson, Gohm, and Gross 2007; Abbey 2002; Krebs et al. 2009; Agardh, Odberg-Pettersson, and Ostergren 2011b) and transactional sex (Townsend et al. 2011; Wojcicki 2002; Norris, Kitali, and Worby 2009). Alcohol consumption among young people in Uganda is considered to contribute to sexual coercion, particularly for women (Lake Victoria Basin Commission - East African Community 2010; Uganda Youth Development Link 2008). Alcohol has also been associated with poor mental health and sexual coercion (Mehra et al. 2014), factors that were independently associated with transactional sex in the current thesis.

Thus, alcohol use and mental health status were found to be the intrapersonal or ontological factors among other factors (such as younger age and poor socio-economic status) that may influence risky sexual behaviors, including transactional sex among youth in Uganda.

Transactional sex, sexual behaviors and HIV

The results of the thesis, particularly Study 4, is in accordance with prior literature which shows that multiple concurrent sexual partnerships are associated with either form of transactional sex, and for both sexes (Dunkle et al. 2004b; Dunkle et al. 2007a; Halperin and Epstein 2004; Luke and Kurz 2002). Multiple concurrent sexual partnerships have been implicated as primary drivers in the spread of HIV epidemic in SSA (Bingenheimer 2010; Chen et al. 2007). The findings of Study 4 also found statistically significant associations between high number of lifetime sexual partners and HIV positive sero-status among young women in the national sample.

The thesis findings could not demonstrate an association between inconsistent condom use and transactional sexual relationships among young men and young women. However, research has documented that when the promise of gifts or money is involved in exchange for sexual intercourse, it is associated with reduced capacity to negotiate for safer sex such as condom use and less communication about sexual health (Luke and Kurz 2002). Furthermore, most qualitative and quantitative studies across sub-Saharan Africa (including Uganda) have demonstrated multiple concurrent heterosexual partnerships and little or no condom use within transactional sexual partnerships are common practices (Dunkle et al. 2004b; Leclerc-Madlala 2003; Luke 2003; Moore and Biddlecom 2006; Sadgrove 2007; Samara 2010; Silberschmidt and Rasch 2001).

Transactional sex has been identified as one of the risk factors for increased vulnerability to HIV. The estimated HIV prevalence in our study, among young people reporting transactional sex in the 12 months prior to the survey (2.7% men, 6.2% women) was found to be much higher than the national prevalence of HIV in this age group (1.2% men, 4.0% women). The study found that paying for sexual interactions was a significant predictor of HIV positive sero-status among young men in the national sample. However, after adjustment for other risky sexual behaviors, our study could not demonstrate an independent association between transactional sex and HIV positive sero-status among young women, although our findings on HIV prevalence were contrary to a South African study that reported the independent association of transactional sex with HIV incidence after adjustment for number and age of partners (Jewkes, Dunkle, et al. 2012). A recent spatial and cluster analysis of data from UAIS, which was the data source for the Study 4 of the thesis, found that transactional sex was a predictor of HIV among Ugandan youth (Chimoyi and Musenge 2014). However, that study did not use sex-disaggregated data for analysis. We believe that the structural economic inequalities affecting Ugandan women, patriarchal society, and social norms around acceptability of transactions among women and control of resources by men, and risky sexual behaviors associated with transactional sex make young women especially vulnerable to HIV (Santelli et al. 2013).

Methodological considerations

The current thesis has a number of strengths. The inclusion of young men and the measurement and analysis of both forms of transactional sex, i.e., receiving or providing money, gifts, or favors in exchange for sex, in the same study has generally been lacking in research literature. Another strength of the thesis is its multifaceted approach by using different data sets (sub-population of university youth and national sample of youth) and methodological approaches (mixed-methods with quantitative and qualitative study designs).

However, the studies contained herein also have a number of limitations. The quantitative studies adopted a cross-sectional design. Due to the nature of this design, the analyses can only assign associations and not causality. However, some of the determinants like age, sex, economic status, age of sexual partner, growing up with single parent, educational attainment of self and parent follow a temporal direction.

In Studies 2 and 4, when analyzing sexual coercion and transactional sex, it is highly possible that sexual coercion may have been a part of the transactional sexual relationship, rather than the reverse. Also, in Study 1, we cannot be certain whether alcohol influences sexual risk taking or whether individuals with multiple risk-taking tendencies were also likely to consume more alcohol and participate in sexual risk-taking behavior. We sought to mitigate the lack of information about temporality between exposure and outcome by analyzing the use of alcohol consumption in relation to sexual activity at both the situational and event level in determining the association with risky sexual behavior

External validity and transferability

The thesis comprises a study that is based on nationally representative data (Study 4). Therefore, it is generalizable and can be utilized for designing nationwide programmatic interventions and policy statements. However, the two other quantitative studies (Studies 1 and 2) and the qualitative study (Study 4) were carried out among a sub-population of Ugandan youth studying at MUST. Ten percent of all Ugandan young people attend tertiary education, hence the data from these studies might not be generalizable to the national population. Study 3 employed a purposive sampling technique to obtain study participants whose gender, age, year of study, and faculty of study reflected the diversity present among young people ages 20 to 24 at MUST, thus enabling the exploration of a broad range of roles that sexual relationships play in lives of university students. For this reason, the author is confident that the results from the MUST university population reflects the situation of other Ugandan university students.

Misclassification

Misclassification is one of the most common measurement errors in epidemiological research. It occurs when the exposure or the disease is wrongly classified, i.e., when an exposed individual is classified as unexposed or visa-versa (Aschengrau. A and Seage 2008). Misclassification may arise due to the nature of the questions asked or responses reported. Non-differential misclassification refers to errors in the classification of the exposure that are unrelated to the outcome or vice-versa. Differential misclassification is especially a problem since the outcome status is biased by exposure status and vice-versa.

The data collected in survey studies through questionnaires with retrospective self-reporting may have the potential of recall bias. The variables pertaining to alcohol consumption and sexual activity (like condom use related to alcohol), and behavioral variables like lifetime number of sexual partners may have been affected by recall bias. Some of our findings might have been underestimated due to the issue of social desirability. Although the survey conducted was anonymous, the sensitive nature of the items, relating to sexual behavior may have affected the responses that were received. It might be argued that there is a risk of differential misclassification while measuring sexual behaviors, due to the issue of social desirability. The prevalence of transactional sex, particularly receiving something of value in exchange for sex, and experiences of sexual coercion may have been higher than reported in the questionnaire, since these experiences may be considered socially undesirable to report. However, reporting of sexual behaviors may also be biased by gender of the individual. Men may over-report their sexual behaviors such as number of partners, while women tend to under-report their premarital sexual activity (Fenton et al. 2001). Therefore, if this were a case of non-differential misclassification, it would have biased our findings towards the null. However, if this were a case of dependent misclassification, it is difficult to predict the direction.

Confounding is a distortion of the association between an exposure and an outcome that occurs when the study groups differ with respect to other factors that influence the outcome. Confounding is a type of bias that can be adjusted for in the analysis if investigators possess information on the status of study subjects with respect to potential confounding factors (Rothman 2002). We identified potential confounders through a review of literature and adjusted for them by adopting a step-wise multivariate analysis. Nevertheless, some residual confounding of minor importance remained.

The survey sample carried out at MUST was directed towards all students, while the national sample of Study 4 involved a representative probability sample of 11,750 households selected through a two-stage sample design. The response rate of both samples was relatively high. Studies 1 and 2 had a response rate of 72%

that may leave some room for selection bias. The response rates for the national study ranged from 97% to 98%. The UAIS sample was allocated equally across all 10 regions of the country in order to allow a sufficient size to produce reliable estimates in each region. Since the sample was not allocated in proportion to the size of each region, the UAIS sample is not self-weighting at the national level (Uganda Ministry of Health and ICF International 2012). Consequently, weighting factors were applied to the data to produce nationally representative estimates. However the missing data and non-response were represented as stated in the analysis. They could be random, possibly leading to selection bias in an unknown direction.

Focus group dynamics might make it more difficult for some individuals to present conflicting views. Related to this, FGDs in Study 3 provided a platform for participants to perpetuate cultural myths that are not necessarily reflected in typical individual behaviors. While the study employed a purposive sampling strategy to ensure heterogeneity, the methods used to contact students could have resulted in a certain degree of homogeneity. That might have led to a restriction in the range of views. However, the researcher attempted to create a congenial, comfortable environment for the FGD and provide everyone with a chance to present his or her point of view without fear of being judged. The importance of respecting the opinions of all the participants present during FGDs was emphasized. The moderator came from a foreign country, which was somewhat advantageous as participants could assume he knew nothing about the issues beforehand: this may have encouraged open discussions. On the other hand, participants may have provided responses that they thought would please the researchers by reflecting a socially acceptable context. To mitigate this the researcher used probing and hypothetical questioning techniques to probe a diverse discussion of the topic areas.

It is possible that population estimates of HIV in national surveys, as in our UAIS, may be differentially biased. More recent analyses using special selection models suggest that these biases may be considerably larger than previously estimated and need to be corrected (Hogan et al. 2012).

Measurement of sexual coercion and transactional sex

An inherent problem associated with measuring transactional sex is the lack of an accurate account, standardized measurement tools, or specific features defining transactional sex or sexual coercion. It is quite common for parties in such relationships to disagree about motive and meaning, and for this to change over time (Kuato-Defo 2004). Unfortunately, most studies including our own, fail to identify particular experiences and contexts of sexual coercion and transactional sex. Studies also do not take into account the characteristics of the transactional or coercive partner. It might be worthwhile to include the motivations of the

transactional partner. For example, whether the transactional partner was committed to the relationship, wanted to marry or have a child with the young person in the future. Furthermore, the studies did not include experiences of forced anal sex, which may have led to under reporting of sexual coercion, particularly among men having sex with men, or if used in heterosexual relationships as a strategy to prevent pregnancy.

The use of FGDs and a qualitative study design mitigated some of the problems associated with measuring transactional sex, enabling the researcher to gain a deeper understanding of the role of sexual relationships together with the contexts, motives, and perceptions of such relationships in the lives of young people through their own voices. Although this sample for a qualitative study was a special one, it may serve as a starting point for further qualitative research among youth in general and as a complement to quantitative research findings.

Credibility and conformability of qualitative study

The researchers approached the qualitative study believing that transactional and cross-generational sex is common among female Ugandan university students, based on prior research. Although they did not introduce this idea into the FGDs, it is conceivable that it might have influenced the data collection through extensive probing into such relationships and by hastening to identify codes and categories in data reflective of such relationships. To counterbalance such a possibility, peer-debriefing sessions were held in which samples of transcripts were counter-coded by other researchers. The identification of relevant categories and sub-categories, and the assessment of the fit between the selected categories and core category for subsequent interpretation, was discussed in these peer debriefings. The entire research team of multidisciplinary competencies was involved in developing the conceptual and the theoretical model. In addition, to assure quality control, the initial results of the FGDs were cross-checked with peer educators in a mixed-sex FGD at the end of data collection, as a way of enhancing the credibility of the study.

Conclusions and recommendations

In the past decade, researchers have identified the possible synergistic co-occurrence of various epidemics and risk factors that contribute additively to increased risk of poor health outcomes, a phenomenon referred to as syndemic. The current thesis extends our understanding of syndemics to illustrate the existence of the possible co-occurrence of factors at different levels such as experiencing sexual coercion, physical violence, poor mental health, risky alcohol consumption, and participation in risky sexual behaviors, including transactional sex, that may act synergistically to compound the HIV risk among Ugandan youth.

Transactional sexual relationships are shaped over time by a number of economic, social, and political conditions that have become dichotomized as motivated by either survival or consumption. These dichotomies of transactional sex, as an active pursuit of power and agency vs. as passive victim of circumstance among Ugandan youth, appear to be over-simplistic. Such relationships may be rooted in traditional culture or emerging economic processes of globalization and may be perceived as socially, economically, and symbolically beneficial by both male and female participants. However, any argument that such relationships are a matter of choice for women has to be interpreted with considerable caution, given the huge constraints on the power of young, impoverished women in a patriarchal society with prominent age and economic hierarchies. It is advisable to take a cautious approach in terms of the limits of agency for a person who is receiving gifts or money in exchange for sex, and contextualize both survival or consumption sex, in researching or designing interventions to mitigate the risks of transactional sex. The exchange of sex for material goods, economic benefit, or other gains may be a universal concept, facilitated by a consumerist, global context. Placing the practice in a purely Ugandan or African context may imply a Western discourse on African sexuality and HIV/AIDS.

The findings of this thesis suggest that there is a need for interventions to address multiple ecological levels of influence on risky sexual behaviors. Such interventions must also take into account the interactions and contradictions of prevailing ecological systems, including the poor SRHR outcomes that are associated with transactional sex.

Attention must also be paid to the intertwined roles of sexual coercion and violence, mental health, and alcohol consumption that shape the sexual behaviors of youth. These multiple factors interact with macro- systemic factors like traditional gender norms, socio-economic conditions, and cultural factors in a progressive, changing, globalized world to create a variety of contexts for young people to carry out sexual behaviors, including transactional sex.

The thesis points towards a different susceptibility profile of males and females who participate in receiving or providing something of material value in exchange for sex. Both sexes are equally vulnerable to the sexual coercion and violence associated with transactional sex, and therefore both must be targeted in intervention programs. Treatment and counseling programs for youth who are victims or perpetrators of sexual coercion or physical violence is critical in decreasing the risks associated with transactional sex.

Interventions could address intrapersonal influences of alcohol through carefully designed public health messages that do not strengthen preexisting beliefs about the possibility of alcohol leading to risky sexual encounters. Young people should not be given an excuse for engaging in unprotected sex. These interventions should emphasize that drinking carries with it an increased likelihood of diminished judgment and a decreased perception of the risks associated with unsafe sex and that such encounters may carry a high risk of exposure to STIs and HIV. Policies directed at limiting the advertising and accessibility of alcohol to youth, and programs targeting responsible consumption of alcohol should also be stressed.

The findings on educational attainment and risky transactional sex add to the existing evidence that the effective implementation of universal primary education policy aimed at improving the educational status of a country and increasing school retention is also essential for safe sexual behaviors and HIV prevention. Interventions like conditional cash transfers that can mediate the economic drivers of sexual exchange and increase school retention, particularly among young girls, may play an important role in opposing these forces. Programs at this level could also include microfinance programs and income-generating projects that could help young people, particularly those who are out of school, find alternatives to transactional sex.

Microsystem influences can be addressed in various phases of an intervention by involving: 1) family, such as improving communication between parent and adolescent; 2) friends, through peer projects and use of role models; and 3) romantic partners, through improving communications about safe sex practices.

At the same time, major efforts should be placed on interventions that utilize a gender transformative approach (GTA) that targets young men and women. GTA

can help challenge implicit assumptions of gender roles and social norms that surround and encourage transactional sex, multiple sexual relationships and inconsistent condom use. GTA can also advocate for positions of social and political influence for women in communities, and address power inequities between persons of different genders. Finally, GTA has the possibility of creating an enabling environment for gender transformation, as it goes beyond including women as participants. However, these interventions must be designed with sensitivity to the socio-cultural context.

Interventions should move beyond basic preventative education and awareness creation to address the risk and resilience factors at multiple ecological levels. There is a need to emphasize on developing comprehensive risk reduction strategies that not only include components towards reducing multiple and concurrent sexual partners but also include negotiation and communication skills towards consistent condom use among young people. Comprehensive sexuality education (CSE) that is scientifically accurate, culturally and age appropriate, gender sensitive, and life skills-based and promotes sexuality as a natural human expression, can provide young people with the knowledge, tools and efficacy to make informed decisions about their sexual relationships and lifestyles. However, youth must be engaged and encouraged to critically challenge the implicit assumptions around gender roles, sexual coercion, and other aspects of risky sexual behaviors including transactional sex, that puts their health and well-being at risk.

Summary in Swedish

Uganda är ett av de yngsta länderna i världen. Majoriteten av Ugandas unga vuxna växer upp i miljöer med ökad urbanisering och globalisering som kännetecknas av förändrad social kontroll och nedbrytning av traditionella normer. Unga vuxna möter utbredd fattigdom, hög arbetslöshet och har begränsad tillgång till utbildning. Dessa faktorer kan få långtgående konsekvenser för hälsa och välbefinnande hos unga vuxna i Uganda. Befintlig forskning visar att unga vuxnas sexuella och reproduktiva hälsa och rättigheter är en angelägenhet för Ugandas folkhälsa.

I Uganda har åldern för pubertetsinträde sänkts samtidigt som åldern för giftermål stigit. Detta tyder på att unga vuxna i allt högre utsträckning har föräktenskapligt sex. Ofta sker dessa sexuella aktiviteter i en kontext präglad av begränsad tillgång till sexualundervisning, påtryckningar och tvång i samband med sexuell debut samt sexuella riskbeteenden, såsom att ha flera partners samtidigt och begränsad eller ingen kondomanvändning. Det är därför inte förvånande att Ugandas unga befolkning tampas med många problem i relation till sin sexuella och reproduktiva hälsa. Dessa inkluderar oönskade graviditeter, osäkra aborter och sexuellt överförbara infektioner inklusive hiv. Den senaste nationella undersökningen rapporterade en liten ökning av hiv bland ugandiska unga vuxna. Den visar att det är en oproportionellt hög hiv prevalens i gruppen unga kvinnor jämfört med unga män. Ekonomisk ojämlikhet, traditionella könsroller och sociokulturell konstruktion av maskulinitet och femininitet har pekats ut som möjliga förklaringsfaktorer. Vidare anses gåvor, tjänster och pengar i utbyte mot sexuell aktivitet, särskilt mellan unga kvinnor och äldre män, också bidra till överföring av hiv. Detta benämns ibland som 'sex mot ersättning' (*transactional sex*).

Tidigare forskning har till stor del fokuserat på individuella faktorer, inom och mellan personer, som påverkar sexuella riskbeteenden, vilket bland unga vuxna i Uganda inkluderar sex mot ersättning. Det finns även kunskapsluckor i forskningen kring hur det sociokulturella inflyandet påverkar ungas deltagande i 'sex mot ersättning' och kring den kontext i vilken detta äger rum. Traditionell forskning och preventiva insatser för att förhindra sexuella riskbeteenden inklusive

'sex mot ersättning' har ofta fokuserat på kvinnor och på deras roll som mottagare av ersättningen. Denna avhandling syftar till att fylla dessa kunskapsluckor och få en djupare förståelse för de faktorer som påverkar sexuella aktiviteter bland unga vuxna i åldern 15-24 år i Uganda, med fokus på 'sex mot ersättning'. Avhandlingen avser att presentera ny kunskap om hur folkhälsoprogram och hälsopolicy kan bidra till minskat sexuellt riskbeteende och därmed förebygga risken för hiv-infektion. Avhandlingen bygger på forskning gjord bland unga män och unga kvinnor ur befolkningen i stort och bland universitetsstudenter i Uganda. Den omfattar statistisk analys av enkätresultat från olika datakällor och kvalitativ analys av fokusgruppsdiskussioner som förts med unga vuxna på ett ugandiskt universitet.

Avhandlingens resultat pekar på att en stor andel ugandiska unga vuxna är utsatta för sexuellt tvång och att 'sex mot ersättning' förekommer. Det fanns ett starkt samband mellan konsumtion av alkohol i samband med sexuell aktivitet och riskfyllda sexuella beteenden, såsom begränsad användning av kondomer med nya partners och att ha flera sexuella partners. För både män och kvinnor som studerar på universitetet fann vi också ett starkt samband mellan att ha varit utsatt för sexuellt tvång eller fysiskt våld och att ha deltagit i 'sex mot ersättning'. Resultaten understryker den roll som den växande globaliseringen och konsumtionismen har bland universitetsstudenter och att den påverkar förfogandet av sexualiteten som en handelsvara för utbyte, särskilt bland unga kvinnor på universitetet. Dessa unga vuxna växer upp i ett patriarkalt samhälle där det finns en utbredd ojämlikhet mellan könen till förmån för män och där kulturella sedvänjor som brudpris kan kopplas till samtida praxis av 'sex mot ersättning' bland unga vuxna. Det finns därför anledning att tro att en del unga kvinnor på grund av den socioekonomiska situationen deltar i 'sex mot ersättning', frivilligt eller av tvång, men att de har begränsad förmåga att kräva 'säker sex' med en partner som ger något i utbyte. Resultaten pekar också på att 'sex mot ersättning' bland unga vuxna i allmänhet är relaterat till att ha flera sexuella partners som överlappar varandra i tid. Detta kan skapa sexuella nätverk av unga vuxna som kan bli mer utsatta för hiv-smitta, särskilt om dessa unga vuxna har partners som är äldre och hiv-positiva. Resultaten visade också att unga män som betalade något i gengäld för sex hade en högre risk att vara hiv-positiva.

Denna avhandling visar tydligt att hiv-interventioner bland unga vuxna i Uganda måste ta hänsyn till att sexuella riskbeteenden och 'sex mot ersättning' påverkas av individuella, grupp-, samhälleliga och kulturella faktorer. Behandling och rådgivning för både unga män och unga kvinnor med erfarenhet av sexuellt tvång är nödvändiga folkhälsoinsatser för att minska sexuellt tvång och 'sex mot ersättning'. Program som främjar utbildning, medvetenhet och metoder för att förhandla säkra sexuella beteenden genom omfattande sexualundervisning är viktiga. Insatser som syftar till att främja grundskole- och gymnasieutbildning och

minska skolavhopp genom villkorade kontantöverföringar är också betydelsefulla. Tillsammans med insatser som skapar sysselsättning och inkomstgenererande möjligheter genom kompetensutvecklingsprogram spelar dessa en viktig roll för att minska riskfyllda sexuella aktiviteter och 'sex mot ersättning'. Slutligen bör unga vuxna ges möjlighet att vara aktivt engagerade i att utforma och genomföra interventioner som innehåller genustransformativa tillvägagångssätt. Detta kan ske genom att kritiskt utmana existerande traditionella genusnormer samt de sociokulturella faktorer som främjar sexuella riskbeteenden såsom 'sex mot ersättning' och därmed orsakar allvarliga hälsorisker för unga vuxna.

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References

- Abbey, A. 2002. "Alcohol-related sexual assault: a common problem among college students." *J Stud Alcohol Suppl* (14):118–28.
- Agardh, A., G. Tumwine, B. O. Asamoah, and E. Cantor-Graae. 2012. "The invisible suffering: sexual coercion, interpersonal violence, and mental health—a cross-sectional study among university students in south-western Uganda." *PLoS One* 7 (12):e51424.
- Agardh, A., K. Odberg-Pettersson, and P. O. Ostergren. 2011. "Experience of sexual coercion and risky sexual behavior among Ugandan university students." *BMC Public Health* 11:527.
- Agardh, A., M. Emmelin, R. Muriisa, and P. O. Ostergren. 2010. "Social capital and sexual behavior among Ugandan university students." *Glob Health Action* 3.
- Agardh, A., P. Östergren, and J. Liljestrand. 2004. "Sexual patterns among youth in Mbarara district, Uganda with a special focus on coercion and power relations." *The XV International AIDS Conference*. Bangkok, July 11–16.
- Amin, S., Austrian, A., Chau, M., Glazer, K., Green, E., Stewart, D., et al. 2013. *Adolescent Girls Vulnerability Index: Guiding Strategic Investment in Uganda*. New York: Population Council.
- Arnett, J. J. 2000. "Emerging adulthood: a theory of development from the late teens through the twenties." *Am Psychol* 55 (5):469–80.
- Aschengrau, A., and G. R. Seage III. 2008. *Essentials of Epidemiology in Public Health*. 2nd edition. Sudbury, MA: Jones & Bartlett.
- Bearinger, L. H., R. E. Sieving, J. Ferguson, and V. Sharma. 2007. "Global perspectives on the sexual and reproductive health of adolescents: patterns, prevention, and potential." *Lancet* 369 (9568):1220–31.
- Bell, S. A. 2011. "Young people and sexual agency in rural Uganda." *Cult Health Sex* 14 (3):283–96.
- Bell, S. A., and P. Aggleton. 2012. "Time to invest in a 'counterpublic health' approach: promoting sexual health amongst sexually active young people in rural Uganda." *Children's Geographies* 10 (4):385–97.

- Benson, B. J., C. L. Gohm, and A. M. Gross. 2007. "College women and sexual assault: the role of sex-related alcohol expectancies." *J Fam Violence* 22 (6):341–51.
- Bingenheimer, J. B. 2010. "Men's multiple sexual partnerships in 15 sub-Saharan African countries: sociodemographic patterns and implications." *Stud Fam Plann* 41 (1):1–17.
- Blum, R. W., F. I. Bastos, C.W. Kabiru, and L. C. Le. 2012. "Adolescent health in the 21st century." *Lancet* 379 (9826):1567–8.
- Boileau, C., B. Vissandjee, V. K. Nguyen, S. Rashed, M. Sylla, and M. V. Zunzunegui. 2008. "Gender dynamics and sexual norms among youth in Mali in the context of HIV/AIDS prevention." *Afr J Reprod Health* 2 (3):173–84.
- Bronfenbrenner, U. 1977. "Toward an experimental ecology of human development." *Am Psychol* 32 (7):513–531.
- Bronfenbrenner, U. 1986. "Ecology of the family as a context for human development: Research perspectives." *Developmental Psychology* 22 (6):723–742.
- . 2005. *Making Human Beings Human: Bioecological Perspectives on Human Development*. Thousand Oaks, CA: Sage.
- Bryan, A., C. A. Rocheleau, R. N. Robbins, and K. E. Hutchinson. 2005. "Condom use among high-risk adolescents: testing the influence of alcohol use on the relationship of cognitive correlates of behavior." *Health Psychol* 24 (2):133–42.
- Chandra-Mouli, V., J. Svanemyr, A. Amin, H. Fogstad, L. Say, F. Girard, et al. 2015. "Twenty years after international conference on population and development: where are we with adolescent sexual and reproductive health and rights?" *J Adolesc Health* 56 (1):S1–S6.
- Charmaz, K. 2014. *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. 2nd edition. Thousand Oakes, CA: Sage.
- Chatterji, M., N. Murray, D. London, and P. Angelwicz. 2007. "The factors influencing transactional sex among young men and women in 12 sub-Saharan countries." *Soc Biol* 52 (1–2):56–72.
- Chen, L., P. Jha, B. Stirling, S. K. Sgaier, T. Daid, R. Kaul, et al. "Sexual risk factors for HIV infection in early and advanced HIV epidemics in sub-Saharan Africa: systematic overview of 68 epidemiological studies." *PLoS One* 2 (10):e1001.

Chimoyi, L., and E. Musenge. 2014. "Spatial analysis of factors associated with HIV infection among young people in Uganda, 2011." *BMC Public Health* 14 (1):555.

Clowes, L., T. Shefer, E. Fouten, T. Vergnani, and J. Jacobs. 2009. "Coercive sexual practices and gender-based violence on a university campus." *Agenda* 23 (80):22–32.

Cook, R. L., and D. B. Clark. 2005. "Is there an association between alcohol consumption and sexually transmitted diseases? A systematic review." *Sex Transm Dis* 32 (3):156–64.

Côté, A. M., F. Sobela, K. Nzambi, J. Pépin, E. Frost, C. Asamoah-Adu, et al. 2004. "Transactional sex is the driving force in the dynamics of HIV in Accra, Ghana." *AIDS* 18 (6):917–25.

Crepaz, N., T. A. Hart, and G. Marks. 2004. "Highly active antiretroviral therapy and sexual risk behavior: a meta-analytic review." *JAMA* 292 (2):224–36.

Critchlow, B. 1986. "The powers of John Barleycorn: beliefs about the effects of alcohol on social behavior." *Am Psychol* 41 (7):751–64.

Doyle, A. M., S. N. Mavedzenge, M. L. Plummer, and D. A. Ross. 2012. "The sexual behaviour of adolescents in sub-Saharan Africa: patterns and trends from national surveys." *Trop Med Int Health* 17 (7):796–807.

Dunkle, K. L., R. K. Jewkes, H. C. Brown, G. E. Gray, J. A. McIntyre, and S. D. Harlow. 2004a. "Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa." *Lancet* 363 (9419):1415–21.

———. 2004b. "Transactional sex among women in Soweto, South Africa: prevalence, risk factors and association with HIV infection." *Soc Sci Med* 59 (8):1581–92.

Dunkle, K. L., R. Jewkes, M. Nduna, N. Jama, J. Levin, Y. Sikweyiya, et al. 2007. "Transactional sex with casual and main partners among young South African men in the rural Eastern Cape: prevalence, predictors, and associations with gender-based violence." *Soc Sci Med* 65 (6):1235–48.

EAC/AMREF Lake Victoria Partnership (EALP) Programme. 2010. *HIV & AIDS Baseline Sero-Behavioural Study in Six Universities in Uganda*. Kampala: EAC/EALP.

Farré Lidia. 2013. "The Role of Men in the Economic and Social Development of Women: Implications for Gender Equality." *The World Bank Research Observer* 28 (1):22–51.

- Fenton, K., A. Johnson, S. McManus, and B. Erens. 2001. "Measuring sexual behaviour: methodological challenges in survey research." *Sex Transm Infect* 77 (2):84-92.
- French, B. H., J. D. Tilghman, and D. A. Malebranche. 2014. "Sexual coercion context and psychosocial correlates among diverse males." *Psychol Men Masc* 15 (1): 42-53.
- Fritz, K. E., G. B. Woelk, M. T. Bassett, W. C. McFarland, J. A. Routh, O. Tobaiwa, et al. 2002. "The association between alcohol use, sexual risk behavior, and HIV infection among men attending beerhalls in Harare, Zimbabwe." *AIDS Behav* 6 (3):221-8.
- Gore, F. M., P. J. N. Bloem, G. C. Patton, J. Ferguson, V. Joseph, C. Coffey, et al. 2011. "Global burden of disease in young people aged 10-24 years: a systematic analysis." *Lancet* 377 (9783):2093-102.
- Gray, R. H., D. Serwadda, G. Kigozi, F. Nalugoda, and M. J. Wawer. 2006. "Uganda's HIV prevention success: the role of sexual behavior change and the national response. Commentary on Green et al. (2006)." *AIDS Behav* 10 (4):347-50.
- Green, E. C., D. T. Halperin, V. Nantulya, and J. A. Hogle. 2006. "Uganda's HIV prevention success: the role of sexual behavior change and the national response." *AIDS Behav* 10 (4):335-46.
- Green, E. C., P. Kajubi, A. Ruark, S. Kamya, N. D'Errico, and N. Hearst. 2013. "The need to reemphasize behavior change for HIV prevention in Uganda: a qualitative study." *Stud Fam Plann* 44 (1):25-43.
- Harper, G. W., C. Gannon, S. E. Watson, J. A. Catania, and M. M. Dolcini. 2004. "The role of close friends in African American adolescents' dating and sexual behavior." *J Sex Res* 41 (4):351-62.
- Harrison, A. 2008. "Hidden love: sexual ideologies and relationship ideals among rural South African adolescents in the context of HIV/AIDS." *Cult Health Sex* 10 (2):175-89.
- Hawkins, K., N. Price, and F. Mussa. 2009. "Milking the cow: young women's construction of identity and risk in age-disparate transactional sexual relationships in Maputo, Mozambique." *Glob Public Health* 4:169-82.
- Higgins, J. A., S. Mathur, E. Eckel, L. Kelly, N. Nakyanjo, R. Sekamwa, et al. 2014. "Importance of relationship context in HIV transmission: results from a qualitative case-control study in Rakai, Uganda." *Am J Public Health* 104 (4):612-20.

Hoeffnagel, Laura. 2012. "Something for Something: Understanding Transactional Sex among Campus Girls in Kampala." Master thesis, University Utrecht.

Hogan, D. R., J. A. Salomon, D. Canning, J. K. Hammitt, A. M. Zaslavsky, and T. Bärnighausen. 2012. "National HIV prevalence estimates for sub-Saharan Africa: controlling selection bias with Heckman-type selection models." *Sex Transm Infect* 88 (Suppl 2):I17–I23.

Hunter, M. 2002. "The materiality of everyday sex: thinking beyond 'prostitution'." *Afr Stud* 61 (1):99–120.

———. 2005. "Cultural politics and masculinities: multiple-partners in historical perspective in KwaZulu-Natal." *Cult Health Sex* 7 (4):389–403.

Jewkes, R., K. Dunkle, M. Nduna, and N. J. Shai. 2012. "Transactional sex and HIV incidence in a cohort of young women in the Stepping Stones Trial." *J AIDS Clin Res* 3 (5):1.

Jewkes, R., R. Morrell, Y. Sikweyiya, K. Dunkle, and L. Penn-Kekana. 2012. "Men, prostitution and the provider role: understanding the intersections of economic exchange, sex, crime and violence in South Africa." *PLoS One* 7 (7):e40821.

Jewkes, R., Y. Sikweyiya, R. Morrell, and K. Dunkle. 2011. "Gender inequitable masculinity and sexual entitlement in rape perpetration South Africa: findings of a cross-sectional study." *PLoS One* 6 (12):e29590.

Kabiru, C., C. Izugbara, and D. Beguy. 2013. "The health and wellbeing of young people in sub-Saharan Africa: an under-researched area?" *BMC Int Health Hum Rights* 13 (1):11.

Kalichman, S. C., and L. C. Simbayi. 2004. "Sexual assault history and risks for sexually transmitted infections among women in an African township in Cape Town, South Africa." *AIDS Care* 16 (6):681–9.

Kalichman, S. C., L. C. Simbayi, M. Kaufman, D. Cain, and S. Jooste. 2007. "Alcohol use and sexual risks for HIV/AIDS in sub-Saharan Africa: systematic review of empirical findings." *Prev Sci* 8 (2):141–51.

Kalichman, S. C., L. Weinhardt, K. DiFonzo, J. Austin, and W. Luke. 2002. "Sensation seeking and alcohol use as markers of sexual transmission risk behavior in HIV-positive men." *Ann Behav Med* 24 (3):229–35.

Kaufman, C. E., and S. E. Stavrou. 2004. "'Bus fare please': the economics of sex and gifts among young people in urban South Africa." *Cult Health Sex* 6:377–91.

- Kelly, R. J., R. H. Gray, N. K. Sewankambo, D. Serwadda, F. Wabwire-Mangen, T. Lutalo, et al. 2003. "Age differences in sexual partners and risk of HIV-1 infection in rural Uganda." *J Acquir Immune Defic Syndr* 32 (4):446–51.
- Kirby, D. 2008. "Changes in sexual behaviour leading to the decline in the prevalence of HIV in Uganda: confirmation from multiple sources of evidence." *Sex Transm Infect* 84 Suppl 2:II35–41.
- Knight, R. A., and J. E. Sims-Knight. 2003. "The developmental antecedents of sexual coercion against women: testing alternative hypotheses with structural equation modeling." *Ann N Y Acad Sci* 989 (1):72–85.
- Koenig, M. A., T. Lutalo, F. Zhao, F. Nalugoda, N. Kiwanuka, F. Wabwire-Mangen, et al. 2004. "Coercive sex in rural Uganda: prevalence and associated risk factors." *Soc Sci Med* 58 (4):787–98.
- Krebs, C. P., C. H. Lindquist, T. D. Warner, B. S. Fisher, and S. L. Martin. 2009. "College women's experiences with physically forced, alcohol- or other drug-enabled, and drug-facilitated sexual assault before and since entering college." *J Am Coll Health* 57 (6):639–47.
- Kuato-Defo, B. 2004. "Young people's relationships with sugar daddies and sugar mummies: what do we know and what do we need to know?" *Afr J Reprod Health* 8:13–37.
- Kwaak, A. V. D., and S. M. Wegelin. 2006. *Gender and Health: Policy and Practice, A Global Sourcebook*. Amsterdam: KIT Publishers.
- Leclerc-Madlala, S. 2003. "Transactional sex and the pursuit of modernity." *Soc Dyn* 29 (2):213–33.
- . 2008. "Age-disparate and intergenerational sex in southern Africa: the dynamics of hypervulnerability." *AIDS* 22:S17–S25.
- . 2009. "Cultural scripts for multiple and concurrent partnerships in southern Africa: why HIV prevention needs anthropology." *Sex Health* 6 (2):103–10.
- Lee, B., S. F. Kaaya, J. K. Mbwambo, M. C. Smith-Fawzi, and M. T. Leshabari. 2008. "Detecting depressive disorder with the Hopkins Symptom Checklist-25 in Tanzania." *Int J Soc Psychiatry* 54 (1):7–20.
- Lewin, B. 1998. *Sex i Sverige: om sexuallivet i Sverige 1996*. Stockholm: Folkhalsainstitutet.
- Luke, N. 2003. "Age and economic asymmetries in the sexual relationships of adolescent girls in sub-Saharan Africa." *Stud Fam Plann* 34 (2):67–86.

———. 2005. “Confronting the ‘sugar daddy’ stereotype: age and economic asymmetries and risky sexual behavior in urban Kenya.” *Int Fam Plan Perspect* 31 (1):6–14.

Luke, N., and K. M. Kurz. 2002. *Cross-Generational and Transactional Sexual Relations in Sub-Saharan Africa: Prevalence of Behavior and Implications for Negotiating Safer Sexual Practices*. Washington, DC: International Centre for Research on Women and Population Services International.

Lundberg, P., E. Cantor-Graae, G. Rukundo, S. Ashaba, and P. O. Ostergren. 2009. “Urbanicity of place of birth and symptoms of psychosis, depression and anxiety in Uganda.” *Br J Psychiatry* 195 (2):156–62.

MacPhail, C., and C. Campbell. 2001. “‘I think condoms are good but, aai, I hate those things’: condom use among adolescents and young people in a Southern African township.” *Soc Sci Med* 52 (11):1613–27.

Meekers, D., and A. E. Calves. 1997. “‘Main’ girlfriends, girlfriends, marriage, and money: the social context of HIV risk behaviour in sub-Saharan Africa.” *Health Transit Rev* 7 Suppl:361–75.

Mehra, D., A. Agardh, M. Stafstrom, and P.-O. Ostergren. 2014. “Is drinking alcohol associated with sexual coercion among Ugandan university students? A cross-sectional study.” *Reprod Health* 11 (1):7.

Messman-Moore, T. L., K. L. Walsh, and D. DiLillo. 2010. “Emotion dysregulation and risky sexual behavior in revictimization.” *Child Abuse Negl* 34 (12):967–76.

Mmari, K., and R. W. Blum. 2009. “Risk and protective factors that affect adolescent reproductive health in developing countries: a structured literature review.” *Glob Public Health* 4 (4):350–66.

Moore, A. M., K. Awusabo-Asare, N. Madise, J. John-Langba, and A. Kumi-Kyereme. 2007. “Coerced first sex among adolescent girls in sub-Saharan Africa: prevalence and context.” *Afr J Reprod Health* 11 (3):62–82.

Moore, A. M., and A. E. Biddlecom. 2006. *Transactional Sex Among Adolescents in Sub-Saharan Africa Amid the HIV Epidemic*. Alan Guttmacher Institute.

Moore, A. M., A. E. Biddlecom, and E. M. Zulu. 2007. “Prevalence and meanings of exchange of money or gifts for sex in unmarried adolescent sexual relationships in sub-Saharan Africa.” *Afr J Reprod Health* 11 (3):44–61.

Nalwadda, G., F. Mirembe, J. Byamugisha, and E. Faxelid. 2010. “Persistent high fertility in Uganda: young people recount obstacles and enabling factors to use of contraceptives.” *BMC Public Health* 10 (1):530.

Napierala Mavedzenge, S. M., A. M. Doyle, and D. A. Ross. 2011. "HIV prevention in young people in sub-Saharan Africa: a systematic review." *J Adolesc Health* 49 (6):568–86.

Napierala Mavedzenge, S., R. Olson, A. M. Doyle, J. Changalucha, and D. A. Ross. 2011. "The epidemiology of HIV among young people in sub-Saharan Africa: know your local epidemic and its implications for prevention." *J Adolesc Health* 49 (6):559–67.

National Council for Higher Education, Uganda. 2013. *The State of Higher Education and Training in Uganda 2011: A Report of Higher Education Delivery and Institutions*. Kampala: National Council for Higher Education.

Neema, S., F. H. Ahmed., R. Kibombo, and A. Bankole. 2004. *Adolescent Sexual and Reproductive Health in Uganda: Results from the 2004 Uganda National Survey of Adolescents, Occasional Report*. New York: Guttmacher Institute.

Nobelius, A.-M., B. Kalina, R. Pool, J. Whitworth, J. Chesters, and R. Power. 2010. "'You still need to give her a token of appreciation': the meaning of the exchange of money in the sexual relationships of out-of-school adolescents in rural southwest Uganda." *J Sex Res* 47 (5):490–503.

Norris, A. H., A. J. Kitali, and E. Worby. 2009. "Alcohol and transactional sex: how risky is the mix?" *Soc Sci Med* 69:1167–76.

Nsamenang, A. B. 2002. "Adolescence in sub-Saharan Africa: an image constructed from Africa's triple inheritance." In: B. B. Brown, R. W. Larson, and T. S. Saraswathi, eds., *The World's Youth*, 61–104. Cambridge, UK: Cambridge University Press.

Nyanzi, S., B. Nyanzi-Wokholi, and B. Kalina. 2008. "Male promiscuity: the negotiation of masculinities by motorbike taxi-riders in Masaka, Uganda." *Men and Masculinities*. Epub.

Nyanzi, S., R. Pool, and J. Kinsman. 2001. "The negotiation of sexual relationships among school pupils in south-western Uganda." *AIDS Care* 13 (1):83–98.

Patton, G. C., C. Coffey, S. M. Sawyer, R. M. Viner, D. M. Haller, K. Bose, et al. 2009. "Global patterns of mortality in young people: a systematic analysis of population health data." *Lancet* 374 (9693):881–92.

Pedersen, W., and K. Hegna. 2003. "Children and adolescents who sell sex: a community study." *Soc Sci Med* 56 (1):135–47.

Pettifor, A. E., I. Kleinschmidt, J. Levin, H. V. Rees, C. MacPhail, L. Madikizela-Hlongwa, K. 2005. "A community-based study to examine the effect of a youth

HIV prevention intervention on young people aged 15–24 in South Africa: results of the baseline survey.” *Trop Med Int Health* 10 (10):971–80.

Population Secretariat, Ministry of Finance, Planning and Economic Development, Uganda. 2013. *International Conference on Population and Development (ICPD) Beyond 2014 Review: Uganda Country Report*. Kampala: ICPD.

Ramjee, Gita, and Brodie Daniels. 2013. “Women and HIV in Sub Saharan Africa.” *AIDS Research and Therapy* 10 (1):30.

Rothman, K. J. 2002. *Epidemiology: An Introduction*. New York: Oxford University Press.

Sadgrove, J. 2007. “‘Keeping up appearances’: sex and religion amongst university students in Uganda.” *J Relig Afr* 37 (1):116–44.

Samara, S. 2010. “Something-for-something love: the motivations of young women in Uganda.” *J Health Organ Manag* 24 (5):512–9.

Santelli, J. S., Z. R. Edelstein, S. Mathur, Y. Wei, W. Zhang, M. G. Orr, et al. 2013. “Behavioral, biological, and demographic risk and protective factors for new HIV infections among youth in Rakai, Uganda.” *J Acquir Immune Defic Syndr* 63 (3):393–400.

Santelli, J. S., and S. Galea. 2011. “The global burden of disease in 10–24-year-olds.” *Lancet* 377 (9783):2058–60.

Santhya, K. G., and S. J. Jejeebhoy. 2015. “Sexual and reproductive health and rights of adolescent girls: evidence from low- and middle-income countries.” *Glob Public Health* 10 (2):189–221.

Selikow, T.-A., Z. Bheki, and E. Cedras. 2002. “The ingagara, the regte and the cherry: HIV/AIDS and youth culture in contemporary urban townships.” *Agenda* 53:22–32.

Semugoma, P., C. Beyrer, and S. Baral. 2012. “Assessing the effects of anti-homosexuality legislation in Uganda on HIV prevention, treatment, and care services.” *SAHARA-J* 9 (3):173–6.

Shearer, C. L., S. J. Hosterman, M. M. Gillen, and E. S. Lefkowitz. 2005. “Are traditional gender role attitudes associated with risky sexual behavior and condom-related beliefs?” *Sex Roles* 52 (5–6):311–24.

Shefer, T., L. Clowes, and T. Vergnani. 2012. “Narratives of transactional sex on a university campus.” *Cult Health Sex* 14 (4):435–47.

Shumba, A., J. Mapfumo, and J. Chademana. 2011. “The prevalence of concurrent sexual partnerships among students in institutions of higher education in Zimbabwe.” *J Hum Ecol New Delhi* 34 (1):53.

Silberschmidt, M., and V. Rasch. 2001. "Adolescent girls, illegal abortions and 'sugar-daddies' in Dar es Salaam: vulnerable victims and active social agents." *Soc Sci Med* 52 (12):1815–26.

Simbayi, L. C., S. C. Kalichman, S. Jooste, V. Mathiti, D. Cain, and C. Cherry. 2004. "Alcohol use and sexual risks for HIV infection among men and women receiving sexually transmitted infection clinic services in Cape Town, South Africa." *J Stud Alcohol* 65 (4):434–42.

Simon, W., and J. H. Gagnon. 1986. "Sexual scripts: permanence and change." *Arch Sex Behav* 15 (2):97–120.

Simon, W., and J. H. Gagnon. 1984. "Sexual scripts." *Society* 22 (1):53–60.

Stafström, M., and Agardh, A. 2012. "Socio economic determinants for alcohol consumption and heavy episodic drinking in a Ugandan student population." *Int J Alcohol Drug Res* 1 (1): 57–67.

Steele, C. M., and R. A. Josephs. 1990. "Alcohol myopia: its prized and dangerous effects." *Am Psychol* 45 (8):921–33.

Stephenson, R., C. Simon, and C. Finneran. 2014. "Community factors shaping early age at first sex among adolescents in Burkina Faso, Ghana, Malawi, and Uganda." *J Health Popul Nutr* 32 (2):161–75.

Stephenson, R., A. Winter, and M. Elfstrom. 2012. "Community environments shaping transactional sex among sexually active men in Malawi, Nigeria, and Tanzania." *AIDS Care* 25 (6):784–92.

Stoebenau, K., S. Nixon, C. Rubincam, S. Willan, Y. Zembe, T. Tsikoane, et al. 2011. "More than just talk: the framing of transactional sex and its implications for vulnerability to HIV in Lesotho, Madagascar and South Africa." *Global Health* 7 (1):34.

STRIVE. 2014. "Capturing transactional sex." Accessed December 4, 2014. Available at: <http://userforum.dhsprogram.com/index.php?t=tree&th=981&S=90cc7e5fd36bc7e83d089e17a0e65d96>.

Svedin, C. G., and G. Priebe. 2007. "Selling sex in a population-based study of high school seniors in Sweden: demographic and psychosocial correlates." *Arch Sex Behav* 36 (1):21–32.

Swahn, M. H., J. B. Palmier, and R. Kasirye. 2013. "Alcohol exposures, alcohol marketing, and their associations with problem drinking and drunkenness among youth living in the slums of Kampala, Uganda." *ISRN Public Health* 2013:9.

Swidler, A., and S. Watkins. 2007. "Ties of dependence: AIDS and transactional sex in rural Malawi." *Stud Fam Plann* 38:147–62.

Townsend, L., A. Ragnarsson, C. Mathews, L. G. Johnston, A. M. Ekström, A. Thorson, et al. 2011. "'Taking care of business': alcohol as currency in transactional sexual relationships among players in Cape Town, South Africa." *Qual Health Res* 21 (1):41–50.

Uganda AIDS Commission. 2007. *Young People, Health, HIV, AIDS and Development*. Kampala: Uganda AIDS Commission.

Uganda Bureau of Statistics (UBOS). 2012. *Uganda Demographic and Health Survey 2012*. Calverton, MD: UBOS and Macro International.

Uganda Ministry of Health (MOH) and ICF International. 2012. *Uganda AIDS Indicator Survey 2011*. Kampala: MOH and ICF International.

Uganda Youth Development Link. 2012. *State of Alcohol Abuse in Uganda: "Young People Drinking Deeper into Poverty"*. Kampala: Uganda Youth Development Link.

UNAIDS. 2010. *Global Report: UNAIDS Report on the Global AIDS Epidemic*. Geneva: UNAIDS.

———. 2014. *The Gap Report*. Geneva: UNAIDS.

United Nations. 1979. *Convention on the Elimination of all forms of Discrimination Against Women*. New York: United Nations.

———. 1989. *Convention on the Rights of the Child*. New York: United Nations.

———. 1994. *International Conference on Population and Development Programme of Action*. New York: United Nations.

———. 2000. *Millennium Development Goals*. New York: United Nations.

———. 2012. *Official Records of the Economic and Social Council, 2012, Supplement No. 5 (E/2012/25)*. New York: United Nations.

United Nations Population Fund. 2012. *Bali Global Youth Forum Declaration*. New York: UNFPA.

———. 2014. *The Power of 1.8 Billion: Adolescents, Youth and the Transformation of the Future. State of the World Population 2014*. New York: UNFPA.

United Nations Population Fund and Population Reference Bureau. 2012. *Status Report on Adolescents and Young People in Sub-Saharan Africa: Opportunities and Challenges*. New York: UNFPA.

Wamoyi, J., A. Fenwick, M. Urassa, B. Zaba, and W. Stones. 2011. "'Women's bodies are shops': beliefs about transactional sex and implications for understanding gender power and HIV prevention in Tanzania." *Arch Sex Behav* 40 (1):5–15.

Wamoyi, J., D. Wight, M. Plummer, G. Mshana, and D. Ross. 2010. "Transactional sex amongst young people in rural northern Tanzania: an ethnography of young women's motivations and negotiation." *Reprod Health* 7 (1):2.

Watt, M. H., F. M. Aunon, D. Skinner, K. J. Sikkema, S. C. Kalichman, and D. Pieterse. 2012. "'Because he has bought for her, he wants to sleep with her': alcohol as a currency for sexual exchange in South African drinking venues." *Soc Sci Med* 74 (7):1005–12.

Weissman, A., J. Cocker, L. Sherburne, M. B. Powers, R. Lovich, and M. Mukaka. 2006. "Cross-generational relationships: using a 'continuum of volition' in HIV prevention work among young people." *Gend Dev* 14 (1):81–94.

Wingood, G. M., Scd, and R. J. DiClemente. 2000. "Application of the theory of gender and power to examine HIV-related exposures, risk factors, and effective interventions for women." *Health Educ Behav* 27 (5):539–65.

Wojcicki, J. M. 2002. "'She drank his money': survival sex and the problem of violence in taverns in Gauteng Province, South Africa." *Med Anthropol Q* 16 (3):267–93.

World Health Organization (WHO). 2005. *Alcohol, Gender and Drinking Problems: Perspectives from Low and Middle Income Countries*. Geneva: WHO.

———. 2011. *Global Status Report on Alcohol and Health*. Geneva: WHO.

Ybarra, M. L., S. S. Bull, J. Kiwanuka, D. R. Bangsberg, and J. Korchmaros. 2012. "Prevalence rates of sexual coercion victimization and perpetration among Uganda adolescents." *AIDS Care* 24 (11):1392–400.

Zablotska, I. B., R. H. Gray, M. A. Koenig, D. Serwadda, F. Nalugoda, G. Kigozi, et al. 2009. "Alcohol use, intimate partner violence, sexual coercion and HIV among women aged 15–24 in Rakai, Uganda." *AIDS Behav* 13 (2):225–33.