

Georgia State University

ScholarWorks @ Georgia State University

Psychology Dissertations

Department of Psychology

Summer 7-20-2011

South African Youth and Parents: A Mixed-Methods Examination of Family Communication about Sex, HIV, and Violence

Lindsey Zimmerman
Georgia State University

Follow this and additional works at: https://scholarworks.gsu.edu/psych_diss



Part of the [Psychology Commons](#)

Recommended Citation

Zimmerman, Lindsey, "South African Youth and Parents: A Mixed-Methods Examination of Family Communication about Sex, HIV, and Violence." Dissertation, Georgia State University, 2011.
doi: <https://doi.org/10.57709/2194031>

This Dissertation is brought to you for free and open access by the Department of Psychology at ScholarWorks @ Georgia State University. It has been accepted for inclusion in Psychology Dissertations by an authorized administrator of ScholarWorks @ Georgia State University. For more information, please contact scholarworks@gsu.edu.

SOUTH AFRICAN YOUTH AND PARENTS: A MIXED-METHODS EXAMINATION OF
FAMILY COMMUNICATION ABOUT SEX, HIV, AND VIOLENCE

by

LINDSEY ZIMMERMAN, M.A.

Under the Direction of Lisa P. Armistead

ABSTRACT

South Africa retains the highest HIV prevalence in the world, with the incidence of infection growing fastest among youth. The purpose of this investigation was to inform preventive family-based interventions designed to reduce youth HIV risks. In 2009, 38 black South African caregivers and youth (ages 10-14) participated in key informant interviews and focus groups, which were coded for themes related to family communication about sex. Findings highlighted a cultural taboo against communication that among some caregivers was shifting. Informed by this qualitative data, in 2010, 97 black South African caregivers and 97 youth (ages 10-14) completed measures designed for quantitative comparisons between the caregiver and youth generations. Results were that youth reported significantly more communication about sex topics than did their caregivers, and significantly lower perceptions of caregiver responsiveness to communication than their caregiver's self-report. Importantly, although youth reported that they would prefer to ask their mother first a question about sex, currently few do so. Male youth and their caregivers were significantly less likely to report communication about sex topics than were female youth and their caregivers. Correlations indicated that youth-reported perceptions of their caregivers' responsiveness are likely one of the best indicators of whether and how communication occurs, and that being a younger caregiver is associated with higher self-reported caregiver responsiveness. Regarding safety, nearly twice as many caregivers reported feeling that

their neighborhood was “not safe” than did youth and the majority of caregivers reported talking to their youth about sexual violence.

INDEX WORDS: Family communication, HIV, AIDS, South Africa, Prevention, Youth, Violence, Neighborhood safety, Mixed-methods

SOUTH AFRICAN YOUTH AND PARENTS: A MIXED-METHODS EXAMINATION OF
FAMILY COMMUNICATION ABOUT SEX, HIV, AND VIOLENCE

by

LINDSEY ZIMMERMAN, M.A.

Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

in the College of Arts and Sciences

Georgia State University

2011

Copyright by
Lindsey Zimmerman
2011

SOUTH AFRICAN YOUTH AND PARENTS: A MIXED-METHODS EXAMINATION OF
FAMILY COMMUNICATION ABOUT SEX, HIV, AND VIOLENCE

by

LINDSEY ZIMMERMAN, M.A.

Major Professor: Lisa Armistead

Committee: Sarah Cook

Julia Perilla

Kelly Lewis

Electronic Version Approved:

Office of Graduate Studies

College of Arts and Sciences

Georgia State University

December 2011

TABLE OF CONTENTS

LIST OF TABLES	vi
LIST OF FIGURES	vii
1 INTRODUCTION	1
1.1 Cape Town Resettlement and Migration: Policies shaping South African Families	2
1.1.1 Generational analyses of families and households in Cape Town	4
1.2 HIV/AIDS in the changing South African political contexts	5
1.4 Family Communication Reduces Youth HIV Risk	8
1.5 Summary	10
1.6 Theoretical and Methodological Framework	11
1.6.2 Defining Generations	12
1.6.3 Grounded Theory	12
1.7 Qualitative Research Questions	13
2 QUALITATIVE METHODS	14
2.1 Qualitative Participants	14
2.2 Qualitative Procedures	15
3 QUALITATIVE RESULTS	16
3.1 Family Communication about sex topics	18
3.1.1 Caregiver Prompt	18

3.1.2	Youth Prompt	23
3.1.3	Youth Safety and Neighborhood Violence	25
4	QUANTITATIVE METHODS	27
4.1	Quantitative Research Questions	28
4.2	Quantitative Participants	28
4.3	Quantitative Procedures	33
4.3.1	Audio Computer Assisted Self Interviews (ACASI)	33
4.3.2	Validation and Cultural Adaptation of Measures	34
4.3.2.1	Communication about Sex Topics	34
4.3.2.2	Caregiver Responsiveness to Communication about Sex Topics	35
4.3.2.3	Perception of Neighborhood Safety	36
4.3.4	Power analysis	37
5	QUANTITATIVE RESULTS	37
5.1	Communication about Sex Topics	37
5.2	Caregiver Responsiveness	44
5.4	Correlations among Measures	46
6	DISCUSSION	48
7	REFERENCES	57

LIST OF TABLES

Table 1	Qualitative Participants' Household Members	14
Table 2	Frequency of Themes Across the Qualitative Coding	16
Table 3	Co-caregiver Relationships	32
Table 4	Risk Reduction Communication Reported by Caregivers	42
Table 5	Caregiver Reported Communication about Violence	43
Table 6	Who would you go to first with a question about sex?	45
Table 7	Correlation Matrix	47

LIST OF FIGURES

Figure 1	Household Relationships to the Caregiver	30
Figure 2	Household Relationships to the Youth	31
Figure 3	Mean Communication Scores by Youth Gender and Reporter	38
Figure 4	Dating Communication by Youth Gender and Reporter	39
Figure 5	Menstruation Communication by Youth Gender and Reporter	40
Figure 6	Puberty Communication by Youth Gender and Reporter	40
Figure 7	Sex Communication by Youth Gender and Reporter	41
Figure 8	HIV Communication by Youth Gender and Reporter	41

INTRODUCTION

The HIV/AIDS epidemic in Sub-Saharan Africa dwarfs other regions of the globe. The prevalence of HIV in Sub-Saharan Africa (22.4 million) is more than double the cumulative prevalence of HIV in the rest of the world (11 million; UNAIDS, 2009). Nearly a quarter of those living with HIV in this region are South African (5.3 million), and the loss of South African lives due to HIV/AIDS has been enormous. From 1997-2007, the median age for South African men has fallen from 52 to 43 years, whereas women have seen an even more stark loss of 15 years (from 57 to 42 years). In 2010, HIV/AIDS is projected to account for about 75% of premature deaths in South Africa, an increase from 39% just ten years ago (Bradshaw, 2003).

South African youth are at particular risk for HIV. Over 1.2 million South Africans are infected before the age of 24. Prevalence of HIV for 15-19 year old males (2.5%) doubles by ages 20-24 (5.1%), and female HIV prevalence triples from ages 15-19 (6.7%) to ages 20-24 (21.1%), representing a disproportionate 3:1 rate of infection for females when compared to males (South Africa National Department of Health, 2009). The disproportionate impact of HIV on young females is almost certainly linked to the finding that 27% of girls aged 15-19 report sex with partners at least five years older (Shisana, et al., 2009). Given that the prevalence of HIV in the population increases with age, young girls who have sex with older partners are at greater risk of infection. In addition, violence contributes to HIV risk. Reports of rape and sexual assault have increased by 8.2% since 2003, and recent studies show that in South Africa 27% of men reported having raped a woman (Jewkes, Wikweyiya, Morrell, & Dunkle, 2009).

To reduce the burden of HIV/AIDS in South Africa it is essential to identify the most promising ways to prevent new infections among youth and young adults. U.S. research findings indicate that enhancing family processes to protect youth is a promising intervention target.

Given that greater than 95% of HIV infections in South Africa are sexually transmitted, and the average age of sexual debut is 16.7 years old, parents are in an excellent position to reduce youths' behavioral and contextual HIV risks. Unfortunately, as recently as 2005, parents were only involved in 1 of 21 evidence-based HIV prevention programs on the African continent (Rotheram-Borus, et al., 2005). To contribute to the scientific knowledge underpinning family-based HIV prevention interventions, this study seeks to enhance understanding of how youth and caregivers perceive and describe family communication about sex, HIV, and violence within their families.

We begin by presenting a historical and sociopolitical context for understanding how communication within families may be influenced by the culture of South African society. Then, we present oral histories previously conducted in the region to demonstrate how personalizing the experience of black South African families across generations has enhanced our conceptualization of family communication and youth HIV risk. Third, we examine the relation between family communication and youth HIV risk by citing recent empirical findings from investigations in the United States and in sub-Saharan Africa, before presenting the qualitative and quantitative findings from this investigation.

Cape Town Resettlement and Migration: Policies Shaping South African Families

Communication within families is strongly influenced by culture which, in South Africa, has been evolving for several generations heavily influenced by colonization. Occupation of South Africa's indigenous societies, by a relative minority of European settlers, began with the Dutch (Boers) in the 1600s and continued with the British in the 1700s (Hamilton, Mbenga, & Ross, 2010). British armies heralded the "extermination" of "natives" as they cleared land for white settlers (Legassick & Ross, 2010). The imperial enterprise also brought African, Indian,

and “Cape Malay” settlers (many originally slaves) together in Cape Town (Susser, 2009). Soon after, the South Africa Act went into effect in 1909, and indigenous Africans lost most political rights (Yergan, 1939). For black families near Cape Town, economic pressures to migrate to the cities for manufacturing jobs were met with increasingly exclusionary governmental policies. The aim of these policies was to keep indigenous Africans from settling in the cities to benefit from industrial jobs, culminating in the rise to power of the National Party in 1948, whose platform would go on to enforce the apartheid (“separateness”) system according to race (Finchilescu & Tredoux, 2010).

Several social-engineering policies implemented through the apartheid system affected families, including those that organized settlement, societal relations, and education along racial lines (see Finchilescu & Tredoux, 2010; Lee, 2009). For example, the Mixed Marriage Act (1949) forbade interracial marriage, and the Group Areas Act (1950) led to the forced removal and demolition of informal African settlements in urban areas. A formal race classification system (Population Registration Act [1950]) facilitated this process. Other policies would further pressure families into displacement, subject them to institutional oppression, and create a significant shift in the culture of black South African families. The Bantu Authorities Act (1951) and the “Pass Laws” Act (1952) led to a forced exile from true homelands into state-designated “homelands,” such as the Transkei for the Xhosa, stripped citizenship from millions of the indigenous majority, and required all Bantu (a term used to describe black South Africans at the time) to carry identification. Finally, the Native (Urban Areas) Act (1952) specified that Bantu were allowed in the urban areas only under strict, often unattainable, conditions. This so called “Section 10” policy directly impacted family life—women would often need to demonstrate dependence on a man to work in the city or risk arrest. Despite these restrictive policies,

according to census data, urbanization led to an increase of Africans residing in urban areas from 10% in 1904, and 27% in 1951, to 43% by 1996 (Lee, 2009). In turn, the acts of apartheid oppressed indigenous Africans through a system of unequal economic resources, segregation, work migration, and exile from homelands, setting the stage for transformations in family structure that coincided with the emergence of the HIV epidemic in the 1980s.

Generational analyses of families and households in Cape Town.

One approach to understanding family context and communication is through the use of oral histories. Using this method, Lee (2009) highlights how the economic and political factors that led to forced relocation in South Africa were experienced by three generations of migrant women (n=39) in the Cape Town township of Guguletu. In addition to government policies, and contrary to the frequent emphasis on the migration of men for work, another factor leading to new family constellations are the approximately 1 in 3 South African migrant workers who are women (Posel, 2006). Lee's work illuminates differences in society-level influences on family structure by generation. Her study examined the differences among a first generation (born in the 1920s and 1930s), second generation (born in the 1950s and 1960s), and third generation (born in the 1970s or early 1980s). The majority of the first generation had been married (six were widows) and many now had large families living in council (government regulated) homes, with up to 22 dependents in one household. She found that the second-generation women gained significantly more educational opportunities, even during apartheid, than did their mothers or daughters (Lee, 2009). In contrast, by the third generation, all eight of the individuals from Lee's study were unmarried, and three had children born when they were teenagers. Half the women in the third generation were unemployed, and none had households independent from their mother's. Frequent policy transitions (e.g., Section 10) reconfigured kinship and household

structures in Cape Town such that researchers have argued that instability is a core attribute of the South African household, and that genealogy, income-sharing, or co-residence alone cannot specify the boundaries of a family (Spiegel, Watson, & Wilkinson, 1996).

Toward the end of apartheid, as many of the older generations were able to secure government pensions and retain residency in council homes, grandmothers often became the most stable resources upon which family could rely, contributing to a rise in multigenerational households (Lee, 2009). Moreover, the African custom that children born outside of marriage would stay with the mother's family began an increasingly matriarchal family structure (Lee, 2009). In addition, between 1965 and 1989 it is estimated that births outside marriage in Cape Town increased from 33% of Africans residing in the city to 69.8% (Burman & van der Spuy, 1996); and today, women are also far less likely to marry the father of their child (Naidoo, 2009). This is consistent with census data, which depicts a relatively stable marriage rate among those over 15 years old from 1936 to 1960 (54-57%), but a declining rate ever since, with 49% married in 1970, 42% in 1980, 38% in 1991, and 30% in 2001 (Hunter, 2010; p. 150). As these data highlight, a decline in marriages, an increase in births outside of marriage, and an increase in intergenerational households comprise the family context of youth HIV risk for black South Africans. Understanding the differences in how caregiver and youth generations in South Africa think and communicate about sex and HIV can provide important information for intervention development designed to reduce youth HIV risk.

HIV/AIDS in the Changing South African Political and Cultural Contexts

In the early years of the new South African Republic, national attention tended to prioritize the struggle for liberation and the prevention of civil war as opposed to the growing HIV epidemic. Unfortunately, during this period of neglect, the HIV prevalence rate rapidly

increased from 1 in 100, to 1 in 4 South Africans. For example, just before the end of Apartheid in 1988, representing the African National Congress (ANC), Nkosazane Dlamini-Zuma (who would become the first health minister of the independent South Africa), addressed the interrelationship between HIV/AIDS and apartheid-era migrations in the following way:

“We have all heard how the migrant labor system disrupts families. Besides disrupting families, it does two other things. One it accentuates poverty, because instead of the man’s salary being used in one household, he must divide it between where he lives in the city and his family in the rural area. Two...it is going to be a problem also with the new disease, AIDS, because these men are not allowed to take their families into the cities...”(Susser, 2009; p. 76).

More recently, South African political leadership has also significantly influenced the context of HIV for South African families. When President Thabo Mbeki was elected in 1999, 25% of all pregnant women in South Africa were HIV positive, which grew again to 30% in five years (Gevisser, 2009). Mbeki espoused several ideas that may have cost South African lives, such as (1) that there was not a causal link between HIV and AIDS, (2) that antiretroviral treatments were ineffective and being pushed by untrustworthy for-profit pharmaceutical companies, (3) that rates of sexual violence in South Africa were greatly exaggerated, and (4) that poverty was the primary cause of AIDS. Mbeki reported to Gevisser (2009) that talking about sex and HIV was so stigmatized that it was ineffective for prevention, and that only by focusing on poverty would people begin to openly discuss HIV/AIDS. It is possible that Mbeki represented many South Africans who found talking about HIV taboo.

Currently, the cultural norms about sex and HIV communication in South Africa continue to shift. For example, in 2007, Jacob Zuma became the first Zulu President of the ANC, succeeding Mandela and Mbeki who are both Xhosa (Susser, 2009). Zuma broke significantly from Mbeki’s approach by publicly taking an HIV test, disclosing that he was circumcised and encouraging his sons to do so too (Dugger, 2010). Zuma, was also charged and acquitted of rape

of a woman who was HIV positive. Famously, Zuma introduced inaccurate information about ways to reduce HIV risk when he reported that he would not become infected because he had “taken a shower” after intercourse. This recent shift from Xhosa to Zulu leadership is notable because historically, there are cultural differences between the practices of Zulu- and Xhosa-speaking South Africans that could be related to youth HIV risk. For example, in 2010 in an attempt to reduce HIV transmission risks, Zuma worked with the Zulu king, Goodwill Zwelithini, who re-instated Zulu male circumcision (medically, not traditionally conducted), a practice which King Shaka stopped 200 years ago (Dugger, 2010). In contrast, the Xhosa people (the primary participants in the present study) never ceased circumcision traditions, and in the past, some derided Zulu ANC leaders who were not circumcised through traditional initiate rites (Smith, 2010). As this circumcision example highlights, it remains important to determine how other cultural norms may be changing, and may or may not be associated with youth HIV risk.

Ethnic identification among South Africans is also in flux. In 1994, a random multistage cluster sampling technique (N=1000) was used to assess identification with the following South African identities: South African, African, Black, White, Afrikaans-speaking White, English-speaking White, and specific Black ethnic groups, such as Xhosa, Zulu, and Sotho (Bornman, 2010). Results indicated that Blacks identified most highly with the term “Blacks,” but there was not a significant difference between identification with Black, South African, or the Black ethnic groups. Four years later, using a stratified multistage cluster sampling strategy in 1998 (n=1472), a measure of emotional attachment to different group identities indicated that Blacks had shifted and were most closely identified with their language group as compared to their racial and ethnic group (Bornman, 2010). In contrast, using the 1998 sampling strategy again in 2001 (n=2530), an assessment of both group identification, and identification with Western culture, found that

Blacks most strongly identified with the African continent, however, no statistically significant differences were observed among identification with African culture, Black ethnic groups, or racial identity (Bornman, 2010). In conclusion, evidence of constant redefinition in South Africa highlights the value of examining both caregiver and youth perspectives to better understand whether and how current family communication processes may be related to youth HIV risks.

Family Communication Reduces Youth HIV Risk

In U.S. research, family communication about sex is related to several variables that mediate youth HIV risk, including attitudes about HIV (Seligman, Mukai, Woods, & Alfeld, 1995), intentions to abstain (Miller et al., 1997), and less sexual risk taking among adolescents (Miller, Forehand, & Kotchick, 1999). Key aspects of caregiver-youth communication are essential for reducing youth sex and HIV risks, including the breadth of the sex topics discussed, the timing of the communications, and the caregiver's responsiveness to communication about sex.

Among U.S. samples, more complete communication encompassing more topics was associated with fewer specific incidents of youth sex risks (Dutra, Miller, & Forehand, 1999; Miller, Kotchick, Dorsey, Forehand, & Ham, 1998). In addition, youth whose caregivers spoke to them *prior* to first sex were more likely to use a condom during first sex and during subsequent sexual activity (Miller, Levin, Whitaker, & Xu, 1998). Also critical are several U.S. research findings that caregiver responsiveness is associated with lower overall levels of youth sexual risks (Dutra et al., 1999; Fasula and Miller, 2006; Kotchick et al. 1999; Miller et al., 2009). Responsive caregivers are those who self-report or are described by their children as being open, skilled, and comfortable communicating about sex with their youth. Perhaps most important, is that youth perceive their caregivers to be responsive to sex communication. For

example, in the U.S., youth perceptions of responsive communication have been associated with delayed onset of sexual activity and lower rates of sexual behavior (O'Sullivan, Jaramillo, Moreau, & Meyer-Bahlburg, 1999). Based on these promising findings, data are needed to assess whether caregiver-youth communications could also be protective for South African youth.

In one sample of South African adolescents and young adults aged 15-21 years ($n = 1113$), families were the least utilized source of information about sex risks (James, Reddy, Taylor, & Jinabhai, 2004). Results of a large-scale survey of adolescents ($N = 14,944$) in South Africa and Tanzania revealed that approximately 40% of youth report never talking to their parents or other adult family members about sex, suggesting there may be a cultural taboo against communication (Namisi, Flisher, Overland, Bastien, Onya, Kaaya, & Aaro, 2009). However, recent evidence indicates that family-based programs developed to protect youth in the U.S. may translate to the South African context.

Addressing the role of the family in communicating with youth about sex for the purposes of HIV prevention, the Collaborative HIV Prevention and Adolescent Mental Health Program South Africa (CHAMPSA) found that a family-based intervention can lead to significant increases in caregivers' frequency and comfort with communicating about sex and HIV, as compared to controls (Bell, Bhana, Petersen, McKay, Gibbons, Bannon, & Amatya, 2008). In addition to the findings that caregivers' communications increased, youth of caregivers in the intervention group significantly increased their AIDS transmission knowledge and reported significantly less stigma toward HIV-infected persons. In Ghana, even without a targeted intervention, reports of recent family communication about HIV/AIDS increased the odds of youth using a condom (Adu-Mireku, 2004). In another South African intervention designed to reduce HIV and intimate partner violence risks, caregiver and youth participants

reported a shift from vague caregiver threats of sexual risks to specific risk reduction messages during communication (Phetla, Busza, Hargreaves, Pronyk, Kim, Morison, Watts, & Porter, 2008).

Beyond data describing South African families' communications about sex and HIV, enhanced understanding of family communications involving violence and safety is important. Rates of sexual assault in South Africa are consistently high. Multiple studies indicate that over 25% of South African men report perpetration of sexual assault and up to 86% percent South African research samples have reported witnessing community violence, such as gang violence, rape, and murder (Kalichman, et al., 2005; Shisana et al., 2009). Unfortunately sexual violence during childhood is also common. In a sample of 14-30 year olds, 60% of males (n=193), and 53% of females (n=216) reported experiencing childhood sexual abuse (Madu & Petzer, 2001). For this reason, in the present South African context where rates of interpersonal violence are on the rise and where violence is linked to risk of HIV (Jewkes, Sikweyiya, Morrell, & Dunkle, 2009), it may also be important to determine whether caregivers communicate about violence risks with their youth. Do South African caregivers and youth endorse and describe family communication about sex, HIV, and violence? And if so, do they perceive the cultural norms about communication or the quality of their communications in similar or discrepant ways? Finally, are youth and caregiver reports about caregiver responsiveness and communication about sex topics associated with one another as they are in previous research? These questions are the primary focus of the current mixed-methods investigation.

Summary

Compounded by violence, South Africa retains the highest HIV prevalence in the world, making it a high priority context for preventing HIV among youth (Shisana et al., 2008). The

incidence of HIV infection in South Africa is growing fastest among youth, and in particular, young girls (Nupen & Wangenge-Ouma, 2009). The innovation of the present study is to describe South African family communication about sex, HIV, and violence via both the caregiver and youth generations' reports. The purpose is to inform family-based HIV-prevention interventions in South Africa designed to reduce youth risks. The caregivers and youth (ages 10-14) will be compared for commonalities and differences in qualitative reports and quantitative measures of 1) caregiver responsiveness to communication about sex topics, and 2) family communication about sex, HIV, and violence.

Theoretical and Methodological Framework

The Theory of Triadic Influences conceptualizes the intrapersonal, social/situational, and cultural/environmental influences on youth (TTI; Flay, 1999). Youth communication with a responsive caregiver creates a protective setting immediately proximal to the youth that can help mitigate other dangers. In the present study, this most proximal context is assessed with the caregiver responsiveness and family communication variables, the environmental context is assessed with a question about neighborhood safety, whereas cultural influences on youth are assessed via both caregiver and youth qualitative reports.

Given that this investigation was designed to inform family-based intervention development, it is also important that the research questions were consistent with ecological intervention-development principles (see Miller & Rasco, 2004; p. 35-47). We examined whether there may be opportunities to reduce youth HIV risks through caregiver communication,¹ and many principles of an ecological framework were incorporated. For example, we used a mixed-methods design to identify local values and beliefs for intervention

¹ The parent intervention is called Imbadu Ekhaya, which is Xhosa for "Communication at Home"

design, and focused principally on local concerns about youth sex, HIV, and violence risks. Moreover, the present research questions prioritized prevention by examining potentially protective family processes, and youth HIV risk and protective factors were conceptualized in terms of the fit between youth, caregivers, and their settings.

Defining generations.

Generations can be defined chronologically or they can be understood qualitatively. Usefully, Kertzer (1983) identified four meanings used to define a generation in anthropology and sociology: 1) a generation as *kinship* (e.g., caregiver to child), 2) a generation as a *cohort* (e.g., current mothers), 3) a generation as a *life stage* or age (e.g., pre-adolescence), and 4) a generation as a *historical period* (e.g., post-apartheid generation). Use of all of these definitions, would conceptualize youth and caregiver generations as having both distinct and overlapping aspects. In the present analysis, we distinguish between the caregivers and youth for comparisons and define generation by role (i.e., child or child's primary caregiver), in order to examine the cohort of self-identified caregivers of a cohort of youth ages 10-14 years old.

Grounded theory.

Glaser and Strauss (1967), and Strauss and Corbin (1990), suggest a “constant comparative” approach to mixed-methods research where simultaneous or sequential qualitative and quantitative data collection and analyses are considered mutually informative. Working from data in this way, rather than beginning with an a priori set of hypothesis tests, is particularly appropriate for understudied populations or when the primary theoretical models have been developed with different cultures and settings. Although research literature was consulted a priori in the present study, the primary literature identifying family communication as protective against youth sex risks was developed in the United States. Therefore, it is useful to incorporate

the research principle behind the grounded theory framework, which is that research progresses in neither a solely inductive or deductive fashion, but rather is an iterative process where data collection, analysis, and theory development are concurrent and reciprocal.

Youth and caregivers' qualitative reports, obtained in the fall of 2009, were coded to inform research questions assessed via quantitative data collection and analysis in 2010. We began with qualitative data collection in order to increase the likelihood that the research will be culturally meaningful and that the answers to research questions will be of use to the local community. Relying solely on quantitative group-based data with an understudied population, such as Xhosa-speaking South Africans, risks generalizing results without first exploring diversity in the participants' reports. In contrast, when a diversity of perspectives is qualitatively identified, enlisting the strengths of quantitative statistical tests improves interpretations of relationships among variables, and across stakeholders (i.e., the caregiver and youth reports). Both the qualitative and quantitative research questions in the present study enlist the multi-informant design and are exploratory and descriptive. The multi-method research process will be described separately, beginning first with the qualitative research questions, methods, and analysis, before turning to the quantitative research questions, methods, and analysis, and concluding with a discussion of both the qualitative and quantitative findings.

Qualitative research questions

1. How do caregivers and youth perceive and describe family communication about sex, HIV and violence?
2. And, are there similarities and/or differences
 - a. across the caregiver and youth cohorts?
 - b. based on the gender of the reporter?

QUALITATIVE METHODS

These qualitative analyses were part of the formative work used to develop and pilot the Imbadu Ekhaya parenting intervention (funded by the National Institute of Child Health and Development), which was designed to reduce HIV-risk among South African youth in Langa, Cape Town, South Africa. Langa is a township outside of Cape Town with primarily Xhosa-speaking South African residents. Langa includes both a government-established housing section and an informal settlement area known as “Joe Slovo.” The Langa neighborhood is very old and was set-aside for black South Africans prior to apartheid. The collaborative research team that developed Imbadu Ekhaya includes researchers from Georgia State University in Atlanta, Georgia (United States) and Stellenbosch University in Stellenbosch Western Cape (South Africa), and social workers from Cape Town Child Welfare Society (South Africa).

Qualitative Participants

Thirty-eight black caregivers and youth (ages 10-14) from Langa participated in focus groups (separated by gender and by role as caregivers or youth) and key informant interviews in Fall 2009. Table 1 presents household membership information that caregivers and youth reported during interviews.

Table 1.

Qualitative Participants' Household Members

Examples of Household Members Reported by Caregivers

I have 3 children, a boy 17 years old, a girl 10 years old, and a 6 year old

I have 2 children who are 19 and 9 years old

I have 2 brothers 12 and 10 years old; then there's another child, the third one who is my sister's child who is 8 years old

I live with a 4 year old child and his father

I live with my sister

I have 2 children and one of them the boy is mine. He is 3 years old, there's also my sister's child who is 13 years old

Examples of Household Members Reported by Youth

I live with my father and grandmother, and my siblings

At home there are 10 of us living there; it's me, my mother, cousins, and siblings

There are 4 of us at home, it's me, my siblings, my grandmother's sister and her twin and their sister

I live with my aunt, my mother, my 4 brothers

...at home there are 6 of us, my mother, my father, cousin and my sister

Qualitative Procedures

During the fall of 2009, South African collaborators conducted focus groups and key informant interviews about family life and family communication about sex topics (prompts below). Three males (ages 21 to 43) and three females (ages 26-27) conducted the interviews and focus group in English or in Xhosa (and translated into English) for coding. One potential disadvantage of interview and focus group methodology is that participants may feel pressure to respond in a certain way to manage an impression with the researcher or other participants. To minimize this limitation, participants were grouped according to shared characteristics. For example, caregivers participated in focus groups and interviews separated by gender. Youth also participated, separate from the caregivers, and separated by gender.

Two South African collaborators independently coded the qualitative interview and focus group data using ATLAS.ti. The PI then used the ATLAS.ti codes to identify all associations the qualitative research participants made related to the research question about family communication. This process to identify all the unique qualitative themes associated with family communication progressed until all categories of responses were “saturated” (Grounded Theory Methodology; Corbin & Strauss, 1990).

QUALITATIVE RESULTS

Although participants responded to scripted interviewer prompts about family life and family communication themes, themes about cultural shifts and perceptions of neighborhood violence emerged frequently as well. Table 2 depicts these common topics in the first column. Columns three and four are useful for assessing the proportion of the interviews associated with that topic within the theme (column 3) or across all the coded qualitative data (column 4). The most frequently coded topic was blocks (obstacles) to caregiver-youth communication.

Table 2.

Frequency of Themes Across the Qualitative Coding

Family Theme	Frequency	% of Theme	% of Total
	Coded	Total	Coded
Blocks to parents talking about sex	65	16.3	9.1
Communication about sex	63	15.8	8.8
Role of fathers	45	11.3	6.3
Family systems/responsibilities	41	10.3	5.7
Discipline	42	10.5	5.9
Parent expectations	35	8.8	4.9

Extended family	31	7.8	4.3
Parent-child relationship	25	6.3	3.5
Family communication	18	4.5	2.5
Child abuse	16	4.0	2.2
Domestic violence	10	2.5	1.4
Protection of youth	9	2.3	1.3
<i>Sum</i>	<i>400</i>	<i>100</i>	<i>55.9</i>

Neighborhood Violence Theme	Frequency	% of Theme	% of Total
	Coded	Total	Coded
Peer violence	38	20.2	5.3
Criminal violence	37	19.7	5.2
Dangerous	28	14.9	3.9
Sexual violence	24	12.8	3.4
Bullying	14	7.4	2
Acceptance of crime	12	6.4	1.7
Gang violence	10	5.3	1.4
External influences	6	3.2	0.8
Acceptance of violence	5	2.7	0.7
Crime/Theft	4	2.1	0.6
<i>Sum</i>	<i>188</i>	<i>100</i>	<i>26.3</i>

Cultural/Societal Shifts Theme	Frequency	% of Theme	% of Total
	Coded	Total	Coded
Lack of control over youth	39	30.5	5.4

HIV sources of information	25	19.5	3.5
Changing systems of society	18	14.1	2.5
HIV incorrect beliefs	17	13.3	2.4
Youth resistance	15	11.7	2.1
loveLife ¹	7	5.5	1.0
HIV denial	7	5.5	1.0
<i>Sum</i>	<i>128</i>	<i>100</i>	<i>17.9</i>
Table Totals	716	-	100

1. loveLife is the largest national youth HIV prevention program in South Africa.

In the following overview of themes about family communication, the researcher prompt is presented followed by selected participant comments chosen to represent each unique and relevant theme associated with family communication in the qualitative data.

Family Communication about Sex Topics

Caregiver prompt:

“Our research has shown that talking with your kids about having sex before they begin having sex is important. But this can be a difficult topic to talk about. Do you think most parents talk to their kids about sex and sexuality?”

Male and female caregiver respondents below found it difficult to talk to their youth about sex because it is considered culturally inappropriate. Cultural prohibitions exist that keep wives and husbands from discussing sex and prevent discussing sex with non-biological children. The many cultural and historical influences that traditionally would prevent caregiver-youth communication about sex are highlighted, though the participants also indicated that some of these influences are beginning to shift.

1. Female caregiver:

When we were growing up our parents *never discussed these issues with us*, we learned about them from the street and everybody was very secretive about that information, it

was worse at home it was like that part of life does not exist. Because we grew up like that we tend to be uncomfortable talking about these issues to our children.

2. Female caregivers:

Participant: It is because as black people we are not used to talking about sex so you think that your child will be surprised when you talk to her about sex or you are encouraging her to have a boyfriend.

Participant: And the husband dreads to ask his wife about it.

3. Male caregivers:

Interviewer: Do you think most parent talk to their kids about sex and sexuality?

Participant: No!

Participant: Not at all.

Participant: No. That is not our culture.

Interviewer: Okay. So the barrier would then be culture?

Participant: In our culture we don't do that.

4. Male caregiver:

We are scared that they might try to touch and sex. Yeah, preparing them, that you must start now. You must never mention anything about sex...As the parent it's not our culture.

5. Male caregiver:

I think we as black people, especially us Xhosa people, are not open to conversations to our children about sex. You think twice before you mention anything concerning such topics to your child, and maybe it is because our parents never did it to us. They did not talk about such things so you think that it will look like you meddle in children's lives. It is tough but yeah, some people are able to do it, though I do not think that most black people do it. It is really difficult for black people to get used to discussing such issues with children.

6. Female caregiver:

I think as black people our culture makes it very difficult to talk about sex issues to our children. I don't think it is that easy because our children are scared of us like we never asked as well and we were not told anything [not clear] we used to hide everything and the worst was anything to do with sex.

7. Male caregiver:

As we said on that, most of our kids are born out of wedlock. They were grown up by our parents and we are not close to your kid to make her your friend so that we can talk everything. Because in our culture we are not gonna have a child out of wedlock. That is not my child. That is my parent's child. I don't have any access to that child, to talk everything. That child belongs to my parents. So we didn't have that bond with the child to be free to talk with her. You know? To try and have that bond because it was a shame to have a child out of wedlock and that not does not belong to me it belongs to my

parents. I don't have any say on that child up until I get married and I have got my own children.

Several participants rejected out-of-hand the notion that Xhosa parents and youth would ever discuss sexual behavior. What remains unclear is the degree to which *most* caregivers and youth still subscribe to these traditional roles and restrictions in Langa.

The following section presents responses from caregivers who indicated that they recognized the value in discussing sexual behavior to prevent teenage pregnancy and other sexual risks. Caregivers described their own beliefs about why it is important for them to communicate with their children and emphasized the need to be responsive and open to communication with youth or else youth will get sex information elsewhere.

1. Female caregiver:

I say to him, "my baby the only people allowed to touch your 'nanana' are you and mummy when she gives you a bath okay and no one else must touch it, and when you go to the loo it must just be you who touches it and again no one else. Sometimes he, his sister and my sister's child go to my sister's house to visit. When I bath him after that and notice that he keeps on touching his private parts I ask him, "did anybody play with your nanana?" And then he replies, "no mummy nobody touched my nanana." If you want to be able to talk to the child right through his life you must start talking to him now while he is still very young and bring him closer. Talk to him at this tender age because out there they... they practise these things. There are parents who make love in front of the children and the children watch so they know about this type of action; they then want to do the same.

2. Female caregiver:

Even when I was pregnant I kept quiet about it and.... I did not want to tell my mother because she was going to kill me, I approached my aunt instead and said "there is something I want to tell you", and she said, "what is it, come sit down, what is it"? I said "I am pregnant"; "you are pregnant, have you told her?" I said no I have not told her, "Why don't you tell her?" I said I am scared.

3. Female caregiver:

I think it is important to discuss sex topics with our children so that they understand what it involves. It will not help us to avoid sex discussions with them because they have to know all about sex. If we hide such information from them they will go away to other places to find out. The other children at school will also tell her about sex so it does not help much not to hear it from her own parents.

4. Female caregiver:

I think it is the right thing to do to tell him during these times of ours so it is advisable to sit your child down and tell her that you can see she is reaching a certain stage of having interest in boys so this is the way to go about it starting by visiting the clinic to get advice on your health and an injection to prevent pregnancy. There are those children whose parents do not really care what they do and they usually come up with unexpected pregnancies, and the child who is constantly guided by her parent has a lesser chance of falling pregnant unnecessarily.

5. Female caregiver:

I wish...yes you can be a strict parent but at the same time you must listen to your child's problems to make it possible for him to come and talk to you. One mistake we make is to be very strict and not being open to a communication channel with your child especially when he has problems, don't just scream at him when he enters that door to speak to you, listen to him.

6. Male caregiver:

No the parents of today do talk when you are HIV positive it depends on your relationship with your parents, you need not hide anything from them and refrain from picking up other advices from outside.

Despite some caregivers describing the import of parent openness to communication to reduce outside influences on youth sexual behavior, many caregivers reported their expectations that youth learn about sex elsewhere. The following comments represent caregivers' beliefs about who should be the source of information about sex for youth. One female caregiver espoused a gender-based responsibility for communication, and also talked about puberty as time when girls should be spoken to about sex. This was echoed by others who endorsed an urgency to speak to female youth earlier than male youth because of the risk for pregnancy. Caregivers also discussed the role of other institutions such as the school and the loveLife campaigns.

1. Female caregiver:

The father knows what changes happen in men and he is the right person to advise the boy, on the other hand the mother tells the daughter about when menstruation starts and how to take care of it. So when she starts menstruating she will go to her mother because her father will not know anything about that.

2. Male caregiver:

I think it is different because when talking to a girl its mostly like ‘you should behave yourself, do not do this’ and with a guy, usually with a male child they usually taught at a later stage like just to be responsible but with a girl it starts when they are very little to know that they shouldn’t fall pregnant, they shouldn’t do this. It’s more on the girl because of culture because it’s the girl who is going to get pregnant, it’s the girl who’s going to be left if the guy is not like responsible and all that.

3. Male caregiver:

Seeing that now in schools they are taught about sex; and then you’ll hear a child come back from school and tell you ‘Mother, today teacher so and so told us about sex.’ So now you are open to talk to your child about it now because they are taught at/from school about it.

4. Male & Female Caregivers (Couple):

Interviewer: Who do you think the children of his age talk to about things like girlfriends and sex? Who would they be comfortable with when it comes to such discussions?

Participant: I would say they talk with their friends

Participant: With friends, yes

5. Male caregivers:

Interviewer: You know so, so who do adolescents then talk to?

Participant: Their peers.

Participant: The; yeah, friends, peers...

Participant: They discuss on their own.

Interviewer: Okay.

Participant: Sisters or aunts whatever, *not me*.

6. Male caregivers:

Interviewer: Are there any other peer organisations that give information about sex and sexuality to our adolescence in Langa?

Participant: Love life. [*Simultaneous response*]

Interviewer: Yeah. How extensive is Love Life? And are they doing a good job?

Participant: No! I don’t like Love Life, most of the children that come from Love Life have got babies.

Interviewer: Okay.

Participant: I think most of the parents in Langa they don’t like it, they want the place to be closed.

Interviewer: Okay. But why?

Participant: They’ve got babies, I’m sending my child to Love Life, next after 3 months she’s pregnant, how?

On average the male caregivers were more likely than female caregivers to state that youth should learn about sex from sources other than caregivers, whereas more female caregivers indicated their openness to communication with youth. Moreover, many of the caregiver themes focused more clearly on reducing unplanned pregnancies than on risk of HIV or other sexually transmitted infections. Several comments from the caregivers indicated that the cultural norms for younger generations are different from their parents. It was common as well for caregivers to indicate that it is more important to talk to female youth about sex than it is to talk to male youth.

Youth prompt:

“Do families talk about serious sexual health issues, like HIV and AIDS?
Where do most kids learn about HIV? Who can you trust to talk about HIV?”

It is perhaps not particularly surprising that youth did not use a cultural frame (i.e., black people don’t talk about sex) for their comments about family communication about sex and HIV. Due likely to their young age (years 10 to 14), the youth were more likely to describe their own personal relationship with a caregiver, which youth perceived in various ways. For example, one female youth reported a simple message from her mother, “Don’t sleep with boys,” another reported fear, and yet another described her embarrassment should the topic of sex come up via television in the presence of her family. Other themes that emerged were the acknowledgement of multiple sources of information about sex (e.g., teachers and friends), cultural constraints against talking with parents, a general lack of communication about sex and HIV with caregivers, youth’s superior knowledge of HIV when compared to caregivers, and issues of HIV disclosure within the family.

1. Female youth:

Hmm my mother tells me not to sleep with boys that’s all, until I’m 22 years old

2. Female youth:

I blush and maybe switch the TV off or cover my face; I sometimes just leave the room.

3. Female youth:

Interviewer: Would it be easier if a child your age talks to her mother about these things?

Participant: No, maybe to others but not to me

Interviewer: Is it because you are scared of her?

Participant: Yes

4. Female youth:

Interviewer: So when you sit as a family do you discuss serious issues like HIV or AIDS?

Participant: No

Interviewer: You never discuss it?

Participant: No

5. Male youth:

I wish that he would just stop shouting at me and insulting me, he should just hit me because when you shout at me and say that you want to punish me, you would also talk back, then when you talk back you are told that you are back-chatting and then they hit you and the they tell you that you have no respect with the way you are acting. Whether it is repeating the same case that you have done. And then again with your case that you have done, this wrong thing that you have done, you will try and explain to them why you did it and then he will say that you are back chatting, things like that. "Am I your peer?" things like that and you end up saying things that you will end up regretting that you ever said that.

6. Female youth:

Interviewer: Where do you get discussions about HIV and other sicknesses?

Participant: I get them from my teacher

Interviewer: Does the family ever talk about sicknesses?

Participant: Hmm, like at home my cousin is HIV positive

Interviewer: Okay.

Participant: She is 14 years old this year.

Interviewer: Okay.

Participant: My grandmother says we must treat her well because her mother and father passed away, and my grandmother says we must treat her as the same person and not make it obvious that she is HIV positive by acting strangely when she is eating something.

Interviewer: Is she HIV positive? So do you talk about HIV during her presence at home?

Participant: She is not aware that she is HIV positive she only knows that she is sick but she does not know that she is HIV positive. The only people who know are my cousin and I because we were told to be very careful when interacting with her.

Interviewer: Okay, do you ever discuss HIV?

Participant: No

7. Male youth:

No.....I also get hit if I do something wrong, like if I have stolen something, I used to steal things but I have since stopped stealing... No he must hit me and show me the right way.

8. Male youth:

Interviewer: Do you feel like the parents and the youth has enough information or one that is different about HIV or the parents do not have a lot information about HIV?

Participant: The youth has a lot information.

Interviewer: So you have to explain more about things such as HIV to the parents.

Participant: Some of the parents never went to school.

Participant: Yes there are like, like the effects of apartheid you see, people didn't get educated about HIV and AIDS now probably think, it could be that they do not know it very well this HIV and AIDS and how it happens you see and the if you have it you can maintain a healthy life for how long you see those kind of things.

Overall, the youth reports in the qualitative data were consistent with previous findings that parents were likely the least used source of information about sex and HIV among youth in South Africa. It is also notable that no responses in the qualitative data indicated that youth had experienced an open and responsive communication with a caregiver about sex, even though some caregivers reported having such conversations with youth. In addition, the youth largely reported silence from their caregivers in response to HIV, even in households with an infected family member. Many households had many other family members, instead of caregivers, with whom youth may be more likely to discuss sex and HIV.

Youth safety and neighborhood violence.

The topic of violence also emerged in relation to family communication and youth sexual risks. Several caregivers indicated concerns regarding child abuse and the safety of the Langa region. Despite this concern, a prohibition against family communication about violence was a common theme among caregivers.

1. Female caregivers:

- Participant: If a girl goes out at night around 2000 hrs or so it is very dangerous for her because she could be raped. Even if the rapist does not kill her she can be damaged, at least the boy is a little bit safer when it comes to rape though some boys do get raped. It is a daily wish to protect a girl child if possible because she is the flower of the family.
- Participant: They get raped at broad daylight even when you've sent her to the neighbour. You could maybe think she has gone to the shop and yet the child is screaming right here next door. There is no wisdom in dealing with the girl child's safety.

2. Male caregiver:

- Interviewer: Are there social constraints when talking about violence, especially sexual violence?
- Participant: I think there are because most people are still afraid to come out and say 'I have been sexually abused' because society basically will say, let's say if its a member of the family, there are constraints there because they don't want to be arrested, maybe its an uncle to be arrested...
- Participant: Hmm.
- Participant: ...and then maybe the wife, is the aunt, and they want to protect their husband or something like that.
- Interviewer: Hmm.
- Participant: So most people just end up hiding such things in the house because they want to protect the family.

As with the caregiver interviews, the issue of sexual violence emerged among youth, as was evidenced by the following exchange between a male youth and the interviewer.

3. Male youth:

- Participant: ...the child who was raped still comes to school.
- Interviewer: Where is she?
- Participant: In our street.
- Interviewer: In your street?
- Participant: The rapist was chased away from where he was renting but the girl is pregnant .
- Interviewer: Oh! The raped child is in your street?
- Participant: She was raped recently.
- Interviewer: When did this happen?
- Participant: Last week.
- Interviewer: Oh! So how old is that child?
- Participant: She is 15 years old.
- Interviewer: Where is the rapist now?
- Participant: He has moved back home in another street. He was renting a shack and he called this girl in and raped her.
- Interviewer: Okay, okay.

- Participant: And he was told to leave that place
- Interviewer: Oh! Was he chased away because of that?
- Participant: Yes
- Interviewer: So those are the things that happen in your area, people getting raped. Are these the things that you witness?
- Participant: Yes
- Interviewer: So this girl is pregnant?
- Participant: Yes
- Interviewer: Did the police do anything about it?
- Participant: I do not know.
- Interviewer: So what did the girl's parents do when they found out that their child has been raped and now she is pregnant?
- Participant: They chased this guy away from their home but did nothing else. They did not even call the police. If we go there now we can find that man there.
- Interviewer: Who was chased away, this guy?
- Participant: Yes
- Interviewer: So he is still there?
- Participant: Yes
- Interviewer: So now... if this person who has done a thing like this is still living in your street how do you as young children look at him? Do you think it is comfortable to live with him in your street or you are scared of him?
- Participant: No he is fine
- Interviewer: He is a fine person? So he does not look like a person who can do something like that?
- Participant: Yes

The caregivers stated many serious concerns about the ability to raise a family in Langa given risks of violence against youth. Unfortunately, the youth report described a sense that sexual violence is normative. Despite this, participants reported that sexual and physical violence were typically not discussed.

QUANTITATIVE METHODS

Next we move to triangulate youth and caregiver qualitative responses with quantitative data from a larger sample. Given the diversity of perspectives identified in the qualitative dataset, enlisting the strengths of quantitative statistical tests improves interpretations of relationships among variables and can be used to identify any differences between the caregiver and youth reports. Quantitative analyses descriptively examined caregiver and youth scores on three

measures (family communication about sex topics, caregiver responsiveness, and neighborhood safety) to address the following two research questions:

Quantitative Research Questions

1. Are there statistically significant generational or gender differences in caregiver and youth reports of family communication about sex topics, caregiver responsiveness, and neighborhood safety?
2. Are there statistically significant relationships between the caregiver and youth reports of family communication about sex topics and caregiver responsiveness?

First, participant household and demographic data and individual items that inform the topic of family communication about sex were examined. Second, the internal consistency of each measure (family communication, caregiver responsiveness) was calculated, and item distributions were examined to test for reliability and violations of normality. Third, means and standard deviations were calculated for each measure. Fourth, power analysis was conducted to identify the effect size possible to identify given the sample size. Fifth, paired sample *t* tests were used to assess for mean differences between caregiver and youth generations' reports (research question one). Sixth, an independent samples *t* test was enlisted to examine whether family communication varied by youth gender. Finally, a correlation matrix was generated to assess the strength and direction of relations among the three variables to examine research question two.

Quantitative Participants

In the present report, the total sample size was 194. Ninety-nine youth ages 10-14 years old attended baseline assessments for the parent intervention study, however a sample of 97 participants were included for scale-based analyses due to incomplete baseline data for two youth. Similarly, ninety-nine caregivers ages 22-80 years old participated in baseline

assessments, however two caregivers did not complete the baseline assessment and were excluded from scale-based analyses. Whenever responses to a single item were examined the most complete data available are reported. The mean youth age was 11.7 years old ($SD = 1.4$), with 45 male and 52 female youth participants. The mean caregiver age was 43 years ($SD = 11.98$). All the caregivers were female. The majority of caregivers in the sample were mothers (69.1%), followed by grandmothers (15.5%), aunts (6.2%), and great-grandmothers (2.1%), with one cousin and one foster mother.

Seventy-eight percent of the participants were from the Western Cape, and 21.9 percent were from the Eastern Cape. One participant did not list a province. The majority of the sample identified as Xhosa (83.5%), followed by Zulu (11.3%), Sotho (3.1%), and other ethnicities (2.1%). The majority of the sample lived in brick houses (70.1%), and 34.1% of the sample reported that they owned their home. More than likely these participants live in government-apportioned council homes and 45.8% reported that they share their brick home with another family or families. However, a third of the sample lived in much less stable housing, including shacks (11.3%), hostels (4.1%), room/garage (4.1%) or flats (2.1%). 8.2% of the participants endorsed homelessness.

Participants' provided information about up to eight household members, including the members' relationship to the caregiver and youth. Figures 1 and 2 depict the frequency of each type of relationship as a function of font size. Use of this algorithm provides a visual representation of household relationships. For maximum clarity the enrolled caregiver and youth were excluded, as this relationship was requisite for participation in the present investigation. Figure 1 displays household members' relationships to the caregiver, whereas Figure 2 displays the household members' relationships to the youth.

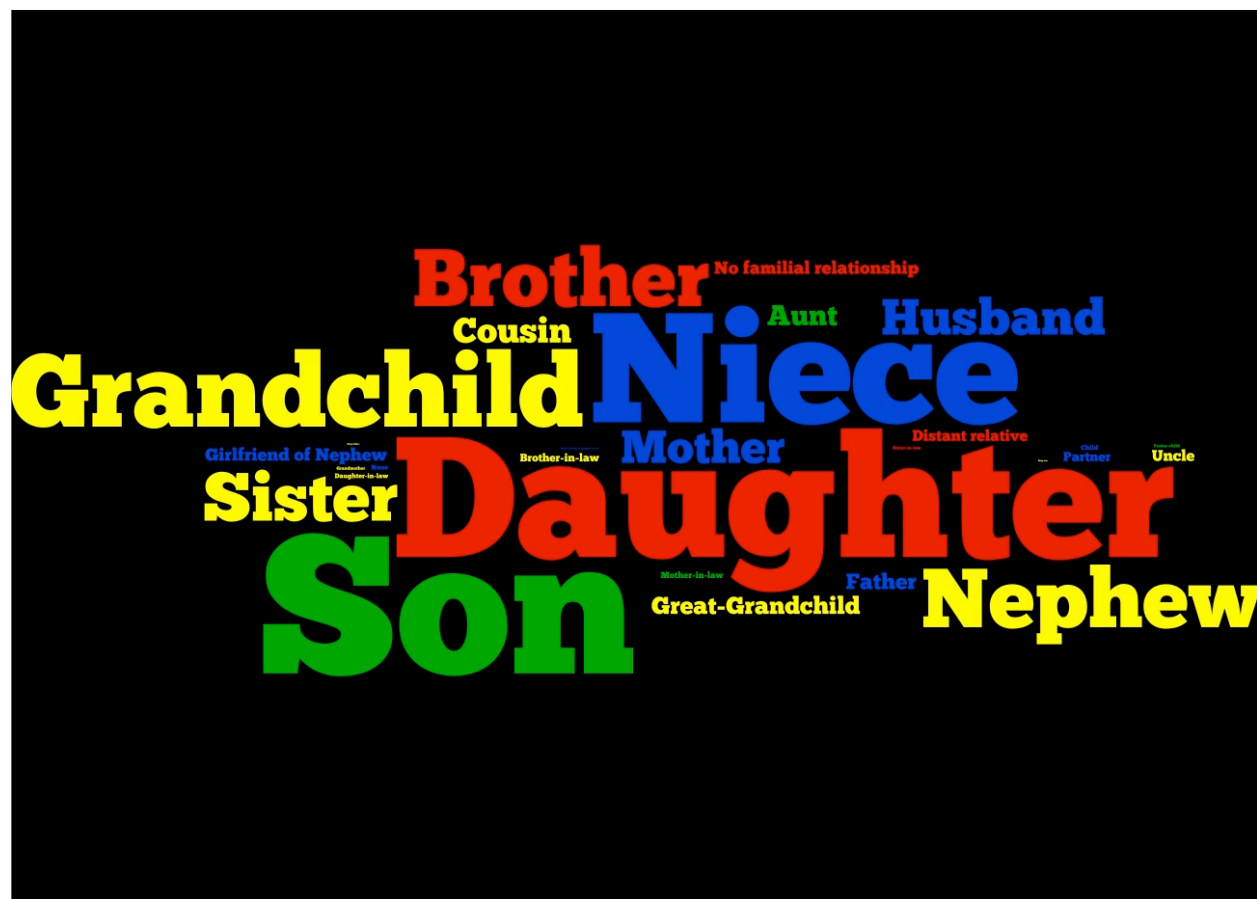


Figure 1.

Household Relationships to the Caregiver

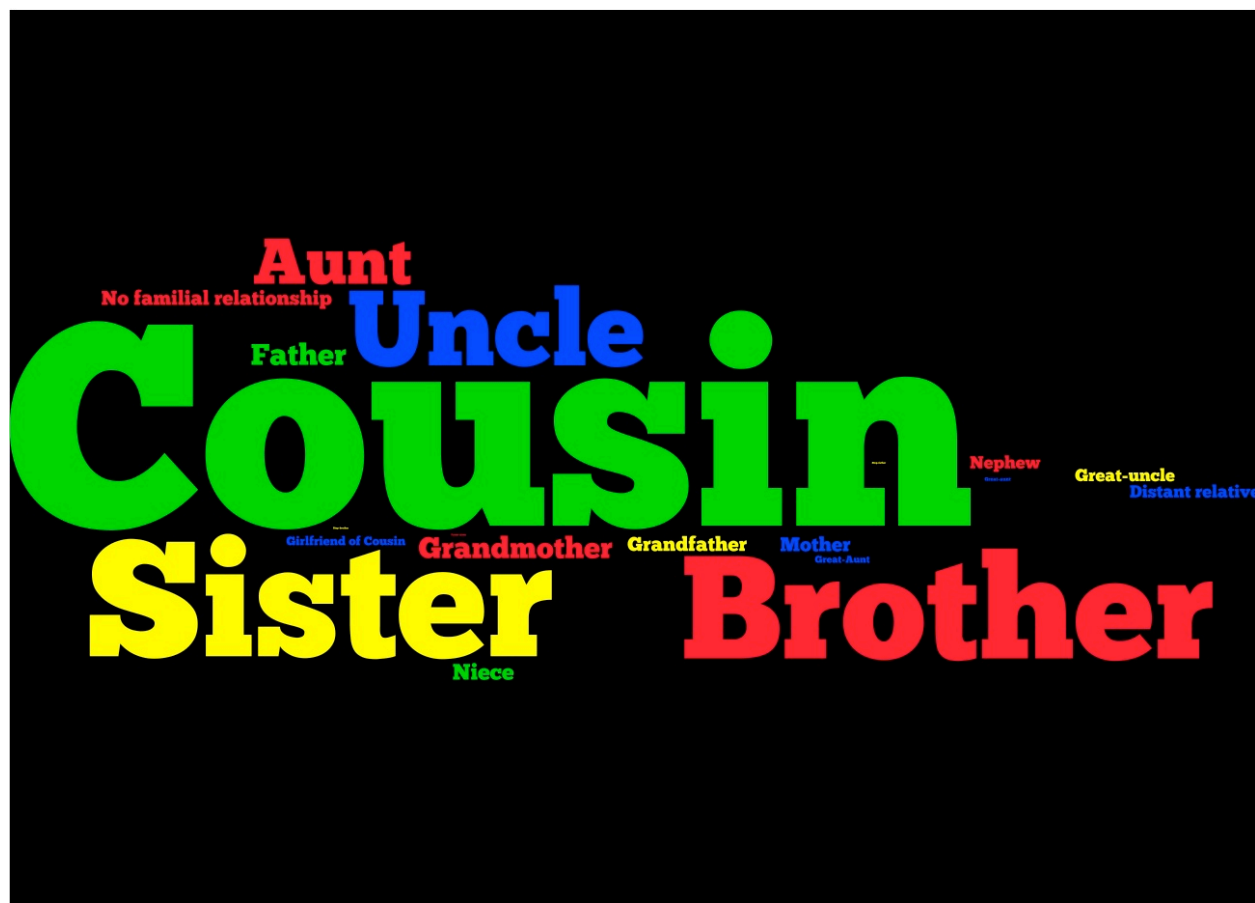


Figure 2.

Household Relationships to the Youth

Figure 1 depicts the prominence of female relationships in the household. Daughters and nieces are the most frequently reported relationships to caregivers. Figure 1 also demonstrates the multigenerational structure of households within this sample, as many caregivers reported living with mothers and grandchildren. In Figure 2, cousin is the most commonly reported youth household relationship, followed by sister and brother, suggesting that same-generation household members are typically present in the lives of these youth. Moreover, Figure 2 indicates the relative absence of fathers in these households.

Consistent with data showing a decline in marriage in South Africa over several recent generations, 59.8% of the caregivers in the sample never married. Among those who were not

married, 18.6% were living with a partner, and 41.2% were not. Among the 40.2% who were or had been married, 19.6% were not living with their spouse, 12.4% reported living with a spouse/partner at least four nights a week, and 8.2% were widowed. When asked, “Is there someone who helps you raise your child and take care of them?” 63.6% of the sample said yes, and 55% of the total sample reported a live-in co-caregiver. Table 3 displays the co-caregiver relationships that were reported. The majority of co-caregivers were female (57.6%). In addition, although the largest proportion (40.9%) of co-caregivers was one familial generation from the youth (i.e., aunt, father), the most frequently reported co-caregiver was a grandmother (21.6%).

Table 3

Co-caregiver Relationship¹

	Frequency	Percent
Grandmother	21	21.6%
Father	11	11.3%
Answer unclear ²	10	10.3%
Aunt	7	7.2%
Mother	6	6.2%
Sister	3	3.1%
Brother	2	2.1%
Step-father	2	2.1%
Great-Grandmother	1	1.0%
Uncle	1	1.0%

Did not respond	4	4.1%
No Co-caregiver	29	29.9%
Total	97	100.0%

Notes. 1. Refers to the co-caregiver's relationship to the youth
 2. Participants entered their answers in ACASI; these answers were not interpretable.

Quantitative Procedures

Eligibility criteria were that potential participants could participate in either English or Xhosa and were the legal caregiver of at least one 10-14 year old youth with whom they live and had lived for at least one year in the Langa Township. Local community workers went door-to-door to identify families with 10-14 year olds and recruit them to an orientation meeting. Ninety-nine caregivers attended orientation meetings with the goal of identifying 90 eligible South African caregivers and their 90 youth. Caregiver-youth dyads meeting eligibility requirements were scheduled for the baseline assessment. Prior to assessment, youth signed an assent form and caregivers signed consent forms for their own and their youth's participation. Consent forms were offered in English and Xhosa, and the project staff who explained the informed consent were fluent in both languages.

Audio Computer Assisted Self Interviews (ACASI).

Caregivers and youth completed Audio Computer Assisted Self Interviews (ACASI) with questions delivered visually and orally in Xhosa or English. The majority of youth chose to complete the interview in English (65.7%), whereas the majority of caregivers chose Xhosa (63.6%). Interviews were completed individually and an anonymous identification number was used to track caregivers and youth. The total assessment was designed to last 90 minutes for

caregivers and 45 minutes for youth. Caregivers were compensated with 70 Rand (approximately \$10 USD) for the assessment, and youth were compensated with a small toy and snack.

Validation and cultural adaptation of measures.

Measures were selected whenever possible based on prior use in South Africa. Informed by the qualitative data, quantitative measures were reviewed for linguistic appropriateness, comprehension, developmental stage, and local context by the South African collaborative team, including researchers from Stellenbosch University, social workers from Cape Town Child Welfare Society, and the U.S. research team. Measures were translated from English to Xhosa, and then translated back into English for verification. All measures were piloted with individuals demographically similar to prospective study participants to maximize reliability, validity and to assess cultural adaptations.

Communication about sex topics.

Caregivers and Youth: Family communication was measured with a subset of 5 items drawn from a larger scale found to have good reliability (caregiver alpha = 0.88; youth alpha = 0.86) and validity in U.S. samples (Forehand, et al., 2007). The 5 communication topic items included talks about dating, puberty, menstruation, what sex is, and HIV/AIDS. Due to IRB concerns at Stellenbosch University in South Africa, youth items were gated so that youth who did not report communication about a topic were not asked follow-up questions about that topic. Therefore, the five communication topics for the family communication scale reported here were selected because all the youth and caregivers responded to them. However, caregiver responses to risk reduction communication topics and communication about violence topics were also examined (e.g., “When you talked about menstruation, have you told your child that when girls start to menstruate, they can get pregnant?” or “Have you ever talked to your child about child

sexual abuse?”).

In the present study, reliability of the family communication scale was adequate (caregiver $\alpha = .77$; youth $\alpha = 0.69$). Although communication about one topic may not be expected to significantly correlate with another communication topic, these alpha values suggest that across the five topics these items reliably assessed family communication about sex topics. For youth, each question asks first whether the youth or caregiver have ever talked about the topic, followed by a frequency scale ranging from 0 “never” to 3 “three or more times.” Given that few youth endorsed communication about the topic one or two times, responses were recoded dichotomously to indicate that communication about that topic had occurred (1) or had not occurred (0). The caregivers were also asked whether communication about the topic occurred (1 = yes/0 = no), which could be directly compared to the recoded youth data. The items were summed to create a communication scale ranging from 0 to 5.

Caregiver responsiveness to communication about sex topics.

Caregiver report: Caregivers’ perceptions of their responsiveness to sex communication were measured by a subset of 12 items that assessed their knowledge, skills, comfort, and confidence in communicating with their youth about sex. Originally developed for the Family Adolescent Risk Behavior and Communication Study (FARBCS) (Miller et al. 2000), sample items include, “If my son/daughter asked me a question about a sex topic, I would be glad s/he asked,” and “I know enough about sex topics to talk to my child.” One item was added based on the qualitative data: “In my culture, parents don’t talk to their children about sex.” Response options ranged from 0 “not at all true” to 2 “very true.” Seven items were reverse-coded so that higher scores on the measure indicate higher caregiver responsiveness. An example of a reverse-coded item is, “My child is not allowed to ask me questions about sex topics.” Responses were

summed to create the responsiveness measure (possible range from 0 to 24), with higher scores indicating more caregiver responsiveness during communication. Coefficient alpha for the scale was 0.80 in a recent U.S. research study, indicating adequate reliability (Miller et al., 2009). In the present study, reliability was less robust with $\alpha = 0.63$.

Youth report: Youths' perceptions of their caregivers' responsiveness were measured with the same 12-item subset of the caregiver responsiveness items, re-worded for use with youth. Specifically, youth answered items such as, "If I asked, my parent would answer my question." Response options were 2 "Yes," 1 "Maybe," 0 "No." The options "Don't Know," and "Refuse to Answer," were also provided, but were used by approximately 1% of the respondents and were treated as missing data. Seven items were reverse-coded so that higher scores on the measure indicate higher caregiver responsiveness. Examples of reverse-coded items include, "I would be afraid to ask my parent a question about sex," and "My parent doesn't talk to me about these topics, he/she warns or threatens me about the consequences." The reliability of the youth responsiveness scale was adequate with $\alpha = 0.65$. Three additional items queried youth regarding whether 1) they had *ever* asked a question about sex, 2) who they would go to *first* with a question about sex, and 3) where they get *most* of their information about sex.

Perception of neighborhood safety

Caregiver and Youth reports: Neighborhood safety was assessed with a single item from the Community Disorder Scale (Cutrona, Russell, Hessling, Brown, & Murry, 2000): "How safe do you feel your neighborhood is?" Response options were "Very safe," "Safe," "Not safe," "Don't know," and "Refuse to Answer." Originally, the researchers intended to use the entire Community Disorder Scale to assess whether the caregiver and youth's perceptions of the community context varied from one another, and whether these perceptions were associated with

reports of communication and caregiver responsiveness. However, despite several adaptations to the measure made with the South African collaborators, the internal inconsistency of the measure was inadequate for making these comparisons. Therefore, although less robust than a full measure, this single item assesses perceptions of safety, a topic that came up frequently among caregivers in the qualitative data when discussing youth HIV risks.

Power Analysis

Using the statistical program G*Power, the sample size needed to detect a medium effect ($d = .5$) with a paired sample t test (two-tailed; $\alpha = .05$) yielded $n = 54$. Therefore, the sample size of $n = 194$ in the present study has adequate power to detect moderate effects with regard to research question one. However, sensitivity analysis indicates that with a sample size of 194, any effects smaller than .50 would likely go undetected. G*Power was also used to assess the necessary sample size to detect medium effects using correlation. Results recommended $n = 115$. Therefore, there should also be adequate power to detect moderate effects with regard to research question two.

QUANTITATIVE RESULTS

Communication about Sex Topics

The summed communication topics scale ranged from 0 to 5. Means (with standard deviations in parentheses) were youth = 3.0 (1.62) and caregiver = 2.42 (1.74). However, as Figures 3-8 display, the caregiver and youth reports frequently differed. With the exception of communication about what sex is, the majority of the youth sample indicated that each topic had been discussed at least one time. Caregivers more frequently indicated that topics were *not* discussed. Paired sample t tests of the difference between the youth and caregiver reports indicated that the overall difference between each caregiver and youth report was

statistically significant $t(96) = 2.68, p < .01$. Paired sample t tests assess the overall mean difference between generations, accounting for the dependent nature of caregiver and youth reports about the same communication.

Independent sample t tests identified significant mean differences in caregiver-youth communication between male youth 2.35 (1.54) and female youth 3.59 (1.47), and between caregivers of male youth 1.85 (1.5) and caregivers of female youth 2.92 (1.80): Youth = $t(95) = -4.1, p < .01 (d = -.82)$; Caregivers = $t(96) = -3.2, p < .01 (d = -.65)$. A Levene's test was not significant for the youth report and equal variances were assumed. However, for the caregiver report, the Levene's test was significant ($p < .05$), and the t statistic reported is with equal variances not assumed. The Cohen's d values indicate that gender had a large magnitude of effect on communication. Figure 3 displays both the gender difference and the difference between caregiver and youth reports.

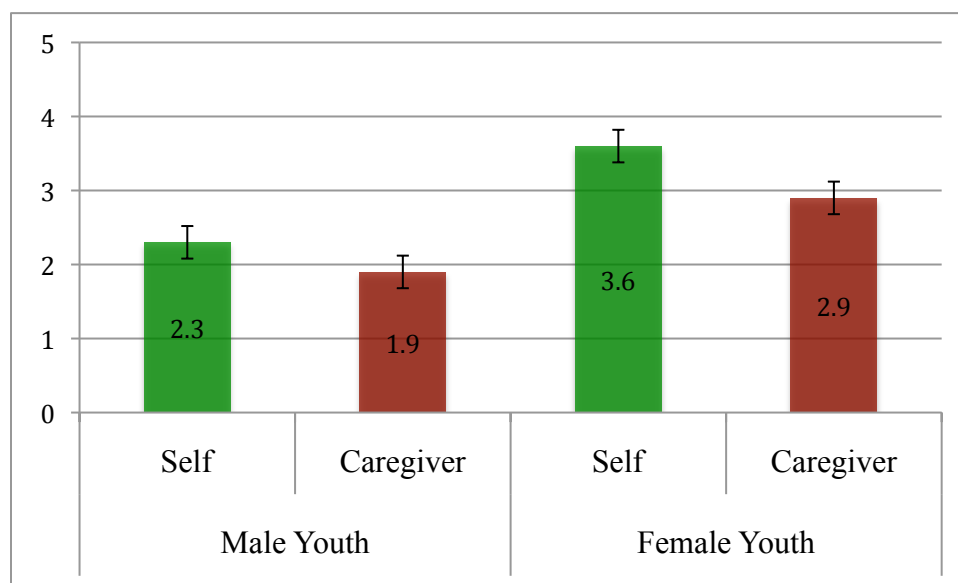


Figure 3

Mean Communication Scores by Youth Gender and Reporter

Separated by both gender and reporter, Figures 4-8 display the frequency of communication reported by caregivers and youth for each sex topic. Generational and gender differences emerged, though these figures also display wide variability by topic. For example in Figure 4, some caregivers reported discussing dating nearly as often as youth, but only for the caregivers of female youth. Caregivers and youth differed considerably in reports of communication about puberty (Figure 6), with 50% of caregivers of female youth and 80% of caregivers of male youth denying communication about the topic. Figure 7 indicates that except for female youth, communication about sex was denied by the majority of participants. Last, Figure 8 indicates that communication about HIV was the only sex topic where the majority (nearly 80%) of caregivers of male youth reported that communication occurred. In addition, HIV was the only topic where communication reported by caregivers of male youth (78.7%) exceeded that reported by caregivers of female youth (67.3%).

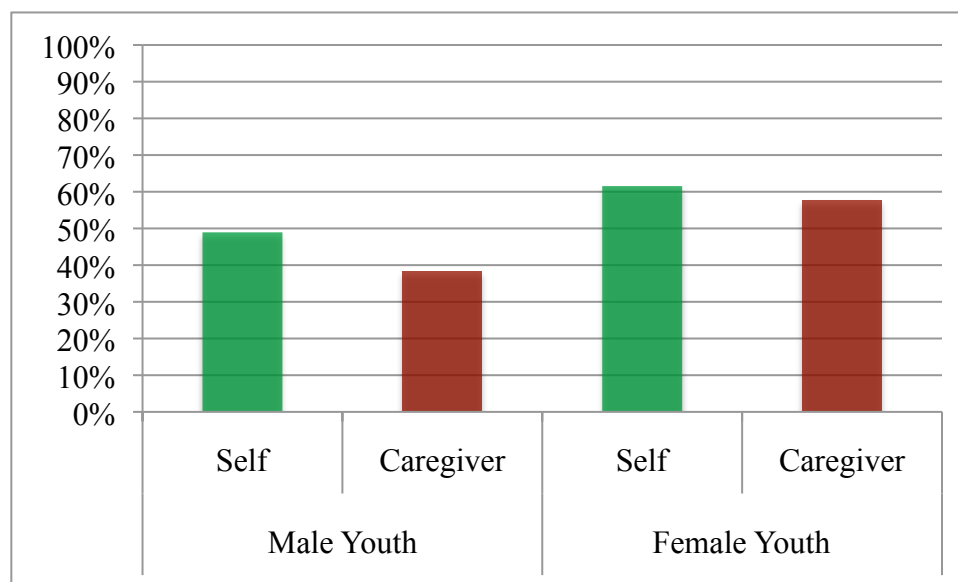


Figure 4

Dating Communication by Youth Gender and Reporter

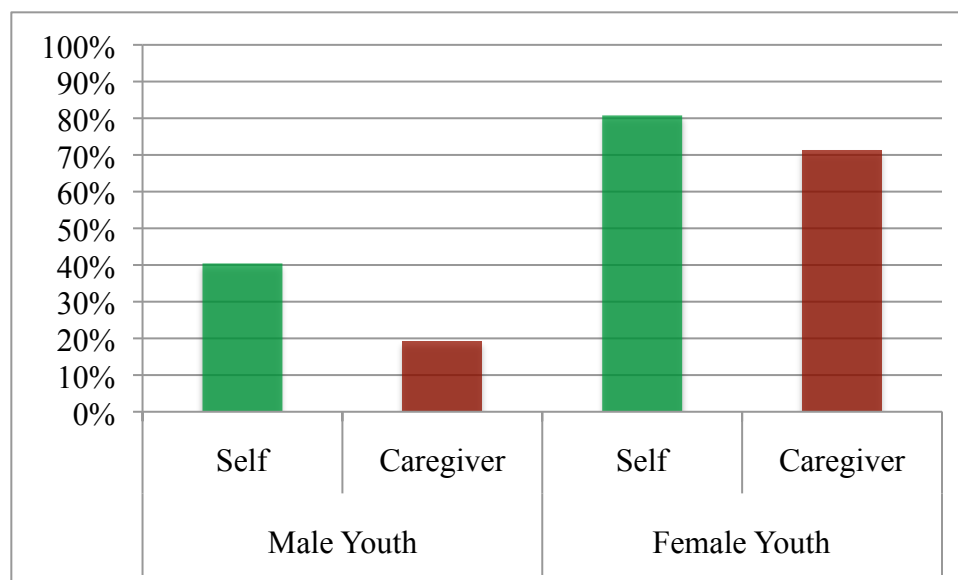


Figure 5

Menstruation Communication by Youth Gender and Reporter

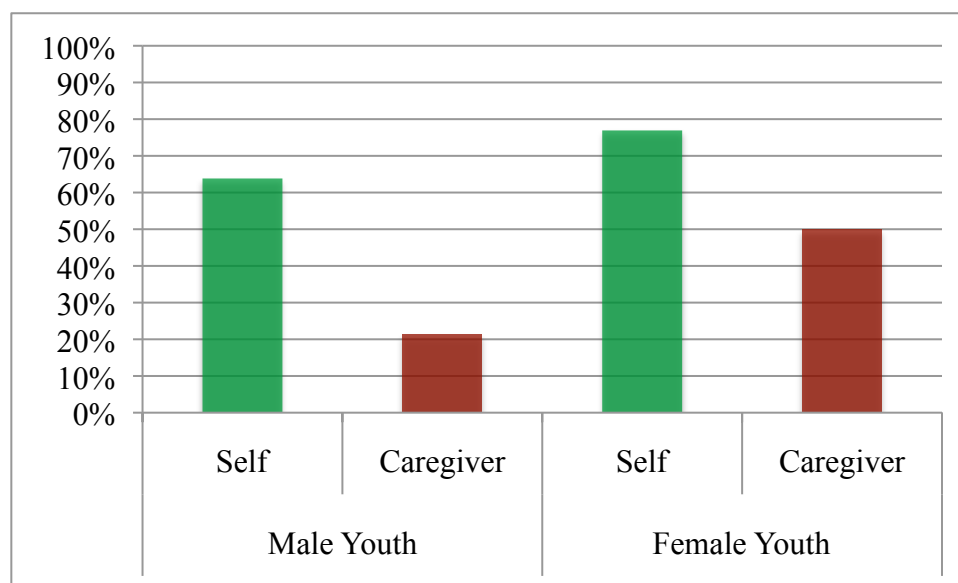


Figure 6

Puberty Communication by Youth Gender and Reporter

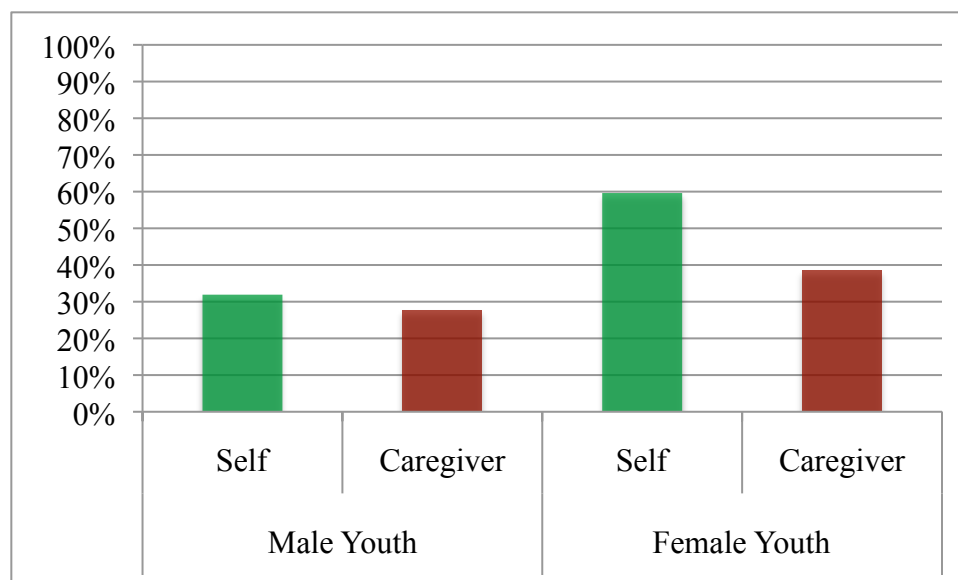


Figure 7

Sex Communication by Youth Gender and Reporter

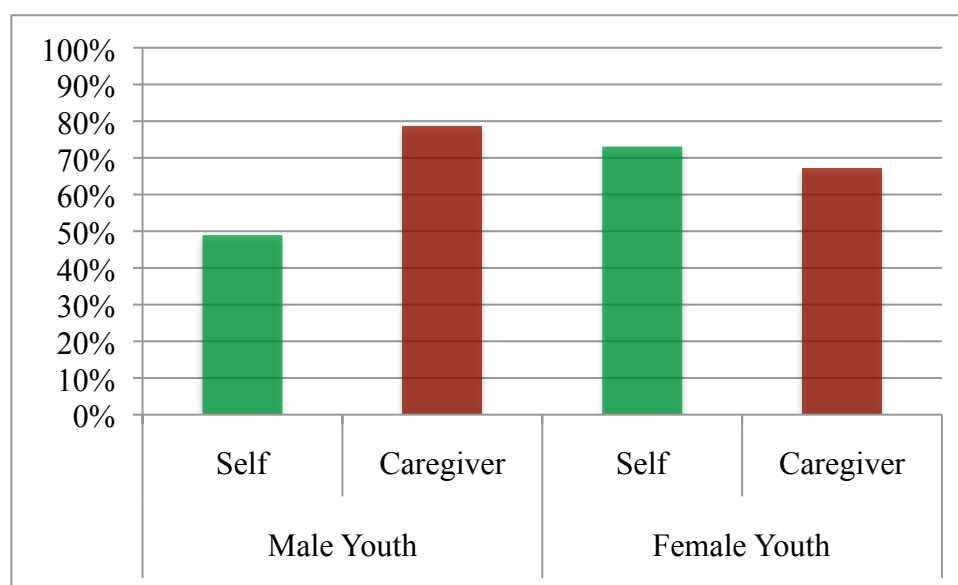


Figure 8

HIV Communication by Youth Gender and Reporter

After asking if a sex communication topic (e.g., sex or HIV) was discussed (yes/no), caregivers who said yes were asked whether they had discussed specific risk reduction topics (e.g., abstinence, condom use). Table 4 presents this data. The first column lists the specific risk reduction topic. The second column indicates sample size of caregivers who endorsed the broader sex topic question gate (e.g., sex or HIV) and were administered the follow-up question. And, the third and fourth columns present the percent of caregivers of either male youth or female youth, respectively, who endorsed communication about that specific risk reduction topic among those who endorsed the broader topic gate.

Table 4

<i>Risk Reduction Communication Reported by Caregivers</i>			
	Topic Gate ¹	Risk Reduction Topic ²	
Youth Gender	n	Male %	Female %
...that when girl starts to menstruate, they can get pregnant	46	17.0	56.9
...that when male and female have sex...a baby can be made	22	14.9	25.5
...that females can get pregnant the first time she has sex	22	17.0	72.5
Have you ever talked about abstinence	97	42.6	47.1
Have you ever talked about condoms	97	51.1	45.1
...that condoms protect against disease and pregnancy	47	46.8	43.1
Have you ever talked about how a person gets HIV	71	70.2	60.8
...that you can protect from HIV by not having sex	71	68.1	62.7
...that you can protect from HIV by using a condom	71	63.8	56.9

Notes. 1. The n for the broader “topic gate” indicates the number of caregivers who endorsed talking about the broader topic and were asked about these more specific topics. 2. These columns refer to the percentage of caregivers of either male or female youth, respectively, who endorsed communication about that specific topic among those who were asked the follow-up question.

In addition to risk reduction communication, the caregivers were asked about communication with youth about violence. Table 5 presents this data. The first column lists the violence topic. The second column indicates number of caregivers who endorsed the broader topic gate and were administered the follow-up question. And, the third and fourth columns present the percent of caregivers of male youth and of female youth, respectively, who endorsed communication about that particular violence topic.

Table 5

Caregiver Reported Communication about Violence

Youth Gender	Topic Gate ¹	Violence Topic ²	
	n	Male n (%)	Female n (%)
Have you ever talked about rape or sexual assault	97	61.7	76.5
Have you ever talked about sex with family members	97	40.4	43.1
Have you ever talked about child sexual abuse	97	70.2	66.7
Have you ever talked about trading sex for gifts or favors	97	44.7	64.7
Have you ever talked about ways to deal with peer pressure	97	36.2	33.3
Have you ever talked about what consent to sex is ³	97	14.9	21.6
...what factors make someone unable to consent	18	8.5	19.6

Notes. 1. The n for the topic gate indicates the number of caregivers who endorsed talking about the broader topic gate and were asked about more specific violence topics. 2. The percent for the specific violence topics are caregivers who endorsed communication about that specific topic among those who were asked the follow-up question. 3. One person endorsed “Don’t Know” for this item.

Given the number of family members in the household, the discrepancy between caregiver and youth reports, and a significant gender difference in communication, the frequency of reported communication based on the presence of a co-caregiver was assessed. Examination of frequency data indicated that caregivers with a co-caregiver tended to report more communication with youth about sex topics. However, when independent samples t tests were used to test for mean differences across groups, the results were not statistically significant.

Caregiver Responsiveness

The summed responsiveness scale ranged from 0 to 24. Sample means (with standard deviations in parentheses) were youth report = 13.26 (4.27) and caregiver report = 14.53 (4.47). A paired sample t test of the difference between youth and caregiver responsiveness reports was statistically significant $t(90) = -2.15, p < .05$, with caregivers reporting higher levels of responsiveness than reported by the youth. Independent samples t tests were used to assess for mean differences in caregiver responsiveness between the male and female youth reports, and between the reports of caregivers of male youth and caregivers of female youth. Sample means (with standard deviations in parentheses) by reporter were male youth = 12.53 (4.25) and female youth = 14.06 (4.23), and caregivers of male youth = 14.44 (4.97) and caregivers of female youth = 14.39 (3.97). No significant differences in caregivers' responsiveness were identified based on youth gender in the youth or caregiver reports.

Three additional items queried youth regarding where they get or would like to get information about sex. In response to the question "Have you ever asked your parent about a sex topic?" 65.7% of the youth said no, 16.2% of the youth reported that they had, but it was more than six months ago, and 18.5% reported asking a question about sex in the last six months. Despite this data suggesting that youth are very unlikely to go to their caregivers with a question

about sex, when asked, “Who would you go to *first* with a question about sex,” the most frequent response for both male (40.4%) and female (48.1%) youth was mother (see Table 6).

Table 6

Who would you go to first with a question about sex?

	Female		Male	
	Frequency	Percent	Frequency	Percent
Mother	25	48.1	19	40.4
Sister	3	5.8	1	2.1
Cousin	8	15.4	1	2.1
Grandparent	3	5.8	1	2.1
Aunt	1	1.9	3	6.4
Friend	2	3.8	1	2.1
Minister/Priest	1	1.9	4	8.5
Teacher	3	5.8	6	12.8
Doctor/Nurse	1	1.9	4	8.5
loveLife staff member	2	3.8	6	12.8
No one	3	5.8	1	2.1
Total	52	100	47	100

Notes. Options that were *not* endorsed: Stepmother, Father, Stepfather, Brother, Uncle, Boyfriend, Someone Else, Don't Know, Refuse to Answer

Consistent with the qualitative data, no youth endorsed going to a male family member, such as a father, brother, or uncle with a question about sex. Moreover reports of going first outside the family to talk to a teacher (12.8%) or loveLife staff member (12.8%) were common among male youth, whereas female youth more commonly reported talking to a cousin (15.4%). Inconsistent with their stated desire to ask a caregiver about sex first, when youth were asked where they get *most* of their information about sex, the answers were more consistent with the 65.7% of youth who reported never asking their caregiver. Specifically, the youth reported the following primary sources of information about sex: School (33.7%), loveLife (20.4%), Clinic (13.3%), Friends (9.2%), and TV or Movies (7.1%). Family members were listed as a primary source of information by only 3.1% of the youth. Moreover, of the 44 caregivers who endorsed talking with youth about sex:, 47.7% reported that when they did talk about it, they told their youth they would punish or beat them if he/she had sex.

Neighborhood Safety

Cross-tabulation of the caregiver- and youth-reports on the neighborhood safety item identified some divergence between the cohorts. For example, the proportion of youth who perceived their neighborhoods to be “safe” or “very safe” (82%) exceeded the proportion of caregivers (66%) who endorsed these two options. In addition, youth who endorsed either the “not safe” or “very safe” options converged with caregivers’ reports only 50% of the time, and convergence between caregivers and youth for “safe” was only 28.6%.

Correlations Among Measures

Table 7 displays the correlations among caregiver and youth age, caregiver and youth reports on the communication about sex topics scale, and caregiver and youth reports of caregiver responsiveness to sex communication. Youth age was significantly positively

correlated with caregiver communication scores. Caregiver age was significantly negatively correlated with caregiver reports of their own responsiveness. Youth and caregiver communication scores were significantly correlated with each other, but youth and caregiver reports on the responsiveness measure were not. Youth-reported communication and caregiver responsiveness scores were significantly positively correlated, as were caregiver-reported communication and responsiveness. The strongest relationships were between youth-reported caregiver responsiveness and the caregiver- and youth-reported communication topics scores.

Table 7

<i>Correlations</i>		<i>r</i>					
		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
Age							
	1. Youth		.1	.1	.23*	.1	.1
	2. Caregiver			-.1	.1	.1	-.24*
Communication							
	3. Youth				.20*	.40*	.1
	4. Caregiver					.37*	.3*
Responsiveness							
	5. Youth						.2
	6. Caregiver						

Note. * Correlation is significant ($p < .05$; 2-tailed).

DISCUSSION

To contribute to the scientific knowledge underpinning family-based HIV prevention interventions, this study sought to enhance understanding of how sex, HIV, and violence are discussed in South African families. Based on promising research findings in the United States and South Africa, the goal was to identify potentially modifiable family communication processes that might help reduce youth HIV risks. The present investigation used both qualitative and quantitative analyses to describe family communication about sex topics. The benefits of the qualitative data were that they highlight diversity within the caregiver and youth samples. This was complemented by the strengths of the quantitative data, which allowed for more generalizable statistical comparisons. One clear benefit of this primarily descriptive investigation was that questions about the role of cultural norms about family communication could be explored. In addition, the inclusion of more than one generation was incorporated to gather more than one perspective about whether and how family communication in South Africa occurs and to determine how South African cultural norms may be shifting over time.

In the discussion section that follows, we first review the family and household demographics of the present samples and compare them to the South African research literature. Then key study findings are reviewed related to the two primary aims, which were to both qualitatively and quantitatively describe differences and similarities between youth and caregiver reports of family communication and caregiver responsiveness to communication. Throughout this review the emphasis will be on using the qualitative and quantitative results to inform one another, in light of the relevant research literature. Based on these findings, directions for future family-intervention research are proposed. Finally, this section concludes with a discussion of the limitations and strengths of the present investigation.

Overall, the household and demographic data for both the qualitative and quantitative participants were consistent with the literature review, which found that South African families are continually being redefined based on political and economic pressures, a decline in marriage, and an increase in multi-family and intergenerational households (Hunter, 2010; Lee 2009; Spiegel, Watson, & Wilkinson, 1996). For example, although there are many ways to examine generations, the cohort of caregivers of these 10-14 year old youth ranged in age from 22 to 80 years and from familial-relations ranging from mother to great-grandmother. Co-caregiver relationships were in a similar wide range. In addition, 59.8% of the caregivers in the sample never married. Given findings of multiple types of relationships within households for many families, it seemed plausible that youth might be likely to talk with other family members besides their primary caregiver about sex. But, at present, only 3.1% of youth reported talking with *any* family members about sex. Therefore, it is unclear given the large number of family members in the household, whether future intervention research might benefit from including more household members.

The first study aim was to determine whether caregivers and youth perceived and described communication about sex topics in similar or discrepant ways. One of the principal findings of the qualitative investigation was the diversity of perspectives among caregivers about communication with youth. On the one hand, several caregivers in the qualitative sample described a cultural taboo prohibitive of communication about sex between caregivers and youth. On the other hand, caregivers reported that considerable societal shifts, including the HIV epidemic, sex education in schools, and high rates of violence, compelled them to talk to youth about sex risks. The quantitative data are largely consistent with these qualitative findings. For example, using paired-sample *t* tests, youth reported more sex communication than did their

caregivers, which might be because youth have not internalized cultural taboos associated with parent-child communication about sex to the same extent as their caregivers. The administration of sex education in schools and the prominence of loveLife may have resulted in normalization of sex communications for youth. Additional empirical support toward a cultural shift that is more accepting of caregiver-youth communication about sex was the finding that caregiver age was significantly negatively correlated with their self-reported responsiveness to sex communication. In other words, younger caregivers may be more likely to communicate with their youth. However, the finding that youth reported more communication than caregivers is particularly notable because it contrasts with the U.S. research literature where caregivers typically are more likely than youth to say that communication about sex topics has occurred (Miller et al., 2009).

It is possible that the high prevalence of HIV in South Africa is what the caregivers in the qualitative dataset meant when they described an imperative to discuss sex risks due to “extraordinary times.” According to all reporters, HIV was more frequently discussed than sex, and it was the only sex topic that caregivers of male youth endorsed discussing at a rate that exceeded the caregivers of female youth. Perhaps again indicative of cultural prohibitions about sex communication, among caregivers, across sex topics, sex was least likely to be discussed. So, by the account of all reporters, most caregivers and youth were engaging in some HIV-related communication. However, it may be less than ideal for prevention that these conversations do not appear to be occurring in the context of more general communication about sex topics. Qualitative and quantitative data indicated that warnings or fear-based messages about HIV and other negative consequences of youth sexual behavior may be the most common caregiver-youth sex communications.

Using a paired sample *t* test, caregivers' self-reported mean responsiveness scores were significantly higher than youth reports about his/her caregiver's responsiveness. In addition, the caregiver and youth responsiveness scores were not correlated. Forty-seven percent of the caregivers reported that when they talk about sex they warn their youth that they will punish or beat them if they have sex. While this communication would convey a prohibition against youth sexual behavior, it would not inform youth about ways to reduce sex and violence risks. Moreover, 34.7% of youth, and 54.1% of caregivers reported on the responsiveness scale that when the caregiver talks about sex topics she warns or threatens the youth about the consequences. These results convey missed opportunities for protective communications in relation to youth HIV risk and highlight an aspect of family caregiver-youth communication to target for improvement. Specifically, based on U.S. research indicating that more responsive caregiver communication encompassing more topics has resulted in fewer specific incidents of youth sex risks in U.S. samples (Dutra, Miller, & Forehand, 1999; Miller, Kotchick, Dorsey, Forehand, & Ham, 1998), and given evidence from South Africa that a reduction in caregiver threats and increase in responsiveness was associated with increases in youth HIV transmission knowledge (Bell, Bhana, Petersen, McKay, Gibbons, Bannon, & Amatya, 2008), helping South African caregivers to move beyond warnings and threats may result in positive outcomes for their youth. Providing evidence that achieving this more protective communication is possible, nearly half of the caregivers in the present study reported discussing risk reduction topics, such as abstinence or condom use, with their youth.

Addressing another aim of this investigation, the qualitative and quantitative data highlight the prominent role of gender in caregiver-youth communication about sex topics. Some caregivers in the qualitative sample asserted that communication about sex should be gender-

consistent (i.e., a father talking to a male youth). However, the male caregivers denied that youth would talk to them about sex topics. In the quantitative sample these assertions were largely confirmed and expanded. Though the exclusion of male caregivers did not allow for consideration of same versus cross-gender communications, female youth and their caregivers were particularly likely to report that communication with a caregiver had taken place. In contrast, male youth and their caregivers reported significantly less communication. Large effect size estimates were computed for these mean differences between the male and female youth, and between the caregivers of male youth and caregivers of female youth. And, finding a significant Levene's test for the caregiver reports of communication was informative, because the researchers can conclude that the variance in communication between male youth and their caregivers, and the variance between female youth and their caregivers was different. Also in the quantitative data, no youth reported going to a father, uncle, brother, or even a boyfriend, with a question about sex. Perhaps in large part because South African male youth are living in households with a high proportion of female members, male youth currently may be the least likely to derive any protective benefits from caregiver communication.

Another third key finding, consistent with previous research in other cultures (Dutra et al., 1999; Fasula and Miller, 2006; Kotchick et al. 1999; Miller et al., 2009), was the relatively high correlation between youth-reported caregiver responsiveness and caregiver-reported communication. It would seem straightforward that youth who report higher levels of communication also report higher levels of caregiver responsiveness, as do caregivers. However, across reporters, youth-reported responsiveness was nearly as highly correlated with caregiver-reported communication as the within-reporter correlation between youth-reported responsiveness and communication. The correlation between youth-reported caregiver

responsiveness was also larger than the correlation between caregiver- and youth-reported communication scores. This finding is consistent with the researchers' expectations about family processes. Specifically, when youth perceive and report that their caregivers are open, comfortable, and knowledgeable about sex communication, they and their caregivers are also more likely to report that communication has occurred.

There was, however, evidence that many youth *do* regard communication about sex topics with caregivers off-limits. As expected based on reports from most of the participants in the qualitative data collection, and consistent with previous South African research findings (Namisi, Flisher, Overland, Bastien, Onya, Kaaya, & Aaro, 2004), nearly two-thirds of the youth in this study had *never* asked their caregiver a question about sex. This was despite 40% of the youth also stating that would go to their caregiver first with a question about sex. This finding among the youth is also consistent with the findings regarding the communication and responsiveness scales. The youth communication items all begin with the phrase “Has *your parent* ever talked to you about...” and the parallel caregiver communication items begin with “Have *you* ever talked to your child.” In contrast, the youth responsiveness items begin with prompts such as, “If *I* asked...” “*I’m* not allowed to ask...” “*I* would be afraid...” and consistent with these items, the caregiver responsiveness items start with “If *my child* asked...” “*My child* feels comfortable...” Given that youth reported significantly more communication than their caregivers, but significantly less responsiveness, it suggests a perceived lack of caregiver responsiveness to *youth-initiated* communications, perhaps due to cultural norms. Therefore, these quantitative findings may prove useful for future intervention development, and for community agencies in Langa, because they suggests that a significant number of South African

youth prefer to ask their caregiver a question about sex, if they expected their caregivers to be responsive to them doing so.

While it is possible that the lack of a significant correlation, but significant mean difference, between youth and their caregiver on the paired sample t tests for responsiveness are indicative of wide variability in caregiver responsiveness, it is also possible that these findings are an artifact of the statistical tests. For example, perhaps these findings can be explained by the differences between the statistical comparison that corrects for the dependent (shared variance), within-dyad reports of caregivers and youth (the t test), and those that simply compare between the two generational cohorts (correlation). For example, the largely consistent means, in a test that corrects for dependence, suggest that the significant overall mean difference is explained by the dyad: Youth and caregivers are likely inconsistent with one another in their reports/perceptions of caregiver responsiveness, leading to a significant overall difference. This interpretation makes a lot of sense when considered alongside the significant difference between caregivers and youth sex communication reports. Of course, dependent-sample statistical comparisons also benefit from more power to detect effects than independent-sample comparisons do. Therefore, the higher sensitivity of the paired sample t test, as compared to the correlation, could also explain the lack of significant correlation at the same time that significant mean differences were observed.

A fourth major finding was the qualitative theme of violence, including violence against youth, and female youth specifically. The reports from caregivers about specific risks of violence for female youth help to interpret an incidence of female HIV infection growing at triple the rate of male peers between ages 15 and 25 (South Africa National Department of Health, 2009) and are also consistent with data suggesting that crime and violence in South Africa continue to be a

significant problem (Dunkle et al., 2004; Jewkes, Levin, & Penn-Kekana, 2002; Jewkes, Sikweyiva, Morrell, & Dunkle, 2009). Adding more information, a single-item quantitative comparison of youth and caregivers' perceptions of their safety within their neighborhood indicated that a higher proportion of caregivers perceived their neighborhoods to be unsafe than do youth. This finding is consistent with the youth example from the qualitative data who described an incidence of sexual violence against a 15-year old female peer in the neighborhood, and concluded that the perpetrator is "fine." Although caregivers reported concerns about youth safety, there was not evidence in either the caregiver or youth qualitative reports that this concern translated into communication with youth about violence risks. However, the quantitative data was slightly more promising. Depending on the topic (see Table 5), between approximately 20 and 33% of caregivers reported talking to youth about rape or sexual assault, sex with family members, child sexual abuse, trading sex for gifts or favors, peer pressure and sexual consent. Still, it is important to recognize that youth sexual behavior is negotiated in a multifactorial context, and family communication is only one mechanism that might help mitigate specific sex risks. However, interventions designed to increase communication about ways to reduce these violence risks among a higher proportion of caregivers might prove to be a significant advance in curbing youth HIV risks.

Although, the present investigation provides rich descriptive information, there are limitations to the findings. Despite benefiting from multi-informant, and multi-method datasets, cross-sectional self-report data provide a limited assessment of caregiver and youth communications. In addition, while the quantitative data improve the representativeness of the findings, based on the power analyses conducted, any small effects ($<.50$) are likely to remain hidden with the sample size of the present study. Although considerable effort was made to

ensure the cultural validity of the research methods, through international collaboration and workshops, qualitative data collection and analysis, use of measures (when possible) previously administered in South Africa, translations and back-translations of measures into Xhosa, and audio and written assessments through the ACASI system, the quantitative findings are very likely to be influenced by the exploratory nature of many measure items. Only through continued efforts to establish a culturally competent research program in South Africa will research questions like those examined in the present study prove to be useful to the local community. Given that any local culture is a “moving target” it will be essential to continue to explore the ways that the lived experiences of South African caregivers and youth may be changing.

Certainly the necessity of reducing youth HIV risks remains an important goal for intervention science and the South African people. Findings of the present investigation do suggest that among some caregivers and youth, cultural norms about caregiver-youth sex communication are changing, but gender may significantly moderate this shift. Perhaps one of the most helpful contributions of the present analysis is the ability to examine diversity within qualitative data, look for confirmation with a larger quantitative sample, and then return to the qualitative data to improve the interpretations of quantitative findings. This iterative process of using each methodology to inform the other likely greatly improves the specificity and utility of the investigation to the people of Langa. In addition, the present investigation provides a wealth of descriptive data across youth and caregiver generations that can inform future intervention work. Specific to youth HIV risk, this study finds that many youth would prefer to go to a caregiver first, indicating an important potential in the development of parenting-based intervention approaches to the reduction of youth HIV risks in South Africa.

REFERENCES

- Adeku-Mireku, S. (2003). Family communication about HIV/AIDS and sexual behaviour among senior secondary school students in Accra, Ghana. *African Health Sciences*, 3, 7-14.
- Bhana, A., McKay, M.M., Mellins, C. Petersen, I., & Bell, C. (2010). Family-based HIV prevention and intervention services for youth living in poverty-affected contexts: the CHAMP model of collaborative evidence-informed program development. *Journal of the International AIDS Society*, 13, 1-8.
- Bornman, E. (2010). Emerging patterns of social identification in postapartheid South Africa. *Journal of Social Issues*, 66 237-254.
- Bornman, E. (2010). Emerging patterns of social identification in postapartheid South Africa. *Journal of Social Issues*, 66 237-254.
- Bradshaw, D., Groenewald, P., Laubscher, R. Nannan, N. Nojlana, B., Norman, R. Pieterse, D., Schneider, M. (2003). *Initial burden of disease estimates for South Africa, 2000*. Burden of Disease Research Unit, Medical Research Council.
<http://www.mrc.ac.za/bod/bodestimates.pdf> (accessed November 2009).
- Burman, S. & van der Spuy, P. (1996). The illegitimate and the illegal in a South African City: The effects of Apartheid on births out of wedlock. *Journal of Social History*, 29, 613-635.
- Cutrona, C.E., Russell, D.W., Murray, V., Hessling, R.M., Brown, P.A. (2000). Direct and moderating effects of community context on the psychological well-being of African American Women. *Journal of Personality and Social Psychology*, 79, 1088-1101.
- Dugger, C.W. (2010). In South Africa, an unlikely leader on HIV/AIDS. *The New York Times*. Retrieved from: <http://www.nytimes.com/2010/05/15/world/africa/15zuma.html>

Dunkle, K.L., Jewkes, R.K., Brown, H.C., Gray, G.E., McIntyre, J.A., & Harlow, S.D. (2004).

Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. *The Lancet*, 363, 1415-1421.

Dutra, R., Miller, K. S., & Forehand, R. (1999). The process and content of sexual

communication with adolescents in two-parent families: Associations with sexual risk taking behavior. *AIDS and Behavior*, 3, 59–66.

Fasula, A. M., & Miller, K. S. (2006). African-American and Hispanic adolescents' intentions to delay first intercourse: Parental communication as a buffer for sexually active peers.

Journal of Adolescent Health, 38, 193–200.

Finchilescu, G. & Tredoux, C. (2010). The changing landscape of intergroup relations in South Africa. *Journal of Social Issues*, 66, 223-236.

Flay, B.R. (1999). Understanding environmental, situational and intrapersonal risk and protective factors for youth tobacco use: The Theory of Triadic Influence. *Nicotine & Tobacco Research*, 1, 111-114.

Forehand, R., Armistead, L., Long, N., Wyckoff, S.C., Kotchick, B.A., Whitaker, D., Shaffer, A., Greenberg, A.E., Murray, V., Jackson, L.C., Kelly, A., & McNair, L. (2007). Efficacy of a parent-based sexual-risk prevention program for African American preadolescents.

Archives of Pediatric Adolescent Medicine, 161, 1123-1129.

Gevisser, M. (2009). *A legacy of liberation: Thabo Mbeki and the future of the South African dream*. New York: Palgrave Macmillan.

Glaser, B. G. & Strauss, A. L.(1967). *Discovery of grounded theory: Strategies for Qualitative Research*. Aldine Publishing Company: Chicago.

- Hamilton, C., Mbenga, B.K., & Ross, R. (2010). *The Cambridge history of South Africa: Vol. 1. From early times to 1885*. New York: Cambridge University Press.
- Hunter, M. (2010). From migrating men to moving women: Trends in South Africa's changing political economy and geography of intimacy. In F. Thomas, M. Haour-Knipe, P. Aggleton (Eds.). *Mobility, sexuality, and AIDS*. New York: Routledge.
- James, S., Reddy, S.P., Taylor, M. & Jinabhai, C.C. (2004). Young people, HIV/AIDS/STIs and sexuality in South Africa: The gap between awareness and behavior. *Acta Paediatrica*, 93, 264-269.
- Jewkes, R., Levin, J. & Penn-Kekana, L. (2002). Risk factors for domestic violence: Findings from a South African cross-sectional study. *Social Science and Medicine*, 55, 1603-1617.
- Jewkes R, Sikweyiya Y, Morrell, R, Dunkle K. (2009). *Understanding men's health and use of violence: interface of rape and HIV in South Africa*. Gender and Health Research Unit, Medical Research Council.
- Kalichman, S.C., Simbayi, L.C., Kaufman, M., Cain, D., Cherry, C., Jooste, S., & Mathiti, V. (2005). *The Journal of Sex Research*, 42, 299-305.
- Kertzer, D.I. (1983). Generation as a sociological problem. *Annual Review of Sociology*, 9, 125-149.
- Kotchick, B. A., Dorsey, S., Miller, K. S., & Forehand, R. (1999). Adolescent sexual risk-taking behavior in single-parent ethnic minority families, *Journal of Family Psychology*, 13, 92-102.
- Lee, R. (2009). *African women and apartheid: Migration and settlement in urban South Africa*. London: Tauris Academic Studies.

- Legassick, M. & Ross, R. (2010). From slave economy to settler capitalism: The Cape Colony and its extension, 1800-1854. In C. Hamilton, B.K. Mbenga, & R. Ross (pp. 319-391). *The Cambridge history of South Africa: Vol. 1. From early times to 1885*. New York: Cambridge University Press.
- Madu, S.N., & Peltzer, K. (2001). Prevalence and patterns of child sexual abuse and victim perpetrator relationship among secondary school students in Northern Province (South Africa). *Archives of Sexual Behavior*, 30, 311-321).
- Miller, K.E., & Rasco, L. M. (2004; Eds). *The Mental Health of Refugees: Ecological Approaches to Healing and Adaptation*. Lawrence Erlbaum Associates: Mahwah, NJ.
- Miller, K. S., Clark, L. F., & Moore, J. S. (1997). Sexual initiation with older male partners and subsequent HIV risk behavior among female adolescents. *Family Planning Perspectives*, 29, 212–214.
- Miller, K. S., Fasula, A.M., Dittus, P., Wiegand, R.E., Wyckof, S.C., & McNair, L. (2009). Barriers and facilitators to maternal communication with preadolescent about age-relevant sexual topics. *AIDS Behavior*, 13, 365-374.
- Miller, K. S., Forehand, R., & Kotchick, B. A. (2000). Adolescent sexual behavior in two ethnic minority samples: A multi-system perspective. *Adolescence*, 35, 313–333.
- Miller, K. S., Kotchick, B. A., Dorsey, S., Forehand, R., & Ham, A. Y. (1998b\). Family communication about sex: What are parents saying and are their adolescents listening? *Family Planning Perspectives*, 30, 218–235.
- Miller, K. S., Levin M. L., Whitaker, D. J., & Xu, X (1998). Patterns of condom use among adolescents: the impact of mother-adolescent communication. *American Journal of Public Health*, 88, 1542-1544.

- Naidoo, K. (2009). *Fragmented families, poverty, and women's reproductive narratives in South Africa*. London: Adonis & Abbey Publishers Ltd.
- Namisi, F.S., Flisher, A.J., Overland, S., Bastien, S., Onya, H., Kaaya, S., & Aaro, L.E. (2009). Sociodemographic variations in communication on sexuality and parents, family members and teachers among in-school adolescents: A multi-site study in Tanzania and South Africa. *Scandinavian Journal of Public Health*, 37, 65-74. doi: 10.1177/1403494808086986
- Nupen, J.K. & Wangenge-Ouma, G. (2009). Grade 10 learners' conceptions of risk of HIV infection in four secondary schools in the Western Cape. In J. Baxen, & A. Breidlid, A. (Eds.). (2009). *HIV/AIDS in Sub-Saharan Africa: Understanding the implications of culture and context* (pp. 87-99). Tokyo, Japan: United Nations University Press.
- O'Sullivan, L. F., Jaramillo, B. M. S., Moreau, D., & Meyer-Bahlburg, H. F. L. (1999). Mother daughter communication about sexuality in a clinical sample of Hispanic adolescent girls.
- Phetla, G., Busza, J., Hargreaves, J.R., Pronyk, P.M., Kim, J.C., Morison, L.A., Watts, C., & Porter, J.D.H. (2008). "They have opened our mouths": Increasing women's skills and motivation for sexual communication with young people in rural South Africa. *AIDS Education and Prevention*, 20, 504-518.
- Posel, D. (2006). Moving on: Patterns of labour migration in post-apartheid South Africa. In M. Tienda, S. Findley, S. Tollman, E. Preston-Whyte (Eds.). *Africa on the Move: Migration and urbanisation in comparative perspective* (pp. 217-231). Johannesburg: Wits University Press.
- Rotheram-Borus, M. J., Flannery, D., Rice, E., & Lester, P. (2005). Psychological and socio medical aspects of AIDS/HIV. *AIDS Care*, 17, 978-987.

- Scott R., & Harrison, D. (2009). *A gauge of HIV prevention in South Africa*. Johannesburg: loveLife Trust. http://www.lovelife.org.za/prevention_gauge.
- Seligman, C. K., Mukai, T., Woods, T., & Alfeld, C. (1995). Parents' contributions to children's and attitudes regarding AIDS: Another look. *Journal of Pediatric Psychology*, 20, 61–77.
- Shisana, O., Rehle, T., Simbayi, L.C., Zuma, K., Jooste, S., et al. (2009). *South African national HIV prevalence, incidence, behavior and communication survey 2008: A turning tide among teenagers?* Cape Town: HSRC Press.
- Smith, A.D. (2010). Thousands face agony or death after Zulu king's circumcision decree. *The Guardian*. Retrieved from: <http://www.guardian.co.uk/world/2010/jan/17/circumcision-zulu-south-africa-hiv>.
- South Africa National Department of Health (2009). *2008 National Antenatal Sentinel HIV & Syphilis Prevalence Survey*. <http://www.doh.gov.za/docs/reports/> (accessed November 2009).
- Spiegel, A., Watson, V., & Wilkinson, P. (1996). Domestic diversity and fluidity in some African households in greater Cape Town. *Social Dynamics*, 22, 7-30.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage Publications, Inc.
- Susser, I. (2009). *AIDS, sex, and culture: Global politics and survival in southern Africa*. Chichester, West Sussex, UK: Wiley-Blackwell.
- Whitaker, D. J., Miller, K. S., May, D. C., & Levin, M. L. (1999). Teenage partners' communication about sexual risk and condom use: The importance of parent-teenager discussions. *Family Planning Perspectives*, 31, 117–121.

Yergan, M. (1939). The status of the natives in South Africa. *The Journal of Negro History*, 24, 44-56.