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HIV/AIDS Education Program Effectiveness: A Case Study in Rural Uganda

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Abstract

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This study assesses the impact of HIV/AIDS educational programs on knowledge levels about HIV/AIDS transmission in a rural Ugandan community. More specifically, this study addresses the following research questions:

(1) Do HIV/AIDS education programs effectively teach about the heterosexual transmission and prevention of HIV/AIDS?
(2) Do HIV/AIDS education programs effectively teach about the transmission and prevention of HIV/AIDS in same-sex sexual practicing individuals?

"Throughout Africa, LGBT communities are being decimated with a speed and breadth reminiscent of the impact of the epidemic on gay men in New York and San Francisco in the 1980s" (C. A. Johnson, 2007, 14). Studies on HIV have identified HIV programming as the next step to decreasing the high vulnerability of Africa's populations to HIV/AIDS, particularly among men who have sex with men (C. A. Johnson, 2007, 1-70; Semugoma, 2005). Evaluation of such programs is crucial to reaching the target community, same-sex sexual practicing individuals, who are unlikely to participate in any programs that connect them to homosexuals or same-sex sexual behaviors. The recent introduction of legislation in Uganda making same-sex sexual behavior punishable by death, and imposing prison sentences for anyone supporting LGBT individuals, precluded interviewing same-sex practicing individuals for this study. Therefore, I evaluated knowledge gained in HIV/AIDS prevention programs about same-sex practicing individuals by interviewing heterosexuals who attended these programs.

In Dabani, Uganda I employed two types of primary research: informal and formal interviews with heterosexuals. I conducted four informal interviews with HIV education program educators. I conducted twenty-two formal interviews with two respondent populations, heterosexual individuals who had and had not attended HIV/AIDS education programs. I found that individuals who attended HIV/AIDS education programs knew about the main methods of HIV/AIDS transmission among heterosexuals. Individuals who had not attended HIV/AIDS education programs did not know the main methods of HIV/AIDS transmission. I also found that neither groups in my sample – individuals who had and had not attended HIV/AIDS education programs – knew the main methods of HIV/AIDS tranmission or prevention among same-sex sexual practicing individuals. I recommend that the HIV/AIDS education programs I studied are replicated in other rural African contexts, that information on both the hetero- and same-sex sexual tranmission and prevention of HIV/AIDS is included in programs, that funding increases for programs, and that further research is conducted on this topic.

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To Wafula and family, for opening your doors to me again and again and for your constant guidance and support in Dabani. This project would have been impossible without you. Esther, Evelyn ne Mama wange, you made Dabani a home for me; whether we were washing clothes, joking about the babas, or watching Benja, Josefu, Timo and Blessing, our time together will always remain a treasured memory.

To Mr. Mageni, our hour long boda rides deep into the village were unworldly. Your honest, trusting, and altruistic character give me something to aspire to. You were by my side every step of the way and this research is as much yours as it is mine. Continue to do the work you do, it is an inspiration to your community.

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Abbreviations

AIDS: Acquired immune deficiency syndrome

ART: Anti-retroviral therapy

CEPEHRG: The Centre for Popular Education and Human Rights Ghana

FAR Uganda: Freedom and Roam Uganda

HIV: Human immunodeficiency virus

LGBT: lesbian, gay, bisexual and transgender (is often used because it is inclusive of the diversity of the community)

MSM: Men who have sex with men (used to identify men who have sex with men, but who may or may not self-identify as gay or homosexual)

Glossary of Luganda, Kisaamia, and English terms

Bisaga: local term for homosexual in Dabani

Education program participants: Individuals who attend HIV/AIDS education programs

HIV/AIDS education programs: any type of meeting, session, or class that educates individuals on the transmission and prevention of HIV/AIDS.

Kisaamia: Language spoken in Dabani

Kuchu: Lugandan (Ugandan language) word defined as “a man who has sex with men”

Mudoko Dako: an alternative sexual identity that impotent males assume; these men are treated as women and marry men.

Outing: The act of publicly declaring (sometimes based on rumor and/or speculation) or revealing another person’s sexual orientation without his or her consent.

Same-sex sexual practicing individuals: A term used for individuals who have sexual relations with members of the same sex but do not wish to identify as homosexual.

Sensitizations: local term for HIV/AIDS education program in Dabani

Slim: local term for AIDS in Dabani

Sharing sharp objects: HIV/AIDS prevention strategy that refers to needles and razors

(Sources: Amnesty International, GLAAD Media Reference Guide, 2007 edition, GenderPAC, Wikipedia and World Health Organization)

Preface

I was awarded funding to return to Uganda from Emory's Institute for Developing Nations (IDN) and Scholarly Research and Inquiry at Emory (SIRE) on October 8, 2009. I had studied abroad in Uganda for four months from September to December 2008, and had applied to return to Uganda to conduct research for an honors thesis. The study abroad program was broken into two components: coursework and a research practicum. I completed four Development Studies courses at Makerere University in Uganda's capital, Kampala. In November, I traveled to Busia District, located at the southeastern tip of Uganda, for the research practicum. In Busia District, I lived in Dabani sub-county, where I taught classes at an orphanage and primary school and conducted research on orphan's access to education.

Originally, my research design focused on HIV/AIDS education programs for same-sex practicing individuals in Kampala, Uganda. I was particularly struck by Cary Alan Johnson's report, *Off the Map: How HIV/AIDS Programming is Failing Africa's LGBT Population*, in which she argued that same-sex sexual practicing populations in Africa are a high-risk population for HIV infection. Johnson explains that contrary to the high risk of infection, few prevention interventions exist for this population (C. A. Johnson, 2007). Due to unforeseen political circumstances while I was preparing to enter the field, particularly the introduction of the Anti-Homosexuality Bill, my research focus shifted. I abandoned my plan to study HIV/AIDS education program effectiveness for same-sex sexual practicing populations in Kampala. Instead, I studied HIV/AIDS education program effectiveness for teaching about the hetero- and same-sex sexual transmission and prevention of HIV/AIDS in Dabani sub-county.

Chapter 1:

Introduction

IMAGES OF HIV/AIDS IN DABANI SUB-COUNTY

On Sunday, January 24, Josea[1] insisted on my joining him for the burial of a neighbor. The deceased was to be buried on her husband's land, in accordance with the Ugandan tradition. We walked in a group about a mile to the home, passing the local trading center that had shut down for the funeral. Groups of people joined us as we walked. Eventually, we arrived to see almost a thousand people, sitting on the ground, under tents, and in chairs, all surrounding a coffin on a raised platform. A speaker talked about the life of the deceased, a local Church choir sang, and a Pastor offered a prayer.

At the funeral they said the woman died of liver cancer. She left behind four children and a husband. An acquaintance told me she died of AIDS. Because her eleven year old son had AIDS the cancer story seemed fabricated. She had never been tested for AIDS because, friends said, she was scared. About halfway through the ceremony, they opened the casket. Friends, neighbors, and relatives donated money to the now-orphaned children. Afterwards, we moved to an area where the woman's uncles and brothers had dug a hole to place the coffin. I stood by silently as these men lowered her body into the ground and covered it up with dirt.

This one contact with what I suspect was an AIDS-related death dramatized both the impact on the community and the secrecy and confusion surrounding this death. The experience of the funeral raised questions about the disease. These questions led me to

[1] Father of my home-stay family in Dabani

develop a project that explored HIV prevention interventions. More specifically, a project that assessed the impact of educational programs on knowledge levels.

This study does not look at how people's lives are affected by the virus but rather how one community can take advantage of an intervention that empowers them to exercise control over the transmission and prevention of this disease. More specifically, this study addresses the following two research questions:

(1) Do HIV/AIDS education programs effectively teach about the heterosexual transmission and prevention of HIV/AIDS?

(2) Do HIV/AIDS education programs effectively teach about the transmission and prevention of HIV/AIDS in same-sex sexual practicing individuals?

First, it's important to understand people's beliefs about the origins of this virus in Dabani. Since HIV/AIDS has existed for less than thirty years in this rural community, it is critical to understand people's beliefs in order to know how to most effectively educate residents. Here are some different stories about how people understand the origins of HIV in Dabani.

In 1982, the STAR newspaper[2] released a story titled, "Unknown disease kills many" (Interview: Enoka). This unknown disease became known in Dabani sub-county as "slim" because people become very "skinny and sickly" (Interview: Fran).

Stories surfaced in Dabani to explain the origins of this disease that was killing hundreds of people. "Operation Magurusu" is an account of how HIV/AIDS spread to Dabani. Residents describe this event as an invasion of Uganda from Tanzania in the late

[2] Local newspaper in Busia District

1970s that was against the regime of then-president Idi Amin. Operation Magurusu serves to date when the HIV epidemic reached Uganda. It also provides one explanation for the means of HIV infection: soldiers. This narrative suggests that outsiders (soldiers) brought HIV/AIDS to Dabani.

"Fishmongering" is a competing story to explain the origin of HIV/AIDS in Dabani. Fishmongering referred to the sale of fish across the Kenyan-Ugandan border in the 1980s. Kenyan fishmongers sold fish to people in Busia who began to fall sick after they had bought the fish. Later, community members gossiped that the reason for their sickness was because they were cursed after they failed to pay the fishmongers for their fish (Interviews: Enoka, Fran). Similar to Operation Magurusu, this narrative serves to date when the epidemic reached Uganda and when an awareness of this new disease occurred in the community. This narrative also suggests that outsiders (Kenyan fishmongers) brought the virus to Dabani.

These stories are two popular images of when HIV originated in Dabani and offer competing views of how and when HIV/AIDS came to Dabani. During the interviews, program educators and participants shared these stories about how HIV came to Dabani. The stories reveal how people in this rural community struggle to locate a cause for this life-threatening illness.

Operation Magurusu and Fishmongering have become part of Dabani's oral history about the origins of HIV/AIDS. These stories influence behaviors and thus expose people to greater risk of contracting HIV. Education programs have been shown to be one way to reduce the risk of people contracting HIV/AIDS (Jon Cohen, 1993; Kirby, Laris,

& Rolleri, 2007; Mann, Tarantola, & Netter, 1992; Mitchell, Nakamanya, Kamali, & Whitworth, 2001).

JUSTIFICATION FOR RESEARCH

Education program effectiveness has not been studied sufficiently, especially in rural areas in Africa. Like all contexts, Dabani sub-county is unique. The stories shared above illustrate conjecture and superstition that interfere with knowledge about HIV transmission and prevention. For this reason, the first part of my study focuses on people's beliefs about the heterosexual transmission and prevention of HIV. Do individuals learn about the heterosexual prevention and transmission of HIV while attending an education program?

"Throughout Africa, LGBT communities are being decimated with a speed and breadth reminiscent of the impact of the epidemic on gay men in New York and San Francisco in the 1980s" (C. A. Johnson, 2007, 14). Yet there are scarcely "more than a handful of formal prevention programs targeting 'men who have sex with men' (MSM)" (C. A. Johnson, 2007, 2). Studies on MSM and HIV have identified HIV programming as the next step to decreasing the high vulnerability of this population (C. A. Johnson, 2007, 1-70; Semugoma, 2005).

This study, evaluates whether formal HIV prevention programs effectively teach about same-sex sexual behaviors. Evaluation of such programs is crucial to reaching the target community, same-sex sexual practicing individuals, who are unlikely to participate in any programs that connect them to homosexuals or same-sex sexual behaviors. The second part of my study focuses on HIV/AIDS program effectiveness for teaching about the same-sex transmission and prevention of the virus.

BACKGROUND ON UGANDA

Let me introduce background information about the location that is the focus of my research, Uganda. A familiarity with the context of this study will provide the reader with the necessary background information to understand the implications, findings, and recommendations of this research project.

British explorers arrived in Uganda in the 1860s in search of the source of the Nile River. British colonial rule officially began in 1888 with the signing of the Charter of the British East Africa Company, which led to the declaration of Uganda as a British Protectorate in 1894. Initially settling in the Buganda Kingdom, the British did not waste any time imposing their cultural values on Ugandan societies. The Buganda Kingdom was the central and most influential Kingdom of Uganda, and remains so today. The British brought Christianity to Uganda in the 1870s. Christianity soon enveloped the country, resulting in the rapid decline of traditional Ganda religion (Otiso, 2006).

In 1962, Uganda gained independence under Prime Minister Milton Obote. Since becoming an independent nation, the Chief of State (president), who also acts as the Head of Government leads the Ugandan government. The Kabaka, ruler of the Buganda Kingdom, also exercises political power; however since independence much of his power has been revoked. The current president, Yoweri Museveni, seized power in 1986, and later revised the National Constitution so that he could extend his Presidency beyond the constitutional limit of two terms (Otiso, 2006). While President Museveni is challenged with accusations of corruption and elitism, he is credited by some for national development programs that have raised Uganda's gross domestic product to $US12 billion, from levels as low as $US5 billion, during the political turmoil under the regimes

of Milton Obote and Idi Amin (United Nations Statistics Division, 2009; World Bank Group, 2009).

Uganda has some of the most "fertile farmland in Africa"; over 75% of Uganda's land is arable (Otiso, 2006, 11). The country's major cash crops include coffee, tobacco, sugar cane, tea, and cotton. Eighty-two percent of the labor force work within the agricultural sector, another thirteen percent work in the service sector, and five percent work in various industries, including textile, clothing, and building material manufacturing (Otiso, 2006, 11-12).

History of HIV/AIDS in Uganda

Between 1982 and 1983, the first cases of HIV/AIDS were detected in Uganda. Individuals living in Uganda's Rakai District were diagnosed with HIV/AIDS infection. In the 1980s, at the onset of HIV infection in Uganda, the nation was viewed as one of the worst HIV/AIDS affected countries in the world. Since then, the virus has killed an estimated 940,000 Ugandans. Most of these individuals are of childbearing age and leave millions of orphaned children behind (Allen & Heald, 2004).

Today, Uganda is touted as an international success story in the context of decreases in national HIV/AIDS infection. Uganda is "widely recognized as the only country in sub-Saharan Africa to experience a significant drop in HIV prevalence" (Allen & Heald, 2004; Jonathan Cohen & Tate, 2006, 13; Ministry of Health, 2003). This is partly due to the success of Uganda's national AIDS program, which began in 1987 (The AIDS Support Organization, 2008). However, scholars in the field argue that the decline in the prevalence of the virus has been exaggerated (Parkhurst, 2002; Uganda AIDS

Commission (UAC) & MEASURE Evaluation and Uganda Ministry of Health (MOH), 2002).

Since the 1980s, rates of HIV infection have increased in different areas of Uganda and among different groups of people. Nationally, HIV infection increased during the Ugandan civil war before Museveni came to power in 1986 (World Bank, 2003, 47). Allen and Heald explain that this argument is flawed because there has been "continuous military activity and civil war" in all parts of Uganda since Museveni came to power (2004, 10). For example, war has confined Gulu, a district in northern Uganda, since the late 1980s. HIV prevalence in Uganda in 2002 was estimated to be as high as twelve percent. Sex workers represent the group of Ugandans with the highest HIV prevalence; 47% of Ugandan sex workers were HIV positive in 2000 (Ministry of Health, 2003). Helene Epstein, however, argues that AIDS spread in Uganda not because of promiscuity, but because of long-term simultaneous relationships. When individuals have several long-term partners, a single person's infection can spread more rapidly through the group (Epstein, 2007).

The features of Uganda that I describe above—the history of colonialism, the agrarian economy with a large uneducated rural population, and the nation's history of HIV/AIDS—combine to shape beliefs and laws regarding homosexuality. These beliefs and laws, in turn, influence the effectiveness of HIV/AIDS prevention programs for both heterosexual and same-sex sexual practicing Ugandans.

SEXUALITY AND HIV/AIDS IN UGANDA

Heterosexual practices in Uganda

Heteronormative conceptions of sexuality dominate the Ugandan context. Traditionally, monogamous and polygamous heterosexual unions define the Ugandan family (Otiso, 2006). In an effort to protect the cherished culture, legal, religious, and traditional family values, Uganda's social institutions promote a heterosexual sexuality (Throckmorton, 2009). Schools teach about the heterosexual family and the importance of reproduction through marriage (Jonathan Cohen & Tate, 2006). Parents and grandparents reinforce these social norms when they stress the importance of "reproduction as the goal of all sexual activity" (Prazak, 2000, 83). As a result, marriage is traditionally one of "the most important social customs in Uganda" (Otiso, 2006, 82).

In contrast to the importance of the nuclear and traditional family, premarital sex and marital infidelity are both common in Uganda. In a study of marital patterns in Jinja District, Uganda, Neema and Cleland found that both wives and husbands had extramarital sex (Neema & Cleland, 2004). A study of trends in sexual behaviors in seven East African nations confirmed Neema and Cleland's finding (Macro International Inc.). The researchers found that in the mid-1990s twelve percent of women had "one or more non-marital/non-cohabitating" partner in the last twelve months. Twenty-nine percent of men had "one or more non-marital/non-cohabitating" partner in the last twelve months. This study also looked at the average age of pre-marital sex in Uganda. Age at first sex among Ugandan girls was seventeen, and among Ugandan boys was eighteen (Macro International Inc.).

Homosexual practices in colonial Uganda

"10% of the population has homosexual tendencies."

-Martin S. Weinberg

In the 1940s and 1950s, Alfred Kinsey conducted studies that challenged conventional beliefs about sexual behaviors and sexuality. Today his research supports the claim that 10% of the population is sexually attracted to members of the same sex (Weinberg, 1976). In the Uganda context, Kinsey's findings may appear shocking, as few believed homosexual practices existed in colonial Uganda (Murray & Roscoe, 1998). Arguably, the context with which Kinsey is writing in, the 1950s in North America, is not applicable to Africa generally or Uganda specifically. However, Kinsey's study provides a reference point for every nation's homosexual population.

By exploring the history of and literature about homosexual practices in colonial Uganda, we can better understand the current context of same-sex sexual practices. Little is known about same-sex sexual practices in colonial Uganda because of the British colonialist influence. Because colonial Europe is historically uncomfortable discussing homosexuality, documentation of same-sex sexual practices in colonial Uganda is scarce. Colonial explorers and missionaries left Uganda to return to Europe and failed to report on the homosexual practices they observed (Murray & Roscoe, 1998, 16). As a result, few accounts of homosexual practices in Uganda exist; the accounts that do exist are deficient and minimalist.

The few accounts of homosexuality in colonial Uganda tell us that these sexual practices were neither fully condoned nor totally suppressed (Feminist Review, 1987).

The most famous account of homosexual practices in Uganda comes from the Kabaka Mwanga. The Kabaka ruled the Buganda Kingdom from 1884 to 1897, during a civil war between Christians and Muslims. Between 1885 and 1886, Kabaka Mwanga persecuted twenty-two Catholic converts[3]. There are two opposing explanations for the persecution. Faupel and Otiso argue the Kabaka burned these men alive after they renounced the Muslim religion (Faupel, 1962; Otiso, 2006).

Murray and Roscoe suggest that Kabaka Mwanga forced his Christian pages to "sexually submit to him" (1998, 277). When the pages refused to submit to him, the Kabaka had them killed. Hoad supports this claim; however no details about the frequency, normalcy, or extent of his sexual interactions with the pages exist (Hoad, 2007). Other authors who have written about Kabaka Mwanga agree that accounts of the King's sexual encounters lack detail (Murray & Roscoe, 1998, 277; Otiso, 2006).

Jack Driberg provides another account of same-sex sexual practices in colonial Uganda. Driberg introduced the Mudoko Dako identity to the Western world in his ethnographic study of the Nilotic Lango, a group of agriculturists north of Lake Kwania. Mudoko Dako is an alternative sexual identity that impotent males assume; these men are treated as women and marry men (Driberg, 1923; Murray & Roscoe, 1998, 35-36). Accounts of homosexual practices in colonial Uganda also exist among the Iteso (Laurance, 1957), Bahima (Mushanga, 1973), Banyoro (Needham, 1973), and Baganda (Southwold, 1973) communities.

[3] Today in Uganda, these men are remembered by a national holiday, Uganda Martyrs Day.

The social construction of same-sex sexual practices

The British failed to document same-sex sexual practices because of their discomfort discussing these sexual practices (Murray & Roscoe, 1998). Colonialists redefined the homosexual practices that they were uncomfortable with; they stigmatized homosexual practices through making negative connotations to this formerly neutral Ugandan practice (Hoad, 2007; Murray & Roscoe, 1998).

Two colonial structures, colonial administrators and missionaries, enforced the negative definitions associated with homosexual practices. British administrators, who operated throughout Uganda and held power over local authority structures (chiefs), defined same-sex sexual practices as "abnormal" and "foul" (Murray & Roscoe, 1998, XIII). Missionaries, who functioned as the hand of the Christian Church, promoted the belief that homosexuality is "morally wrong" (Murray & Roscoe, 1998, XIII). Additionally, colonial administrators and missionaries associated same-sex sexual behaviors with "Eastern decadence, sexual license, harems and eunuchs" (Hoad, 2007, 11).

As a result of the stigmatization of homosexual practices, Ugandans feared associating with these behaviors. This fear resulted in the lack of explicit homosexual practices, allowing colonialists to deny the existence of such behaviors. Stigma became associated with homosexual practices and allowed colonial structures to deny all evidence of homosexual practices in Uganda (Murray & Roscoe, 1998).

Legislation

Because homosexual behaviors were stigmatized and denied in colonial Uganda, these behaviors appear foreign to Uganda today. With few individuals who identify as same-sex sexual practicing individuals, the government faces no resistance to making homosexual behavior illegal.

In 2005, the Ugandan Parliament ostracized all homosexuals and same-sex sexual practicing individuals, in a vote of 111 to 17 that made "marriage lawful only if entered into between a man and a woman" ("The Constitution Amendment Act," 2005). In 2009, the Ugandan Parliament introduced a similar bill that proposed more extreme measures against homosexuals. The bill threatened to jail anyone accused of being a homosexual for life, to criminalize the work of international and national activities and organizations, and to imprison individuals working towards achieving human rights for homosexuals. These articles are part of the proposed "Anti-Homosexuality Bill[4]" (Long, 2009).

The role of the media

Today, the Ugandan media highlights the illegality of homosexual practices. President Museveni uses the media to remind the public of the consequences of same-sex sexual behavior. In 1999, Museveni issued the statement, "I have told the Criminal Investigations Department to look for homosexuals, lock them up, and charge them" (International Gay & Lesbian Human Rights Commission, 1999; C. A. Johnson, 2007, 46). In 2006, an article published in the popular Ugandan tabloid, *The Red Pepper*,

[4] Because many international organizations will pull their funding from Uganda if the Anti-Homosexuality Bill passes, President Museveni has pulled his support for the Bill (Young, 2009). Without the President's support the bill is not likely to pass. As of March 2010, the bill is still being debated in Parliament (Among, 2010).

reminded readers that homosexual behavior is illegal and violators will be punished. The authors revealed a "list of deviants (same-sex sexual practicing men)" in an effort to "shame" them and show others the consequences of engaging in such behaviors (Red Pepper, 2006).

Sylvia Tamale provides another example of the media promotion of the illegality of homosexual behaviors. Tamale, a LGBT activist in Kampala explains, "The Ugandan media promotes the belief that there is a network 'out there' with an explicit agenda to 'recruit' young African men and women into their 'decadent, perverted' habits" (2007, 18). This depiction of same-sex sexual behavior stigmatizes individuals engaging in these behaviors and makes the individuals appear foreign and unnatural to Uganda (Tamale, 2007).

OUTLINE OF THESIS

In this chapter I introduced beliefs about the origins of HIV/AIDS in Dabani. These stories provide an important context for efforts to educate residents. They also influence behaviors and expose people to the risk of HIV contraction. As Cohen (1993), Kirby et al. (2007), Mann et al. (1992), and Mitchell et al. (2001) argue, education programs have shown to be one way to reduce the risk of HIV contraction and increase preventive behaviors. The background information I presented on HIV/AIDS and sexuality in Uganda, evidence the high-risk of HIV contraction that hetero- and same-sex sexual populations face and the need for the introduction of education programs to combat this risk. Below, I offer a road-map for this thesis by outlining the information included in each chapter.

In Chapter Two, I discuss the literature on HIV/AIDS education program effectiveness and HIV education programs as a tool for behavior change, highlighting similarities and differences in the Ugandan context. I also discuss the literature on same-sex sexual behaviors and HIV/AIDS education programs for this population. In Chapter Three, I provide the methodology for collecting primary data in Dabani sub-county. I present a detailed discussion of the methods employed in this research study. This includes the different methodological tools used during the travel period in Uganda. In Chapters Four and Five, I introduce my primary research. I provide an analysis of the data I collected through informal and formal interviews while in Dabani sub-county. First, I present the finding that education programs are effective for teaching about the heterosexual transmission and prevention of HIV/AIDS. Second, I present the finding that people do not believe that homosexuals exist in Dabani and that education programs are not an effective means to teach individuals about same-sex sexual behaviors in relation to HIV. I conclude the thesis in Chapter Six with my recommendations for both the next steps for education programs and for further research on this topic.

Chapter 2:

Past Research on HIV/AIDS Education Programs

HIV/AIDS EDUCATION PROGRAMS

The AIDS Support Organization (TASO) Uganda outlines six principles to define HIV/AIDS education programs: offering counseling services to people with HIV/AIDS and their families, training counselors for TASO and other organizations, complementing available medical services, sensitizing the public about HIV/AIDS, minimizing the social ills caused by HIV/AIDS through material support to clients and their families, and supporting community-based efforts initiated to respond to the AIDS epidemic(The AIDS Support Organization, 2008). This study focuses on HIV/AIDS education programs[5], which Kirby et al. suggests are "the key means to decreasing the probability of contracting HIV/AIDS" (2007, 211).

Defining HIV/AIDS education "program effectiveness"

> "If we can identify what makes education programs successful, then programs can be replicated on a contextual basis."
>
> -Cary Alan Johnson

"Program success"[6] and "effectiveness" are interchangeable terms that are used throughout the literature on HIV/AIDS education programs. The health education

[5] "Sensitization programs" are used synonymously with "education programs" in Dabani. For this reason, I use the terms interchangeably.

[6] "Program success" is used synonymously with "program effectiveness" in the literature on HIV/AIDS. For this reason, I use the terms interchangeably.

community offers several definitions of "program effectiveness". King and Wright consider programs effective if they integrate four components: "motivational support, knowledge acquisition, skills development, and attitudes development." These four components are requisite to the adoption of safe sexual behaviors (King & Wright). Clift (1998, 371) agrees with King and Wright and applies their definition by urging program evaluators to ask four questions when determining program effectiveness:

- To what extent does the channel reach the target population?
- How does the community rate the channel?
- Is the intended message received and clearly understood by all members of the community?
- Does the community remember the message?"

The four components to and questions about education programs, raised above, provide a framework for program evaluation. When program evaluators observe an education program, they can answer these four questions or determine whether the program includes these "four components", to suggest whether a program is effective.

Social science literature suggests an evaluation of HIV/AIDS education programs (Clift, 1998; Potter, 2006). The public health community agrees, and differentiates between three types of program evaluation: process, impact, and outcome evaluation. Process evaluation refers to how the intervention is delivered; is the education program delivered as intended? Impact evaluation determines if the intervention produces changes on the targeted behaviors; do education programs change knowledge about HIV or behaviors? Outcome evaluation addresses the results of the intervention; what occurs after one attends an education program? Each evaluation collects different types of data.

This study is primarily an impact evaluation, with some elements of process evaluation (Rossi, Lipsey, & Freeman, 2004).

Impact evaluation emphasizes the collection of data that documents the changes in respondent's knowledge and behaviors as a result of the intervention. In the context of education programs, this type of program evaluation focuses the researcher's investigation on the knowledge and behaviors individuals gain from the program. Researchers identify the changes in knowledge and behaviors they wish to examine. Changes in the context of HIV/AIDS education programs include increased knowledge of HIV/AIDS, higher rate of condom use, and fewer sexual partners (Rossi, et al., 2004, 141-142).

These criteria to evaluate program effectiveness are only three examples of frameworks to evaluate health education programs. While many evaluation frameworks applicable to the HIV/AIDS context exist, I discuss these three models because they are similar to program evaluation models that many HIV/AIDS education program evaluators use.

"Program effectiveness" is also dependent on peer educators[7]. For an education program to be effective, the peer educator must effectively communicate the information in the curriculum to program participants. Mitchell et al. explains that programs are not effective in teaching HIV/AIDS preventive behaviors when "the individual teaching about HIV/AIDS transmission and prevention is not an effective educator" (2001, 417).

[7] Peer educators, also called community or program educators, "conduct around 10 small group meetings with members of the village monthly. Teachings include condom use, HIV testing, how HIV is spread, marital faithfulness, and preventing the spread of HIV" (C. A. Johnson, 2007; Mitchell, et al., 2001, 412; Robert & Rosser, 1990; Sanders et al., 2007; Smith, Tapsoba, Peshu, Sanders, & Jaffe, 2008).

To combat this, program educators must be "knowledgeable and trustworthy" and must present accurate messages about HIV/AIDS. Because peer educator's abilities to present accurate messages about the transmission and prevention of HIV depends on the quality of their training, it is imperative that program educators attend certified peer educator training programs (The AIDS Support Organization, 2008). For this reason, peer educator's participation in HIV/AIDS education training programs is requisite to program effectiveness (Mitchell, et al., 2001).

"Effective" approaches to HIV/AIDS education

> "Interventions designed to prevent the transmission of HIV by reducing risk behaviors offer at present the only chance of limiting the spread of the virus."
>
> -Jon Cohen

Mann et al. and Cohen agree that basic, straightforward HIV prevention interventions, which include clear and concrete information, are the key to program effectiveness (Jon Cohen, 1993, 1712; Mann, et al., 1992). HIV/AIDS education programs are an example of a basic, straightforward strategy, where information about HIV transmission and prevention is presented to individuals in an educational context.

Educational interventions are one intervention that we know work (Jon Cohen, 1993; Kirby, et al., 2007; Mann, et al., 1992; Mitchell, et al., 2001). Research proves educational interventions are a reputable prevention method and a means to decrease the probability of contracting the virus (Kirby, et al., 2007; Mitchell, et al., 2001).

More specifically, HIV/AIDS education programs "prepare individuals with the knowledge, attitudes, and skills needed to avoid infection" (Kirby, et al., 2007, 211). HIV education programs are based on social and behavioral science theories. Knowledge and behavior change through education has been widely successful because of its community-based and face-to-face interactions approach (Allen & Heald, 2004).

Alfred Bandura developed one of the most influential social and behavioral science theories, social cognitive theory. Social cognitive theorists believe learning can occur in the absence of direct reinforcement and that cognitive factors are central to human functioning. Different from traditional social and behavioral science theories, Bandura believes knowledge increases with reinforcement and vicarious learning. He also explains that beliefs and behaviors are influenced by multiple determinants: internal beliefs, rewards, and punishments. These determinants form a complex system that affects beliefs and behaviors. Beliefs and behaviors change through outcome expectations and self efficacy. Outcome expectations are "predictions of behaviors" and self efficacy expectations are "predictions about our ability to perform the tasks or behaviors we set out to accomplish" (Nevid, 2003, 497).

In the context of HIV education, "learning results from events ('reinforcements') which reduce physiological drives that activate behavior" (DiClemente & Peterson, 1994, 5-22)."Reinforcements" in the context of HIV education include a decrease in casual/multiple sexual partners, condom promotion, and HIV testing. The introduction of these "reinforcements" in education programs induces participant learning, reduces the number of sexual partners, increases condom use, and increases the frequency of HIV testing (Fenton, 2004; Hearst & Chen, 2004; Stoneburner & Low-Beer, 2004; Wawer et

al., 2005). Learning also results from observing others and imitating their behaviors (Nevid, 2003). If peer educators are role models for program attendees, then program attendees may imitate their behaviors.

Two studies of HIV education programs that are modeled on behavior change theory verify the success of the behavior change program model. Kirby et al. reviewed eighty-three studies that evaluated the effects of curriculum-based sex and HIV education programs. The researchers identified seventeen characteristics that contributed to HIV education program effectiveness. These characteristics included "curriculums with clear health goals (prevention of HIV), specific behaviors leading to these health goals, and multiple sexual risk factors" (Kirby, et al., 2007, 213) . Individuals who attended education programs with these characteristics were more likely to learn safe sexual behaviors than individuals who attended programs that did not incorporate any of these characteristics (Kirby, et al., 2007).

Kirby et al. found "curriculum-based sex and HIV education positively impacted the sexual behavior of two-thirds of program participants." The authors defined "positively impact" as the adoption of one or more safe sexual behaviors; for example an educational intervention that increases abstinence and condom use among program participants, "positively impacts" their sexual behavior (Kirby, et al., 2007, 210).

Mitchell et al. conducted a study that also supports the success of the behavior change program model in the context of HIV education programs. The researchers conducted an evaluation of four channels of HIV/AIDS interventions in rural Uganda. The four channels Mitchell et al. identified were drama, video, community educators (CE), and leaflets. I will focus on Mitchell et al.'s evaluation of CE's because the role of

the CE is synonymous with the role of a peer educator; he or she is responsible for leading HIV education programs (2001).

Program participants said that education programs with CE's offered the best opportunity to learn about HIV prevention and transmission. Respondents who attended education programs felt that they could ask questions and clear up misunderstandings about HIV transmission and prevention at these programs. Education programs proved to be the most effective intervention for information retention; respondents who attended education sessions with a CE remembered more messages about HIV prevention and transmission than respondents who attended a drama, watched a video, or read a leaflet. Mitchell et al. associated the success of education programs with participants trust in CE's. 94% of respondents (n=54) said, "If a friend or relative had a problem or question regarding HIV/AIDS, I would advise them to go and talk to the CE" (Mitchell, et al., 2001, 417-420).

Neither Kirby et al. nor Mitchell et al. explored the relationship between the number of times one attends a program and behavior change[8]. In his 1998 review of "ways information, education, and communication can support reproductive health strategies," Clift suggests that behavior change occurs along a continuum and that the farther an individual travels along the continuum the more he or she changes his or her behaviors. An individual who attends a HIV/AIDS education program multiple times is more likely to demonstrate safe sexual behaviors learned at the program than an individual who attends one education program. This has implications for evaluating

[8] Unlike Clift's study of behavior change, this study looks at knowledge change. For this reason, the applicability of Clift's study is questionable.

program effectiveness: individuals who have attended multiple education programs make education programs appear more effective than they are (Clift, 1998, 367)[9].

Limitations and obstacles

A minority reached a different conclusion regarding program effectiveness. Oakley et al. and Wellings argue that little is known about which HIV/AIDS education interventions are effective and why. The researchers make this conclusion on the basis that few prevention efforts have been evaluated for their effectiveness. Few education interventions have been evaluated in the rural Ugandan context (Mitchell, et al., 2001). In 1995, Oakley et al. "identified and critically reviewed" education interventions for HIV/AIDS prevention. The researchers identified 815 studies of HIV/AIDS education programs; only 114 of these published studies were evaluations of education programs (1995, 480). The existing evaluations of programs tended to be descriptions of processes rather than attempts to establish effectiveness in changing health outcomes. The paucity of program evaluations, coupled with the lack of rigorous evaluation, lead Oakley et al. and Wellings to conclude that it is unclear which HIV/AIDS education program models work the best (Oakley, et al., 1995; Wellings, 1992).

Stigma presents a substantial obstacle to HIV/AIDS education programs. In his now classic work, Goffman defined stigma: "An attribute that is significantly discrediting," causing the individual possessing the attribute to be "negatively valued" in society (1963). In the context of HIV/AIDS, Parker and Aggleton explain, "the

[9] Due to the limited amount of time I had to conduct this research, I was unable to capture this information in the study.

stigmatized individuals possess an undesirable difference," which distances them from mainstream society (2003).

Stigma is associated with attending HIV/AIDS education programs in rural settings (Mitchell, et al., 2001). Researchers explain that this stigma comes from beliefs about HIV/AIDS transmission and prevention that are often promoted through community gossip (Herek, Capitanio, & Widaman, 2002; Mann, et al., 1992; Parker & Aggleton, 2003).

One belief about HIV/AIDS transmission is "witching", understood in Uganda as "a curse against an individual that you are feuding with or dislike." One respondent from Mitchell et al.'s study explained witching in the context of HIV/AIDS, "a man has two wives that do not get along…'wife 1' falls sick (with AIDS), 'wife 1' believes 'wife 2' bewitched her (with AIDS)" (Mitchell, et al., 2001, 415-416). Additionally, witchcraft is a plausible explanation for why some individuals who are exposed to the virus get sick and others do not. Because HIV symptoms can take years to appear, there is a lack of a visible link between the means of infection and the symptoms. This makes witchcraft a credible explanation for HIV infection.

Mitchell et al. and Ashforth found that "symptoms of illnesses associated with the onset of AIDS, diarrhea, abdominal pains, coughing, wasting, have long been associated with witches" (Ashforth, 2005, 9; Mitchell, et al., 2001). Witchcraft stigmatizes HIV infection because one is witched (and infected with HIV) after committing a malicious act. Communities associate HIV positive persons with evil and wrongdoing.

Respondents' definitions of and beliefs about witching in rural Uganda reduce witchcraft to an "unequivocal opposition between good and evil" (Geschiere, 1997, 12; Mitchell, et al., 2001). Peter Geschiere explains that witchcraft is not something inherently evil; "it can represent a thrill, excitement, and the possibility of access to unknown powers" (1997, 1). While Geschiere argues that individuals do not believe exclusively in witchcraft as an explanation for HIV infection, political figures, the elite, and the educated all believe in witchcraft as one of many explanations for phenomena such as HIV infection.

"Community gossip" promotes beliefs about the causes of HIV/AIDS, often resulting in stigmatizing infected persons (Mann, et al., 1992). Individuals spread rumors about HIV transmission and prevention to friends and relatives. In Uganda, "zero grazing", a reference to monogamy, was a national HIV prevention slogan in the 1990's (Allen & Heald, 2004, 1148). Education program attendees familiar with the meaning of zero grazing, tethering a goat or cow to a post, asked friends and relatives to explain the connection between zero grazing and HIV/AIDS. This term also has important implications for promiscuity, as it goes against common ideas about the importance of men having access to many women. Community gossip about zero grazing and HIV/AIDS led to misunderstandings about the term and incorrect beliefs about the transmission and prevention of HIV (Allen & Heald, 2004; Mann, et al., 1992).

Beliefs about HIV transmission and prevention that stigmatize infected individuals, make HIV education program recruitment challenging. Individuals resist peer educators recruitment efforts because they fear being associated with the stigma of

HIV/AIDS. Resistance to attending HIV education programs represents another limitation to this intervention.

Mitchell et al.'s study of HIV prevention interventions in rural Uganda identified three groups of the population who reject HIV education programs. "Highly educated and wealthy individuals, husbands and parents, and the elderly" reject association with HIV/AIDS out of fear of losing their high-status positions. Community members will think these individuals are HIV positive if they attend HIV education programs, because participation in education programs declares one's status to the community.

Peer educators explained, "When we go to teach those high-status people, they send us away, telling us they do not want to be taught" (Mitchell, et al., 2001, 417). The elites rejection of peer education is ironic, as many of the initial victims of HIV/AIDS in Africa were high-status (Mann, et al., 1992). Occasionally men prevent their wives and parents prevent their children from attending HIV education programs out of fear that attending a program will stigmatize the family (Mitchell, et al., 2001). One elderly individual in rural Uganda explained, "I have nothing to learn from such programs" and "if I attend those programs they will know I am infected" (Mitchell, et al., 2001, 414).

The lack of HIV/AIDS program evaluation research, critical to the development and application of future HIV education interventions, represents one limitation to HIV/AIDS education interventions. Additionally, the stigma associated with program attendance that is spread through beliefs about HIV transmission and prevention represents one obstacle to educational interventions.

THE EFFECTIVENESS OF EDUCATION FOR SAME-SEX PRACTICES

Mann et al. (1992), Kirby et al. (2007), Mitchell et al. (2001), nor Oakley et al. (1995) address HIV education program effectiveness for teaching about the same-sex sexual transmission and prevention of HIV/AIDS. Instead, these studies discuss HIV education program effectiveness for teaching about the heterosexual transmission and prevention of HIV/AIDS.

Because homosexual behaviors are stigmatized and illegal in Uganda, many individuals perceive an absence of same-sex sexual behavior. Because Ugandans rarely acknowledge homosexual practices in the Ugandan context, it appears that these practices do not exist.

Same-sex sexual behavior

The publications of two studies in the last five years disprove the belief that Uganda lacks a same-sex sexual practicing population. In 2005, Paul Semugoma conducted a study of same-sex sexual behaviors in Uganda. Exploratory in nature, the research was designed to "establish salient facts about the existence of same-sex sexual behavior" in Uganda. Semugoma explains that Uganda's population is 28 Million people. Using a working figure of 3.0% of the adult (over 15 years) male population, an estimated 210,000 male Ugandans have had sexual relations with men over the last year (Semugoma, 2005, 9-21).

Kajubi et al. published the second and more recent study of same-sex sexual practicing individuals in Uganda. In 2008, Kajubi et al. interviewed 224 same-sex sexual practicing men in Kampala and found that 61% of the sample identified as gay, and 39%

identified as bisexual (2008, 1). This particular study did not take into account alternative sexual identities that may be particularly relevant to the Kampala same-sex practicing community, such as *Kuchu*[10] or *Mudoko Dako*. These statistics also fail to address the number of men who do not identify with any of these sexual identity constructs; perhaps a faction of same-sex practicing men in Kampala do not identify with a sexual identity, or identify with a sexuality that they keep secret.

Uganda's HIV/AIDS strategy

Given two studies that establish the existence of a same-sex sexual practicing community in Uganda, it is important to examine the implications of an existent yet ignored population. Characterized by a population that believes homosexuals do not exist, Uganda lacks HIV/AIDS education programs for same-sex sexual practicing individuals. These individuals are left out of Uganda's HIV/AIDS education strategy. Education programs in Uganda do not include information about the transmission or prevention of HIV for same-sex sexual practicing individuals (C. A. Johnson, 2007; Kajubi, et al., 2008; Semugoma, 2005). If heterosexual men engage in sex with same-sex sexual practicing men, then the lack of education about HIV/AIDS in the same-sex sexual practicing community also affects the spread of HIV/AIDS in the heterosexual community.

In Uganda, HIV/AIDS programming efforts have focused primarily on the heterosexual population. Uganda's HIV/AIDS policy has ignored the high risk of HIV infection for same-sex sexual practicing individuals (Kajubi, et al., 2008). Even though

[10] The Luganda word *Kuchu*, defined as "a man who has sex with men," is the equivalent of the Western sexual construct MSM.

data reveals that same-sex sexual practicing individuals are at high risk for HIV contraction, no prevention programs targeting this vulnerable population exist in Uganda (C. A. Johnson, 2007; Mann, et al., 1992). As a result, Uganda's same-sex sexual practicing population has a high vulnerability to HIV/AIDS contraction (C. A. Johnson, 2007).

Because there are no HIV/AIDS education programs for same-sex sexual practicing individuals in Uganda, these individuals may not know how HIV/AIDS is transmitted or prevented. Without knowledge about the same-sex sexual transmission or prevention of HIV/AIDS, these individuals may engage in unsafe sexual practices (Baral, Sifakis, Cleghorn, & Beyrer, 2007; C. A. Johnson, 2007; Niang et al., 2003; Sanders, et al., 2007).

In 2005, Dr. Paul Semugoma published a report titled, *Same Sex Sexual Behavior, HIV, and Health Care in Uganda*. The data revealed there is a lack of factual knowledge concerning the transmission and prevention of HIV/AIDS among same-sex sexual practicing individuals in Uganda. Same-sex sexual practicing men believed, "HIV is only spread by women, and that men who exclusively have sex with men cannot contract the virus" (Semugoma, 2005, 36). This belief also reveals same-sex sexual practicing men's misperception of HIV risk in same-sex sexual relationships. Additionally, same-sex sexual practicing men's responses revealed their lack of knowledge concerning the prevention of HIV/AIDS: 90% of same-sex sexual practicing men were unfamiliar with water-based lubricants[11] (Semugoma, 2005, 37-39). Kajubi et al.'s 2008 study of gay and

[11] Water-based lubricants are an alternative to oil-based lubricants (type of lubricant most commonly used) and do not destroy the condom during anal sex; however they are difficult to find in Kampala (Semugoma, 2005).

bisexual men in Kampala yielded similar results to Semugoma. An overwhelming number of respondents believed females were the only carriers of the virus, and did not see HIV as a major risk factor (Kajubi, et al., 2008, 503).

Solutions

The probability that MSM will contract HIV can only be reduced through changes in MSM sexual behaviors (Semugoma, 2005, 22-23). Until educators communicate accurate information regarding the transmission and prevention of HIV to MSM, the popular saying in Kampala, "Mu ba Kuchu temulimu silimu," which translates, as "there is no HIV amongst homosexuals," will continue to persist (Semugoma, 2005, 36). Research shows that when educators share knowledge with MSM through HIV programming, these men are empowered to change their sexual behaviors (C. A. Johnson, 2007; Onyango-Ouma, Birungi, & Geibel, 2005).

The public health community argues for programs that are designed specifically for the same-sex sexual practicing population (C. A. Johnson, 2007; Robert & Rosser, 1990; Smith, et al., 2008). It is however important to note that much of the content of an education program focusing on heterosexual transmission of HIV is relevant for homosexual transmission—condom use, sharing sharp objects, and abstinence, are effective preventions for both populations.

Two public health studies suggest HIV programming for same-sex sexual practicing individuals is a key means to decrease the probability of contracting the virus (Kajubi, et al., 2008; Semugoma, 2005). HIV/AIDS programming "prepares individuals

with the knowledge, attitudes, and skills needed to avoid infection" (Kirby, et al., 2007, 211). Research shows that when knowledge is shared with MSM through HIV programming, these men are empowered to change their sexual behaviors. Joseph et al. and McKusick et al. agree that educational interventions offer the best opportunity for risk reduction. They explain, "Reductions in high-risk sexual behavior among homosexual men appear linked to new norms which discourage unprotected anal intercourse and encourage condom use and other safer sex modifications" (Joseph et al., 1987; McKusick et al., 1985, 623-626).

Assuming social cognitive theory applies to all individuals, whether heterosexual or homosexual, educational interventions based on this theory should have the same positive effects on same-sex sexual practicing populations as long as the information being presented is adjusted so that it is relevant to this population. Education programs for heterosexuals introduce "reinforcements" that do not always apply for same-sex sexual practicing individuals; birth control is one example. Education programs for heterosexuals also ignore reinforcements that are essential for same-sex sexual protection, such as water-based lubricants. "Reinforcements" will also eliminate myths prevalent in the homosexual community surrounding HIV transmission. When peer educators provide detailed explanations of the multiple modes of HIV transmission and prevention during education programs, they deconstruct myths about HIV.

Evaluating same-sex teachings

"We do not know if HIV/AIDS education programs for same-sex sexual practicing individuals are an effective intervention, because no programs or evaluations of such programs exist in Uganda."

-Phoebe Kajubi et al.

Recently in Kenya and Ghana HIV/AIDS education programs for same-sex sexual practicing individuals have been evaluated. It is important to note that similar to Semugoma and Kajubi et al.'s, the Kenyan and Ghanaian studies were both located in urban centers, where same-sex sexual practicing communities exist openly (Kajubi, et al., 2008; Semugoma, 2005).

In 2005, Onyango-Ouma et al. analyzed the impacts of attending an education program on the behaviors of same-sex sexual practicing individuals in Kenya. The researchers conducted interviews with 500 MSM; 60% of the men who attended an education program, "were more likely to use condoms than those who did not attend" (Onyango-Ouma, et al., 2005, 29). This finding reveals the effectiveness of education programs for teaching same-sex sexual practicing individuals safe sexual behaviors.

In Ghana, The Centre for Popular Education and Human Rights Ghana (CEPEHRG) conducted a similar study. Researchers studied HIV education programs for same-sex sexual practicing men in five urban Accra neighborhoods. CEPEHRG released results that mirrored those of the Kenyan study: attending an education program increased the number of MSM practicing safe sex and getting tested for HIV, and

quashed the myth that condoms are unnecessary to prevent HIV transmission (C. A. Johnson, 2007).

Education programs for same-sex sexual practicing individuals have also been evaluated in San Francisco, New York, and Madagascar (Célestine, 1998; W. D. Johnson et al., 2002; McKusick, et al., 1985). All three programs were conducted in urban areas, where there is a present same-sex sexual practicing population. These studies confirmed the finding that program attendance yields "positive large scale behavior change" in same-sex sexual practicing populations (McKusick, et al., 1985).

Limitations

Is it possible to implement HIV/AIDS education programs for same-sex sexual practicing individuals without national or socio-cultural support? Johnson argues, "The current situation in Uganda prohibits the same-sex sexual practicing community from appealing for an increase in the quantity and accessibility of programming" (2007, 69). Because the same-sex sexual practicing population is stigmatized and criminalized, it becomes a "hidden" population. Not only does the National Government refuse to fund HIV programming specifically for this population, but the population itself hides from the public eye and is thus difficult to recruit for such programs.

This population lacks visibility because they wish to remain discreet and off the map. This makes it difficult to conduct research on same-sex sexual behaviors. Recruitment of same-sex sexual practicing subjects is almost impossible in an environment where such behavior is stigmatized and illegal (C. A. Johnson, 2007).

Research on this population is also difficult because many same-sex sexual

practicing individuals do not identify with an LGBT (lesbian, gay, bisexual, transgender) identity. Often times, these individuals are married and have children, and have sexual relations with members of the same sex secretly (C. A. Johnson, 2007). This is because those who openly identify with homosexual behaviors may identify with a range of different identities (homosexual, lesbian, gay, Kuchu). These identities have different meanings for different people (Weinberg, 1976). When a heterosexual-identifying man engages in sex with a same-sex sexual practicing man, the lack of education about HIV/AIDS in the same-sex sexual practicing community also affects the spread of HIV/AIDS in the heterosexual community.

Ugandan identification with different sexual identities raises the important question of how Ugandans define each identity. According to North American heteronormative conceptions of gender and sexuality, gay and homosexual men are "effeminate," look and act a certain way, and only have sex with other men (Haggerty, 2000). Sexual identity theory in gender and queer studies and in anthropological research urges scholars and practitioners to recognize the diversity of the definitions of sexual identities. Ugandans construct definitions of what it means to be "gay" that are not always synonymous to Western definitions. We must understand the range of sexual identities with which Ugandans identify, instead of assuming everyone fits into the Western construct of "gay" or "homosexual" behavior (Brummelhuis & Herdt, 1995). Sexual identities in Kampala range from the *Kuchu* identity to gay and bisexual identities (Kajubi, et al., 2008; Semugoma, 2005).

In an effort to conduct research on this population, the public health community has adopted the term MSM. Hoping to disprove beliefs that homosexual behavior does

not exist in Uganda, the public health community recognized the need for research on this population. Because of the range of sexual identities in Uganda, the public health community adopted a term that could serve as an umbrella identity. MSM was formulated in 1994 to describe the behaviors of homosexual men (Baral, et al., 2007). An umbrella term that encompasses the multiple sexual behaviors of same-sex practicing men supports and fosters research on this population.

It should be noted that the term MSM is a Western construct which might lack legitimacy in African social contexts. There is a debate surrounding the MSM category. However, I will not engage this debate (Brummelhuis & Herdt, 1995).

Given governmental and socio-cultural limitations researching this population, HIV/AIDS education programs, specifically for same-sex sexual practicing populations, are an unrealistic intervention in rural Uganda. The absence of an open same-sex sexual practicing population in rural Uganda makes such interventions impractical. However, the inclusion of information about the same-sex sexual transmission and prevention of HIV/AIDS in all HIV/AIDS education programs is an effective and culturally sensitive alternative.

In Chapter 3, I present the research methodology used to answer the research questions, Do HIV/AIDS education programs effectively teach about the heterosexual transmission and prevention of HIV/AIDS? and Do HIV/AIDS education programs effectively teach about the transmission and prevention of HIV/AIDS in same-sex sexual practicing individuals? I hypothesize that education programs are an effective intervention for teaching about the heterosexual transmission and prevention of HIV/AIDS in Dabani. I do not however believe that HIV/AIDS education programs in

Dabani are an effective means to teach about same-sex behaviors in relation to HIV.

Chapter 3:

Methodology

My original research design focused on HIV/AIDS education programs for same-sex sexual practicing individuals in Uganda. I was particularly struck by Cary Alan Johnson's report, *Off the Map: How HIV/AIDS Programming is Failing Africa's LGBT Population*, in which she argued that same-sex sexual practicing populations in Africa are a high-risk population for HIV infection. Johnson explains that contrary to the high risk of infection, few prevention interventions exist for this population (2007). As I discuss below, due to unforeseen political circumstances while I was preparing to enter the field, my research focus shifted to HIV/AIDS education program effectiveness for teaching about the hetero- and same-sex sexual transmission and prevention of HIV/AIDS.

PLANNING THE RESEARCH

My search for active LGBT organizations in Uganda led me to Freedom and Roam Uganda (FAR Uganda), a human rights organization that recently began to develop HIV/AIDS education programs for Kampala's gay and lesbian community. After contacting the program director and learning more about FAR Uganda's various programs, I arranged an internship with the organization from December 16, 2009 through January 30, 2010. My internship was to serve two purposes. First, I would assist FAR Uganda in the development of their HIV/AIDS education program, which was in its nascent stages. The director explained that my responsibilities would include developing program curriculum and writing grant proposals. Second, I would conduct interviews

with HIV education program educators and participants about their experience with HIV/AIDS education programs for same-sex sexual practicing individuals.

To prepare for the interview component of the internship I developed an interview guide. My questions examined the effectiveness of FAR Uganda's HIV education programs; were FAR Uganda's education programs an effective intervention for teaching about the same-sex sexual prevention and transmission of HIV?

Political events in Kampala upset my original research plan. On October 14, 2009, roughly two months before my scheduled departure, David Bahati (member of Ugandan Parliament) introduced the "Anti-Homosexuality Bill" into Parliament. Also known as the Bahati Bill, this proposed legislation aimed to "strengthen the nation's capacity to deal with emerging internal and external threats to the traditional heterosexual family" and "protect the cherished culture, legal, religious, and traditional family values of the people of Uganda against the attempts of sexual rights activists seeking to impose their values of sexual promiscuity on the people of Uganda" (Throckmorton 2009). If passed, penalties included a life sentence for same-sex sexual practicing individuals and the death penalty for "aggravated homosexuality," which is defined as "sex with a minor or a person where the offender is HIV-positive." Additionally, the bill threatened imprisonment for those who fail to report homosexuals to Ugandan authorities (Candia, 2009).

The Anti-Homosexuality Bill was introduced two months before my departure for Uganda. As my departure date approached, I explored alternate research questions and considered several ideas about a new direction for my study. I contemplated changing my entire focus and examining the politics surrounding and reactions to the recent

introduction of the Anti-Homosexuality Bill. I also considered interviewing program educators for and participants in HIV/AIDS education programs for heterosexuals in Kampala. I knew that if I changed my research plan significantly, I would need to obtain permission from IRB, (my original study was given "exempt" status from the IRB, which meant that I would not have to report small changes in the design). Given that I did not know how the proposed bill would affect FAR Uganda or my access to program participants, I left for Uganda without clarity on the final direction my research project would take.

PRELIMINARY RESEARCH IN KAMPALA

On December 17, 2009, I arrived in Kampala. It was obvious that the introduction of the Anti-Homosexuality Bill had worsened the environment for gays and lesbians, and individuals who know of or work with these individuals. Newspapers published articles attacking the same-sex sexual practicing community. Members of the same-sex sexual practicing community with whom I was in contact communicated the dangers associated with the introduction of the Anti-Homosexuality Bill. In Kampala I spoke briefly with the assistant director of FAR Uganda, who explained that if the bill passed, the consequences for same-sex sexual practicing individuals would be "exponential" (Kalende, 2009).

Because of the danger that working with LGBT organizations and individuals posed, I did not intern with FAR Uganda. If I pursued my original research plan I would have put myself and others in jeopardy. I contacted the director of FAR, explained my reasons behind not interning, and offered my apologies.

Lacking the clarity of a research question, I moved in with the home-stay family that I lived with in 2008, and began to research HIV/AIDS programs in Kampala and follow the media coverage of the recently introduced bill. Unfortunately, the timing of my visit coincided with the Christmas and New Years Holidays. Activity in the city ceased. With HIV/AIDS organizations closed for the holiday season my research did not progress.

I took this period as an opportunity to scrutinize the daily media. I chose to read the national newspapers exclusively because of their accessibility. I did not listen to radio shows or watch television programs. Unreliable access to a radio made it difficult to follow the national radio programs. I could not determine which radio talk shows would discuss homosexuality and at which time a program would concentrate on the Anti-Homosexuality Bill. I also ruled out radio programs because most were aired in *Luganda*, which I did not speak fluently. I choose to forgo television programs for similar reasons.

Vendors throughout Kampala sell newspapers for between 1,200 and 2,000 Ugandan shillings (less than USD$1). The volume of articles I read remedied the unpredictability of an article on homosexuality appearing in the paper on a particular day. I read the two national newspapers, *The Daily Monitor* and *The New Vision*, daily and compiled all articles referencing homosexuality. In particular, I sought articles about the Anti-Homosexuality Bill. I looked for articles detailing national sentiments and opinions about homosexuality. I also followed the legislative action involving the Bill and other political measures concerning gays.

As the two-week holiday break neared its end, I became pressed for time. Four weeks remained to complete twenty interviews. In 2008, I studied abroad in Uganda and

conducted research in Dabani Sub-County of Busia District. To accelerate the research process, I turned to several contacts in Busia for research support and guidance.

FIELD RESEARCH IN DABANI SUB-COUNTY

Dabani sub-county is located at the southern tip of the Kenyan-Ugandan border in Busia District, Uganda[12]. Uganda is divided into eighty districts, each district is divided into sub-counties, which are broken down into parishes (Otiso, 2006). Dabani sub-county has an estimated population of 17,038; the sub-county is broken into five parishes: Buyengo, Buwumba, Busia, Nangwe, and Dabani (Dabani Sub-County Technical Planning Committee, 2009). I conducted this study in Dabani sub-county, collecting data in all five parishes.

Over 99% of Dabani's population is subsistence farmers, 35% of the 99% live in abject poverty. Dabani has a local market for agricultural produce, yet most individuals do not have access to this market. Large scale growing and selling is impossible due to "low-incomes" which constrain access to basic requirements (food, shelter, water) and prevent individuals from tapping into their agricultural resources (Dabani Sub-County Technical Plannign Committee, 2009).

I contacted the father of the home-stay family I lived with during my 2008 trip to Uganda, who connected me with Fran[13], the representative of Dabani Sub-County's HIV/AIDS programs[14]. I travelled to Dabani Sub-County on January 4, 2010. Fran

[12] Find map of Busia District in Appendix B
[13] Pseudonym used for confidentiality purposes
[14] Each sub-county in Busia District has a sub-county representative for all HIV/AIDS services. BUSINET+, a local NGO, coordinates the network of representatives. Each

agreed to serve as my research advisor. Fran had helped establish the network of HIV/AIDS education programs operating in Dabani and knew peer educators and program attendees. For this reason, he was responsible for the recruitment of respondents.

The new research design differed from the original research design that I abandoned in several ways. First, the sample population was different. Originally, the sample population was same-sex sexual practicing men in Kampala that had attended education programs for MSM. The sample population shifted to education program attendees and non-attendees in Dabani. Second, the research questions differed. Originally, the research questions were, Do same-sex sexual practicing individuals demonstrate an understanding of HIV/AIDS transmission and prevention? and Does HIV/AIDS programming effectively communicate information about the transmission and prevention of HIV/AIDS to the same-sex sexual practicing community? Finally, because each study had a different set of research questions, the interview guides were different.

Research Questions

For the new study, I asked the following research questions:

(1) Do HIV/AIDS education programs effectively teach about the heterosexual transmission and prevention of HIV/AIDS?

(2) Do HIV/AIDS education programs effectively teach about the transmission and prevention of HIV/AIDS in same-sex sexual practicing individuals?

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representative sensitizes the community and forms support groups for People Living with AIDS (Interview: Fran).

To obtain a general overview of the network of HIV/AIDS prevention programs in Dabani, I conducted informal interviews with HIV/AIDS program educators. Describing Dabani's network of HIV/AIDS education programs was not one of my research questions. This information, however, helped me understand the context that I was studying. The program educators I interviewed connected me with residents of Dabani with whom I could conduct formal interviews.

The formal interviews allowed me to answer Research Questions #1 and #2. I recruited two respondent populations, individuals who had (Group 1) and had not (Group 2)[15] attended HIV/AIDS education programs. Recruitment of two different populations—program attendees and non-attendees—replicated Mitchell, Nakamanya, Kamali, and Whitworth's evaluation of community based HIV/AIDS education programs in rural Uganda (2001). Representation from these two groups yielded the variation in the study. Having respondents from both groups permitted me to assess the success of these programs in communicating information about the transmission and prevention of HIV/AIDS to program attendees (Questions #1 and #2).

Informal Interviews

In Dabani I employed two types of primary research: informal and formal interviews. I conducted four informal interviews over the course of three weeks. Informal interview respondents were HIV/AIDS program educators. I scheduled the informal interviews before the formal interviews commenced[16]. Fran requested that I take notes by

[15] Find the list of each group in appendix D
[16] The fourth informal interview took place after the formal interviews began, due to scheduling conflicts.

hand during the interviews instead of audio recording them[17]. Additionally, as all informal interview respondents were fluent in English, the interviews were conducted in English.

The purpose of the informal interviews was to learn about HIV/AIDS education programs in Dabani. This would help me understand the context I was studying. Additionally, the purpose of the informal interviews was to answer research questions #1 and #2, by asking program educators about program educator trainings, program curriculum, and their beliefs about homosexuality.

I conducted my first informal interview with Fran, my research advisor. Fran and I spoke casually about the active HIV/AIDS education programs in Dabani. On January 4, I recorded the activities of each HIV/AIDS education program. Unlike subsequent formal interviews, I did not script the questions I asked Fran; I asked Fran questions as they came to mind instead of reading them from an interview guide. Because I integrated informal questions into my methodology, I was able to expand the breadth of my research. Through discussions with Fran I became familiar with the network of HIV/AIDS education programs in Dabani, the problems with certain programs, the risks associated with attending such programs, and additional background information about the programs.

On January 5, I visited HOPE CASE Foundation, an HIV/AIDS NGO in Dabani. I asked David[18], the program director, questions as they came to mind and allowed the conversation to flow. After David described the activities HOPE CASE facilitates, we

[17] Fran explained that interview respondents would be uncomfortable audio recording the interviews; it would make respondents feel self-conscious.
[18] Pseudonym used for confidentiality purposes

discussed HOPE CASE'S HIV/AIDS programming efforts and his stance on homosexuality.

Taka, Dabani's community condom distributor, was my third informal interview respondent. We met at Dabani's trading center[19] for thirty minutes on January 6. Taka explained her role in the community and responded to my questions about HIV/AIDS education programs and homosexuality in Dabani.

Enoka, the director of Busia District's HIV/AIDS education programs, was my final informal interview respondent. We met on January 19; this interview was scheduled after the formal interviews began due to scheduling difficulties. I asked Enoka about his occupational responsibilities, Dabani's HIV/AIDS education programs, and his beliefs about homosexuality in the community.

Formal Interviews

Fran recruited twenty-two respondents to participate in the formal interviews. Due to his extensive work with Dabani's network of HIV positive persons, Fran contacted many individuals to participate in the study who were HIV positive persons or had HIV positive family members[20].

Dabani Sub-County has five Parishes, Buyengo, Nangwe, Busia, Buwumba, and Dabani[21]; so that the interview sample was representative of the sub-county, Fran recruited respondents from each Parish. While Fran recruited respondents from each

[19] Area where sub-county headquarters and small shops are located
[20] Respondents often voluntarily revealed their own or a partner's HIV + status
[21] See Appendix B for map

Parish, due to time constraints he was unable to recruit a sample population that was evenly distributed among all five Parishes.

Parish	Parish Population[22]	Number of Interview Respondents
Buyengo	1,850	1
Nangwe	3,382	3
Busia	4,559	1
Buwumba	2,668	6
Dabani	4,339	11

Fran visited the homes of individuals he knew from Dabani's education programs to recruit respondents for the study. Fran made these home visits several days prior to the interview to explain the research project[23] to the potential respondent and ask if they wished to participate. Wafula[24], the research advisor with whom I worked closely in 2008, recruited the final three formal interview respondents. Shortly after I arrived in Dabani, Wafula expressed his desire to recruit several interview respondents for the study (using the same recruitment methodology as (Interview: Fran).

My first research question, Do HIV/AIDS education programs effectively teach the heterosexual transmission and prevention of HIV/AIDS?, sought to evaluate the effectiveness of HIV/AIDS education programs for teaching about heterosexual behaviors in relation to HIV. My second research question, Do HIV/AIDS education programs effectively teach about the transmission and prevention of HIV/AIDS in same-sex sexual practicing individuals?, sought to evaluate the effectiveness of education

[22] Population size is based on 2002 Census projections for 2009/2010 (Dabani Sub-County Technical Planning Committee, 2009).
[23] Fran told each potential respondent that the research project was about HIV/AIDS education programs in Dabani.
[24] Pseudonym used for confidentiality purposes

programs for teaching about same-sex sexual behaviors in relation to HIV.

The interviews commenced on January 9. Between January 9 and 14, Fran and I conducted 19 interviews, 14 with individuals who had attended programs (Group 1) and 5 with individuals who had not attended programs (Group 2). On January 15, Wafula and I conducted the three final interviews with respondents who had not attended HIV education programs (Group 2). Below is the interview schedule:

	Mon	Tues	Wed	Thurs	Fri	Sat
Jan 1-7				Informal Interview with Fran	Informal Interview with David	Informal Interview with Taka, Formal Interview #1-3
Jan 8-14	Formal Interview #4-6	Formal Interview #7-9	Formal Interview #10-11	Formal Interview #12-15	Formal Interview #16-19	Formal Interview #20-22
Jan 15-21					Informal Interview with Enoka	

Interviews took place at the homes of each respondent; Fran or Wafula, the respondent, and I gathered at the respondent's home. In an effort to gain the respondent's trust, I began the interview by introducing myself and explaining the purpose of the research in the local language, Kisaamia. I also told the respondent that his or her identity and the information that he or she provided would remain confidential[25].

After this introduction, the respondent chose the language for the interview (Kisaamia or English)[26]. Fran and Wafula translated all interviews from English into

[25] The respondent signed a consent form to guarantee confidentiality.
[26] All but three respondents chose Kisaamia for the interview

Kisaamia. They asked the respondent each interview question in Kisaamia and transcribed the response in English. Due to the personal nature of several questions, respondents also had the option of recording their answers privately. Only one respondent recorded his own answers; the remaining twenty-one respondents asked Fran or Wafula to record their answers.

The interviews lasted between twenty and forty-five minutes. After the final interview question, I thanked the respondent for their participation and moved onto the next scheduled interview. Fran or Wafula and I conducted between two and four interviews each day.

The interviews gathered strictly qualitative data. All interview questions were open response: respondents did not select responses from a set of predetermined answers, but rather answered carefully crafted questions in their own words. The open-ended format of the interview questions guaranteed the collection of richer and more meaningful data.

The interview guide consisted of ten questions that are displayed in Appendix C. Each interview question corresponds to and attempts to answer one of the research questions. The interview questions gauged program attendees' and non-attendees' understanding of the hetero- and same-sex sexual transmission and prevention of HIV. With this information I can identify whether HIV/AIDS education programs are an effective intervention for teaching individuals about HIV/AIDS transmission and prevention.

This is not the same interview guide that I developed for my original research project on MSM. The original interview guide asked same-sex sexual practicing

individuals questions about the modes of transmission and prevention that they learned from education programs for MSM.

Data Analysis

After returning to the United States, I transcribed the interviews. I analyzed the data by reading over each interview transcript. I identified themes across the data that corresponded to the research questions and literature.

METHODOLOGICAL LIMITATIONS

Limited time in the field was the primary methodological limitation. I lived in Dabani for four weeks, yet, because the ground work for the interviews consumed time, I had less than three weeks to conduct interviews. With more time in Dabani, I could have analyzed my preliminary data in the field and conducted interviews with a larger respondent pool.

My unfamiliarity with the area, another methodological constraint, limited my ability to collect a random sample of respondents. Instead, I had to rely on Fran and Wafula to recruit a sample population. Based on my request to speak to local program attendees and non-attendees in Dabani, Fran and Wafula personally selected men and women who they believed fit my description.

As the sub-county director of HIV/AIDS programs and as an HIV positive person himself, Fran is active with Dabani's HIV/AIDS education programs. Fran used his connections with HIV positive individuals to recruit respondents for group one. As a result of Fran's close ties and constant interactions with HIV affected individuals, all

group one respondents were either HIV positive or active in Dabani's HIV/AIDS education programs. Fran and Wafula also recruited respondents who were willing to speak openly with foreigners about HIV/AIDS. As a result, the interview data is not representative of individuals who are intimidated by or uncomfortable with speaking to outsiders.

Fran and Wafula also recruited respondents for Group two. These individuals did not participate in Dabani's HIV/AIDS network, they were known in Dabani for "refusing to test for HIV" or "refusing to attend community HIV/AIDS sensitization programs" (Interview: Fran). While these respondents rejected information about safe sexual behaviors and HIV/AIDS, they appeared comfortable voicing their beliefs about the virus. Group two recruitment was limited by individuals who "did not want us to visit their homes and interview them." Fran explained that these feelings stemmed from the stigma associated with discussing HIV/AIDS with an outsider.

My unfamiliarity with the community and dependence on Fran and Wafula for recruitment limited the make-up of the sample population to individuals active in Dabani's HIV/AIDS education programs, individuals comfortable speaking about HIV/AIDS, and individuals who refused to test for HIV. My unfamiliarity with the community also prevented me from randomly assigning the sample population to either an experimental (attends education program) or control group (does not attend education program). With more time in the field, this definitive test would confirm that differences in knowledge or beliefs about HIV/AIDS are due to exposure to education programs. As I was unable to conduct a random experiment, it is unclear whether changes in respondent's knowledge and beliefs were entirely due to education programs. It is

possible that other variables, exposure to social support and treatment or differences in the types of individuals who choose to be educated about HIV/AIDS, affected respondent's knowledge and beliefs. With more time in Dabani, I would not have been limited by the described respondent population and method of recruitment.

My inability to speak the local language, Kisaamia, was an additional limitation to data collection and interpretation. My basic understanding of greetings, verbs, and "small talk" in Kisaamia proved insufficient to conduct the interviews in Kisaamia. For this reason Fran and Wafula acted as translators. At times the translations distorted my questions and my understanding of respondent answers. I also found myself wondering "What did I miss?" when Fran would translate a three-minute response (in Kisaamia) into one sentence (in English).

I studied respondent's exposure to any one of the HIV/AIDS education programs in Dabani. This is another limitation because certain programs may be more effective than others in changing respondent's beliefs. Due to time constraints, I was unable to meet with a peer educator from or the director of each education program. For this reason I cannot determine whether certain programs were more effective than others nor characteristics that establish program effectiveness in Dabani.

Most group one respondents attended HIV education programs for individuals under ART treatment. These individuals were exposed to information from education programs, systems of social support and treatment. It is possible that social support and treatment had a greater impact than information from education programs on knowledge change. With more time in the field, I would explore the impact of treatment and social support on belief and knowledge change.

Related to the limitations associated with program exposure, it is unclear what level of exposure to health education programs made a difference for knowledge change. The data I collected reveals that knowledge increases with the number of programs attended; an individual who attended 50 programs knows more about HIV transmission and prevention than an individual who attended several programs. As discussed above, minor differences in program design make it difficult to determine the validity of this association. If certain education programs are more effective than others, than attending "effective" education programs several times is better than attending "ineffective" education programs many times. Additionally, due to time constraints I was unable to determine whether other variables, such as living longer with AIDS, affected the positive association between the number of times one attends a program and the individual's level of knowledge about HIV.

The measurement of the dependent variable (asking people if their knowledge changed because of exposure to programs) is vulnerable to social desirability effects and limits the applicability of my findings. Respondents self-reported whether their knowledge changed and the cause of the change. There is some concern for how the social desirability effect may have affected responses. Respondents may have concluded that knowledge change resulted from exposure to programs because they thought Fran, Wafula, or myself would view this answer favorably. Asking respondents about their behaviors would have offered a more valid measure of the dependent variable, and would not have been vulnerable to the social desirability effect. Unfortunately, I was limited by the IRB to asking about individual's beliefs and knowledge about HIV.

The lack of data on HIV/AIDS in Dabani represents the final methodological limitation to this study. Dabani lacks statistics on the number of HIV positive persons, of persons attending HIV/AIDS education programs, and of persons receiving anti-retroviral therapies (ART's). Without these statistics, one cannot gauge the scale of the impact of HIV/AIDS in Dabani or the effect of HIV/AIDS programming on the community.

Chapter 4:

Education program effectiveness in Dabani

What are the HIV/AIDS programs in Dabani? This was not one of my research questions. However this information puts the two research questions, Are education programs an effective means to teach about (1) the heterosexual transmission and prevention of HIV and (2) the same-sex sexual transmission and prevention of HIV?, in context. An understanding of Dabani's network of HIV/AIDS education programs is imperative to the contextualization of the research findings.

In Dabani sub-county eight different organizations offer HIV/AIDS education programs. The activities of each organization range from home-based care to educational support. Below, I list the eight active HIV/AIDS organizations and their respective activities.

HIV/AIDS Organization	Program Activities			
TASO	Home-based care	Train peer counselors to give continuous community sensitizations	Group sensitizations that about 25 people attend (# is flexible, 25 is norm)	
HOPE CASE Foundation	HIV education that targets youth, married couples, community sex workers, & orphans	Vocational training for groups at risk of contracting HIV/AIDS	Programs targeting sex workers. Peer educators are former sex workers	Radio, media & married couples program: hold meetings with married couples, teach them to be faithful
CDC	Home-based care	Before client can receive free	Peer educators are not from	

		ARV's, they must attend sensitization & counseling	Dabani, they are trained in urban areas	
NACWOLA (HIV + women)	Educate women on women's rights	Educate women on will writing	Educate women on HIV/AIDS prevention	
BUSINET+	District appoints sub-county representative who sensitizes the community	Representative forms People Living with HIV/AIDS group. Members serve as peer educators in Dabani	Sensitize each Parish in groups of 30 for 2 hours	
Christian Child Fund	Train peer counselors that sensitize community in groups about HIV	Sensitize children individually		
International HIV/AIDS Alliance	Appoint 2 representatives to serve as peer educators in Dabani	Representatives refer people in their sub-county to go for counseling or sensitization	Representatives work at community health center & sensitize on HIV/AIDS, nutrition, family planning, & drugs	
FOC-REV	Empowerment of HIV positive persons	Train every member of FOC-REV as an HIV/AIDS peer counselor	Partner with Family Health International to sensitize community about HIV/AIDS in border towns	

TASO is the only government-funded HIV/AIDS organization in Dabani. CDC is a federal agency in the US Department of Health and Human Services; the CDC funds and directs projects, such as this HIV prevention intervention, worldwide. The remaining six organizations are private NGOs. TASO, HOPE CASE, and BUSINET+ provide the

majority of sensitizations in Dabani (Interview: Fran). As there have not been any evaluations of these programs, it is unclear which are most successful in educating the community.

HIV/AIDS EDUCATION PROGRAM EFFECTIVENESS

HIV/AIDS transmission

Do HIV/AIDS education programs effectively teach about the heterosexual transmission and prevention of HIV/AIDS? Ten group one respondents[27] credited HIV/AIDS education programs with teaching them how HIV/AIDS is transmitted. One interview respondent who learned about the heterosexual transmission of HIV/AIDS after attending three HIV/AIDS programs in 2001 pleaded for "those ones who have the epidemic to not go on transmitting the virus" (A7-BW)[28]. Enoka, a peer educator and informal interview respondent, also described the effectiveness of HIV/AIDS programs in Dabani, "Thirty sex-workers attended HOPE CASE education programs; after attending education programs these individuals stopped working in the sex industry and established work in small businesses (tailoring, hairdressing)[29]." This documents changes in behavior as a result of education programs.

While this study focuses on changes in knowledge, one formal respondent also

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[27] There are fourteen individuals in group two, all of whom have attended education programs.

[28] To protect the privacy of interview respondents, interviews are cited in the text using a two-part code: For example (A11-BU) or (NA13-DA). The first part of the code refers to the group: either A for group one (program attendee) or NA for group two (non-attendee). The second part of the code refers to the parish in which the interview occurred: BU for Buyengo, NN for Nangwe, BS for Busia, BW for Buwumba, and DA for Dabani.

[29] HOPE CASE trains former sex workers to be peer educators; education sessions with sex workers are conducted on a one-on-one basis (Interview: Enoka).

changed her behaviors after attending an education program. Never having attended an education program, Fran answered several of the respondent's questions about HIV transmission and prevention after the interview. After learning about the transmission of HIV and signs of infection, the respondent said she would go to get tested for HIV (NA12-DA). This was not a formal education program setting. However, because Fran taught her about the transmission and prevention of HIV, this one-on-one intervention functions as an education program that resulted in behavior change.

I asked respondents to discuss their beliefs about HIV transmission before and after attending an education program, identifying whether attending made the respondent change his or her beliefs. Before attending an education program, respondents believed the following were modes of HIV/AIDS transmission: "air, breath, sharing food, a sponge, tooth brush or clothing, body contact, kissing, mosquito bites, animals and prostitution." Even more surprising, almost half (six) of group one respondents believed sexual intercourse was the only mode of HIV transmission (A2-BW, A3-BW, A8-BW, A14-DA, A15-DA, A16-DA).

After attending HIV/AIDS education programs, respondents demonstrated an understanding of multiple modes of HIV/AIDS transmission. Respondents described "mother-to-child transmission, sharing sharp objects, sexual intercourse, and blood transfusions" as possible modes of HIV transmission.

Attending an education program also led to an increase in the quantity of responses to the question about modes of HIV transmission, and to more descriptive and detailed responses. Before attending a program, respondents explained, "HIV can be transmitted through sex." After attending a program respondents described "sex without a

condom," or "sex with an infected or HIV positive person" as possible modes of transmission. Below, respondents explain their beliefs about HIV transmission before and after attending education programs.

"Before attending seven sensitization programs, I believed HIV/AIDS was transmitted by mosquito bites and that everyone having sex with an infected person was a victim of the virus. Attending education programs taught me that transmission can occur through unprotected sex with an infected person, infected mothers that transmit to their babies, sharing sharp objects[30] with an infected person, or a blood transfusion with an infected person"(A1-DA).

"I used to believe any time you come in contact with an HIV infected person or share food with one, you could get infected. After attending HIV/AIDS education programs and counseling, listening to radio talks, reading newspapers, and going to churches, I learned that it can be transmitted during sexual intercourse with an infected person, by sharing sharp objects with an infected person, or through a blood transfusion"(A5-DA).

"I attended HIV/AIDS education programs as many as fifty times. Before attending, I believed sharing air or breath was the only way to transmit. Now, I know sexual intercourse with an infected person, a blood transfusion with HIV infected blood, or sharing contaminated sharp instruments are ways to transmit" (A6-DA).

[30] Similar phrases appear in many respondents answers. It is likely that this is a function of the translation; that is the translator used the same phrases ("sharing sharp objects", "infected person") when translating responses to interview questions. This represents a methodological limitation.

"I believed slim was only transmitted in animals before I attended several HIV education programs. I learned that slim can transmit when playing sex with an infected person, sharing a sharp object with one who is infected, or playing sex without using a condom" (A7-BW).

"Before I attended education programs several times, I thought slim could be transmitted by kissing, sharing a sponge or tooth brush, or through body contact. After attending, I learned that it can transmit through sexual intercourse with an infected person, a blood transfusion, or during birth" (A10-BW).

Unlike group one respondents, group two respondents did not learn about HIV/AIDS transmission from an education program[31]. Instead, group two respondents learned about HIV transmission after "talking to friends" (NA12-DA, NA17-DA, NA19-DA), "seeing people who were infected" (NA11-BW), or "listening to teachers" (NA22-NN). The beliefs that respondents learned were often incorrect and lacked detail.

Five group two respondents believed, "sex was the only mode of HIV transmission." Additionally, "sharing sharp objects" and "sex" were the only modes of transmission group two respondents cited. While these are both correct modes of HIV transmission, respondents are incorrect to believe that there are only two modes of HIV transmission.

[31] There are eight respondents in group two, none of whom have attended education programs.

Respondents described other modes of HIV transmission that were incorrect. One respondent explained, "A friend told me slim can only be transmitted by men" (NA12-DA). Two respondents claimed they "knew nothing" about HIV/AIDS and believed witching was the only possible cause of HIV/AIDS transmission (NA20-NN, NA21-NN).

In addition to the inaccuracy of group two's beliefs about HIV transmission, their responses lacked specificity. Unlike respondents from group one, group two respondents gave brief, undeveloped explanations for HIV transmission. Instead of explaining "sexual intercourse with an infected partner" or "sex without a condom" were modes of transmission, group two respondents cited "sex" or "sexual intercourse." Additionally, two respondents from group two named "sex between a man and a woman" as a mode of transmission; neither respondent explained that either the man or woman must be HIV positive for HIV transmission to occur (NA11-BW, NA17-DA).

HIV/AIDS prevention

I asked respondents to discuss their beliefs about HIV prevention before and after attending an education program, identifying whether attendance changed respondents beliefs. 93% of group one respondents described a change in their beliefs about HIV/AIDS prevention after attending an education program. Fourteen respondents explained that their beliefs about HIV prevention prior to attending an education program were inaccurate. Below respondents answer the question, "Before attending an HIV/AIDS education program, what strategies did you believe could prevent HIV/AIDS transmission?"

Respondent 1: marry early	Respondent 8: treatment is only way to prevent transmission
Respondent 2: only when they discovered the drugs	Respondent 9: cannot be prevented
Respondent 3: only drugs can prevent transmission	Respondent 10: drawing out an infected persons blood and replacing it with negative blood
Respondent 4: avoid sexual relationships	Respondent 13: stop sex
Respondent 5: get drugs or go to traditional doctors	Respondent 14: sex with men
Respondent 6: treated like other diseases	Respondent 15: only if curing drugs are discovered
Respondent 7: if one is tested positive, that person should be killed to avoid transmissions	Respondent 16: stop sharing sharp objects

Many of the responses individuals listed are idealistic prevention methods. Abstinence, for example, is an effective prevention method, yet it is improbable and unfair to assume that people will stop having sex. Respondents also cited incorrect prevention methods. “Marrying early,” “only having sex with men,” “killing HIV positive persons,” and “drawing out an infected person’s blood” are all incorrect HIV prevention strategies.

Similar to the impact of attending education programs on one’s beliefs about HIV transmission, attending education programs positively impacted one’s beliefs about HIV prevention. Thirteen group one respondents learned multiple methods of HIV prevention from an education program. After attending an education program, respondents described the following prevention strategies: “attending HIV/AIDS sensitization programs, disclosing of people who are HIV infected, using condoms, reducing multiple partners,

stopping to share sharp objects, abstaining from playing sex, being faithful, knowing your status, and delivering babies in hospitals." Attending an HIV/AIDS education program increased respondent's knowledge of multiple HIV/AIDS prevention strategies. Below, respondents explain their beliefs about HIV prevention before and after attending education programs:

"Before attending HIV/AIDS education programs, I believed that "marrying early" was the only method of HIV/AIDS prevention. After attending seven HIV/AIDS education programs, I learned that attending HIV/AIDS sensitization programs, disclosing of people who are HIV infected, care and support of people infected, & positive living of people who are infected are all effective methods of prevention" (A1-DA).

"I used to believe avoiding sexual relationships was the only slim prevention. I attended ten times and changed my beliefs; you can prevent slim by abstinence from sex, use of condoms, support of people who are HIV positive, & learning about HIV/AIDS are all effective prevention methods" (A4-DA).

"Before attending HIV/AIDS education programs I thought going to traditional doctors and getting drugs were the only methods of HIV/AIDS prevention. After attending five HIV/AIDS education programs, I learned condom use, being faithful to your partner, and abstinence from sex are all preventions" (A5-DA).

"I thought killing HIV positive persons was the only way to stop getting slim. I attended several programs. I found out that abstaining from sex, being faithful to your partner, using condoms, & disclosing your status are all effective methods of prevention" (A7-BW).

Unlike group one respondents, group two respondents did not learn about HIV/AIDS prevention from an education program. Group two respondents learned about HIV prevention from "seeing people dying" (NA11-BW, NA18-DA), "hearing from a teacher" (NA22-NN), and "hearing from people" (NA17-DA, NA19-DA). The beliefs that respondents learned were often incorrect and lacked detail.

One respondent believed abstinence was the only method of HIV prevention (NA22-NN). Another respondent thought "by not having multiple partners and not sharing sharp objects" one could prevent slim (NA17-DA). While these are all effective HIV prevention methods, the respondents were incorrect in their beliefs that these prevention strategies alone will prevent HIV infection. Additionally, three respondents from group two explained, "they knew nothing about HIV/AIDS" (NA12-DA, NA20-NN, NA21-NN).

Program attendance and knowledge

Respondent knowledge about HIV transmission and prevention increased as the number of programs the individual attended increased. The more frequently an individual attended an HIV/AIDS education program, the more modes of HIV transmission and prevention strategies of which he or she was aware.

Eleven group one respondents attended "four or more"[32] HIV/AIDS education programs, and knew of two (or more) modes of HIV/AIDS transmission. After attending six HIV/AIDS education programs, one respondent explained, "HIV/AIDS can be transmitted by an infected man with an infected woman during sexual intercourse, sharing razor blades or needles, and having unprotected sex." Three group one respondents attended "less than two" [33] education programs, and only named one mode of HIV/AIDS transmission. One of these three respondents described "through people" as the only mode of HIV/AIDS transmission (A14-DA).

WHAT LIMITS THE EFFECTIVENESS OF HIV/AIDS EDUCATION PROGRAMS?

Respondents were asked to discuss what they saw as limitations to the effectiveness of HIV/AIDS education programs. They identified three themes: funding, peer educators and stigma.

Funding

The funding for each HIV/AIDS organization varies. In the Dabani context, this variability can negatively impact education program effectiveness. The Centers for Disease Control (CDC), for example, lost their funding from the U.S. government in 2009 and terminated a five-year education and ART distribution program. As a result of the funding cut, CDC pulled out of Dabani and stopped offering free sensitizations and

[32] Respondents A7-BW and A10-BW attended "several times"
[33] Respondent A15-DA attended "several times"

ART's (Interview: Fran). Without funding, HIV/AIDS organizations cannot offer education programs or other HIV/AIDS services.

All eight of Dabani's HIV/AIDS education organizations struggle to secure funding. This is often a result of corruption; funds for education programs do not always make it into the hands of program educators or participants (Interviews: Fran, Taka, David). Three interview respondents agreed that funding for Dabani's HIV/AIDS education programs is lacking because of corruption (N6-BU, N9-BS, NA11-BW). All four informal interview respondents explained that when funders give money to peer educators, HIV/AIDS support always gets to HIV positive persons. If funders give politicians money for HIV/AIDS support, it rarely gets to HIV positive persons (Interviews: Fran, David, Taka, Enoka).

The lack of funding for HIV/AIDS education programs is correlated with perceptions of Dabani's network of education programs as deficient. Interview respondents complained that Dabani's HIV/AIDS network was far from sufficient; three respondents asked for "more funds to go towards outreach and support for HIV/AIDS" (A6-BU, A9-BS, NA11-BW). Another interview respondent identified a "disparity between the multitude of active HIV/AIDS organizations in Dabani and the lack of monetary resources for these organizations" (A10-BW). The large number of HIV/AIDS organizations is representative of the increasing number of infected persons in Dabani. As the number of individuals seeking HIV/AIDS services and support increases, funding must increase to support these programs.

Peer educators

Peer educators also impact program effectiveness. When funding permits peer educators are trained by NGOs or local health centers (Interview: Taka). Red Cross and Dabani Hospital offer three-day training programs for HIV/AIDS program educators. While the content of each training program varies, all training programs in Dabani omit information concerning the same-sex sexual transmission and prevention of HIV/AIDS (Interviews: Fran, David). The content of each training program affects the effectiveness of education programs. Education program effectiveness is highly dependent upon the peer educator and the training that they undergo. An under-funded training program may graduate less knowledgeable and therefore less effective peer educators than a training program with enough funding to give each attendee teaching materials.

Peer educators working in Dabani rarely receive a salary. With the exception of CDC and HIV/AIDS Alliance peer educators, no peer educators in Dabani receive a salary. Yet peer educators continue to make home visits to inform individuals about upcoming HIV/AIDS sensitizations, distribute ART's, and talk to individuals about faithfulness and condoms. Taka, the community condom distributor, for example, spent two un-paid days each week handing out free condoms. The government promised Taka a weekly salary and a bicycle for transport, but despite several years working as the condom distributor, Taka has received neither the bike nor the salary. While some peer educators like Taka continue to do this work because they were promised a salary, Fran continues the work because he believes it "helps the community and saves lives" (Interview: Fran).

If peer educators do not receive a salary for their work, one would expect the educator to stop working or put less effort and time into the work. During the research period in Dabani this was not the case. Peer educators did however express their frustration with the implications of an unpaid job, "I cannot take care of myself or my family," and "We need more government money and support." As David and Taka expressed, without a regular salary peer educators struggle to support themselves and their families (Interviews: David, Taka). Peer educator salaries, or lack thereof, may affect program effectiveness in the future.

Respect and trust of peer educators may also negatively affect program effectiveness. While group two respondents were willing to talk to peer educators about silm and their reasons for not attending education programs, Fran noted that there were some individuals in Dabani that did not want a peer educator to visit their home nor be interviewed about HIV. If the only individuals that respect and trust peer educators are HIV positive individuals that are already involved in the network of HIV/AIDS organizations in Dabani, then education programs function more as a support network than a teaching mechanism.

Stigma

Respondents from group two did not attend HIV/AIDS education programs because they feared being associated with HIV. One respondent explained, "If I go to the hospital to get tested for HIV or attend an HIV/AIDS education program, the entire community will know I am HIV positive" (NA17-DA). Regardless of one's HIV status, when one tests for HIV or attends an education program, the community assumes that the

individual is HIV positive. Three respondents in group two voiced their fear of testing and attending programs during the interview (NA16-DA, NA17-DA, NA19-DA).

Group two respondents feared HIV testing and attending programs because of the stigma associated with Dabani's HIV/AIDS education programs. The husband of one respondent did not allow his wife to attend an education program or go for HIV testing, out of fear that these actions would stigmatize their family (NA18-DA).

In Dabani, HIV/AIDS stigma stemmed from misunderstandings of how HIV is transmitted. One respondent explained, "Those who die from slim (HIV/AIDS) are being witched" (NA21-NN). One interview respondent described witching: "It is the cause of this thing (HIV) that makes people fall sick" (NA20-NN). Another interview respondent defined witching: "Someone brings a local medicine and you get sick for many years, you even become bed ridden. Someone will witch you if you quarrel with them or if you have wealth" (NA21-NN). Both respondents who believed witchcraft was the cause of HIV infection were elderly women; they believed "witching" was the only cause of the infection. These women also believed that victims of witchcraft are deserving of the curse because they have "lots of wealth, power, or education" (NA21-NN).

DISCUSSION

HIV/AIDS education program effectiveness

This study supports Cohen (1993), Kirby et al. (2007), Mann et al. (1992), and Mitchell et al.'s (2001) finding that HIV/AIDS education interventions are a successful means to change beliefs about the transmission and prevention of HIV. Ten group one respondents described a change in their beliefs about HIV/AIDS transmission after

attending an education program, and thirteen group one respondents described a change in their beliefs about HIV/AIDS prevention after attending an education program. All respondents explained that before attending an education program they had incorrect notions of how HIV/AIDS is transmitted and prevented. After attending an education program, group one respondents identified correct methods of HIV transmission and prevention.

Education programs were also effective in teaching respondents about multiple methods of HIV transmission and prevention and detailed descriptions of how these transmission and prevention methods work. This finding supports Kirby et al. and Mitchell et al.'s studies of HIV/AIDS education program effectiveness described in the literature review (Kirby, et al., 2007; Mitchell, et al., 2001).

Education programs in Dabani support Kirby et al.'s finding that effective education programs "teach clear health goals, specific behaviors leading to these health goals, and multiple sexual risk factors" (2007, 213). Dabani's education programs fit Kirby et al.'s definition of effective education programs because education program attendees in Dabani learned about behaviors leading to HIV transmission and prevention.

Findings from this study also reflect Mitchell et al.'s study of education interventions in rural Uganda. Unlike Mitchell et al.'s study, this study did not compare different forms of education interventions (drama, leaflets, nor video). However, Mitchell et al. found that information retention after attending an education program is one indicator of program effectiveness. Group one respondents named multiple methods of HIV transmission and prevention after attending an education program. This indicates

that program attendees in Dabani retain information, which according to Mitchell et al. adds to program effectiveness (2001).

Clift suggests that behavior change occurs along a continuum and that the farther an individual travels along the continuum the more he or she changes his or her behaviors. This study confirms Clift's finding in the context of HIV transmission and knowledge change (1998)[34]. Respondents who attended education programs multiple times knew more modes of HIV transmission than individuals that attended one education program. There was not a significant association between respondents' knowledge of HIV prevention methods and the number of times they attended an education program; respondents who attended education programs multiple times were not more or less likely to demonstrate knowledge about HIV preventions, than individuals who attended one education program.

This finding has important implications: there are distinct benefits to attending more than one education program in Dabani. In most cases, interview respondents attended multiple programs because they were HIV positive and received free ART's from the organizations sponsoring the education program. Individuals outside of this network are less likely to attend multiple programs and less likely to increase their knowledge about HIV transmission and prevention. Findings from this study and Clift's study prove that individuals do not learn everything about HIV transmission and prevention by attending one program (1998). Instead, findings from both studies urge program educators to communicate the benefits of attending multiple education programs to all individuals.

[34] Unlike Clift's study of behavior change, this study looks at knowledge change. For this reason, the applicability of Clift's study is questionable.

Limitations

Oakley et al. (1995), Mann et al. (1992), and Mitchell et al. (2001) discuss limitations to HIV education programs. Many of the limitations they identify resonate with this study. Lack of funding is one limitation to HIV education program effectiveness. All eight HIV/AIDS organizations in Dabani experience difficulty financing HIV/AIDS education efforts (Interview: Fran). With sparse funding these organizations must cut education programs, decrease the number of individuals receiving free drugs, and revoke offers for free testing. Informal interview respondents also identified corruption as a reason for the lack of funding for education programs in Dabani. Funding often ends up in the hands of local politicians instead of program educators or participants. Politicians in Dabani are known for keeping money for themselves instead of supporting HIV/AIDS prevention efforts.

There are implications to the lack of funding for education programs in Dabani. First, funds that exist are prioritized to those in most need. In Dabani, funding is put towards HIV positive individuals in need of ART's and sick individuals in need of HIV testing before anyone else. As a result, HIV education is not a priority and individuals who are not in need of ART's or testing are virtually ignored. Because funding is concentrated in Dabani's HIV positive population, individuals who are not HIV positive or who do not go for testing are often left out of Dabani's HIV/AIDS policy. This translates to fewer individuals attending education programs and learning about HIV transmission and prevention. The lack of funding also means peer educators are not paid for their work.

With more funding, Dabani's HIV/AIDS programs could be expanded to support more education programs and to target individuals who do not typically involve themselves in HIV/AIDS-related activities. With increased funding for education programs, HIV/AIDS education programs could incentivize program attendance and increase knowledge about HIV/AIDS in Dabani. If funding increases for education programs, it is essential that funds go directly to program educators and education program directors.

Second, without funding peer educators are unpaid and lack the incentive to perform their job responsibilities. Mitchell et al. suggests that peer educator salaries, or lack thereof, affects program effectiveness (2001). With the exception of CDC and HIV/AIDS Alliance peer educators, no peer educators in Dabani receive a salary. If peer educators do not receive a salary for their work, one would expect the educator to stop working or put less time and effort into their work. While this is not the case in Dabani today, unpaid peer educators make home visits to inform individuals about upcoming HIV/AIDS sensitizations, distribute ART's, and talk to individuals about being faithful and getting condoms, it could become the case in the future.

Community members do not always trust or respect peer educators. In Dabani, HIV positive individuals involved in the network of education programs trust and respect peer educators; individuals outside of this network do not. If HIV positive persons are the only individuals trusting enough of peer educators to attend programs, then education programs function more as a support network than as a teaching mechanism.

Another limitation to HIV/AIDS education program effectiveness is associated with funding and peer educator training. An under-funded training program graduates

less-knowledgeable and effective peer educators than a well-funded training program. Mitchell et al. found that education program effectiveness is highly dependent upon the peer educator and the training that they undergo (2001). If the education program is well-funded, the peer educator helps establish education program effectiveness.

In Dabani, the curriculum for peer educator training programs includes basic information about the heterosexual transmission and prevention of HIV/AIDS. Training programs do not include information about same-sex sexual transmission of HIV/AIDS (The AIDS Support Organization, 2008). All four program educators confirmed the absence of information about same-sex sexual transmission and prevention from peer educator trainings. This information is absent from peer educator training programs because there is no visible same-sex sexual practicing population in Dabani. This information is also left out of training programs because of the stigmatization of same-sex sexual practicing individuals. If peer educators discuss these behaviors during education programs, there is a threat that program attendees will think they are homosexuals.

The government plays a role in the design of the curriculum for peer educator training programs. TASO, a government-run AIDS organization, offers peer educator training in Dabani[35]. Tamale and Johnson depict the government's hatred and stigmatization of same-sex sexual practicing individuals (C. A. Johnson, 2007; Tamale, 2007). The government clearly impacts the exclusion of HIV/AIDS-related information for same-sex sexual practicing individuals from government-sponsored peer educator

[35] As TASO is the only government-funded HIV organization in Dabani, the government only plays a role in its curriculum design. However, private NGOs must design curriculums that reflect the government.

training programs. Information on same-sex sexual behaviors may be intentionally omitted from education programs by a government unsupportive of same-sex sexual behavior (Jonathan Cohen & Tate, 2006). If the government advocates for the exclusion of same-sex sexual transmission and prevention information from peer educator training programs, then any program they fund will likely omit this information.

The final limitation to HIV education program effectiveness is stigma associated with HIV/AIDS. Mitchell et al.'s finding that stigma is associated with attending HIV/AIDS education programs in rural settings was supported in Dabani (2001). Herek et al. and Parker and Aggleton explain that this stigma comes from beliefs about HIV/AIDS transmission and prevention (Herek, et al., 2002; Parker & Aggleton, 2003). Witchcraft, however is one source many believe explain HIV infection (Mitchell, et al., 2001).

Two interview respondents believed witchcraft was the cause of HIV infection; they explained, "Those who die from slim (HIV/AIDS) are being witched" (NA21-NN, NA20-NN). This belief about HIV infection supports Ashforth and Mitchell et al.'s finding that "symptoms of illnesses associated with the onset of AIDS, such as, diarrhea, abdominal pains, coughing, wasting, have long been associated with witches" (Ashforth, 2005, 9; Mitchell, et al., 2001).

Neither respondent who identified witchcraft as the cause of HIV infection identified other potential causes of HIV infection. Geschiere explains that researchers often assume witchcraft is the only explanation for HIV infection in African societies, when in fact Africans have many beliefs about sources of HIV infection. The two respondents that identified witchcraft as the cause of HIV do not support Geschiere's

finding. However, other respondents who offered multiple explanations for HIV infection support Geschiere's finding (1997).

Similarly, as witchcraft was not the focus of this study, there was no association between Dabani's elite and beliefs about witchcraft. Geschiere found that political figures, the elite, and the educated believe in witchcraft as one of many explanations for phenomenon such as HIV infection (1997). Because this study did not identify Dabani's elite class, it is impossible to know whether Geschiere's finding resonates in Dabani.

The stigmatization of HIV through the promotion of beliefs about HIV infection makes education program recruitment difficult. Three respondents feared testing and attending education programs because of the stigma associated with Dabani's HIV/AIDS education programs (NA16-DA, NA17-DA, NA19-DA). Peer educators face resistance when trying to convince individuals to attend education programs. Many individuals refuse to communicate with peer education, frustrating motivated and unpaid peer educators, who pay their own transportation costs to and from each home visit. Individuals avoid peer education because they fear the stigma associated with peer educators and program attendance. If an individual speaks to a peer educator or attends an education program, the community thinks the individual is HIV positive. If the community thinks you are HIV positive, it is difficult to get work and support your family. Resistance to attending education programs represents a significant limitation to education program interventions.

Mitchell et al. found that the people who reject peer educators tend to be associated with three groups: the elderly, husbands and parents, and high-status individuals (2001). In Dabani, the husband of one respondent did not allow his wife to

attend an education program or go for HIV testing, because attending a program would stigmatize their family (NA18-DA). Additionally, four elderly interview respondents turned away peer educators when they came to their homes. One of these interview respondents, an elderly man, was so removed from the HIV/AIDS network that he had never seen a condom.

Because HIV/AIDS-related stigma is endemic to Dabani culture, it is difficult to imagine the eventual acceptance of education programs. If funding increases and education programs are developed that cater to all individuals in Dabani, community members may eventually move past stigmatizing those who attend the program.

Above, I discuss three themes respondents identified that limit education program effectiveness: funding, peer educators and stigma. With the exception of these three limitations, HIV/AIDS education programs in Dabani appear to be an effective intervention for teaching about the heterosexual transmission and prevention of HIV/AIDS.

In Chapter 5, I present findings relating to the second research question, Are education programs an effective means to teach about the same-sex sexual transmission and prevention of HIV? I also offer a discussion of the implications to this finding.

Chapter 5:

"Bisagas"

What are the beliefs about homosexuality in Dabani? This was not one of my research questions. However this information puts the second research question, Are education programs an effective means to teach about the same-sex sexual transmission and prevention of HIV?, in context. In order to comprehend respondent's answers to this research question, one must understand the beliefs about same-sex sexual behaviors in Dabani.

COMMUNITY ATTITUDES TOWARDS HOMOSEXUALITY

What do community members believe about homosexuals and same-sex sexual behaviors in Dabani? All four informal interview respondents believed "homosexuals do not exist in Dabani." All twenty-two formal interview respondents agreed and claimed that they had never met a homosexual. Informal interview respondents explained that homosexuals "only exist in Kampala where they are paid to be gay by international organizations." These international organizations place agents in urban centers like Kampala, where they "pay people to be gay and promote a gay lifestyle" (Interview: Fran).

Similar sentiments towards homosexuals surfaced during the formal interviews. Five respondents claimed they have never "known or seen" homosexuals, they have only heard" of them (A9-BS, A14-DA, A15-DA, NA16-DA, NA17-DA). Three of these respondents heard about homosexuals "over the radio" (A9-BS, A14-DA, NA17-DA). Interestingly, the publicity surrounding the Anti-Homosexuality Bill was one

respondent's first encounter with homosexuality. This respondent explained, "I did not know of homosexuals until I heard of this Anti-Homosexuality Bill over the radio program…if I did not hear about the bill explaining these people, I would not know what homosexuals are" (A14-DA). After another respondent said, "I don't know that language or talk about homosexuals," it became clear that many individuals in Dabani lack basic information about same sex sexual behavior (NA16-DA).

THE EFFECTIVENESS OF EDUCATION FOR SAME-SEX PRACTICES

The absence of knowledge of homosexuality and same-sex sexual behaviors reflects the lack of information about the same-sex sexual transmission and prevention of HIV/AIDS in education programs. Below, are respondent's answers to the second research question, Are education programs an effective means to teach about the same-sex sexual transmission and prevention of HIV? All eight HIV/AIDS education programs in Dabani exclude information about the transmission and prevention of HIV/AIDS in same-sex sexual practicing individuals from their curriculums. Additionally, peer educator trainings exclude information about "gays and gay sexual behaviors" (Interviews: Fran, David). The exclusion of this information makes Dabani's education programs less effective in their teaching about the same-sex sexual transmission and prevention of HIV/AIDS.

HIV/AIDS transmission

I asked respondents if "HIV can be transmitted among homosexuals?" Respondent's answers reflected the lack of information about same-sex sexual behaviors

in Dabani's education programs. Half of the formal interview respondents (eleven), answered, "no" or "I don't know". Respondents from both groups one and two did not realize that HIV can be transmitted between two men. While more respondents from group one (nine) than group two (two) knew that HIV/AIDS can be transmitted between homosexuals, no respondents learned this information from an HIV/AIDS education program. Instead, respondents who knew HIV/AIDS could be transmitted between homosexuals learned this information "through friends."

Additionally only one formal interview respondent knew that two men who have sexual relations face a higher risk of HIV contraction than a man and a woman who have sexual relations (A5-DA). More common were respondent statements such as, "I think homosexuals can get HIV/AIDS because there is a small possibility that you can get HIV/AIDS when you share saliva" (A10-BW), and, "Someone told me that homosexuals fear getting infected by women, so they have sex with men to avoid infection" (NA17-DA).

HIV/AIDS prevention

HIV/AIDS education programs in Dabani also exclude information about HIV/AIDS prevention strategies for same-sex sexual practicing individuals. Since prevention strategies for same-sex sexual practicing individuals differ from heterosexual practicing individuals, inclusion of prevention strategies for same-sex sexual practicing individuals in education programs is essential (Semugoma, 2005).

No respondents (from either group one or two) knew of prevention strategies specific to same-sex sexual practicing individuals, such as water-based lubricants.

Instead, respondents (from group one and two) listed the following HIV prevention strategies: “abstinence, using condoms, stopping sharing of sharp objects, ante-natal care, and sensitizations.”

As discussed above, abstinence is an effective, yet idealistic prevention strategy. In the context of same-sex sexual practicing individuals “sharing sharp objects” is another effective prevention strategy, yet it is not particularly relevant in the context of preventions for same-sex sexual practicing individuals. Similarly, ante-natal care is another effective yet irrelevant prevention strategy. Reproduction is impossible between members of the same sex; thus, ante-natal care is an irrelevant prevention strategy. While individuals may engage in sexual relations with both sexes, resulting in same-sex sexual practicing individuals needing ante-natal care, this prevention strategy should not be at the forefront of HIV/AIDS preventions for same-sex sexual practicing individuals.

Respondents also cited ineffective prevention methods like “marrying early,” “only having sex with men,” “killing infected persons,” and “drawing out an infected person’s blood.” Condom use is a relevant and effective prevention strategy for same-sex sexual practicing individuals (Semugoma, 2005). However, same-sex sexual practicing individuals must know to use condoms with water-based lubricants. If condoms are not used with water-based lubricants, they are easily breakable and not an effective prevention strategy (Semugoma, 2005). No interview respondents mentioned lubricants or using condoms with lubricants.

Finally, because Dabani’s sensitization programs lack basic information pertinent to HIV transmission and prevention for same-sex sexual practicing individuals, sensitization program attendance is an ineffective prevention strategy.

DISCUSSION

Community attitudes towards homosexuality

In Dabani, the belief that "homosexuals and same-sex sexual behaviors do not exist" is prevalent. This belief is supported by the fact that no formal or informal interview respondents had ever met or heard of a homosexual in Dabani. This epitomizes Murray and Roscoe and Hoad's finding that individuals deny the existence of homosexuals and same-sex sexual behaviors (Hoad, 2007; Murray & Roscoe, 1998). In Dabani no "out" homosexual population exists because of the stigma associated with these practices. Similar to Johnson (2007), Kajubi et al. (2008), Mann et al. (1992), and Tamale's (2007) finding that homosexuals are stigmatized, in Dabani, homosexual behaviors are also stigmatized, laughed at, and rarely discussed. The Ugandan media promotes this stigma in newspaper publications and radio shows that highlight the illegality of homosexual behaviors (International Gay & Lesbian Human Rights Commission, 1999; Red Pepper, 2006; Tamale, 2007).

As Tamale and Johnson pointed out, the media plays a role in promoting the mistaken belief that homosexual behavior does not exist in Dabani (C. A. Johnson, 2007; Tamale, 2007). The radio appears to be the most accessible media outlet in Dabani, and therefore the source of most respondent's information about homosexuals. In fact three interview respondents heard about homosexuals "over the radio" (A9-BS, A14-DA, NA17-DA). Respondents also brought up the Anti-Homosexuality Bill after hearing about the bill on the radio. The bill promoted the belief in Dabani that these behaviors are morally wrong.

Interview respondents also expressed the belief that individuals are paid to be homosexuals. In her work as an activist in Uganda, Tamale also found that individuals living in Kampala believed individuals are paid to be homosexuals (2007). Politicians who support the Anti-homosexuality Bill argue that the bill will protect the "cherished culture, legal, religious, and traditional family values of the people of Uganda against the attempts of sexual rights activists seeking to impose their values of sexual promiscuity on the people of Uganda" (Ladu & Ahimbisibwe, 2009; Mugerwa, 2009; Throckmorton, 2009). The belief that homosexuality is an "imported" behavior, foreign to Uganda, reflects the overwhelming support for a bill that seeks to protect Uganda from the destruction of the traditional heterosexual family.

The effectiveness of education for same-sex practices

Johnson, (2007), Robert and Rosser (1990), and Smith et al. (2008) argue for the implementation of HIV/AIDS education programs designed specifically for the same-sex sexual practicing community. They suggest that HIV programming for same-sex sexual practicing individuals decreases the probability of contracting the virus, and that programming should be conducted exclusively with same-sex sexual practicing individuals to decrease stigma. Johnson, Robert and Rosser, and Smith et al. all focus on the context of same-sex sexual practicing population in urban areas. Compared to rural areas such as Dabani, urban areas have more present same-sex sexual practicing populations, and are more receptive to education programs for these populations. Similarly, evaluations of education programs for same-sex sexual practicing individuals in urban Kenya and Ghana concluded that attending an education program increased the

number of individuals practicing safe sex and getting tested for HIV, and quashed the myth that condoms are not needed to prevent HIV transmission (C. A. Johnson, 2007; Onyango-Ouma, et al., 2005). Due to the contextual differences between urban and rural locations, the Kenyan and Ghanaian projects are not replicable in Dabani.

Because individuals do not believe same-sex sexual practicing individuals exist in Dabani, focusing interventions specifically on them would fail. Kajubi et al. and Johnson agree that any interventions or research on an absent population is "virtually impossible" (C. A. Johnson, 2007; Kajubi, et al., 2008). Without an identified same-sex sexual practicing population in Dabani, education programs for this population cannot be implemented. In rural areas like Dabani where there is no present same-sex sexual practicing population and where individuals do not believe these individuals exist, specific education programs for these individuals are unrealistic. Instead, Dabani's HIV/AIDS education programs should include information about the same-sex sexual transmission and prevention of HIV/AIDS.

In rural contexts such as Dabani, this is a realistic alternative to Johnson (2007), Robert and Rosser (1990), and Smith et al.'s (2008) call for same-sex sexual practicing-specific education programs. Unfortunately, in Dabani this alternative is not a reality. Because of the stigmatization of same-sex sexual behavior and the lack of political and social support for same-sex sexual practicing individuals, education programs exclude information about the same-sex sexual transmission and prevention of HIV. As a result, program attendees do not know that HIV can be transmitted between members of the same sex.

Because same-sex sexual behavior is highly stigmatized in Dabani, individuals that engage in same-sex sexual behaviors must do so discreetly. This study did not attempt to identify or contact any of these individuals, however based on Kinsey and Semugoma's studies of same-sex sexual practicing populations, we can assume that these behaviors occur in Dabani (Semugoma, 2005; Weinberg, 1976).

There are many implications to a same-sex sexual practicing population that is forced to keep silent about its sexual preferences and behaviors. Same-sex sexual practicing individuals in Dabani must keep their sexual behaviors private due to the stigmatization associated with "coming out". Forced to keep silent and unfamiliar with methods of HIV transmission and prevention in same-sex sexual practicing individuals, these individuals are unable to protect themselves from HIV infection.

If Dabani's education programs included information about the same-sex sexual transmission and prevention of HIV, individuals who secretly engaged in same-sex sexual behaviors could attend these programs and learn how to protect themselves. This intervention is feasible in rural areas such as Dabani, because it does not require any structural or social changes. Education programs in Dabani must change their curriculums to include information pertinent to same-sex sexual practicing individuals. This intervention, however, does not require individuals or peer educators to change their attitudes towards this population.

One challenge associated with this intervention is the stigma associated with discussing same-sex sexual behavior. This stigma stems from the belief that Western organizations pay Ugandans to be homosexuals and that same-sex sexual behaviors are an imposition of Western practices. Peer educators must openly discuss information

about the transmission and prevention of HIV in same-sex sexual practicing individuals during education programs. When peer educators discuss same-sex sexual behaviors, program participants may laugh and assume the peer educator is a homosexual. This intervention therefore requires peer educators to abandon their prejudices against homosexuals and recognize the benefits of this intervention strategy for Dabani's invisible same-sex sexual practicing population.

Chapter 7:

Conclusion

SUMMARY OF THE PROJECT

With the introduction of Uganda's Anti-Homosexuality Bill two months before my departure from the United States, the course of my study became unclear. Because I was originally planning on working in Kampala on HIV/AIDS education programs for same-sex sexual practicing populations, I was unfamiliar with the context of education programs in Dabani. I jumped into this study with no knowledge of or expectations about the effectiveness of these rural programs and without knowledge of local beliefs concerning homosexuality.

For that reason I was quite surprised to find that Dabani had multiple education programs in existence which appeared to effectively teach about the heterosexual transmission and prevention of HIV/AIDS. After extensively researching views toward same-sex sexual behavior in Kampala, I was less shocked to see these biases replicated in Dabani.

I was expecting to arrive in Dabani and find—as the literature advocated—a need for separate education programs for the same-sex sexual practicing community. Instead, I learned that the stigma associated with homosexuals and same-sex behavior reflected both my experience in Kampala and my reading of related literature. It made complete sense that the stigma in urban areas against these behaviors was even more present in rural areas, where the practice is much more hidden: people imagine that same-sex sexual behaviors are rare. Ultimately, I discovered a need to incorporate the message about same-sex sexual transmission and prevention into standard HIV/AIDS education

programs that, at present, only addresses HIV in a heterosexual context. Again, this was a surprising finding because there is no literature that suggests any other intervention for this population.

SHORTCOMINGS

A major focus of this study was same-sex sexual behaviors; yet, I did not conduct interviews with or meet any same-sex sexual identifying individuals. Additionally, neither informal nor formal interview respondents believe that homosexuals exist in Dabani. The absence of a visible same-sex sexual practicing population in Dabani limited the scope of this study. Interview data revealed heterosexual individuals' unfamiliarity with the transmission and prevention of HIV for same-sex behaviors. We do not know whether the same is true for same-sex sexual practicing individuals.

Another shortcoming of this study is its focus on knowledge change, not behavior change. Due to IRB limitations I could only ask respondents about their beliefs. While one respondent offered a story about behavior change among sex workers, and another respondent changed her behaviors after an education program, I did not ask respondents about their sexual behaviors (Interview: Fran, NA12-DA). Knowledge and behavior change are both essential to reduce the risk of HIV infection. Individuals may learn about HIV transmission and prevention and still have risky sex. In order to capture all elements of program effectiveness, researchers must study both behavior and knowledge change.

Most individuals interested in Dabani's education programs are already HIV positive. This is a shortcoming because Dabani's network of HIV/AIDS education programs functions more as a support network than as a teaching mechanism. As a result,

I could only determine HIV education program effectiveness for individuals who used education programs as a support network.

Methodological limitations discussed in Chapter 3 serve as the final shortcoming to this study. These include limited time in the field, recruitment methodology, my outside status, and the lack of research on Dabani on this topic.

Without an extended period of time in Dabani to conduct the research, I was limited to a small respondent pool that was not randomly selected. I had to rely on Fran and Wafula to recruit respondents that they knew personally, which limited the make-up of the sample population to those active in Dabani's HIV/AIDS education programs, those comfortable speaking about HIV/AIDS, and those who refused to test for HIV. My status as an outsider and unfamiliarity with the area also left me dependent upon Fran and Wafula to translate the interviews. This limited my ability to determine whether answers to interview questions were distorted by translation. Finally, the lack of statistics on the number of HIV positive persons and of persons attending HIV/AIDS education programs in Dabani limited my ability to gauge the scale of the impact of HIV/AIDS in Dabani or the effect of HIV/AIDS programming on the community.

SUGGESTIONS

The next step for education programs

Education programs that teach about the heterosexual transmission and prevention of HIV in Dabani require expansion. While, education programs targeting same-sex sexual behavior require rethinking. The following ideas represent starting points for moving forward.

The first step is replicating Dabani's education programs which teach the sources of heterosexual transmission and HIV/AIDS prevention strategies in other rural communities. Many members of the community receive free sensitizations. If other rural communities replicate this approach, they theoretically should succeed in teaching individuals about the heterosexual transmission of AIDS and increase knowledge and awareness of safe sexual behaviors.

One challenge associated with this recommendation is the degree of stigma surrounding HIV, which extends to attending HIV education programs. If you attend such a program—or even talk to a peer educator—the community is likely to assume that you are HIV positive. For that reason, many people avoid these programs even when they are available. In fact, the main people who are getting information now are people who already have AIDS. This is because the education programs are most common at ART distribution centers and health clinics.

A peer education training program on same-sex sexual transmission and prevention is a second step. Peer educators represent a vital starting point because they transfer knowledge to Dabani's participants. Dabani's residents learn all that they know about AIDS prevention and transmission from them. If the peer educators are ill-informed, so too will be Dabani's residents. Education programs that include information on both hetero- and same-sex sexual transmission and prevention will make it safer for everyone to learn about HIV. Same-sex sexual practicing individuals can attend education programs and learn ways to protect themselves from HIV infection without being stigmatized. This alternative to education programs targeting same-sex sexual

practicing individuals does not challenge the government's stance on homosexuality or the Ugandan culture.

Peer educators serve as the focal point for communicating accurate information, resulting in increased public knowledge. Using government support to sponsor these training programs provides a "catch 22"; with this sponsorship comes the potential for its omitting critical educative information. In Uganda in particular, where the government has made homosexuality illegal, clear and accurate training information is likely to be withheld.

A third step for education programs is to increase funding for programs in rural areas like Dabani. Funding increases could expand both the number and the reach of education programs to offer increased opportunities for program attendance to those individuals not part of this network. Increased outreach to the general public will likely yield more individuals attending these programs. If funding increases, funding needs to go directly into the hands of the educators so that they can use these resources to develop and implement the education programs. Funding increases will also provide peer educators with financial support for their efforts. With more money, peer educators can reach individuals that are not HIV positive. Occasionally, peer educators speak about HIV transmission and prevention at funerals and Churches in Dabani. Funerals and Churches provide an opportunity for peer educators to reach more individuals. This recommendation will only be successful if peer educators receive the money directly without it passing through government officials.

If peer educators are trained about same-sex sexual behaviors and then financially supported to design and implement training programs, they would be empowered to

choose to teach about same-sex transmission and prevention. One challenge to this approach is the stigma peer educators face talking about same-sex behaviors. If peer educators teach the dangers of transmitting HIV through same-sex behavior, there is the fear that they will be laughed at or labeled as homosexual themselves. What is critical to this recommendation is creating a support system associated with incentives for the peer educators who teach about same-sex behaviors. This recommendation requires that peer educators transcend their own fears in service of what best serves the community. Further research around what could best support them to take this step and go against cultural norms would be helpful.

It is also critical that the government either supports the inclusion of same-sex behaviors in HIV education programs, or this information is included in education programs quietly. Currently, the government does not support the inclusion of this information in education programs. NGOs must therefore deal with government hostility. I recommend that NGOs attempt to keep this information secret from the government; if possible, NGOs should not reveal that they teach about same-sex sexual behaviors in relation to HIV.

Next step for research

I recommend that education programs in rural areas include information pertinent to both heterosexual and same-sex sexual behaviors. Current research suggests that this same-sex sexual practicing community requires its own education programs (C. A. Johnson, 2007; Robert & Rosser, 1990; Smith, et al., 2008). This is the first study advocating a different approach—that HIV/AIDS education programs include

heterosexual and same-sex sexual transmission and prevention. It is critical that findings of this research be validated in other rural areas. I recommend that similar studies be conducted in other rural African contexts to determine whether this intervention is applicable to contexts beyond Dabani. Additionally, other forms of education should be studied in Dabani. Do drama, video, or leaflet interventions reach more people in Dabani?

In future studies on this topic, respondents should be randomly assigned to an experimental or control group. This will increase the validity of the study and confirm that differences in knowledge or beliefs are due to exposure to education programs. Additionally, researchers must describe each education program in the community to reveal the differences and similarities between the most and least effective programs. This will help researchers identify the characteristics of programs that cause knowledge and behavior change. Finally, future research should ask respondents about their behaviors in addition to their beliefs; this will offer a more valid measure of the dependent variable.

Little is known about funding for education programs in Dabani and in other rural areas. Tracing the path of funding from its outset to final destination is a very sensitive and probably not feasible option. My second recommendation to the research community is to study the flow of funding for local HIV/AIDS education initiatives and money channeled through NGOs. This will help determine successful funding mechanisms and help identify any diversions and their consequent impacts. In the Dabani context, program funding should be studied when possible. Funding often ends up in the hands of government officials who often do not appropriate these funds to the intended recipients.

Studies that identify the gaps in program funding and their sources will help identify solutions to this problem. For guidance, researchers can turn to successful local initiatives for ensuring that money reaches the intended recipient.

These recommendations for future education programs and research apply generally to the rural Africa context and more specifically to the Dabani context. This study is specific to a small rural community in southeastern Uganda. The stigmatization of HIV/AIDS or homosexuals may not be as extreme in other contexts as it is in Dabani. Additionally, other areas may not have HIV/AIDS networks of education programs as extensive as Dabani's. These potential differences may make the findings and recommendations from this study impossible to apply or replicate in other locations. The recommendations, however, can be applied to other rural contexts with proper caveats. The recommendations can be applied in rural areas with high rates of HIV infection that are characterized by populations that deny the existence of same-sex sexual practicing individuals. The findings and recommendations from this study can also be used as guidance for future research on this topic.

Appendix A:

Interviews

Informal Interviews

Fran, male. Interview with author. Dabani Parish, Uganda, 4 January 2010.

David, male. Interview with author. Busia Parish, Uganda, 5 January 2010.

Taka, female. Interview with author. Dabani Parish, Uganda, 6 January 2010.

Enoka, male. Interview with author. Dabani Parish, Uganda, 19 January 2010.

Formal Interviews

To protect the privacy of interview respondents, interviews are cited in the text using a two-part code: For example (A11-BU) or (NA13-DA). The first part of the code refers to the group: either A for group one (program attendee) or NA for group two (non-attendee). The second part of the code refers to the parish in which the interview occurred: BU for Buyengo, NN for Nangwe, BS for Busia, BW for Buwumba, and DA for Dabani.

A1, male. Interview with Fran and author. Hand written. Dabani Parish, Uganda, 6 January 2010.

A2, male. Interview with Fran and author. Hand written. Buwumba Parish, Uganda, 6 January 2010.

A3, female. Interview with Fran and author. Hand written. Buwumba Parish, Uganda, 6 January 2010.

A4, female. Interview with Fran and author. Hand written. Dabani Parish, Uganda, 8 January 2010.

A5, male. Interview with Fran and author. Hand written. Dabani Parish, Uganda, 8 January 2010.

A6, female. Interview with Fran and author. Hand written. Buyengo Parish, Uganda, 8 January 2010.

A7, female. Interview with Fran and author. Hand written. Buwumba Parish, Uganda, 9 January 2010.

A8, female. Interview with Fran and author. Hand written. Buwumba Parish, Uganda, 9 January 2010.

A9, male. Interview with Fran and author. Hand written. Busia Parish, Uganda, 9 January 2010.

A10, female. Interview with Fran and author. Hand written. Buwumba Parish, Uganda, 10 January 2010.

A13, female. Interview with Fran and author. Hand written. Dabani Parish, Uganda, 11 January 2010.

A14, female. Interview with Fran and author. Hand written. Dabani Parish, Uganda, 11 January 2010.

A15, male. Interview with Fran and author. Hand written. Dabani Parish, Uganda, 11 January 2010.

NA11, male. Interview with Fran and author. Hand written. Buwumba Parish, Uganda, 10 January 2010.

NA12, female. Interview with Fran and author. Hand written. Dabani Parish, Uganda, 11 January 2010.

NA16, female. Interview with Fran and author. Hand written. Dabani Parish, Uganda, 12 January 2010.

NA17, male. Interview with Fran and author. Hand written. Dabani Parish, Uganda, 12 January 2010.

NA18, female. Interview with Fran and author. Hand written. Dabani Parish, Uganda, 12 January 2010.

NA19, male. Interview with Fran and author. Hand written. Dabani Parish, Uganda, 12 January 2010.

NA20, female. Interview with Wafula and author. Hand written. Nangwe Parish, Uganda, 13 January 2010.

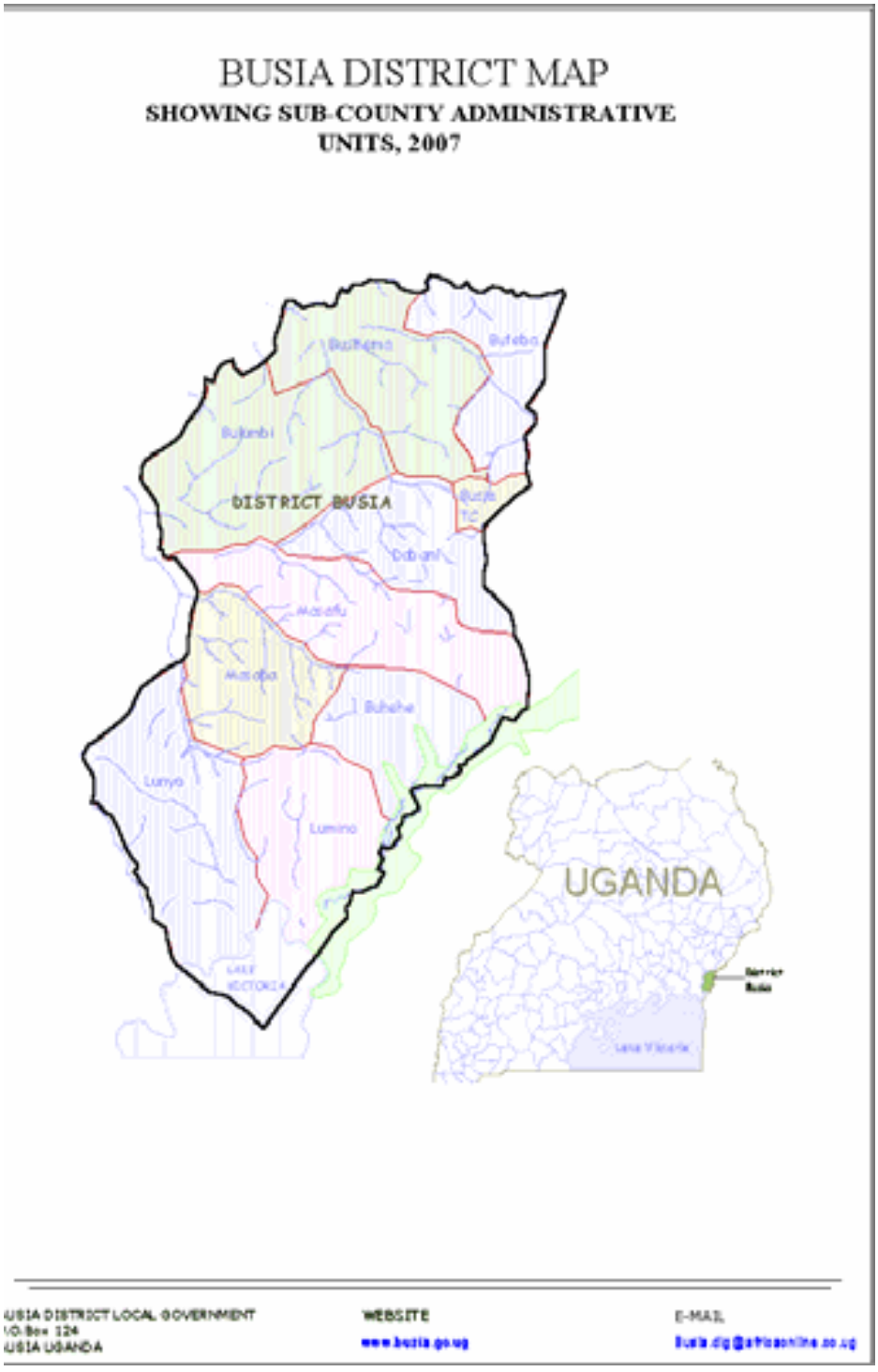
NA21, female. Interview with Wafula and author. Hand written. Nangwe Parish, Uganda, 13 January 2010.

NA22, female. Interview with Wafula and author. Hand written. Nangwe Parish, Uganda, 13 January 2010.

Appendix B:

Map

BUSIA DISTRICT



Appendix C:

Interview Guide

(1) Can you describe how you believe HIV/AIDS is transmitted?
(Probes: How did you learn about the transmission of HIV/AIDS?, At what age was this?, Newspaper, Book, Radio Program, Friend, family member, HIV/AIDS education program)

(2) Is this belief different from what you believed before?
(Probes: How did you first think HIV?AIDS was transmitted?, What made you change your belief?, At what age was this?)

(3) What strategies do you think can prevent HIV/AIDS transmission?
(Probes: How did you learn about the prevention of HIV/AIDS?, Newspaper, Book, Radio Program, Friend, Family member, HIV/AIDS educational program)

(4) Is this belief different from what you believed before?
(Probes: How did you first think HIV/AIDS transmission could be prevented?, What made you change your beliefs?, At what age was this?)

(5) Can HIV/AIDS be transmitted between Men who have sex with men (homosexuals)?

(6) How many times have you attended an HIV/AIDS education program?
(Probes: Briefly summarize the content of each program/session/class/meeting you attended.)

(7) What are two things you remember about how HIV/AIDS is transmitted?

(8) What are two things you remember about how HIV/AIDS can be transmitted?

(9) Do you know of any HIV/AIDS education programs for gays or lesbians (homosexuals)?

(10) Do you know any gays or lesbians (homosexuals) who have attended any HIV/AIDS education programs?

Wrap-up Question: Is there anything you would like to add that I did not ask?

Appendix D:

Group one and group two

Group 1: program attendees	Group 2: program non-attendees
A1-DA	NA11-BW
A2-BW	NA12-DA
A3-BW	NA17-DA
A4-DA	NA18-DA
A5-DA	NA19-DA
A6-BU	NA20-NN
A7-BW	NA21-NN
A8-BW	NA2-NN
A9-BS	
A10-BW	
A13-DA	
A14-DA	
A15-DA	
A16-DA	

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