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Exploring Ugandan secondary school students' sexual health education needs and developing school-based sexual health interventions through participatory action research

by

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Dedication

To the peer educators of Kabarole District.

"Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has." *Margaret Mead*

Abstract

This study began by exploring the factors that influence the sexual health information sources available to Ugandan adolescents and how they decide what sources to use. Guided by participatory action research, focus group discussions and interviews were conducted with students and teachers from two secondary schools in western Uganda. In addition to external barriers, the young people had a complex internal process that they applied when choosing sources. Using these findings, the participants collaborated to develop and initiate a school-based peer education program to prevent unwanted sexual health outcomes (HIV, pregnancy, sexually transmitted infections). The peer educators received participatory training on sexual health topics. Through their involvement in the project, peer educators felt prepared and confident to be peer educators and had already had opportunities to provide advice to their peers. The students continued the peer education program; it expanded to other schools where successes were also achieved.

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"So don't get tired of doing what is good. Don't get discouraged and give up, for we will reap a harvest of blessing at the appropriate time." Galatians 6:9

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List of Abbreviations

ABC	abstinence, be faithful, condom use
ACJ	Amanda Clarisse Jones
AIDS	acquired immune deficiency syndrome
AIDSCAP	AIDS Control and Prevention
ARVs	HIV antiretroviral drugs
AYA	African Youth Alliance
CIA	Central Intelligence Agency
ERIC	Education Resources Information Center
FHI	Family Health International
HIV	human immunodeficiency virus
HPV	human papillomaviruses
ICO	Institut Català d'Oncologia
MEASURE DHS	Monitoring and Evaluation to Assess and Use Results Demographic and Health Surveys
MEDLINE	Medical Literature Analysis and Retrieval System Online
NGO	non-governmental organization
PAR	participatory action research
PIASCY	Presidential Initiative on Communicating to Young People about HIV/AIDS
STIs	sexually transmitted infections
UNAIDS	United Nations Joint Programme on HIV/AIDS
UNFPA	United Nations Population Fund

UNGASS	United Nations General Assembly Special Session
UNICEF	United Nations Children Fund
USAID	United States Agency for International Development
USE	Universal Secondary Education
VCT	HIV voluntary counseling and testing
WHO	World Health Organization

Chapter 1. Introduction

INTRODUCTION

The purpose of this thesis research project was to explore with Ugandan secondary school students how they are informed about sexual health, in particular human immunodeficiency virus (HIV), acquired immune deficiency syndrome (AIDS), sexually transmitted infections (STIs) and pregnancy, and how this information influences their decisions related to sexual health. Using the knowledge collected, the students, school staff and investigator collaborated to develop and initiate a school-based peer education program to promote sexual health among the students' peers. The project also assessed the initial response to the organizational process and the program's formation. The study was conducted using the research method of participatory action research (PAR).

The project began with a series of focus group discussions including students and teachers from two secondary schools in a rural district of western Uganda. These discussions elicited knowledge on how Ugandan students access sexual health information and, in particular, the barriers and facilitators to this access. This yielded an understanding of the current information and sexual health landscape, and provided insights into design features to be used or avoided in the future peer education program. It confirmed the significant role that young people play in influencing their peers' sexual health decisions. This information led to discussions on how a health education program for their schools could be designed.

Though the students were not the ones to initiate the idea of a peer education program, it was their enthusiasm to help inform and influence their peers towards positive sexual health that gave the idea real life. Participants felt that the purpose of the program should be to provide factual information and timely personalized guidance to students and to engage creative delivery methods. These approaches would help equip students with essential health-related knowledge thereby guiding them in reducing their risk of HIV infection, pregnancy and STIs. Participants decided on the best ways to organize themselves into the program and what would be necessary to make the initiative successful. Once the program had been initiated as planned, the students underwent rigiourous training to prepare them for their role as peer educators. In the final stage of the project, the peer educators and teacher participants were consulted to determine their impressions of the program thus far.

While this project was student-led, input and involvement was sought from school administrators and staff throughout all activities to gain support from these critical stakeholders, aiding in the peer education program's sustainability. The research was conducted over a 10-week period from September to

December 2008. Participatory action research was compatible with the project's objectives to engage and empower secondary school students to lead health promotion activities among their peers and to improve the knowledge, attitudes and behaviours of the group in regards to sexual health.

RESEARCH QUESTIONS

1. What are the experiences of Ugandan secondary school students in receiving sexual health information and how does this information influence their sexual health?
2. What is the most appropriate strategy for conducting peer education among Ugandan secondary school students as a means of sexual health promotion?
3. How has the provision of a peer education program influenced students' understanding of sexual health?

PROBLEM AND SIGNIFICANCE

Ugandan adolescents are at high risk for experiencing poor sexual health related to HIV, AIDS, STIs and pregnancy. Numerous factors, including early sexual debut, peer pressure, insufficient parental involvement, sexual abuse, societal values, poverty and power inequities contribute to this increased risk. Key sexual health information is an important component of good adolescent sexual health. Knowledge levels among Ugandan young people are low and the prevalence of misinformation prevents risk-reducing behaviours, such as regular condom use. Ugandan youth have expressed a need for more information and guidance regarding sexual health. Building on lessons learned from other health strategies and school-based education initiatives, a program using peer education methods has the potential to engage the target audience, adolescents, in reaching one of Uganda's most vulnerable populations with critical health information.

CONTEXT

The Global and Regional Burden of HIV

Since its emergence in the early 1980s, HIV has contributed to an estimated 25 million deaths. According to 2009 estimates, 33.3 million people worldwide have HIV. New infections in 2009 were 2.6 million, a 19% decrease from 1999. Despite this encouraging progress, young people continue to make up a large proportion of new infections. Of the almost 2.2 million infections occurring in adults, 41% are young people aged 15 to 24 years. Sub-Saharan Africa carries a large proportion of this burden with 79% of infections in young people occurring in this region. 80% of adolescents living with HIV are in sub-Saharan Africa; 72% are female and 28% are male (UNAIDS, 2010). Alarmingly, data indicates that most of these young people are not aware of their HIV status (WHO/UNAIDS/UNICEF, 2009). When examining other sexual health indicators, young people from sub-Saharan Africa continue to fare poorly. This region has the highest adolescent birth rate in the world (Anthony, 2011).

Uganda

Located in the Great Lakes region of eastern Africa, Uganda is a landlocked country bordering the Democratic Republic of the Congo, Kenya, Rwanda, South Sudan and Tanzania. It has a total area of 241,550.7 square kilometres (Uganda Bureau of Statistics, 2011). Uganda is a former protectorate of the British Empire, achieving independence in 1962. Following a tumultuous period of dictatorial leadership, the nation has experienced a period of relative stability and economic growth since 1986 under the leadership of President Yoweri Museveni.

Uganda has a growing population that is becoming increasingly younger. The 2011 estimate is 32,612,250 people. 49.9% of population is under 15 years of age; 70% is under 25 years of age (Central Intelligence Agency, n.d.; Uganda Bureau of Statistics, 2011). The population growth rate is 3.576%, the third highest in the world. Uganda has the world's second highest total fertility rate at 7.60. Life expectancy is 53.24 years (Central Intelligence Agency, n.d.). The 2009 gross domestic product (GDP) per capita was US$509 (The World Bank, n.d.). 13% of Uganda's population is urban (Central Intelligence Agency, n.d.).

The Uganda education system consists of seven years of primary education, followed by the lower secondary cycle of four years and the upper secondary cycle of two years (District Information Portal, n.d.). The country instituted Universal Primary Education in 1997 and Universal Secondary Education (USE) in 2006. Secondary school education is primarily overseen at the national level by the Ministry of Education and Sports. USE is influencing secondary schooling in Uganda. Secondary school enrollment continues to rise and experienced a nearly 10% increase between 2008 and 2009. The number of secondary schools rose by almost 40% since 2006. The Uganda government reports that the student-teacher ratio has kept pace with the growth. While this may be the case, schools are still crowded. Even with Universal Secondary Education firmly established only 30% of Ugandan adolescents attend secondary school (Uganda Bureau of Statistics, 2011).

Uganda is widely considered the first HIV prevention success story. The Ugandan HIV prevalence rate for all adults peaked around 15% in the early 1990s and then gradually decreased to 4% in 2003. Since the early 2000s HIV prevalence has stabilized at between 6.5% and 7.0%. There are 1.2 million people living with HIV in Uganda. 64,000 people died from AIDS in 2009 (UNAIDS, 2004).

Kabarole District

Kabarole District, the setting of this research project, is found in western Uganda. Uganda has 80 districts (Central Intelligence Agency, n.d.). Fort Portal town is the district centre and the approximate location of the two secondary

schools involved in this study. The district has a 2011 mid-year population estimated at 409,400 (Uganda Bureau of Statistics, 2011). The district is primarily rural; 11.3% of the population resides in urban areas and 85.4% of households are engaged in agriculture (Unknown, n.d.). Fort Portal is 320 kilometres from Kampala and has a population estimated at 46,300 (Uganda Bureau of Statistics, 2011).

Within the district there are 166 primary schools and 51 secondary schools in Kabarole District (School Guide Uganda, n.d.). Of the secondary schools, 21 are private, 24 are government-owned and six are community schools. The enrollment rate for secondary school in Kabarole District is 31.7%.

Ugandan Adolescents' Sexual Health – Indicators of a Problem

Young people in Uganda experience poor sexual health, as evidenced by key health outcome indicators. Throughout Uganda's history with HIV, adolescents have carried a heavy burden of the new infections. Until recently almost half of all new infections occurred in individuals between 15-24 years. That number is now slowly decreasing (Government of Uganda, 2010). The HIV prevalence rates for this population (2.3% for males; 4.8% for females) highlight the increased HIV risk that Ugandan young women face (World Health Organization, 2011). This is supported by other research showing that Ugandan young women are nine times more likely than Ugandan young men to contract HIV (Darabi et al., 2008).

Early and unwanted pregnancy is a major problem in Uganda. The country has the seventh highest adolescent fertility rate in the world (World Health Organization, 2011). In 2008, 24.9% of Ugandan teenagers had begun childbearing (DHS, n.d.). Among women aged 20-24 years, 35% had given birth before age 18 (World Health Organization, 2011). Half of all pregnancies in Uganda are unplanned (Singh, Prada, Mirembe, & Kiggundu, 2005). This leads to a high demand for abortions – one in five pregnancies in Uganda ends in induced abortion. Restricted access to safe abortion contributes to an elevated risk of medical complications. 28% of Ugandan women undergoing an induced abortion are treated for complications (Singh et al., 2005); one third of those seeking medical treatment are adolescents (Kaye, Mirembe, Bantebya, Johansson, & Ekstrom, 2005). Abortion complications are the most common cause of maternal mortality in Uganda (Mirembe & Okong, 1995).

Sexually transmitted infections are common in Ugandan young people. Among 15-24 year olds who have ever had sex, 21.3% of females and 10.9% of males report having an STI or an STI symptom (Uganda Bureau of Statistics, 2007). The presence of a sexually transmitted infection brings an increased risk of contracting HIV. An additional health danger for young women is human papillomaviruses (HPV), which are associated with almost all cases of cervical cancer. Among sexually active women 12-20 years attending a Kampala health

clinic, 74.6% tested positive for HPV. 51.4% of viruses found were high risk virus strains (Banura et al., 2008). Cervical cancer is the most common cancer in Ugandan women (Castellsagué et al., n.d.).

Behaviours that Contribute to an Increased Health Risk

A variety of sexual health behaviours increase Ugandan youth's vulnerability to HIV, pregnancy and sexually transmitted infections. Ugandan youth have their sexual debut at a relatively young age. Among 15-24 year olds, 15.5% of females and 12.2% of males have engaged in sexual intercourse by the age of 15. 64.2% of females and half of males age 20-24 years have had sex by age 18 (Uganda Bureau of Statistics, 2007).

Condom use, a key sexual health protective behaviour, remains very low among Ugandan young people. In 2007 of the 24% of never-married young women who had sexual intercourse in the past 12 months, only 39% used a condom at last intercourse. Among never-married men, 28% had sexual intercourse in the past 12 months and 56% used a condom at last intercourse (Uganda Bureau of Statistics, 2007). More recent statistics show that condom use among females is increasing to approximately the same rates as males.

This is encouraging progress, however, condom use rates among young people engaging in "higher risk sex" (sex with more than one partner in the last year) are still low – only 28% of these adolescents used a condom at last sex (UNAIDS, 2010). The percentage of adolescents with multiple partners in a year remains very low for females and has been decreasing for males, but the rise in the older male population's multiple sex partners may be a risk for young females (UNAIDS, 2010). Having an older sexual partner is a significant risk to young women. Ugandan female teenagers who have a male partner 10 or more years older are twice as likely to contract HIV compared with those with male partners closer to their age (Kelly & Gray, 2003). Reducing the number of partners and condoms use were two key parts of Uganda's success in reducing the HIV infection rate (Kirby, 2008). Use of other forms of contraception, such as oral, remain very uncommon among this population (Ndyanabangi et al., 2003; Uganda Bureau of Statistics, 2007).

As adolescents who are perinatally infected with HIV become sexually active, this introduces an additional risk into the adolescent population. Evidence on condom use among perinatally infected adolescents is conflicting yet altogether not positive. Some research found that those adolescents who knew they were HIV-positive were only slightly more likely than HIV-negative adolescents to use a condom; even then use was limited and inconsistent (Obare & Birungi, 2010). In other findings, HIV-infected adolescents are less likely to use a condom than HIV-negative adolescents (Beyeza-Kashesya et al., 2011). Few young people in

general have tested for HIV. 12.2% of females and 7.9% of males have tested for HIV and received the results (Uganda Bureau of Statistics, 2007).

The Underlying Causes of Poor Adolescent Sexual Health

There is a host of underlying factors that contribute to adolescents' sexual health behaviours and the risk they encounter. Ugandans become familiar with sex at a young age. Especially in rural settings, due to housing situations and a lack of privacy, it is not uncommon for Ugandan children to observe adults engaging in sex (Kinsman, Nyanzi, & Pool, 2000). Young people come to view sex as something common and natural for them to be involved in. Adolescence is seen as a time to explore and experiment with sex (Hulton, Cullen, & Khalokho, 2000). For young males, there is significant peer pressure to prove their masculinity through having sex (Nobelius et al., 2010a, 2010b; Nyanzi, Pool, & Kinsman, 2001). It is these ideas around masculinity that lead young men to engage in higher-risk sex through having multiple partners (Joshi, 2010; Nyanzi et al., 2001). Boys also engage in sexual relationships to enjoy the pleasure and fulfill their sexual needs (Nyanzi et al., 2001).

Young women report that as their bodies physically mature, boys and men begin to "pester" them and pressure them to engage in sexual activity (Nobelius et al., 2010a, 2010b; Nyanzi et al., 2001). Adolescent girls observe their female friends who already have boyfriends and see them enjoying the attention and material benefits that initially come with a relationship. This helps motivate young women into starting their own relationships. In some cases female friends encourage their peers to get a boyfriend so that they can also benefit (Nobelius et al., 2010a; Samara, 2010; Wagman et al., 2009)

There is a substantial body of research exploring what gift giving in adolescent relationships signifies and how it relates to transactional sex. There is a growing consensus that gift giving is a normal part of adolescent relationships, that it is not considered transactional and that it is done as good maintenance of the relationship (Darabi et al., 2008; Moore, Biddlecom, & Zulu, 2007; Nyanzi et al., 2001; Samara, 2010). However, for some female adolescents there is a real financial need. Parents fail to provide for their daughter's basic needs (Sekiwunga & Whyte, 2009) and may even encourage her to find other ways of obtaining those things (Samara, 2010). Yet young women report that their financial need is not what motivates them to start having sex (Nobelius et al., 2010a), though there is a financial gain that comes with the relationship (Nyanzi et al., 2001).

While gift giving may not be transactional, what implications it has on the nature of the sexual relationship are still being explored. Samara (2010) found that young women have decreased condom-negotiating power where gifts are given. However, this raises the question that if giving is standard practice, does this

mean that in all relationships young women become less able to require condom use. Young women acknowledge that the gifts from older men symbolize an expectation of sex, as opposed to the gifts from their age-mates that are simply part of the regular romantic wooing process (Samara, 2010).

In addition to young women's minimal condom negotiating power there are numerous factors that contribute to low condom use. Survey data shows that of the 40% of adolescents who refused to use a condom, the most common reason was no money to buy one. 10% said that sex with a condom was not enjoyable (Ndyanabangi et al., 2003). Males' dislike for condoms is seen by adolescent girls as a barrier (Samara, 2010). Various challenges associated with health services and fear of how parents and religious leaders will respond to adolescents' contraceptive use are more obstacles to condom and other contraceptive use. Some people associate condom use with being unfaithful or infected with a disease and suspicion is aroused when condom use is requested (Nalwadda, Mirembe, Byamugisha, & Faxelid, 2010).

Certain cultural attitudes prevail. It is expected that young women have no need of contraceptives since they should remain virgins until marriage and, once married, should produce children (Nalwadda et al., 2010; Nyanzi et al., 2001). Adolescent girls experience pressure to marry young (Råssjö & Kiwanuka, 2010; Sekiwunga & Whyte, 2009) and to produce children while young (Hulton et al., 2000).

Poor parental involvement contributes to adolescents' negative sexual health outcomes. Many parents fail to find the right approach and instead are too harsh with their children or disengaged from parenting (Sekiwunga & Whyte, 2009). Adolescents with a low-level of parental monitoring are much more likely to engage in sex than those who experience a high-level (Biddlecom, Awusabo-Asare, & Bankole, 2009).

Alcohol use, assault and sexual health risk are all related. Alcohol use contributes to increased sexual activity (Page & Hall, 2009). Alcohol use before sex is related to physical violence and sexual coercion, of which both are associated with HIV infection risk in young women (Zablotska et al., 2009). Sexual coercion is associated with early sexual debut, pregnancy (Wagman et al., 2009) and an increased likelihood of an abortion attempt (Polis et al., 2009). 20% of female adolescents report being forced or raped the first time they had sex (Ndyanabangi et al., 2003).

There are numerous barriers to adolescents getting tested for HIV (Råssjö, Darj, Konde-Lule, & Olsson, 2007; Sebudde & Nangendo, 2009) including beliefs about what HIV testing represents and how it conflicts ideas of masculinity (Izugbara, Undie, Mudege, & Ezeh, 2009). In general, seeking services and counseling from

health service providers is very challenging (Biddlecom, Munthali, Singh, & Woog, 2007; Darabi et al., 2008; Kibombo, Neema, Moore, & Ahmed, 2008).

The commonness of HIV in Ugandan society and the presence of antiretroviral drugs (ARVs) may have had an adverse affect on HIV prevention. Opio and colleagues (2008) propose that recent decreases in protective behaviours could stem from a lessoned fear of HIV due to the existence of ARVs and a "normalization" of HIV due to its long presence in society. While the validity of this idea requires further investigation, there is other evidence that supports the notion. Before ARVs delivery was scaled-up in Uganda, a study reported that the population felt that the presence of ARVs would motivate increased risky behaviour (Atuyambe, Mirembe, Johansson, Kirumira, & Faxelid, 2005). Many young women claim that they are more afraid of getting pregnant than living with HIV (Jones & Norton, 2007; Nalwadda et al., 2010; Neema, Moore, & Kibombo, 2007).

The entire socioeconomic context of Ugandan society plays a role in adolescent sexual health (Nyanzi et al., 2001) and contributes to significant inequalities. Gender power imbalances contribute to sexual coercion (Hayer, 2010; Neema et al., 2007) and a lack of negotiating power (Hulton et al., 2000). Involvement with older men and authority figures, in particular teachers, places young women at even greater risk (Nalwadda et al., 2010; Ndyanabangi et al., 2003; Wagman et al., 2009). Schooling and education have a protective element. Adolescents in-school are less likely to have had sex than those out-of-school (Darabi et al., 2008). Poverty and economic lack is prevalent and has a major role in adolescent sexual health (Hayer, 2010; Jones & Norton, 2007; Wagman et al., 2009)

Need for Accurate Sexual Health Information

Misinformation about sexual health persists and is widespread among Ugandan adolescents. Adolescents are still confused about how HIV is transmitted, some believing that mosquitoes and sharing food with someone who has HIV can spread the infection (Darabi et al., 2008). Adolescents have inaccurate knowledge concerning when a woman is able to conceive (Darabi et al., 2008; Neema et al., 2007). Ineffective methods for preventing pregnancy (such as having sex standing up or withdrawing before ejaculation) are embraced by ill-informed adolescents (Darabi et al., 2008). There are doubts about whether contraceptives work, if condom use can cause cancer or deformities in infants and other key condom information (Darabi et al., 2008; Flaherty, Kipp, & Mehangye, 2005) contributing to fear that prevents contraceptive use (Nalwadda et al., 2010; Råssjö & Kiwanuka, 2010). It is believed that certain forms of birth control cause sterility (Neema et al., 2007). There is a need for HIV education that can free male adolescents from beliefs that prevent them from getting tested for HIV (Izugbara et al., 2009).

Possessing accurate and sufficient sexual health information is an essential component of successful HIV prevention and good sexual health (Padian et al., 2011). For example, correct knowledge of condom use and a condom demonstration greatly increased the likelihood of using a condom among sub-Saharan African youth (Bankole, Ahmed, Neema, Ouedraogo, & Konyani, 2007). Similarly, in Ugandan adolescents accurate condom knowledge and positive attitudes towards condom use are associated with the likelihood of use (Kayiki & Forste, 2011). Information education communication formed the backbone of Uganda's success story in reducing HIV. Using multiple channels comprehensive information was provided (Green, Halperin, Nantulya, & Hogle, 2006). Population-based surveys indicate that knowledge levels of HIV and HIV prevention have reached a plateau in Uganda and there is a concurrent trend in a rise of riskier behaviours. Meanwhile, the intensity of information education communication has lessoned as primary prevention messages lose prominence (Opio et al., 2008). It is possible that the stagnation of HIV prevalence rates could be linked to a decrease in HIV education.

The need for more sexual health information in Ugandan young people is apparent. Information on the absolute basics of HIV, AIDS and pregnancy prevention is relatively common, but detailed and in-depth knowledge is low (Darabi et al., 2008). In particular, messages on HIV have become limited to the "ABC" approach: Abstinence, Be Faithful, Condom Use (Neema et al., 2007). The World Health Organization (2011) reports that 38% of young male Ugandan people and 32% of females have comprehensive knowledge of HIV. Information and skills about reproductive health are also lacking (Råssjö & Kiwanuka, 2010). Researchers report an incongruence between what adolescents practice or intend to practice and the type of information given by health providers (Birungi, Mugisha, Obare, & Nyombi, 2009a; Birungi, Obare, Mugisha, Evelia, & Nyombi, 2009b). In a survey among Ugandan youth, 32% reported never having received any information on reproductive health. Only 18% of respondents reported receiving information regularly (Ndyanabangi & Kipp, 2002). Adolescents confirm the need for more information. Almost half of surveyed secondary students expressed that they and their peers need a better understanding on how to protect themselves from HIV (Jacob, Shaw, Morisky, Hite, & Nsubuga, 2007b). Within Kabarole District, Uganda, 94% of students interviewed expressed a need for more information and teaching on sexual health (Ndyanabangi, Kipp, & Diesfeld, 2004). More sexual health education among this population is needed (Jacob et al., 2007b).

LITERATURE REVIEW

The literature review began by identifying priority topics to be located through the literature search. The literature search focused on six major areas: peer education programs in sub-Saharan Africa, school-based sexual health education programs in sub-Saharan Africa, youth reproductive health in Uganda, the

education system in Uganda, general background on Uganda and anything on peer education in Uganda. Using these categories, a series of search terms was developed. Search efforts predominately centered on academic databases, though key grey literature resources were located through more generic Google searches. The University of Alberta's library yielded useful resources on the research methodology participatory action research.

Four academic databases were searched: Scopus, Global Health, ERIC (Education Resources Information Center) and SocINDEX. Scopus was selected for its high volume of records (including all of MEDLINE), multidisciplinary characteristics and extensive collection of Open Access journals. Global Health offers journals specific to global health and not covered in MEDLINE. ERIC addresses the educational aspects of the thesis topic. SocINDEX is a comprehensive sociology database. Priority was given to publications that were the most relevant to the study topic, offered the greatest specificity and were published since 1999. Library technicians from the University of Alberta and the International Development Research Centre provided expertise on designing database searches.

The objective of the literature review was to describe where Ugandan adolescents access sexual health information and their experiences with these sources; what they are seeking in an information source; the foundational aspects of peer education; how peer education is applied for sexual health education among adolescent populations in sub-Saharan Africa and the challenges and recommendations drawn from this body of evidence.

Current Sources of Information & Their Problems

There is a wide range of possible information sources offered to Ugandan adolescents (Bull, Nabembezi, Birungi, Kiwanuka, & Ybarra, 2010; Darabi et al., 2008; Jacob et al., 2007b).

Relatives

Ugandan adolescents use family members, including parents, grandparents, older siblings, aunts and uncles as a source of information on topics related to sex, puberty and romantic relationships (Bull et al., 2010). However, this communication, especially with parents, is very limited (Biddlecom et al., 2009). Traditionally in Ugandan culture, parent-child communication on issues about sex is considered taboo (Nobelius et al., 2010c). When some adolescents ask questions to older family members, the elders assume the young person is involved in sex. Punishment may follow (Flaherty et al., 2005; Nobelius et al., 2010c). Female adolescents are especially concerned that if they are viewed as being promiscuous, their chances of marriage could be jeopardized (Flaherty et al., 2005). Parents and elders confess that they are not always sure what to tell youth about these topics (Sekiwunga & Whyte, 2009). When these conversations

do occur the information provided by parents and elders, especially that related to modern contraceptives, often has inaccuracies. This is not surprising since many parents are less educated than their children and have no access to correct information themselves (Flaherty et al., 2005).

Historically among the tribes in Uganda, it was the responsibility of the paternal aunt, called the *senga*, to educate a girl on puberty, sexuality and sex (Kinsman et al., 2000). In some circles this is still practiced. Yet young women feel that in the *senga* tradition the role of the young women is to only listen. There is no opportunity for a girl to ask questions of her *senga* and engage in a dialogue (Nobelius et al., 2010c).

Building on key aspects of the *senga* tradition, an innovative community education program trained respected women in a community to serve as *sengas* and provide traditional and current information about sexual and reproductive health (Muyinda, Nakuya, Whitworth, & Pool, 2004). Forty-five percent of the visits to the *sengas* in the intervention program were made by adolescent girls. Girls who used *sengas* demonstrated increased HIV/AIDS knowledge, sexual communication skills, consistent condom use and use of family planning services (Muyinda, Nakuya, Pool, & Whitworth, 2003). While this is a very unique approach, the project was strongly based on community acceptance and places significant responsibility on the women who act as *sengas.*

Communities

Community settings offer sources on sexual health information through health care providers, NGOs, community-based organizations and religious leaders. Health care providers are often listed as a preferred source of information and are considered very credible, but youth describe numerous barriers to accessing them (Darabi et al., 2008; Kiapi-Iwa & Hart, 2004). Students, especially females, are concerned that they will not be treated respectfully at health service facilities or may be refused treatment. They are greatly concerned that their use of the health system will not remain confidential and that teachers and parents will find out about their health care needs. Adolescents feel that they cannot communicate openly and freely with health care providers due to differences in age and life experience (Flaherty et al., 2005). Furthermore, many health service centres are not designed to provide information as a stand-alone service. Often guidance on sexual health is only provided when a client visits for another reason, such as HIV testing (Darabi et al., 2008; Kiapi-Iwa & Hart, 2004).

NGOs and community-based organizations, while mandated to educate adolescents on HIV prevention, are often under-resourced, have a limited reach and are dependent on foreign funds and foreign agendas. In Uganda, religious settings have become an opportunity to dispense messages on HIV prevention. Many of the messages from religious leaders tend to emphasize abstinence and

faithfulness in marriage. Some churches do not condone condom use (Neema et al., 2007). Another method used by Ugandan adolescents to learn about sex and relationships is eavesdropping on conversations about these topics (Nobelius et al., 2010c).

Media

Media-based sources are often the most commonly reported sources of information on sexual health. In a study where students were asked to list their primary sources of information on reproductive health, 35% stated the media, 15% schools, 13% friends, 2% health professionals (Ndyanabangi & Kipp, 2002). Mainstream newspapers, television, radio programs and magazines often cover sexual health topics, communicating information that parents and teachers will not, such as information about contraceptives (Kinsman et al., 2000; Ndyanabangi et al., 2003).

The prevalence of radio use in Uganda makes it a frequent source of information (Ndyanabangi et al., 2004). The Ministry of Health and local radio stations, among others, produce educative radio programs. Some of these have a format that permits listeners to call or write-in their questions to be answered on air (Nobelius et al., 2010c). Health programming on television is available but is not very popular in comparison other television viewing options (Ndyanabangi et al., 2003). Film and print media pornography is a source of information on sex for young people (Kinsman et al., 2000).

The Straight Talk Foundation, an internationally known NGO, generates multi-language high-quality print and media-based resources geared for children and adolescents. Newspapers and radio programs provide detailed accurate information tackling controversial issues about sex, sexuality and sexual health. Programming is offered in a number of local languages.

Many Ugandan adolescents, especially students, like to consult written material when looking for health information (Ybarra, Emenyonu, Nansera, Kiwanuka, & Bangsberg, 2008). However, this type of material is relatively rare in Uganda. This lack of availability may be what makes the source even more important to youth (Cook, 2010).

As computer and internet use expands in Uganda, these areas are being explored in research. A survey with Ugandan secondary school students found that 38% of them consulted the internet when needing information on sexual health (Ybarra et al., 2008).

Schools

In Uganda there are a number of policies and legislations related to adolescent sexual health, creating a need for them to be systematized and integrated to

work together (Darabi et al., 2008) One of the major governmental initiatives is the Presidential Initiative on Communicating to Young People about HIV/AIDS (PIASCY). Instigated in 2003 with a mandate to educate adolescents with key HIV information, the initiative has been rolled out to target all youth, but has been most successful at reaching in-school young people. The program was initially implemented in primary schools and has gradually expanded to secondary schools. PIASCY provides teachers with training to conduct HIV education and to integrate HIV education into all aspects of schooling (Jacob, Mosman, Hite, Morisky, & Nsubuga, 2007a).

For Ugandan youth who are studying, schools become a major source of sexual health education. This differs from out-of-school youth who primarily get information from family, community and media (Nobelius et al., 2010c). Sex education topics have been integrated into some subjects (in particular biology and religious education), but not in a comprehensive manner (Jones & Norton, 2007). A survey of students found that 58% said that sex education was not taught in their schools' curriculum (Jacob et al., 2007a).

Though sexual health may be taught to a certain degree in schools, students feel they are not given the opportunity to engage in discussion on these topics with their instructors (Mutonyi, Nielsen, & Nashon, 2007). Youth do not feel they can speak with teachers and other school officials for fear of negative ramifications (Flaherty et al., 2005). Teachers also feel uncomfortable, lack confidence (Kibombo et al., 2008) and sometimes leave out controversial topics that they are not comfortable discussing (Gallant & Maticka-Tyndale, 2004). Teachers are not necessarily trained to share information on HIV, AIDS and reproductive health (Jacob et al., 2007a) and the information they provide is not always accurate (Råssjö & Darj, 2002). Provision of condoms within a school setting is not done because school officials do not want to be perceived as encouraging sexual activity (Flaherty et al., 2005).

A number of school-based sexual health education programs have been piloted in Uganda with mixed outcomes. For example, programs introduced in primary and secondary schools used multiple methods, including in-class lessons, to communicate sexual health information by specially trained teachers. Insufficient implementation has been a common problem for such programs (Kinsman et al., 2001; Terris-Prestholt et al., 2006). The "World Starts with Me" program was designed to give computer-based sex education. However, due to issues with not enough computers, broken computers and lack of electricity, this program was primarily delivered using the hard-copy manuals. Despite six days of training, the teachers leading it felt ill equipped and in need of more training. The program was not fully implement and had very little impact (Rijsdijk et al., 2011).

Local and national health authorities have a responsibility to monitor and assist in sexual health education. The Ugandan School Health Education Programme sends educators to visit schools and discuss topics related to sex education. Regional conferences and retreats have been organized through the federal government to offer students instruction about HIV/AIDS (Chacko, Kipp, Laing, & Kabagambe, 2007). Few programs offered to students provide opportunities for students to ask questions on a day-to-day basis and the coverage of the programs is not universal.

Friends

Friends are used by adolescents to gain information on sex, sexual health and relationships (Bull et al., 2010). Adolescents' friends can be a negative influence on a young person's sexual health decisions by encouraging sexual behaviours (Nobelius et al., 2010a, 2010b, 2010c; Nyanzi et al., 2001; Samara, 2010; Wagman et al., 2009). Friends may not be any more educated on sexual health topics, may have incorrect information, and especially for girls, a lack of confidentiality can affect an adolescent's reputation (Nobelius et al., 2010c).

Regardless, peers still serve as an important way of learning about sexual health. Adolescents frequently communicate with their peers. In a Tanzanian study, youth listed their friends as the group they most frequently communicate with about HIV and AIDS (Bastien, Leshabari, & Klepp, 2009). 50% of surveyed Ugandan secondary school youth turn to a friend when they need information on sexual health (Ybarra et al., 2008). Consulting older friends is also common (Ndyanabangi et al., 2004). As young people move through adolescence they become more likely to consult their friends as opposed to when they were younger and consulted adults (Ybarra et al., 2008). Adolescents think their friends are an important sources of information (Ndyanabangi et al., 2003). Research with out-of-school adolescents found that peers were the most important source of information on sex, relationships and sexual health topics because there was the opportunity to discuss and debate information learned from other sources (Nobelius et al., 2010c).

What is Desired in an Information Source

Research findings provide insights into what Ugandan youth are looking for in future sources of sexual health information. First and foremost, adolescents want opportunities to have discussions. This includes discussing topics with their peers (Cook, 2010), as well as asking questions and having those questions addressed (Jones & Norton, 2007). They are looking for individuals who are more open than their teachers (Cook, 2010) and understand the context that influences their sexual health decisions (Jones & Norton, 2007). In other research, youth stated that they want someone who they would be comfortable receiving health care information and condoms from, a person who was trustworthy, confidential, able to communicate well and friendly. Males

preferred males and females preferred females. They are looking for someone who will not judge, but is willing to freely talk about the issues and be accessible (Flaherty et al., 2005).

There is a need to involve adolescents in designing sexual health education interventions (Cook, 2010; Nyanzi et al., 2001). Furthermore, Ugandan adolescents are eager to be involved in sexual education. They see a need for information sharing between youth and view themselves as a source of information, specifically stating that they would like to make a difference by reaching their peers (Råssjö & Kiwanuka, 2010). Future health programming should take into consideration where adolescents turn in the absence of other sources of information (Ybarra et al., 2008). A Nigerian study documented how adolescents turned to the media and their peers for direction on sexual health when the authorities in their lives failed to meet their information needs (Onyeonoro et al., 2011).

When students have been given the opportunity to design health education programs, they have done so with a sense of enthusiasm, responsibility and attentiveness to the needs of their peers and reality of their present situation. In a Ugandan study, following discussions about sexual health topics, issues and strategies, the student participants created a program to help reach their community. The study recommended that opportunities be created for youth to contribute to the development of sexual health education (Jacob et al., 2007b). The students chose to use a school-based club as a platform to launch a variety of sex education strategies.

School-based peer education delivered through a club is an approach that links together the specific needs expressed by Ugandan youth for sexual health education. Clubs can provide the organizational structure to implement creative and engaging education methods, including drama, music, games and poetry, that Ugandan youth want to see more of (Jacob et al., 2007b). Involving youth in peer education develops their leadership skills and provides ways to raise gender issues (Norton & Mutonyi, 2007). Creating a peer education program using participatory approaches helps make programs more youth-friendly and empowers young people to instigate change in society (Isikwenu, Omokiti, & Nurudeen, 2010).

Peer education clubs can be designed in a format that provides ample opportunity for discussion between peer educators and other knowledge sources. The peer educators can use regularly occurring social interactions to share essential information with their peers. Young people feel very comfortable asking questions of each other and discussing issues (Nobelius et al., 2010c). The importance of dialogue should not be underestimated. Discussion of topics is directly related to individual action in those areas (Paek, Lee, Salmon, & Witte,

2008). Peer educators add a fresh voice to the existing messages within the school (Löfgren, Byamugisha, Tillgren, & Rubenson, 2009). Given that peers have a significant influence on a youth's decision to engage in sexual activity, this same peer pressure may be used to promote healthy sex choices through initiatives such as peer education (Nyanzi et al., 2001).

PEER EDUCATION

Peer education is an approach that has been frequently taken for sexual health education. In the UNAIDS manual *Peer Education and HIV/AIDS: Concepts, Uses and Challenges* (1999, p. 5), it states:

> Peer education typically involves the use of members of a given group to effect change among other members of the same group. Peer education is often used to effect change at the individual level by attempting to modify a person's knowledge, attitudes, beliefs, or behaviours. However, peer education may also effect change at the group or societal level by modifying norms and stimulating collective action that leads to changes in programmes and policies.

Peer education draws from a number of behavioural theories, including Social Learning Theory, the Theory of Reasoned Action, and the Diffusion of Innovation Theory. Peer education also has roots in the Theory of Participatory Education whereby the "horizontal process of peers (equals) talking among themselves and determining a course of action is key to peer education's influence on behavioural change" (UNAIDS, 1999, p. 6). Peer education involves full participation of people affected by a given problem as they together plan and implement a response.

Peer education gained popularity in the late 1990s and early 2000s as a method of promoting HIV prevention, especially among adolescent populations. Peer education has been used in a diversity of settings (e.g., schools, communities, workplace) and populations, especially those considered vulnerable and hard to reach (e.g., sex workers, injecting drug users, men who have sex with men, people living with HIV) (UNAIDS, 1999).

Grey Literature Resources

The rise in the method's popularity and the versatility of its use has led to a wealth of grey literature resources on peer education in practice. The key resources include *Peer Education and HIV/AIDS: Concepts, Use and Challenges* (UNAIDS, 1999), produced by UNAIDS and Horizons/Population Council. This report synthesized the current literature on peer education, presented results from a global needs assessment and used this evidence to provide recommendations for best practices in HIV/AIDS peer education. Another key resource is the five-part "Youth Peer Education Toolkit" by UNFPA and Family

Health International (FHI). Designed for use by program managers and trainers in local settings, the kit includes a comprehensive set of standards, training materials and evaluation tools (Family Health International, n.d.). The brief *How to Create an Effective Peer Education Program* walks program creators through a basic needs assessment and inventory of resources to contribute to designing a program (FHI/AIDSCAP, 1998). Also by FHI in partnership with USAID was one of the early comprehensive evaluations of youth peer education, which contributed some of the first program assessment resources (Svenson & Burke, 2005).

Peer-Review Research on Peer Education in Sub-Saharan Africa

The literature examined in this section is limited to peer education conducted in sub-Saharan Africa for education on sexual health topics among adolescents. The majority of the initiatives examined were conducted among in-school youth. Despite the predominance of peer education in sub-Saharan Africa, there is a relatively limited body of peer-reviewed literature on the topic.

Design of Peer Education Programs

Peer education is conducted through a wide range of program designs. Some peer education programs are one component of a comprehensive multicomponent initiative. African Youth Alliance (AYA) is an example of such an initiative. In operation from 2000 to 2005, this program included youth-friendly clinical services, policy and advocacy, capacity building and linked agencies targeting youth. Peer education was also used to deliver behaviour change communication in multiple settings including schools. The peer education program had a relatively good reach within the schools. Of those youth exposed to AYA, 29% of females and 27% of males had interactions with peer educators (Karim et al., 2009). However, the overall impact of AYA was mixed (Daniels, 2007) and the program was not renewed after the scheduled funding end date.

Other peer education programs, while not part of a comprehensive program, have targeted multiple youth settings, such as schools, youth clubs and sports associations (Speizer, Tambashe, & Tegang, 2001). Peer education, delivered through a club, may be used as one part of a multi-faceted school-based program (Govender & Edwards, 2009). The Ugandan Ministry of Education was responsible for starting a number of club-based peer education programs in secondary schools as part of its HIV education mandate. These clubs use drama, popular culture and community outreach and incorporate existing information sources, such as newspapers, as a resource for the clubs (Mutonyi et al., 2007). Peer education programs offered through a club setting are a recommended format. In a review of community-based programs, those designed as a club were deemed to be the most successful (Maticka-Tyndale & Barnett, 2010). Findings from Kim and Free (2008) emphasize the importance of involving young people when designing peer education programs and understanding the wider context in which the sexual health education is situated.

There has been relatively little research examining the recruitment and selection of peer educators. Mason-Jones et al. (2011a) examined the differences in characteristics between the peer educators and the students, as well as between peer educators who were chosen by teachers or volunteered. Very few differences were found except that peer educators were younger than their peers and had slightly better economic advantage. They did not explore whether this contributed to a difference in implementation or impact of the program. The authors propose that the opinion leaders within a group should be identified by their peers and invited to serve as peer educators. While this is an interesting recommendation, recruitment and selection procedures should be viewed from the perspective of the format and objectives of the program. In the case of a club format, it is likely that membership cannot be restricted to just those nominated by their peers and that recruitment would occur through a variety of methods. Recruiting peer educators with leadership skills is important (Shepherd et al., 2010).

The program's setting and population must be considered when addressing issues of remuneration. In a Tanzanian study involving out-of-school youth, the peer educators expected to be paid and to be offered jobs through the program (Simba & Kakoko, 2009). Since these peers educators were investing time that they could have been using to earn an income, this situation is different from a school-based program where youth engage in the program as a type of school extra-curricular activity. In this case, incentives such as T-shirts are acceptable (Speizer et al., 2001).

Training of peer educators is frequently delivered through an intensive multiple-day course, followed up by regular refreshers (Speizer et al., 2001; Visser, 2007). During this training it is important for adolescents to engage in dialogue to explore their beliefs, knowledge and experiences learning to seek information, as well as experience disagreement and the process of reaching consensus (Mutonyi et al., 2007). Training should incorporate many different participatory techniques (Campbell, 2005). In the past the "cascade" approach to training (training of master trainers, who train trainers/teachers, who train peer educators) was considered practical and cost-effective. There is now debate on the effectiveness of this approach to training (Gallant & Maticka-Tyndale, 2004).

How peer educators reach their peers with sexual health information takes many forms. In the program designed by students, the peer educators offered counseling and guidance, performed dramas in schools, conducted community outreach and wrote educative materials (Norton & Mutonyi, 2007). Another club created dramas out of discussion topics (Kafewo, 2008). Dramas are a common tool used by peer educators (Hughes-d'Aeth, 2002). A more structured program used a curriculum to guide the peer educators in performing in-class

presentations and leading discussions (Mason-Jones et al., 2011a). In another program, peer educators delivered a single curriculum-based session to their classmates that lasted less than two hours (Agha & Van Rossem, 2004). As part of the South African loveLife program, teams of trained peer educators visited different schools doing a presentation (Warwick & Aggleton, 2004).

Who leads the peer education program has a significant influence on the program's function and success. Programs that rely on teachers to implement them have encountered challenges with the curriculum being sufficiently implemented (Visser, 2005; Visser, Schoeman, & Perold, 2004). While teachers possess experience, knowledge and authority useful for the program, they carry heavy workloads and are often too busy to devote the time needed to properly manage a health education program. Even in student-led programs, when teachers were needed they were hard to access (Visser, 2007). In other programs, students led the activities (Mason-Jones, Mathews, & Flisher, 2011b), decided what they wanted to do and involved teachers as needed (Mutonyi, 2007).

Peer education programs that rely heavily on donor funding face the challenge of discontinued funding. When this happens, some programs continue but at not nearly the same level (Simba & Kakoko, 2009). Links with the community are important for sustainability, program quality and the inflow of fresh information (Norton & Mutonyi, 2007).

Impact of Peer Education Programs

There are formidable challenges with evaluating the impact of peer education programs, one of which is the difficulty of attributing changes in an individual's behaviour to a particular community-wide intervention (Harden, Oakley, & Oliver, 2001). There are very few studies that have rigourously assessed the impact of peer education programs and systematic reviews have found a number of evaluations to be of questionable quality. In a review of articles about quasi-randomized and randomized control trials of peer-led adolescent sexual health education programs from 1998 to 2005, the reviewers found there was an inconsistent and limited impact. Few evaluations showed strong evidence of change beyond knowledge, attitudes and intentions (Kim & Free, 2008). A second review that examined a broader set of articles on community-based peer education programs concluded that the programs improved HIV knowledge and condom use and improved community attitudes and norms (Maticka-Tyndale & Barnett, 2010).

There are encouraging and insightful results from evaluations of peer education programs. In eastern Uganda a survey of four schools with peer education programs found that 50% of students indicated that the HIV/AIDS clubs helped inform them about HIV/AIDS. In the survey no other school setting sources, such

as teachers, counselors or administrators, were mentioned. These findings show the capacity of the clubs to infiltrate the schools and the students' recognition of the program as an important, and perhaps only, source of HIV information within the schools (Norton & Mutonyi, 2007).

An intervention using peer education in western Uganda found that the sexual health program increased interactions between students and increased discussions between students and teachers, demonstrating the role of social interactions in behaviour change and promoting better sexual health choices. After two years of the peer education intervention, there was a substantial decrease in the percentage of students involved in sex (Shuey, Babishangire, Omiat, & Bagarukayo, 1999).

With a Ghanaian program operating in schools and communities, young people who had talked with peer educators were more likely to do something to protect themselves from HIV than those who had not. This was not seen among youth who talked to only adults. Sexually active youth, those most likely to contract HIV, were more than twice as likely to talk to peer educators than adults. Of the youth who spoke to peer educators, the strategies these youth said they were using to prevent HIV infection were more specific and essential that those strategies listed by youth who talked to adults (Wolf & Pulerwitz, 2003).

While systematic reviews are essential to research, given the diversity of program formats and the varying quality of implementation, it is very difficult to compare evaluation findings across programs. Few studies provide details on how the program was designed, launched and implemented. This lack of specificity limits how much peer education programs can be compared to each other. There is a need for process evaluations to accompany impact evaluations (Harden et al., 2001; Kim & Free, 2008).

Challenges and Criticisms of Peer Education

The major criticism raised about peer education is that young people are not a credible source of information and their friends do not trust them to provide accurate and health promoting information (Nobelius et al., 2010c). However, it should not be assumed that youth who are trained peer educators are viewed the same way as youth who are just friends. In a study by Mutonyi and others (2007), the student participants did not have high regard for their friends' capacity to advise on sexual health matters, but 50% of respondents mentioned the peer education clubs as a good source of information on HIV/AIDS. This suggests that the students made a distinction between getting information from their friends and getting information through the HIV/AIDS club members. The training and knowledge-sharing that peer educators engage in helps to increase their credibility in the eyes of their peers (Mutonyi et al., 2007).

Another criticism about the use of young people is that students do not have enough information and that they are equally as ignorant as their peers. Mutonyi and colleagues (2007) advises that in student-led programs it is essential that at least a core of the peer educators are well-trained to prevent misinformation from circulating and propagating in the group.

Problems have arisen in peer education programs where the teachers had too much control over the program, including when deciding who will be the peer educators. The peer education program reported in Campbell and McPhail (2003) fell apart for this reason. Programs that are build on student involvement increase the likelihood of successful student leadership and ownership. This helps to lessen the role of teachers and prevent program function problems caused by dependence on teachers. Teachers' involvement should not be disregarded as negative and should leverage on their skills and knowledge (Maticka-Tyndale & Barnett, 2010).

Peer education should not be viewed as a replacement for other education strategies. Instead, it can complement and support the many other methods of helping youth understand and engage in preventive action.

Recommendations for Using Peer Education

In addition to the insights provided through grey and peer-reviewed literature, research offers some key recommendations for using peer education successfully and sustainably. Table 1-1 is adapted from Maticka and Barnett (2010) and Svenson & Burke (2005).

DESCRIPTION OF METHODOLOGY

The methodology selected for this study is participatory action research (PAR). PAR is often considered an umbrella term for a variety of methods whose defining characteristics are the engagement of participants to stimulate action beyond the research process (Pain & Francis, 2003). PAR is closely related to action research, which is defined as a process of "collective, self-reflective inquiry undertaken by participants…to improve the rationality and justice of their own social or educational practices and the situations in which these practices are carried out" (Kemmis & McTaggart, 1988, p. 5). The essence of PAR is empowering people to bring change by generating knowledge through reflection on their personal experiences and situation. Thus, PAR is collective and participatory by nature (Kemmis & McTaggart, 1988). PAR approaches research by investigating "with" stakeholders, rather than "for" stakeholders or "on" participants (Greenwood & Levin, 2007).

PAR has the foundational elements of:

a. Active participation of researchers and participants in the co-construction of knowledge;

b. Promotion of self- and critical awareness that leads to individual, collective and/or social change;
c. Building of alliances between researchers and participants in the planning, implementation and dissemination of the research process (McIntyre, 2008, p. 1).

Table 1-1. Ten Recommendations for Using Peer Education Successfully and Sustainably

1. Youth involvement is critical for peer education retention, motivation and productivity.
2. Conduct a community needs assessment – find out what youth know, what's already offered, what they would like to know, what influences their sexual experiences and how other stakeholders feel about the proposed program content and activities.
3. Remember that there are considerable variations between youth peer education programs in terms of the number of activities carried out, type of participants, nature of the contacts, locales, topics covered and costs.
4. Community and government participation and support is critical to program sustainability and productivity.
5. Youth peer education programs need sound technical frameworks, especially in regard to adequate training.
6. Training should be customized to peer educators and their role; refresher trainings are useful for programs with extended timeframes.
7. Successful youth-adult partnerships are critical in developing positive youth dynamics. Peer educators should have regular contact with supervisors.
8. Use input from youth and community stakeholders to engage in a well-thought out selection of peer educators.
9. Develop strategies to enhance peer educator retention.
10. Create a system to locate and train replacement peer educators.

PAR involves a cyclical process of questioning a particular issue, reflecting upon and investigating the issue, developing an action plan and implementing and refining the plan (McIntyre, 2008). The researcher serves as a guide throughout the process, seeking to listen and learn. Each PAR project is context specific; therefore, the research tools used in the research process will depend on the project. Tools used by investigators may be surveys, interviews, focus groups, mapping, dramatization, movement, theater, symbolic art and photovoice (McIntyre, 2008). These methods are incorporated into the exploration and investigation process, as well as the research data collection.

Through the use of PAR theory and methodology, this project not only permitted the participants to contribute to the creation of a pilot intervention, but also enabled them to initiate and execute the activities. Involvement in the PAR process can instill in the participants an awareness of how they can contribute and their capacity to do so, since "it is by actively engaging in critical dialogue and collective reflection that the participants of PAR recognize that they have a stake in the overall project" (McIntyre, 2008, p. 1). PAR was also compatible with project's objectives to empower secondary school students to lead health

promotion activities among their peers and to improve the knowledge, attitudes and behaviours of Ugandan school youth in regards to sexual health.

ETHICAL CONSIDERATIONS

The study underwent ethics review by the University of Alberta's Health Research Ethics Board and by the Uganda National Council of Science and Technology. Table 1-2 outlines the main ethical considerations of the study and the approaches used to appropriately address each consideration.

Table 1-2. Ethical Considerations and the Approaches to Address Them

Other students, teachers and community members might mistake focus group sessions as being for people with HIV and the participants as having HIV
Approach: The purpose of the study and focus group sessions was clearly communicated to the school administrators prior to the beginning of the study. Once chosen, participants were reminded that they could withdraw from the study at any time if they so chose without any penalty.
Due to the discussion of sensitive personal themes, participants might experience tension or emotional distress during focus group sessions
Approach: Participants were reminded that they could withhold their response or withdraw from the study at any time. The investigator had the contact for a local counselor.
Privacy, confidentiality and identity will be maintained by investigator, but it could not be guaranteed that other participants would maintain others' privacy, confidentiality and identity
Approach: During the data collection, instead of using names, participants selected a pseudonym. The master list of the participants' names and pseudonyms remained with only the investigator and her research team. The concept of confidentiality was discussed with the participants at the start of each data collection session. While confidentiality could not be guaranteed, it was strongly encouraged. The focus group participants signed a confidentiality agreement to not discuss the content of the focus group with outside parties.
Language barriers and illiteracy influence informed consent
Approach: All information and consent forms were provided in English and Rutooro. After the investigator explained the study and consent process to student participants, a Ugandan assistant re-explained the information using the local language and locally-accented English.
Participants agree to participate in hopes of receiving a monetary incentive
Approach: Prospective participants were told that no monetary incentive could be provided for their participation. Participants who served as peer educators were provided with light refreshments during focus group sessions, a peer education T-shirt and a certificate of participation.

Informed Consent

Informed consent was obtained from all participants. Most of the students who participated in the study were under 18 years of age. In this case the student's parent or guardian provided informed consent. Since the students were adolescents and were therefore old enough to understand the purpose of the research and what was being asked, the students were also required to give their assent to participating in the study. Consent forms for students and school staff contained information about the project, including the purpose, procedure, benefits, risks, confidentiality, freedom to withdraw and investigators' names and contact information. Consent forms and information letters were made available in English and Rutooro and were assessed for clarity and cultural appropriateness within the western Uganda context by the field research supervisor, Mr. Tom Rubaale. Forms were developed to be understandable for the general public's reading level. The investigator and research assistants verbally presented the information letter and consent forms to each participant. They were told of their right to decline participation in the study and provided an opportunity to ask questions concerning their prospective involvement.

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Chapter 2. Paper – Barriers, motivators and facilitators to Ugandan adolescents' access of sexual health information

INTRODUCTION

Young people in Sub-Saharan Africa are disproportionately affected by human immunodeficiency virus (HIV). Of the almost 2.2 million infections occurring in adults, 41% are in young people aged 15 to 24 years. 80% of these adolescents are in sub-Saharan Africa – 72% are female and 28% are male (UNAIDS, 2010).

Ugandan Adolescents' Sexual Health – Indicators of a Problem

In Uganda, a country with a rapidly growing population that is becoming increasingly younger (Uganda Bureau of Statistics, 2011), young people experience poor sexual health. Throughout Uganda's history with HIV, adolescents have carried a heavy burden of the new infections. Until recently almost half of all new infections occurred in individuals between 15-24 years. That number is now slowly decreasing (Government of Uganda, 2010).

Early and unwanted pregnancy is a major problem in Uganda. The country has the seventh highest adolescent fertility rate in the world. Among women aged 20-24 years, 35% have given birth before age 18 (World Health Organization, 2011). Half of all pregnancies in Uganda are unplanned, creating a high demand for abortions. Restricted access to safe abortion results in a high rate of medical complications (Singh, Prada, Mirembe, & Kiggundu, 2005). Abortion complications are the most common cause of maternal mortality in Uganda (Mirembe & Okong, 1995).

Sexually transmitted infections (STIs) are common in Ugandan young people. Among 15-24 year olds who have ever had sex, 21.3% of females and 10.9% of males report having had an STI or an STI symptom (Uganda Bureau of Statistics, 2007). The presence of a sexually transmitted infection brings an increased risk of contracting HIV. An additional health danger for young women is human papillomaviruses (HPV), which are associated with almost all cases of cervical cancer. Cervical cancer is the most common cancer in Ugandan women (Castellsagué et al., n.d.).

A variety of sexual health behaviours increase Ugandan young people's vulnerability to HIV, pregnancy and sexually transmitted infections. Ugandan youth have their sexual debut at a relatively young age (Uganda Bureau of Statistics, 2007). Condom use, a key sexual health protective behaviour, remains very low among Ugandan young people (Uganda Bureau of Statistics, 2007) particularly during "higher risk sex" (sex with more than one partner in the last

year) (UNAIDS, 2010). Having an older sexual partner significantly increases the risk of contracting HIV for young women (Kelly & Gray, 2003). Reducing the number of partners and condoms use were two key parts of Uganda's success in reducing the HIV infection rate (Kirby, 2008). As adolescents who are perinatally infected with HIV become sexually active, this introduces an additional risk into the adolescent population. Research shows that knowing oneself is HIV-positive has little to no impact on condom use among Ugandan adolescents (Beyeza-Kashesya et al., 2011; Obare & Birungi, 2010).

A Need for Sexual Health Information

Sexual health misinformation is widespread among Ugandan youth and is a key factor that contributes to adolescents' sexual health behaviours. Adolescents are acting on incorrect knowledge about modes of HIV transmission (Darabi et al., 2008), pregnancy prevention strategies (Darabi et al., 2008; Neema, Moore, & Kibombo, 2007) and non-existent side effects from condom and contraceptive use (Darabi et al., 2008; Flaherty, Kipp, & Mehangye, 2005). The later contributes to fears that prevents contraceptive use (Nalwadda, Mirembe, Byamugisha, & Faxelid, 2010; Neema et al., 2007; Råssjö & Kiwanuka, 2010).

Possessing accurate and sufficient sexual health information is an essential component of successful HIV prevention and good sexual health (Padian et al., 2011). Information education communication formed the backbone of Uganda's success story in reducing HIV (Green, Halperin, Nantulya, & Hogle, 2006). Population-based surveys indicate that knowledge levels of HIV and HIV prevention have reached a plateau in Uganda and that there is a concurrent trend of a rise of riskier behaviours. Meanwhile, the intensity of information education communication has lessoned as primary prevention messages lose prominence (Opio et al., 2008). It is possible that the stagnation of HIV prevalence rates could be linked to a decrease in HIV education.

Current Sources of Information

There is a wide range of possible information sources offered to Ugandan adolescents (Bull, Nabembezi, Birungi, Kiwanuka, & Ybarra, 2010; Darabi et al., 2008; Jacob, Shaw, Morisky, Hite, & Nsubuga, 2007b). Parents, grandparents, siblings and other family members provide advice on topics related to sex, puberty and romantic relationships (Biddlecom, Awusabo-Asare, & Bankole, 2009; Bull et al., 2010; Flaherty et al., 2005). The cultural institution of the *senga* in which the paternal aunt provides guidance to young adolescent girls (Kinsman, Nyanzi, & Pool, 2000) has been a model for health education interventions (Muyinda, Nakuya, Whitworth, & Pool, 2004). Within communities friends, health care providers, religious leaders, NGOs and community-based organizations actively educate (Darabi et al., 2008; Flaherty et al., 2005; Kiapi-Iwa & Hart, 2004; Neema et al., 2007).

Media-based sources are often the most commonly reported sources of information on sexual health (Ndyanabangi & Kipp, 2002). The prevalence of radio use make radios a frequent source of information (Ndyanabangi, Kipp, & Diesfeld, 2004; Nobelius et al., 2010a). Film and print media pornography is used to learn about sex (Kinsman et al., 2000). The Straight Talk Foundation, an internationally renowned NGO, generates high-quality print and media-based resources issues geared for children and adolescents, tackling controversial sexual health issues and providing content in a number of local languages.

There are a number of policies and legislations related to adolescent sexual health (Darabi et al., 2008). One of the major strategies, the Presidential Initiative on Communicating to Young People about HIV/AIDS (PIASCY), has a mandate to educate adolescents on key HIV information (Jacob, Mosman, Hite, Morisky, & Nsubuga, 2007a). For Ugandan youth who are studying, schools become a major source of sexual health education and may offer classroom-based lessons, guidance and counseling from teachers, school-based health education programs, peer education clubs and visits from local health educators (Chacko, Kipp, Laing, & Kabagambe, 2007; Jacob et al., 2007b; Jones & Norton, 2007; Kinsman et al., 2001; Norton & Mutonyi, 2007; Rijsdijk et al., 2011; Terris-Prestholt et al., 2006).

Friends are used by adolescents to gain information on sex, sexual health and relationships (Bull et al., 2010) and are considered an important source of information especially in the absence of other sources (Ndyanabangi et al., 2004, 2003; Ybarra, Emenyonu, Nansera, Kiwanuka, & Bangsberg, 2008).

Information Gaps Persist

Despite the diversity of sexual health information sources, the need for more sexual health information in Ugandan youth people is apparent. Information on the absolute basics of HIV, acquired immunodeficiency syndrome (AIDS) and pregnancy prevention is relatively common, but detailed and in-depth knowledge is low (Darabi et al., 2008). Ugandan adolescents report not receiving sexual health information and a need for more sources (Jacob et al., 2007b; Ndyanabangi & Kipp, 2002; Ndyanabangi et al., 2004).

Given the wide variety of sources offered to Ugandan adolescents, why is there still an information deficit? This question has been addressed in part by literature exploring the challenges associated with information access (Biddlecom et al., 2009; Bull et al., 2010; Darabi et al., 2008; Jacob et al., 2007b; Kibombo et al., 2008; Mutonyi, Nielsen, & Nashon, 2007; Nobelius et al., 2010a, 2010b, 2010c; Nyanzi, Pool, & Kinsman, 2001; Rijsdijk et al., 2011; Samara, 2010; Sekiwunga & Whyte, 2009; Wagman et al., 2009). However, much of this work focuses on the challenges associated with a particular source and not the shared characteristics that prevent accessibility to these sources. Additionally, there is a need to better

understand how adolescents respond to the sources available to them, in particular the characteristics of a source that cause a young person to accept or reject it.

The purpose of this study was to explore the factors that influence the information sources available to Ugandan adolescents and how adolescents decide what sources to use. This qualitative study was conducted with adolescents and teachers from two secondary schools in western Uganda. Through identifying shared barriers and promoters to adolescents' access to information, this study reveals key entry points for health educators to improve access to existing sources. Furthermore, it provides guidance on how effective new sources can be designed and introduced.

METHODS

Setting

The study was conducted in Fort Portal town, the district centre of Kabarole District. Kabarole District, located in western Uganda, has a 2011 mid-year population estimated at 409,400 (Uganda Bureau of Statistics, 2011). The district is primarily rural; 11.3% of the population resides in urban areas and 85.4% of households are engaged in agriculture (Unknown, n.d.). Fort Portal, located 320 kilometres from the country's capital of Kampala, has a population of 46,300 (City Population, n.d.).

The School of Public Health at the University of Alberta has a long-standing affiliation with health officials and community leaders in this region of Uganda and has worked with the district to conduct needs-based applied health research and programming. In late 2007 during a consultation process, several head administrators from local secondary schools expressed interest in having a sexual health education program established in their schools. To aid in developing a culturally relevant context-specific sexual health education program, background research was conducted to determine the target population's current experiences in sexual health education. This work is presented here.

Since this research was to inform the design of a school-based health education program, participants were selected from secondary schools interested in hosting such a program. Two secondary schools were purposively selected for their interest and differing characteristics. School A, a public day school located in Fort Portal town, had a population of roughly 1,600 students. School B, with about 650 students, was a historically prestigious boarding school that received substantial private funding and was located in a rural setting 7 kilometres from Fort Portal town. Both were mixed gender schools. The majority of the young people attended either school came from low-economic rural households within Kabarole District.

During the proposal development process, each school provided a letter of support. Upon arriving in Uganda the author (ACJ) met with the school administration, provided them with additional details on the research project, answered any questions and confirmed their interest in participating. Data collection occurred in 2008 during the final term of the school year.

Methodology

Participatory action research (PAR) is the methodology selected for this study and the subsequent phases. PAR is a process of engaging participants to create change through their collective questioning, reflecting and discussion on their personal experiences and situation to generate knowledge and action around a particular issue (Kemmis & McTaggart, 1988; McIntyre, 2008). Consistent with PAR, the study involved participants who were interested in not only the question and reflection aspects, but also planning and taking action to promote sexual health education in their schools. This paper focuses on the initial self-reflective inquiry undertaken by participants around students' current access to sexual health information.

Study Participants

Study participants were recruited to help develop a sexual health peer education program for their schools, and to participate in the program once it was developed. Participants included students and academic staff from each of the selected schools.

Sampling was purposive. The school administrations agreed to help select student participants and were provided with a list of selection criteria. The criteria emphasized that not only were these students going to aid in understanding the current sexual health education context, they would also be invited to help design and run a health education program for their schools. School administrators were to choose young people who were current students, who felt comfortable discussing sexual health topics, who had an interest in being further involved in a program and who were in their second year of secondary school ("Senior Two"). A total of 51 students participated in the study: 25 female, 26 male (age 13 to 18, average 15.6 years); 24 from School A and 27 from School B. Seven school staff members were selected as participants for their experience in providing health education; two female, five male; three from School A and four from School B.

For student participants, the lead researcher had an initial meeting with the selected students at each school. In these meetings more information on the study was provided, questions were addressed and information letters and consent forms were provided. For students under 18 years of age, versions of these materials were provided for guardians. All materials were offered in English and Rutooro, the language most commonly spoken in Kabarole District.

All academic staff participants were provided with an information letter and consent form prior to a focus group or interview. Informed consent was obtained from participants 18 years of age or older and the guardians of those under 18 years of age. Participants under 18 years of age provided their assent to participate.

Data Collection Strategies

Data collection occurred through semi-structured focus groups and interviews with participants. Fifteen focus groups were conducted with students (seven with School A students and eight with School B students) and two focus groups and three individual interviews with academic staff. In the first focus groups, students were separated by gender to allow greater comfort in discussing socially sensitive topics. The students of each school combined when they expressed a readiness to hold discussions as a group. The number of participants in the student focus groups was higher than typical for a focus group discussion. There are two reasons for this: since the students would later be involved in health education activities larger numbers were needed to make this feasible. Secondly, in their selection, school administrators exceeded the number requested by the researcher. The larger than usual numbers of students in the focus groups did not appear to impede the collection of information.

The researcher conducted all focus groups and interviews. All focus groups were in English. Starting in primary school all Ugandan students learn English as a requirement. During focus groups with students, a research assistant who spoke Rutooro was present. Students were told they could speak Rutooro if they desired. Together the research team, school administrators and students decided on suitable locations and times. All discussions occurred on school property except those involving students from School A. Sessions with these students occurred at a location neighbouring the school compound. The discussions were held outside of class hours. Discussion guides were verified for cultural appropriateness by Ugandan research partners. During the focus group discussions, students were addressed by a self-selected pseudonym. Refreshments were provided to all participants as appreciation for their participation. All discussions were audio recorded, amounting to nearly 25 hours of recording. Recordings were transcribed. Identifying information was removed. Field notes capturing observations of participants supplemented the transcriptions. The lead investigator created the pseudonyms attributed to the quotes used in this paper. These pseudonyms are not the ones used by participants during the data collection.

Since the focus of the discussion was around sexual health, the research team first established how the student participants viewed the concept of “sexual health.” Through discussion the participants came to a consensus that sexual health encompasses the state of any aspect related to a person’s sexuality,

including sexual organs, feelings, emotions and actions taken to prevent or reduce the risk of unwanted sexual health outcomes.

Data Analysis

Inductive analysis was used on the qualitative data generated from the focus groups and interviews. The first analysis steps occurred as data collection continued by utilizing understanding generated from a discussion in later discussions. Analysis continued during the transcription by writing notes from observations made during the transcription. After reviewing the transcripts, a broad coding framework was developed and applied using the computer software NVivo (version 8). Through this process themes were identified and sub-codes created. The data were coded again using the sub-codes and a hand-coding method. During this iterative analysis process more notes were made that contributed to the study's final results and discussion. To summarize, analysis began with descriptive and topic coding and moved to analytic coding as described in Richards and Morse (2007) and Mayan (2009).

Ethical Considerations

The study underwent ethical review by the University of Alberta's Health Research Ethics Board and by the Uganda National Council of Science and Technology.

RESULTS

Ugandan students' experiences in accessing sexual health information reveal that there are factors external to them and outside of their control that influence what options they have for accessing information sources. Factors within them, internal factors, also influence their choice of information sources and their reception to the information they hear. The participants' perspectives reveal several strategies that can help facilitate increasing a source's accessibility and appeal to Ugandan youth.

External Barriers Limit the Selection of Sources

According to participants, sexual health information was offered to Ugandan adolescents through numerous forms. Over the course of discussions, participants mentioned teachers, health care professionals, school clubs, parents, relatives, friends, newspapers, radio shows, television shows, pornography, books, seminars and religious leaders as ways they have gained information on sexual health topics. However, the information options available to a particular individual were dramatically reduced by external factors. These factors were largely beyond the control of these young people, leaving them with little capacity to change them.

Poverty was common in Ugandan households. Participants strongly connected poverty with access to media-based information sources. For students coming

from poor homes luxury items such as televisions, radios and even newspapers were rare. This prevented these adolescents from regularly accessing media-based youth health education programming, including that provided by the local health authorities and the Straight Talk Foundation, a Ugandan NGO offering sexual health education to adolescents through newspapers, radio shows and school-based clubs. Erratic and sometimes inaccessible and unaffordable electricity required batteries ("dry cells") to power electronic devices like radios. Even the cost of these could be prohibitive.

> "Some [adolescents] do not listen to Straight Talk on the radios because some of them, they have no radios at home. Maybe they don't have money to buy cells…" [Ruth, female, age 15, School A]

Many Ugandan adolescents in secondary school attend boarding schools where they reside within a school compound and away from their families for ten months of the year. Boarding schools are sometimes in geographically isolated locations. The participants' discussions illustrated how the boarding school setting affects access to sexual health information. The schools' administrations tended to limit how much students could travel off of school property. The use of cell phones and radios was frequently not permitted. During school sessions these factors limited boarding students to only information resources found within the school compound. Teachers and school-based health professionals were commonly turned to for guidance. When students returned home over the holidays, their information sources changed to family members and other sources not available within the boarding school setting.

Parents could have been a crucial information source but numerous adolescent participants felt their parents did not provide information. When asked whether their parents' silence was influenced by a lack of knowledge on sex and sexual health topics, young people felt that parents were not without knowledge. Various sources had provided parents with information pertaining to sex and sexual health:

> "Some of them [parents], they learnt from their mothers. Others learned from the radios. Others learned from their elders, community meetings. Others learnt from their grandmothers. You find that when they were at our age they taught them about how to control themselves, how to take themselves." [Helen, female, age 15, School A]

Students felt that the primary reason for parents' refusal to discuss these topics was that parents fear that when their children hear information on sexual health, instead of discouraging them it will induce their children to become involved in sexual activity. The students felt their parents would prefer to remain silent on

sexual health topics rather than cause their child to become "spoilt" (i.e. lose his or her virginity and be involved in sex).

There were many people in Ugandan adolescents' lives who could provide access or prevent access, either intentionally or unintentionally, to additional sexual health information sources. Students from both schools were frustrated at the failure of their schools' Straight Talk Clubs to provide access to the information-packed newspapers produced by the Straight Talk Foundation. Typically monthly newspapers were delivered through various mechanisms to schools and it was the responsibility of the club members to make the newspapers easily accessible to students.

> "Some of us, we could use that Straight Talk [newspaper], but we cannot get them sometimes. For example,…not many times have I seen Straight Talk given to us in the class. Because I can spend even the whole month without reading the Straight Talk because they are nowhere to be seen." [Daniel, male, age 14, School B]

Other gatekeepers are parents whose strong opinions and fears about how sexual health information could affect their children caused them to prevent adolescents from using sources that would otherwise be accessible to them.

> "Some parents think that if their children listen to that information on Straight Talk which is normally on the radios…, when you sit down to listen to that program, some parents say that, 'You, child, you are getting spoilt while listening to those things.'" [Akiki, female, age 15, School A]

Presenting the wrong type of information was a barrier to students accessing sexual health information. Some information sources, especially individuals, provided only basic facts on sexual health. The lack of detailed specific content reduced the source's relevance and utility. The high proportion of written content relative to visual content, particularly films, was a missed opportunity to share information with students.

Each one of these environmental barriers acted to limit a young person's selection of information sources and access possibilities. Of the choices available to him or her, each adolescent then determined where and how he or she would seek information.

Personal Inhibitors and Motivators

After the information access possibilities were narrowed by external factors, Ugandan students had internal factors that further determined where they would get information from. These internal factors either excluded source

options thereby acting as an inhibitor to information, or motivated the individual to consult a particular source.

Personal Inhibitors

The young people described many instances where they and their peers chose to not use an available information source. Sometimes this happened because students thought they don't need information on sexual health topics. The participants felt that these young people lacked an interest in sexual health and were not motivated to learn more about how to prevent unwanted sexual health outcomes. According to the participants, some students felt that they already knew enough about HIV to be able to take preventative action. They also thought that other young people simply did not have a strong enough interest in sexual health topics to devote time and effort to learning. When information sources were available, these students gave priority to something else that was of greater interest to them.

> "Sometimes I find some students in the library getting these New Visions [a national newspaper], and yet Straight Talk papers are there. They don't bother to get them. And they say that, 'So long as I'm interested in football.' They just get the New Vision so they can read the football news and then they take the papers instead of getting the Straight Talk newspapers." [Luis, male, age 13, School B]

Similarly, participants mentioned that some youth preferred to listen to music on the radio rather than a health program.

Another example of different interests and priorities was adolescents who were involved in sex and didn't want to hear a message telling them to avoid sex. For them, sexual activity was a priority over hearing messages that could be encouraging them to abstain from sex.

> "You find the other one is so interested in getting sex. She says that, 'What are these ones? They mean to stop me from getting my sweet.' And you find that that one is another way how they ignore Straight Talk." [Ruth, female, age 15, School A]

Young people who were motivated to increase their knowledge of HIV and other sexual health topics applied a number of criteria when selecting how they would get information. How a prospective information source compared to these criteria determined whether the young people would use that source.

These criteria were particularly important when a young person had questions about sexual health and was trying to select a person to approach with his or her questions. The most significant consideration was whether the prospective

person could be trusted to keep the student's inquiries and concerns confidential. Students experienced instances when they sought help from a classmate on a sensitive issue and the classmate circulated the information to other people, even exaggerating the nature of the discussion. Students saw this type of action as selfish behaviour and a sign of a desire to gossip rather than to help a friend in need. This lack of discretion had potentially serious ramifications, especially if the information being circulated was about a positive HIV status.

> "You find that you go and tell your friend or any person that, 'I have AIDS, I have such and such a disease.' Instead of helping, he just isolates you. Or they will just leave you. Even they will chase you from their group. They're like, 'This person is going to spread this disease to us.' So they start neglecting you and even they will spread out the news to people." [Anne, female, age 15, School B]

Friends and classmates weren't the only people who disclosed information. Student participants provided specific examples of when a student shared something private with a school staff member expecting that information to be kept confidential. Instead, the staff member reportedly gave the information to other school staff members. Due to events such as this, some educational staff were considered not trustworthy. While meeting with the teacher participants, the moderator asked for an explanation as to why a student's information would be disclosed. One of the replies was:

> "The primary aim behind [the student] talking to the Senior Woman[1] and talking to the Senior Man[1] is to have the problem solved. And that problem cannot be solved only by the Senior Man; neither can it be solved by the Senior Woman teacher. The administration must be involved…So when these children come to know that whatever they shared with the Senior Man or Senior Woman has reached the administration, most of them don't feel bad because they feel that their problem is being addressed." [Mr. William, male, school staff member, School A]

According to teachers, information is shared to help the student with a problem and the student doesn't "feel bad" because the objective of helping him or her has been achieved. This was not the opinion of the students, who felt information was disclosed for reasons less compassionate. So long as a student continued to feel this way, he or she would not approach a teacher who had a reputation of disclosing a secret at a student's expense.

[1] Most Ugandan primary and secondary schools have a female teacher called the "Senior Woman" who is selected by the head administrators to provide guidance on life and health to the female students. While not as commonly found as a Senior Woman, the "Senior Man" performs a similar role to male students.

A second major consideration when selecting a person was anticipating how the person would respond to the student's inquiry. In particular, students wanted to avoid confiding in people who would respond negatively or misunderstand them. The students reported that some busy teachers responded with impatience or harsh words when students approached them for guidance. However, a few participants questioned whether the students in these stories had approached the teacher (or parent) in a respectful manner. They felt that if the student had been respectful in how he or she approached the teacher, the student wouldn't have received such an off-putting response.

Students reported that some teachers assumed that because a student had a question about, for example, pregnancy, the student must be pregnant. The teachers interpreted the students' inquiries about sexual health to be an indicator that the student was involved in some sort of "bad behaviour," such as sex or pregnancy or having a boyfriend or girlfriend. This was a response that occurred in parents too. Other times the student's inquiry prompted the teacher to assume that because one student made an inquiry, a larger group of students must be involved in a bad behaviour. The following quote describes how a student felt when this happened.

> "You go to the deputy [head teacher]'s office and you tell the deputy your problem. Then when you are in assembly, you will also hear the deputy say that the girls are having more problems than boys. If you are the one [who asked], how do you feel? (pause) Ashamed." [Brenda, female, age 18, School A]

These types of responses, or the fear of such a response, created disincentives for students to seek advice from adults, causing them to hesitate to approach an adult. Instead they went to people who they felt comfortable approaching but who might not provide good advice. Participants saw how not approaching someone who was "responsible" for guidance could cause negative outcomes.

> "Sometimes some students fear to go and talk to the responsible people and they end up going to first their friends. And some friends are not somehow good. They end up misleading them." [Ben, male, age 15, School A]

Perceiving that they've received inappropriate information was another inhibitor to adolescents using an information source. The discussion revealed that when participants sought advice from a person, they already had a certain expectation of what type of advice they would receive. When they received information that contradicted their expectation, this was an indicator that the source was not good. As a result they no longer considered that person to be a trustworthy source to consult.

> "Some teachers when you go to them and you need the information about how to protect yourself or to prevent the spread of HIV/AIDS, instead of giving you the right information, they just divert you. They'll turn you the other way around: 'Why do you abstain? I think sex is for people.'" [Nabulungi, female, age 17, School B]

Students saw that the quality of the advice was often linked to the source's own personal attitudes and behaviours around sex. Yet they felt that people could be deceptive in their actions, making it difficult to judge a person's character based on actions alone. Girls in particular were vulnerable to bad-intentioned male teachers who used clever deceptive tactics and money to get female students involved in sex. To avoid this, students felt that female students should approach female teachers for advice. This strategy was also useful for when students had gender-specific problems, such as when girls had questions about menstruation.

Personal Motivators

Just as there were internal factors that prevented a young person from using a sexual health information source, there were also internal processes or events that motivated an adolescent toward a particular source.

The participants observed that young people who might not normally seek out sexual health information willingly sought advice when he or she experienced a "problem," such as an unplanned pregnancy.

> "Someone, a girl might ask [for advice] only if she's pregnant but if she's not, she may not ask." [Adel, male, age 13, School A]

Ugandan adolescents preferred sources where they knew that the information they received was correct and would be beneficial to them. When students heard information from a "trusted" source, they knew they are getting good advice. A trusted source was one that had a well-established reputation of consistently providing accurate, relevant information. While the students had personal experiences with particular individuals, they could agree on only one source that could be trusted to always provide good sexual health information. That source was the adolescent health programming materials provided by the Straight Talk Foundation, specifically the radio programs and printed newspapers.

Another strategy that students used to determine if information was good was verification. The young people used both internal and external verification. Internal verification occurred when they compared the new knowledge to what they felt they already knew as factual or what their personal convictions were. This was usually done with information that tended to be less about scientific

facts and more about general life advice. For example, an individual person's goal to have an advanced education would lead them to reject advice that they should marry while still a teenager.

> "I talked about someone having a vision. For example, if your vision is you want to study, then someone comes and says, 'You know, marriage is good. Why don't you get married?' So when you compare your vision, when you compare your focus with advice you have been given, you find they are totally different. Obviously you burn that advice." [Nelson, male, age 16, School A]

In external verification students consulted other sources to "research" the validity of the information. Students approached numerous people about the new information and cycled through multiple information sources. If they consistently received the same answers then they believed that the information was true. Students also encouraged discussions with their peers as a way of determining the truthfulness of the knowledge.

> "For me what I'm saying is that you should not depend on only one kind of information. Let us depend on many of them and share. If I've got the information from one side and you another one, we combine them, compare and see which one can come the best one." [Richardo, male, age 16, School A]

Students often used a combination of both internal and external verification.

Finally, students' selection of information sources was also influenced by what type of sources they personally preferred.

> "There is someone who can have a book. There is someone who is accessible to a TV. There is someone who can listen to radio. For example, if I prefer reading, you cannot take me to the radio. I cannot." [Nelson, male, age 16, School A]

How they developed their personal preference related to several factors: the individual's enjoyment of a particular source's characteristics (e.g., one student preferred reading because there was detailed information while another student preferred talking to people because he could ask follow-up questions); a positive experience with the source; and congruency between the source and other aspects of the individual's life (e.g., some students with a strong Catholic faith preferred consulting priests).

All of these internal motivators led a young person to select a particular information source.

Reducing Barriers and Improving Receptiveness to Sources

The participants revealed a number of actions that other people undertook that diminished the external and internal barriers and strengthened the adolescents' internal motivation to seek out a source. These are considered facilitating actions.

Students' access to information increased when individuals linked them with additional, and a variety of, information sources that were normally unavailable to them. Student participants described accessing written materials and films because other individuals, such as friends, sports coaches and teachers, provided them. Participants also revealed how they had introduced other students to individuals, such as guidance teachers, who could be a new trustworthy source of information for that student.

Adolescents closely watched the behaviour of people around them and were more receptive to advice from people who behaved in ways associated with healthy choices. They didn't trust the advice of people known to engage in activities associated with bad sexual choices and expected that advice from these people would encourage them to make bad choices also.

> "Now you can't go to a person who uses marijuana, who drinks alcohol, who's in drug abuse, and ask him or her about the right thing. He or she can't tell you the right thing, but he or she can trick you into a wrong thing." [Helen, female, age 15, School A]

Lastly, adolescents felt much more comfortable approaching individuals, including teachers, who were friendly and who they had a good rapport with.

> "If I go to a teacher, I'll first look at my connection to him. You may find, you know, every person is different. There are people who are not friendly and those who are friendly. So I'll have to go for somebody who I know can help me." [Solomon, male, age 17, School B]

These facilitating actions were strategies that enhanced students' access and use of sexual health information.

DISCUSSION

This study explored the factors that influence the information sources available to Ugandan adolescents. Due to poverty, a young person's setting, parents' reluctance to share sexual health knowledge, gatekeepers who stand between youth and sources, and delivery of the wrong type of information or information in the wrong format not all information provided to Ugandan adolescents reaches them. This study also identified how adolescents decide what sources to use. Students filter out certain information sources based on a lack of interest or

other priorities, the source's failure to keep confidentiality, the source's response to the young person's inquiry and whether the information received is appropriate. Students gravitate towards certain information sources when they have a problem to be solved, the source is trusted, the source's information has been verified or the source is consistent with the adolescent's personal preference. The study revealed key entry points to help make information more accessible and appealing to students. Health educators can improve access to information by linking adolescents to other existing sources, by conducting oneself in a manner befitting a sexual health role model and by having a friendly, approachable demeanor.

Since not all adolescents have access to all the sexual health education mediums offered, there is a need for multiple sources of sexual health information, as identified in other studies (Jacob et al., 2007b; Masatu, Kvale, & Klepp, 2003; Ybarra et al., 2008). In addition to conveying information, the use of many channels helps to reinforce the messages communicated through other sources (Mitchell, Nakamanya, Kamali, & Whitworth, 2001).

The influence of school settings when accessing sexual health information, in particular the comparison between day schools and boarding schools, is a relatively unexplored area among studies on secondary schools in sub-Saharan Africa. Other work acknowledges that boarding school students' limited contact with parents and family members creates an added responsibility for the school to inform students on sexual health issues (Jacob et al., 2007b). A study that compared settings found that in boarding schools peers were the first source of information on AIDS (Ndlovu & Sihlangu, 1992). In their quasi-experimental, randomized longitudinal study of the impact of a Zambian peer sexual health education intervention, Agha and Van Rossem (2004) limited their study to boarding schools because they anticipated these students were more isolated from contaminating mass media sources than those attending day schools.

In discussions about parents serving as an information source, the student participants described parents that fit into three possible roles: parents who were a source of relevant advice pertaining to health and life; parents who were a barrier to good information access; or those who were poor parents because they did not monitor the child's activities and were a bad role model on decisions related to sexual health. Löfgren and colleagues' (2009) work with Ugandan youth found similar categories, with the addition that some parents do not have enough time to have serious sexual health conversations with their children. In Sekiwunga and Whyte (2009) the youth acknowledged that their parents were not ideally equipped to provide modern health knowledge and that there were strong cultural barriers, but the youth still desired to have their parents fulfill their parental responsibility of providing guidance and advice.

Engaging gatekeepers is important in sexual health prevention efforts targeting youth (Nalwadda et al., 2010). Guidelines on designing health education initiatives, such as peer education programs, recommend involving gatekeepers (Svenson & Burke, 2005). However, outside the context of specific programs, how to engage gatekeepers in increasing access to information sources has not been explored.

The participants discussed the problem of receiving sexual health knowledge that was too general. It has been found that the absence of a school curriculum on sexual health has contributed to a lack of detailed information from teachers (Jacob et al., 2007b). Not enough detail is a problem also seen in radio programs produced for a wider audience where the same simplified messages are repeated (Nyanzi, Nyanzi, & Kalina, 2005). Participants wanted more sources that used visual images to communicate knowledge. No participants in this study mentioned using internet or computer-based sources. Cell phones were mentioned only as a tool for calling in questions to radio programs. As cell phone, computer and internet usage increases among rural regions of Uganda (Ybarra, Kiwanuka, Emenyonu, & Bangsberg, 2006), educators should work with youth to explore ways of using these mediums (Bull et al., 2010). Early initiatives with cell phones contributed to an increase in health seeking behaviours (Danis et al., 2010). Web-based tools could be a way of increasing accessibility to visually engaging materials. Studies are needed that explore how students in various settings (e.g., day schools versus boarding schools, rural versus peri-urban versus urban) are differentially impacted by emerging innovative education initiatives.

Accessibility to a source does not guarantee that an adolescent will use it. For students that have no interest in proactively learning about sexual health, there needs to be information distribution that is not dependent on the student's initiative. Packaging health information with young people's interests can attract the interest of students typically not drawn to health topics. Quality sporting events and music have frequently been used as techniques to gain young people's interest and deliver health messages (Neuhauser, 2009). The participants in this study described how adolescents involved in sex had no interest in sexual health information. In recent years Uganda's HIV prevention messages to adolescents have focused heavily on abstinence. It may be that many Ugandan adolescents now equate any HIV prevention initiative as being about abstinence. For those adolescents who are not practicing abstinence, they may see typical sexual health information as not carrying any content relevant to them. If this is the case, sexual health education programs need to better cater to sexually active young people by providing information applicable to them.

Young people who don't see themselves as having need of sexual health information do not seek it. This can change when an adolescent finds he or she

has a problem. This finding is supported by Ikoja-Odongo and Mostert (2006), who, in their examination of information seeking behaviour, describe how having a problem drives an individual to engage in knowledge seeking. Information seeking also evolves out of an awareness that something is missing and the expectation that gaining information can help meet the need (Ikoja-Odongo & Mostert, 2006). Strategies to create such an awareness could be explored.

Confidentiality plays an important role. Experiences with teachers breaching confidentiality described by other African students mirror those of the students in this study (Njue, Nzioka, Ahlberg, Pertet, & Voeten, 2009). It is documented elsewhere that young people avoid certain sources because of a lack of confidentiality (Amuyunzu-Nyamongo, Bidd, Ouedraogo, & Woog, 2005). There is a need for all sources of information to respect confidentiality if young people's trust is to be kept.

Ugandan students are anxious over how a source will respond to their inquiries, and factor in the expected response when deciding whether to approach a person. In particular girls are afraid of accusations (Nobelius et al, 2010a). More work must be done to create a culture where it's okay to ask questions about sexual health. Educators should challenge parents and other information sources to not jump to conclusions about what the young person's inquiry signifies.

Close attention is paid to the content of the advice provided and in some adolescents this creates a protective mechanism that screens out sources of incorrect and inappropriate advice. Aside from specific health programming, participants did not discuss the quality of information they read about in mainstream newspapers. Questions asked of the moderator following focus group discussions indicated that they had read stories about machines that can remove AIDS and other inaccurate information. Work in Nigeria confirmed that most journalists are ill equipped to be reporting on HIV (Isibor & Ajuwon, 2004). This highlights a need for strategies to improve young people's criticalness of media messages and their capacity to use scientific facts to reason out the truthfulness of the messages.

Improving access to information should not be limited to addressing only the barriers. Strategies to improve adolescents' motivations should be targeted too. An individual's motivators to seek information include environmental, internal and the characteristics of the source. These influence what a person chooses and how successfully he or she pursues the information (Wilson, 1997).

A student gravitates towards an information source he or she views as trusted. In this study the Straight Talk Foundation newspapers were the source most widely considered trustworthy and not needing verification. Norton and Mutonyi (2007) confirm the role of youth-oriented magazines like Straight Talk in providing

valued information. They show how these magazines can be the basis for further debate, discussion and information distribution. Radio-based health programming, which the Straight Talk Foundation also provides, is considered highly for its information and reliability (Nobelius et al., 2010a).

When using other sources, the adolescents in this study adopted an iterative process of trying to determine if the information learned was satisfactory. Ikoja-Odongo and Mostert (2006) describes a similar cycle which consists of: seeking information, examining it, engaging in reflection and, if the information is not satisfactory, then continuing the search. Based on this paper's findings, it could be added that the outcome from these processes also influences whether the individual turns to that source again. Some of the participants used their life goals to judge the appropriateness of the information, something relatively unexplored in other research. Elsewhere life goals have been promoted as a prevention strategy (Bull et al., 2010).

Students' use of an information verification process is an attempt to protect against wrong information. However, given the high prevalence of sexual health misinformation in Ugandan society (Darabi et al., 2008; Neema et al., 2007), it is reasonable to expect that some incorrect information will slip through the "filtration system" and will be embraced as accurate. Other work has shown that developing the ability to determine bad sources of information takes time and experience (Nobelius et al., 2010a). Researchers should explore how to help younger youth develop the capacity to carefully evaluate these sources. This study helps provide more understanding on what aspects of personal preference drive sexual health information seeking, an area on which there is little research (Ybarra et al., 2008).

Other work acknowledges the role that demeanor and behaviour plays when adolescents are considering adults as an information source. The teachers reported in Kibombo and colleagues (2008) realized that students were evaluating them on their approachability. The teachers also observed their colleagues' bad behaviours (e.g., drunkenness and inappropriate relationships). They realized how students would perceive such behaviours and that students wouldn't receive advice from those individuals.

Limitations

The data in this study draws from discussions with a relatively small number of participants from two schools in the same district of Uganda. The schools in this study may have characteristics that do not apply to other schools. The student participants were selected for their interest in sexual health topics, their potential to be role models in the school, their willingness to help with a future sexual health education and were only in certain grades. These characteristics may mean that the students' perspectives will differ from those of other

students in their school. It is possible that because of the students' interest in sexual health information, they may have been better situated to express the complexities of information access. The participants shared observations of other students' experiences and not just their own.

This study is limited in how much these findings can apply to out-of-school adolescents because of differences between schooling adolescents and out-of-school adolescents and how these differences influence information access experiences (Nobelius et al., 2010a).

It is expected that the setting of Uganda had an influence on the research findings. Uganda's history with HIV and the nature of the country's approach to tackling the epidemic have created an environment where, in comparison with other developing countries, there is relative openness in discussing the dangers of HIV. Sources of information are relatively more prevalent. Adolescent health education newspapers that are as high quality as those of the Straight Talk Foundation may not be found in other countries. These newspapers were one of the students' key sources of information.

This paper acknowledges that access to information is one piece of the complex system that is sexual health behaviour change (Nalwadda et al., 2010). The barriers to behaviour change were not covered in this study.

Recommendations

The findings from this study identify numerous entry points for strategies to increase students' access to sexual health information. Based on these findings, recommendations are offered to sexual health education providers seeking to improve adolescents' access to information (Table 2-1).

Conclusions

Access to a sexual health information source does not guarantee that an adolescent will use it. There is a complex internal process that adolescents conduct when choosing sources of sexual health information. There are a number of low-cost, low-effort strategies that sexual health educators can apply to help increase the variety and appeal of sexual health information sources. These strategies can be integrated in programming designs including that of peer education.

Table 2-1. Recommendations on How to Improve Adolescents' Access to Information

Make more sources available
1. Health education programming should not rely on only one delivery method and should link students with a variety of sources. Future programs should place a priority on providing access to sources in high demand, specifically films, other visual materials and detailed written material. 2. Stimulate information gatekeepers (i.e. parents and teachers) to make other information sources more accessible to adolescents. This could be achieved through awareness initiatives aimed at decreasing stigma around seeking information on topics like sex, condoms and pregnancy.
Manage internal barriers
3. Work with adolescents to identify individuals who they feel are a trustworthy source of accurate sexual health information. Other adolescents can be made aware of whom these individuals are. 4. Build awareness among teachers about the importance students place on confidentiality; concurrently engage with students to further their understanding of how information is shared to solve problems. 5. Explore ways of strengthening the positive health-protecting aspects of adolescents' barriers. Building critical thinking skills will enable adolescents to reject false sexual health information and poor advice.
Strengthen internal enablers
6. Strengthen the positive attitudes that motivate students to seek sexual health information, specifically a motivation to achieve a life goals and the desire to avoid choices that would endanger the achievement of these goals. 7. When an adolescent is motivated to see information because they are experiencing a problem, use the opportunity to go "above and beyond" the information needed in that situation.
Don't neglect the easy wins
8. The facilitators identified in this study require little effort and have the potential to significantly influence students' interest in seeking sexual health information.

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Chapter 3. Paper – Creating a program of their own: Student-led sexual health peer education in Ugandan schools

INTRODUCTION

Ugandan adolescents experience a high level of adverse sexual health outcomes. Almost half of the country's new human immunodeficiency virus (HIV) infections occur in adolescents 15-24 years (Government of Uganda, 2010). 35% of Ugandan girls give birth by the age of 18 years. Uganda has one of the highest teenage pregnancy rates in the world (World Health Organization, 2011). Abortion complications, the most common cause of maternal mortality in Uganda (Mirembe & Okong, 1995), occur in at least 28% of Ugandan women who have an induced abortion (Singh, Prada, Mirembe, & Kiggundu, 2005). Sexually transmitted infections are common in Ugandan young people (Uganda Bureau of Statistics, 2007), as is the human papillomaviruses (HPV) in young women (Banura et al., 2008).

Ugandan adolescents engage in a number of risky behaviours. Ugandan young people begin sexual activity at a young age, consistent condom use is low (Uganda Bureau of Statistics, 2007), young females are involved in risky sexual relationships with older men (Kelly & Gray, 2003) and among HIV infected adolescents condom use is alarmingly low (Beyeza-Kashesya et al., 2011; Obare & Birungi, 2010).

A Need for More Information

Misinformation and misconceptions about HIV transmission, methods of preventing pregnancy and moderns contraceptives are prevalent in Ugandan adolescents, contributing to behaviours that increase unwanted sexual health outcomes (Darabi et al., 2008; Flaherty, Kipp, & Mehangye, 2005; Nalwadda, Mirembe, Byamugisha, & Faxelid, 2010; Neema, Moore, & Kibombo, 2007; Råssjö & Kiwanuka, 2010). Information education communication was a key component in Uganda's successful HIV prevention campaign (Green, Halperin, Nantulya, & Hogle, 2006). Information and knowledge-based skills contribute to the practice of essential preventative behaviours, like condom use (Bankole, Ahmed, Neema, Ouedraogo, & Konyani, 2007; Kayiki & Forste, 2011). It has been proposed that the recent halt in decreasing prevalence rates could be a result of a lessoned emphasis on primary prevention messages (Opio et al., 2008). Comprehensive HIV knowledge in adolescents is relatively low (World Health Organization, 2011) and there is dissatisfaction with the type (Darabi et al., 2008), content (Birungi, Mugisha, Obare, & Nyombi, 2009a; Birungi, Obare, Mugisha, Evelia, & Nyombi, 2009a) and coverage (Ndyanabangi & Kipp, 2002) of sexual health information delivered to adolescents. There is a need for more

sexual health education in this population (Jacob, Shaw, Morisky, Hite, & Nsubuga, 2007b).

Of the current information sources offered to adolescents, there are substantial drawbacks and limitations to each. In Ugandan culture, parent-child communication about sex is taboo (Nobelius et al., 2010) and parents and other older relatives feel ill equipped to provide guidance especially on modern contraceptives (Sekiwunga & Whyte, 2009). Suspicions are raised when young people make inquires about sexual health topics (Flaherty et al., 2005). All this contributes to limited communication with elders (Biddlecom, Awusabo-Asare, & Bankole, 2009). Health care providers are regarded by youth as being an excellent source of accurate sexual health information. However use of this source is limited by the shortage of health care providers, a lack of information access points, unfamiliarity with the health care system and adolescents' concern over treatment by and confidentiality of health care providers (Darabi et al., 2008; Flaherty et al., 2005; Kiapi-Iwa & Hart, 2004). Media methods (radio, newspaper and television) are often the most common source of information for adolescents (Ndyanabangi & Kipp, 2002). The quality of information from these sources varies widely. For example, compare how Uganda's Straight Talk Foundation offers detailed accurate information versus tabloid newspapers that communicate dangerous inaccuracies. Some radio shows offer a call-in feature, but otherwise it is not possible for these sources to answer specific questions and address personal problems (Nobelius et al., 2010).

The school environment provides Ugandan adolescents with sources of information and guidance. At some schools sex education is incorporated into course curriculum but focuses on biological components to the exclusion of the social and emotional aspects of sexual health (Jacob et al., 2007b; Jones & Norton, 2007). The Presidential Initiative on Communicating to Young People about HIV/AIDS (PIASCY) was initially rolled out in primary schools and has recently had greater presence in secondary schools. It aims to integrate HIV education throughout the entire education system (Jacob, Mosman, Hite, Morisky, & Nsubuga, 2007a). On a day-to-day basis, teachers can be a source of information, but some students are afraid of negative ramifications from asking a teacher about sexual health (Flaherty et al., 2005). Teachers can feel uncomfortable, lack confidence (Kibombo, Neema, Moore, & Ahmed, 2008), sometimes leave out controversial topics (Gallant & Maticka-Tyndale, 2004) and are often not trained to provide information on HIV, AIDS and other reproductive health topics (Jacob et al., 2007a). Visiting local health educators provide some sexual health instruction (Chacko, Kipp, Laing, & Kabagambe, 2007) and different models of school-based health education programs have been piloted with varying success. These programs tended to rely on teacher leadership and were insufficiently implemented (Kinsman et al., 2001; Rijsdijk et al., 2011; Terris-Prestholt et al., 2006).

Ugandan adolescents frequently discuss topics related to sex and sexual health with their peers (Bull, Nabembezi, Birungi, Kiwanuka, & Ybarra, 2010). In a survey of Ugandan secondary students, 50% turn to a friend when they need information on sexual health (Ybarra, Emenyonu, Nansera, Kiwanuka, & Bangsberg, 2008). Consulting older friends is also common (Ndyanabangi, Kipp, & Diesfeld, 2004). Adolescents consider their friends to be an important source of information (Ndyanabangi et al., 2003).

Qualities Desired in an Information Source

Ugandan youth have described what they are looking for in future sources of sexual health information. Adolescents want opportunities to have discussions and receive answers to their questions (Cook, 2010; Jones & Norton, 2007). They are looking for individuals who are more open than their teachers (Cook, 2010), someone who they feel comfortable with, a person who is trustworthy, confidential, friendly and able to communicate well. They are looking for someone who will not judge, but is willing to freely talk about the issues and be accessible (Flaherty et al., 2005).

There is a need to involve adolescents in designing sexual health education interventions (Cook, 2010; Nyanzi, Pool, & Kinsman, 2001). Furthermore, Ugandan adolescents are eager to be involved in sexual education. They see themselves as a source of information, stating that they would like to make a difference by reaching their peers (Råssjö & Kiwanuka, 2010). When students have been given the opportunity to design health education programs, they have done so with a sense of enthusiasm, responsibility and attentiveness to the needs of their peers and reality of their present situation. In a Ugandan study, following discussions about sexual health topics, issues and strategies, the student participants created a program to help impact their community. The study recommended that opportunities be created for youth to contribute to the development of sexual health education (Jacob et al., 2007b). The students chose to use a school-based club as a platform to launch a variety of sex education strategies.

School-based peer education delivered through a club is an approach that links together the specific sexual health education needs expressed by Ugandan youth. Clubs can provide the organizational structure to implement creative and engaging education methods, including drama, music, games and poetry, that Ugandan youth want to see more of (Jacob et al., 2007b). Involving youth in peer education develops their leadership skills and provides ways to raise gender issues (Norton & Mutonyi, 2007). Creating a peer education program using participatory approaches helps make programs more youth-friendly and empowers young people to instigate change in society (Isikwenu, Omokiti, & Nurudeen, 2010).

Peer education clubs can be designed in a format that provides ample opportunity for discussion between peer educators and other knowledge sources. The peer educators can use regularly occurring social interactions to share essential information with their peers. Young people feel very comfortable asking questions of each other and discussing issues (Nobelius et al., 2010). The importance of dialogue should not be underestimated. Discussion of topics is directly related to individual action in those areas (Paek, Lee, Salmon, & Witte, 2008). Peer educators add a fresh voice to the existing messages within the school (Löfgren, Byamugisha, Tillgren, & Rubenson, 2009). Given that peers have a significant influence on a youth's decision to engage in sexual activity, this same peer pressure may be used to promote healthy sex choices through initiatives such as peer education (Nyanzi et al., 2001).

Peer Education

Peer education involves "the use of members of a given group to effect change among other members of the same group" (UNAIDS, 1999, p. 5). Peer education gained popularity in the late 1990s and early 2000s as a method of promoting HIV prevention, especially among adolescent populations. Peer education has been used in a diversity of settings and populations, especially those considered vulnerable and hard to reach (UNAIDS, 1999).

Challenges and Criticisms of Peer Education

A major criticism raised about youth peer education is that young people are not a credible source of information and their friends do not trust them to provide accurate and health promoting information (Nobelius et al., 2010). However, it should not be assumed that youth who are trained peer educators are viewed the same way as youth who are just friends. In a study by Mutonyi and others (2007), the student participants did not have high regard for their friends' capacity to advise on sexual health matters, but 50% of respondents mentioned the peer education clubs as a good source of information on HIV/AIDS. This suggests that the students made a distinction between getting information from their friends and getting information through the HIV/AIDS club members. The training and knowledge-sharing that peer educators engaged in helped to increased their credibility in the eyes of their peers (Mutonyi et al., 2007).

Another criticism about the use of young people is that students do not have enough information and that they are equally as ignorant as their peers. Mutonyi and colleagues (2007) advises that in student-led programs it is essential that at least a core of the peer educators are well-trained to prevent misinformation from circulating and propagating in the group.

Problems have arisen in peer education programs where the teachers had too much control over the program, including when deciding who will be the peer

educators. The peer education program reported in Campbell and McPhail (2003) fell apart for this reason. Programs that are build on student involvement increase the likelihood of successful student leadership and ownership. This helps to lessen the role of teachers and prevent program function problems caused by dependence on teachers. Teachers' involvement should not be disregarded as negative and should leverage on their skills and knowledge (Maticka-Tyndale & Barnett, 2010). Peer education should not be viewed as a replacement for other education strategies. Instead, it can complement and support the many other methods of helping youth understand and engage in preventive action.

Design of Peer Education Programs

In sub-Saharan Africa peer education for youth sexual health education is conducted through a wide range of program designs. Some peer education programs are one part of a comprehensive multicomponent initiative, such as the African Youth Alliance (Karim et al., 2009). Other programs target multiple youth settings, including schools, youth clubs and sports associations (Speizer, Tambashe, & Tegang, 2001). Peer education delivered through a club may be used as one part of a multi-faceted school-based program (Govender & Edwards, 2009). Peer education programs offered through a club setting are a recommended format. In a review of community-based programs, those designed as a club were deemed to be the most successful (Maticka-Tyndale & Barnett, 2010). Findings from Kim and Free (2008) emphasize the importance of involving young people when designing peer education programs and understanding the wider context in which the sexual health education is situated.

There has been relatively little research examining the recruitment and selection of peer educators. Mason-Jones and colleagues (2011a) recommend that a group's opinion leaders be identified by their peers and invited to serve as peer educators. Shepherd and colleagues (2010) advise recruiting peer educators with leadership skills. The program's setting and population must be considered when addressing issues of renumeration. For a school-based program where youth engage in the program as a type of school extra-curricular activity, incentives such as T-shirts are acceptable (Speizer et al., 2001).

Training of peer educators is frequently delivered through an intensive multiple-day course, followed up by regular refreshers (Speizer et al., 2001; Visser, 2007). In the past the "cascade" approach to training (training of master trainers, who train trainers/teachers, who train peer educators) was considered practical and cost-effective. There is now debate on the effectiveness of this training approach (Gallant & Maticka-Tyndale, 2004).

How peer educators reach their peers with sexual health information takes many forms. In a program designed by students, the peer educators offered counseling and guidance, performed dramas in schools, conducted community outreach and wrote educative materials (Norton & Mutonyi, 2007). A more structured program used a curriculum to guide the peer educators in performing in-class presentations and leading discussions (Mason-Jones, Flisher, et al., 2011a). In another program, peer educators delivered a single curriculum-based session to their classmates that lasted less than two hours (Agha & Van Rossem, 2004). As part of the South African loveLife program, teams of trained peer educators visited different schools doing a presentation (Warwick & Aggleton, 2004).

Who leads the peer education program has a significant influence on the program's function and success. Programs that rely on teachers to implement them have encountered challenges with the curriculum being sufficiently implemented (Visser, 2005; Visser, Schoeman, & Perold, 2004) and the teachers being too busy to devote the time needed to properly manage a health education program. In other programs, students led the activities (Mason-Jones, Mathews, & Flisher, 2011b), decided what they wanted to do and involved teachers as needed (Mutonyi, 2007).

Peer education programs that rely heavily on donor funding face the challenge of discontinued funding. When this happens, some programs continue but at not nearly the same level (Simba & Kakoko, 2009). Links with the community are important for sustainability, program quality and the inflow of fresh information (Norton & Mutonyi, 2007).

Impact of Peer Education Programs

There are formidable challenges with evaluating the impact of peer education programs, one of which is the difficulty of attributing changes in an individual's behaviour to a particular community-wide intervention (Harden, Oakley, & Oliver, 2001). There are very few studies that have rigourously assessed the impact of peer education programs. Systematic reviews have found a number of evaluations to be of questionable quality and that the impact of peer education programs is centred on improved knowledge, attitudes and intentions as well as certain key behaviours like condom use (Kim & Free, 2008; Maticka-Tyndale & Barnett, 2010).

There are encouraging and insightful results from evaluations of peer education programs. Students have viewed peer educators as an important source and sometimes the only source of information in schools (Norton & Mutonyi, 2007). Elsewhere peer education helped increase interactions between students and increased discussions between students and teachers. A substantial decrease in the percentage of students involved in sex was measured (Shuey, Babishangire, Omiat, & Bagarukayo, 1999). With a Ghanaian program operating in schools and

communities, young people who had talked with peer educators were more likely to do something to protect themselves from HIV than those who had not. Sexually active youth, those most likely to contract HIV, were more than twice as likely to talk to peer educators than adults (Wolf & Pulerwitz, 2003).

While systematic reviews are essential to research, given the diversity of program formats and the varying quality of implementation, it is very difficult to compare evaluation findings across programs. Few studies provide details on how the program was designed, launched and implemented. This lack of specificity limits how much peer education programs can be compared to each other. There is a need for process evaluations to accompany impact evaluations (Harden et al., 2001; Kim & Free, 2008). There is a lack of research describing how the components of a peer education program are selected and designed (Norton & Mutonyi, 2007).

Study Purpose

Building on the lessons learned on peer education in sub-Saharan Africa, including earlier research conducted by the author on adolescents' experiences accessing sexual health information (Jones, 2012), this study sought to work with Ugandan students to design and launch a school-based peer education program in their schools as a method of overcoming some of the gaps and barriers to sexual health information that they and their peers encounter. Two specific research questions were addressed in this project: (1) What is the most appropriate strategy for conducting peer education among Ugandan secondary school students as a means of sexual health promotion? (2) How has the provision of a peer education program influenced students' understanding of sexual health?

Participatory Action Research

The methodology selected for this study is participatory action research (PAR). PAR is often considered an umbrella term for a variety of methods whose defining characteristics are the engagement of participants to stimulate action beyond the research process (Pain & Francis, 2003). PAR is closely related to action research, which is defined as a process of "collective, self-reflective inquiry undertaken by participants…to improve the rationality and justice of their own social or educational practices and the situations in which these practices are carried out" (Kemmis & McTaggart, 1988, p. 5).

PAR involves a cyclical process of questioning a particular issue, reflecting upon and investigating the issue, developing an action plan and implementing and refining the plan (McIntyre, 2008). The researcher serves as a guide throughout the process, seeking to listen and learn.

METHODS

Setting

This research was conducted in collaboration with two secondary schools located near Fort Portal town in Kabarole District, western Uganda. The district has a 2011 mid-year population estimated at 409,400 (Uganda Bureau of Statistics, 2011). A primarily rural population, only 11.3% of the population resides in urban areas and 85.4% of households are engaged in agriculture (Unknown, n.d.). Fort Portal is the district centre and is 320 kilometres from Kampala. The population estimated is at 46,300 (City Population, n.d.).

The Ugandan education system consists of seven years of primary education, followed by the lower secondary cycle of four years and the upper secondary cycle of two years (District Information Portal, n.d.). The country instituted Universal Primary Education in 1997 and Universal Secondary Education (USE) in 2006. Secondary school education is primarily overseen at the national level by the Ministry of Education and Sports (Uganda Bureau of Statistics, 2011). Within the district there are 166 primary schools and 51 secondary schools in Kabarole District (School Guide Uganda, n.d.). Of the secondary schools, 21 are private, 24 are government-owned and six are community schools. The enrollment rate for secondary school in Kabarole District is 31.7%.

For several years the School of Public Health at the University of Alberta has partnered with Kabarole District health officials and community leaders to explore research and community-based projects to respond to the expressed needs of the community. This research project resulted when the headteachers from local secondary schools expressed interest in having a research-based reproductive health education program established in their schools. The scope of the research project was confirmed in early 2008 and the schools provided letters of support.

Since the purpose of this study was to develop a pilot program, the research was restricted to only two schools. The schools were purposively selected for key characteristics. Both schools were mixed (male and female students) and offered the first four years of secondary called Ordinary Level (“O Level”) and the following two years called Advanced Level (“A Level”). Both schools were considered public schools because they received government support. However, School B received a substantial amount of funding from private sources. They differed on other factors: School A was a day school located in a busy part of Fort Portal town. This Universal Secondary Education school was the largest school in western Uganda with a booming population of roughly 1,600 students. Due to insufficient classroom space, O Level students attended school in shifts – either morning or afternoon depending on their grade. A Level students had class all day. This was referred to as a “double shift” system and had become common in Ugandan schools offering Universal Secondary Education. School B was

historically a prestigious school. With 650 students, this boarding school was located in a rural setting 7 kilometres from Fort Portal town. School administrators from both schools described the student population as drawing primarily from low-economic rural households in Kabarole District.

Upon arriving in Kabarole District, the author ACJ met with the headteachers of the schools to review the research approach and provide additional details. They reaffirmed their commitment to the project. The study was conducted in late 2008 over a three-month period during the final term of the Ugandan school year.

Study Participants

Study participants were purposively selected from student and academic staff populations at the schools. Since the focus of the program would be working with students to create a sexual health education, students were selected based on their interest in sexual health topics, their willingness to lead and be involved in education activities within their school and their influence within the school. The students were to be selected from those in their second year of secondary ("Senior Two") since these students were still young but also comfortable and familiar with secondary school setting. There were to be an equal number of male and female students. These criteria were provided to the headteachers who worked with other teachers to identify prospective student participants. At a later stage in the study, teacher participants were identified by ACJ and the headteachers using a snowballing process. Teachers were selected based on their knowledge and experience around sexual health education and their later involvement in designing and running the peer education program.

Once the prospective student participants were identified, ACJ met with each group at their school. ACJ explained that while this was organized as a research project, the overall purpose would be to start a sexual health education program in the school that would be run by students. The students were told that they had been selected for this role, but that their participation was voluntary. An information letter was distributed and discussed. Students had the opportunity students to ask questions about the research project. After they had verbally confirmed their interest, a consent form was distributed, explained in detail and questions were addressed. The information letter and consent form were provided in English and Rutooro, the most commonly spoken local language. At this meeting the student participants and the researcher agreed on a time and location to meet for their first focus group.

Informed consent was obtained from participants 18 years of age or older and the guardians of those under 18 years of age. Participants under 18 years of age provided their assent to participate. For boarding school students, the head teacher acted as their guardian and thus provided consent. Teacher participants

were also provided an information letter, consent form and gave their informed consent to participate.

A total of 54 students were invited to participate in the study. Early in the study four students discontinued their involvement due to illness. Partway through the research process, as other students learned of the research, one female student from School A expressed keen interest in joining. Since she met the selection criteria and had demonstrated a commitment to attending the research meetings, she was added as a student participant. The resulting total of students who participated was 51; 25 female and 26 male students (age 13 to 18, average 15.6 years), 24 from School A and 27 from School B. All of the students from School A were in Senior Two. At School B, the teachers selected six Senior One students to help with continuity of the program and three Senior Three students because they had experiences and training highly relevant to sexual health education. The remainder was Senior Two. Many of the students selected were active in other clubs and had responsibilities in the school. A number had leadership positions, such as serving as a prefect. One boy had a severe physical disability. Seven teacher participants were involved (two female, five male); three from School A and four from School B.

Data Collection Strategies

To be consistent with the participatory action research methodology, the student participants had a significant influence over the research process. It was the students' preference that was followed throughout the research, including organizational aspects (meeting times, frequency, location), discussion design (single gender or mixed gender focus groups), scope of discussion, developing a plan of action (designing the sexual health education program) and implementing their plan. The researcher acted as a facilitator by providing ideas and suggestions, guided discussions as needed and presented herself as open, interested and flexible.

Data was collected through semi-structured focus groups and interviews and through meeting artifacts, including notes, flip charts, lesson plans and observations. Students from School B, the boarding school, chose to meet in a classroom. Due to a lack of classroom space and the likelihood of frequent interruptions on the school grounds, students from School A met off-campus at a meeting hall adjacent to the school. Students first met as boys-only and girls-only. As the discussions progressed and students gained increasing comfort with each other, they agreed that it was time to combine together to share what they had learned and further their plans for their school's program. During the reflection and planning stages of the research four girls-only, five boys-only and four mixed focus groups were conducted. After the sexual health education program was established, each school held one last focus group to share their

reflections and experiences on starting the program. This made for a total of 15 student focus groups.

At the start of all focus groups, students were encouraged to speaking freely but respectfully with each other. The moderator invited the students to share their personal perspective and not what they thought the moderator wanted to hear. The students agreed that their discussions should remain confidential within the group. Students were invited to speak Rutooro if they desired since a local research assistant was always present to continue the discussion. In the early meetings, students used self-selected pseudonyms. As students gained trust and familiarity with each other, these were gradually dropped. The data presented in this paper uses pseudonyms developed by the authors. In addition to meeting for recorded focus group discussions, other research project meetings occurred for training and planning purposes.

For data collection with the school staff, one focus group was conducted before the program was established and one focus group and three interviews were conducted afterwards.

All focus groups and interviews were conducted in English and were facilitated by ACJ. Though culturally appropriate discussion guides were developed and used, the participants had a major role in determining the priorities for the discussion. Each data collection session was audio recorded and transcribed with the speakers' pseudonyms. A total of almost 25 hours were recorded and transcribed. During all research meetings refreshments were provided to participants as appreciation and compensation for their time. Further into the project participants were each provided with a handbook, T-shirt and certificate, all items that the participants agreed would be suitable to aid their work as health educators and were an appropriate reward for their involvement.

Conversations with the student participants began by establishing how they understood the term "sexual health." The students generally viewed sexual health as pertaining to a person's sexuality, including sexual organs, feelings or emotions. It also included the actions taken to prevent or reduce the risk of unwanted sexual health outcomes.

Data Analysis

Analysis began during data collection by noting observations, reviewing notes and incorporating initial findings into later discussions. Since this research project had a substantial action component that required use of focus group findings, the moderator and participants together reviewed what was discussed and decide on how (or if) the results should be implemented.

The data generated through the focus groups and interviews was later subjected to a more comprehensive inductive analysis. The artifact documents were examined to help recount the events in the study but a document analysis was not performed on them. During transcription of the audio recordings, notes were kept on observations and insights. The transcripts were reviewed and a broad coding framework established. Using this framework the transcripts were coded in computer software NVivo (version 8). After review of the coded data, themes were identified and sub-codes created. Using the sub-codes the data was coded again using hand-coding. More notes were made during this iterative analysis process and contributed to the study's final results and discussion. In summary, as described in Richards and Morse (2007) and Mayan (2009), analysis began with descriptive and topic coding and moved to analytic coding.

Ethical Considerations

The University of Alberta's Health Research Ethics Board and the Uganda National Council of Science and Technology conducted an ethical review of the study.

FINDINGS

Part 1: Design of Peer Education Clubs

Context

The initial discussions with student and teacher participants stimulated dialogue on the attitudinal and behavioural norms of these students and their peers regarding sex and sexual health, and specific characteristics of each school setting. The findings from these discussions are described here briefly.

Since the student participants were selected based on their suitability to aid in sexual health education, it wasn't surprising that most expressed favourable views toward delaying sexual activity and avoiding a boyfriend or a girlfriend relationship. However, they felt they were in the minority and that generally their classmates were absorbed with sex, were not interested in abstinence and that "many" had a boyfriend or girlfriend. They said their peers were motivated by strong "sexual feelings" and curiosity, and justified their behaviour with a fatalist attitude and a view that sex is part of being human so it should not be restricted.

Participants felt that the young people's sexual activity is caused by a lack of parental control, sexual curiosity and rebellious behaviour that comes with adolescence (they described it as "a stupid age" where young people have "big heads" and "are ignorant"). This resulted in young people sneaking around at night, wearing "indecent" clothes and consuming alcohol – behaviours which increase the opportunity for a sexual encounter. Furthermore, parents' inability to meet the material needs of their children drove adolescent girls to find a boyfriend who can "buy for her everything" in exchange for sex. Female

participants from School A identified strong peer pressure for girls to have a "sugar daddy" boyfriend.

Pregnancy was seen as a common outcome from this behaviour, especially in School A. An unwanted pregnancy was accompanied by a delayed or discontinued education, "forced marriage," social rejection and isolation and the dangers of childbirth. For girls in that situation, abortion was considered even though it was illegal and dangerous. However, participants were not sure how common abortion actually was.

Sexually transmitted infections (STIs) are another result of unprotected sex. School B school administrators reported a recent increase in STIs. Sex was seen as the main mode of contracting HIV. Schools offered HIV testing through regular blood bank visits. A positive HIV status was associated with significant stigma and could lead to school drop-outs. Condoms were seen as being not popular and there existed misconceptions about their effectiveness and usefulness for adolescents. Female participants felt that pregnancy was feared more than HIV infection and that hormonal contraceptives were more likely to be used by female students than condoms. Some participants had peers who had chosen to test for HIV and then remain faithful, however participants felt it was not likely that faithfulness would be maintained.

Teachers from School A felt the school's location was "a problem." The school bordered a golf course that provided significant isolated space and where it was reported that gangs traffic alcohol. Students found on the golf course were immediately suspended. On the other side of the school was a busy market with bodaboda men (for-hire motorcycle drivers) who admittedly targeted the schoolgirls. As a Universal Secondary Education school, School A ran a "double shift" system where students were in class for half the day (morning or afternoon). A recent suspension of the lunch program due to Ministry of Education and Sport guidelines meant that instead of remaining in school-provided study spaces during the day, students left school and had much free time to loiter. After the lunch program was cut the school reported a recent increase in pregnancies. Both school staff and students reported that students from rural homes rented rooms in town, providing ample opportunity for sexual encounters.

As a boarding school in a rural setting, School B faced different challenges. Boyfriend and girlfriend relationships were considered common even though the school did not permit them. School administrators found little evidence of sexual activity at the school, but suspected that students engaged in it while at home on holidays. Student participants knew of students who smuggled alcohol and cigarettes into the school through purchasing them in nearby villages. Teachers

observed that male students had a tendency to intimidate the female students, treating them as a "weaker sex."

Current Sources of Sexual Health Information

Participants discussed how students currently accessed information about sexual health. Findings on this topic are described elsewhere (see Jones, 2012).

Agreement on Using Peer Education

When student participants were satisfied with the degree to which they had questioned, explored and reflected on their and their peers' sexual health challenges, and their experiences around accessing and sharing sexual health information, the moderator reintroduced the idea of starting a sexual health education program at the schools. Prior to agreeing to participate in the research, students were aware that peer education was the program format being considered. In the preliminary discussions students expressed great interest in developing ways to be a greater positive influence on their peers. Taking this as a sign that the students were interested in starting a peer education program, the moderator described more specifically the concept of peer education.

> **"**Peer education, it's where you have people who are in a certain peer group who share information with people who are also in their peer group. So here at [your school], peer education would be students like you who learn information about sexual health and sex and STDs and HIV/AIDS, and who use that information to help their other classmates learn information that will help them in sexual health. So peer education is kind of like friends talking to other friends about information that they know. But we're making it a bit more of a program." [Moderator]

Upon hearing this, the students confirmed their interest in participating. The moderator and the research assistant further explained that this was an opportunity for the students to provide their perspectives to shape the design of the program.

> "So [the moderator's] here to have your ideas. She says she has her ideas, but can't then put them *to you*. Because this is not [the moderators]'s program. It will be your program in your school, so she'll have some questions concerning how the program can be a success to get your ideas on what you think can be done. You'll see that after December when she has gone back to Canada, your program is still running in your school. And even after you people have left the school, the program stays in the school. The peer education program stays in the school. So we want to have those ideas from you, what the best you think we can do to have this program run successfully in the school." [Colleen, Research Assistant]

The moderator explained that after they had decided how the program would be designed, the students would be trained on topics that they felt were necessary. In each of the student groups there was consensus to move ahead with creating and launching a peer education program at the two schools. This began a new phase in the participatory action research cycle in which the participants developed an action plan to target their peers' need for sexual health information and good advice.

Messages of Peer Education Program

Planning for the peer educator program began with discussions about what sexual health messages and information the peer educators[2] thought should be communicated to their peers through the program. The messages that they described fit into three groups: (1) Communicating substantive information on a topic, (2) Providing advice and counseling and (3) Connecting students to people and resources (Table 3-1). Substantive information consists of detailed, factual information on topics that require comprehensive and accurate understanding. Messages in this category have a self-help focus to them by equipping students with key information to base decisions on. For example, through a detailed knowledge of the signs and symptoms of sexually transmitted infections, students would be able to self-identify if they had an infection. This information was also important for correcting misinformation about sexual health. Advice and counseling messages target lifestyle choices and attitudes that contribute to undesirable sexual health outcomes, showing the relationship between these components and directing the individual toward a more positive path. Messages in the third category are intended to connect students with people and resources, including health care professionals, trusted adults and other sexual health information sources.

The messages provided by the peer educators were strongly based on their observations of the sexual health problems they saw their peers encountering. Overall, the primary message that the peer educators felt should be communicated was that students at their school should avoid becoming involved in sex at this season of their lives. There was some disagreement among peer educators as to whether they should recommend any behaviour other than abstinence from sex, such as faithfulness between sexual partners, especially if the school (in particular School B) did not permit girlfriend and boyfriend relationships. The peer educators reached an agreement that while abstinence was preferred, not all students were going to find themselves able to practice abstinence, so it was necessary to encourage them to protect their health in others ways.

[2] From this point on in this article, these student participants will also be referred to as "peer educators."

"For my case, sometimes you can advise a person, like advising him five times to leave such behaviours [sexual activity] but he can't leave. In that situation you can tell him, 'If you have failed [to abstain] maybe you can be faithful to your what? To your girlfriend.'" [Kevin, male, age 14, School B]

Table 3-1. Categories of Messages to be Communicated by Peer Education Program

1. Communicating substantive information on a topic
• Modes of HIV transmission • Modes of transmitting sexually transmitted infections (STIs) • Ways of avoiding HIV infection and STIs (ABC – Abstinence, Be faithful, Condom use) • Signs and symptoms of various STIs and their cures; what to do if you suspect an STI or HIV infection • How to manage living with HIV; how to treat people living with HIV • Romantic relationships, sexual feelings and sexual intercourse • Puberty and menstruation
2. Providing advice and counseling

• Main message: "Avoid involvement in sexual activity until later in life when you are finished studies and have established yourself"
  • Emphasize the disadvantages of early sex (such as early pregnancy, early marriage and HIV) and how early sex influences a student's present life and future life.
  • Emphasize the advantages of delaying sex
  • Planting and nurturing the motivations to abstain
• "Avoid these behaviours to help you abstain from early sex"
  • Sugar daddy boyfriends, drug and alcohol use, rebellious behaviour towards parents' advice, spending time with peer groups that encourage sexual activity
• "These are ways that you can handle sexual urges…"
• How to practice forms of prevention other than abstinence
• How to help a girl who is pregnant

3. Connecting students to people and resources
• Encourage HIV voluntary counseling and testing (VCT); provide information on VCT locations • Health care professionals who can provide information on testing, treating and managing STIs and HIV • Trusted adults who can provide sexual health guidance and counseling • Additional sources of sexual health information

Peer educators also felt that the message of faithfulness was important for community members and for themselves, since they would eventually find themselves in a relationship where they would need to practice faithfulness.

When discussing information on self-diagnoses of STIs, the preference towards prevention was raised again.

> "Surely the best thing is to learn preventive measures of these STDs and STIs." [Nelson, male, age 16, School A]

Discussing facts about condoms and the promotion of condom use were not mentioned by peer educators as messages to be communicated through the program. There are several possible explanations for this. In other discussions, the peer educators asked the moderator several questions about condoms suggesting that they themselves were unsure about the capability of condoms to protect against HIV and did not have a solid understanding of how condoms should be used. Another reason is that in recent years, many HIV prevention programs in Uganda have taken a strong "abstinence only" approach, condemning the use of condoms and claiming that condoms promoted promiscuity. With this in mind, even if peer educators felt condoms use should be promoted, they may have been shy to raise this point in focus group discussions for fear of their peers' reaction. Despite their relative quietness on condom messages, later training covered information on condoms.

Peer educators were very realistic about what the reception to some of these messages would be. They knew that some students would not be interested in hearing about abstinence and that behavour change could be somewhat limited. They discussed how in the past they have handled this type of response and what they would do in the future.

> "Some students even if you tell them [about sexual health], they tell you they don't want to hear. If you advise them about sex, that real day, that real hour you say about it, you find them in corners doing their things. You find that what you have said is not what they follow." [Helen, female, age 15, School A]

They also acknowledged that there was difference between what students want to hear and what they need to hear.

> "In most cases you see that students, they want to hear you talk about sex and how to play sex and that kind. But when you talk about these things of AIDS they just say, 'Whaa'. (Nabulungi laughs). They don't want to hear about AIDS…" [Nabulungi, female, age 17, School B]

They felt that *how* the message was delivered (the method) could increase or decrease the likelihood of students listening. In a number of instances, the message proposed by peer educators was closely linked to a particular delivery method. For example, the advice and counseling messages described by peer educators were frequently imbedded in how a one-on-one conversation could be used to communicate this. More on this topic is discussed in the section on methods.

Teachers' suggestions on what messages should be provided through the peer education program were consistent with the students' ideas. They also provided examples of the type of questions they frequently received from students. This information reinforced the need to communicate about romantic relationships, puberty, menstruation and condoms.

Methods Used by Peer Education Program

After identifying what messages should be communicated through the peer education program, the discussion then focused on what methods should be used to deliver these messages. As the peer educators shared ideas, they debated the merits and drawbacks of various methods. Though some peer educators had a strong preference towards a particular method, it quickly became evident that the peer educators envisioned a program that used a variety of education strategies, thereby targeting a variety of people since different people have access to different sources of information.

> "There is a saying, this is, that there are many ways of killing a rat…So I think writing [educational materials] or gathering of people, that is not the only way of how they can be advised. There are many ways." [Joseph, male, age 15, School A]

Both teacher and student participants assessed the possible methods on a number of criteria. Participants felt that the target school's characteristics should be taken into consideration when selecting methods, such as the school's setting, the school's social environment and whether it is a day school or a boarding school.

> "Our school [School A] is a day school and the activities we may need may not be the activities needed by those in [School B] and others which are boarding." [Mr. William, male, school staff member, School A]

The school's social environment was a particularly significant issue for participants from School A, who felt that communicating health messages in a school assembly using any means that didn't have an entertainment component would be completely inappropriate and would invite abusive remarks and behaviour from the student population.

> "It is actually hard to stand or sensitize or do what, they will actually abuse you. But when you make some kind of a game or what, they can pay attention to that." [Nelson, male, age 16, School A]

According to peer educators from School A, any presentation to the school assembly must be designed to be entertaining, using drama, music or games.

These methods would appeal to students and capture their attention. However, when using these methods, both peer educators and teachers felt they must be careful to make sure that the entertainment component did not push out the education value.

Students from School B, the boarding school, discussed the value of students being required to attend a presentation by the peer education club. Some felt that required attendance was necessary to ensure that those who most needed to hear the information attended. But others were concerned that these students could become unruly and disruptive if they were forced to come. The discussion concluded by realizing that some events might be required attendance and others not.

Another consideration frequently raised was the cost associated with various methods, not only the cost for the program but also the cost for the user. For example, some peer educators were keen to produce written materials (such as a magazine) but these materials would require the user to purchase it at a fee. Especially among peer educators from School A there was a great reluctance to focus on methods that depended on the user buying it. The peer educators considered some methods to be prohibitively expensive to produce (such as producing a film or books), but acknowledged all methods would require some type of financial contribution.

> "If you talk about something not being costly, there I'm not getting you, because everything now as I'm seeing there, everything will be in need of a little funds in order to be accomplished." [Oliver, male, age 18, School A]

Other potential barriers associated with possible methods included language (i.e. student's literacy skills for producing and using written materials), access (e.g., not all students coming in contact with education materials posted on a bulletin board) and inputs (e.g., electricity for showing films).

The role of partnerships was a theme that repeatedly occurred during the discussions. Working with other entities would provide the peer education program with additional education opportunities, specifically access to additional methods (e.g., doing a radio presentation through their school's Straight Talk Club and gaining support from the school administration to show a film using the school's video projection equipment), improve the methods (e.g., working with the Drama Club to develop a play) and help to implement their education plans (e.g., obtaining permission from the school administration to hold an assembly). This approach supports the idea of using multiple methods for education.

> "We are not finding the best solution, but we are finding alternatives. That's why we are saying, if there is a chance to visit to go to the radio to represent, we utilize that chance. If there is a chance to use the Writers Club, we can also use that one. We can make shows. We can do everything, so we are finding alternatives. We are not finding the best solution or what." [Nelson, male, age 16, School A]

They also saw ways of how their program could introduce new sources of information to the schools by bringing in guest speakers to the school and referring students to outside sources, such as counselors.

The peer educators remained realistic that regardless of the method used, there was no guarantee of achieving an influence on a student. They acknowledged that some students would listen to the information and embrace it and others would not. There was a sense that for those who rejected the information, it was necessary to be careful that they didn't force the person to hear more.

> "For me what I say is that if you advise someone and he or she becomes rude to you, you leave him or her. And if you advise someone and he or she follows your advice, you keep on advising him or her. You advise each other." [Ruth, female, age 15, School A]

Peer educators also felt they needed to be careful in how they approached people to provide advise and counseling, knowing that guidance may not be welcome.

A summary of the methods proposed by the participants is found in Table 3-2, along with reasons given for their use.

Peer Education Program Design

After establishing what the program's messages and methods would be, the discussion moved to how the program would be organized, who would provide leadership and what was needed for the program to function.

Administrative Structure

When asked about how the program should be organized, the peer educators felt strongly that an elected executive of peer educators should provide leadership to each school's program. They felt this was better than having all peer educators serve as simply members. The peer educators wanted to elect students who would make the program successful, people who were disciplined, hardworking, reliable, trusted and punctual. They felt that the leadership's reputation affects the club's reputation in the school. They wanted to avoid

problems seen in other clubs, like low club participation because of poor leadership from "people who are not committed to service."

> "Even among our leaders we are to elect, they should be determined to lead the peer educators to their destination…The leaders should be determined to lead their fellows. Let it not be that when time for a meeting comes or time for educating the mass comes, you find that somebody who has the topic to talk about is not present, which will do what? Which will disappoint those who have gathered together to come and listen for the information." [Solomon, male, age 17, School B]

Table 3-2. Proposed Education Methods for Peer Education Program

Method	Reasons
Films & visual imagery	Power of visual material to influence. Visual materials were rare, students' poor background means little exposure to films, so expected influence would be large. Extra appeal.
Written materials	Ability to write messages customized to audience. Easy access if post around school compound. If produced a school magazine, could sell to earn income for the program.
Drama, music, games & poetry	Visual, entertaining methods and appeal to a student audience. Will immediately attract an audience. Will involve other clubs. Can create own dramas, music and poems. Often used in assembly.
Distribution of other resources	Facilitate access to existing resources, such as Straight Talk newspapers.
Bring in external speakers	New faces and credentials attract the attention of students and give the peer educators credibility.
Radio	Access to a wide audience. Can use creative methods, such as drama.
Open discussion	Opportunity to provide detailed information. Students can ask any question. Could be done in assembly.
Sports	Attract students to program. Keep students out of trouble. Used to reach difficult students.
Personal guidance and counseling	Provide personal advice in a one-on-one format. Able to respond to student's specific problems. No cost to this. Person can ask questions. Works for all literacy levels.
Classroom presentations	Create awareness of the program.
Seminars	For offering special training. Opportunity for in-depth discussion of a topic.
Signs on school campus	Creates general awareness of program. Alerts school to presence of program. Provides daily reminder. Tries to change school atmosphere.

The peer educators identified specialized roles for the executive members, which generally consisted of a chairperson, secretary, treasurer, advisor, organizer and "vice" positions (e.g., vice-chairperson). The peer educators discussed what duties each position was responsible for. The teacher participants suggested a similar administrative structure. This leadership format was consistent with other clubs at the schools. Since school clubs select a new leadership in the second term, the peer educators agreed that this should also happen with their program. The peer educators felt that in addition to their role-specific responsibilities, executive members needed to be active in other aspects of the program.

> "If there's a secretary and his work is to write, that doesn't mean that if we are going to make a play or what, he shouldn't participate. At any time they shall always participate *actively* regardless of hierarchy." [Nelson, male, age 16, School A]

After the peer educators settled on the student leadership structure, they decided to elect the executive members immediately. Under the students' direction, the moderator (ACJ) led this process. Some students felt that teachers should lead the elections. Others felt this wasn't practical. For future elections the peer educators may choose to have the teachers lead it.

Individuals were nominated for a position. The students wanted "no campaigning," meaning that the nominees wouldn't give a brief speech before the voting. The students wanted individuals to be elected based on their reputations, not a convincing speech or election promises made at the moment. By this point in the research, the peer educators had spent a number of hours interacting with each other and were familiar with one another. Students could turn down a nomination and some opted to often because they were interested in a different position. Peer educators were allowed to nominate students who weren't present. The non-chairperson positions received more nominations. The students chose to vote by a non-secret show of hands while the nominees were out of the room. At the students' suggestion, the numbers of votes were not told to the candidates.

There was a desire to be inclusive in the selection of the student leadership. Students initiated several of gender considerations: gender-neutral position titles and a balance of positions between male and female students. For positions that had a corresponding vice position, one was filled by a girl and the other by a boy. When no Senior One students at School B were elected, the peer educators created two new positions to ensure their involvement in the leadership. A peer educator with a physical disability was nominated for a position.

After the leadership was selected, they had a brief meeting that day. From then on the chairperson took a role in leading future gatherings of the peer educators and the other executive members began with their responsibilities. Stationary supplies (clipboards, pens, paper, markers, chart paper) were provided.

Role and Selection of Teacher Coordinators

From early conversations it was apparent that the peer educators felt it was important to have teachers involved in the peer education program and in particular two "teacher coordinators" (one male and one female) who would be committed to assisting with the program. The peer educators envisioned these teachers as primarily performing two functions: providing guidance to the peer educators and acting as a liaison with the school administration to help with peer education activities. For the first function, peer educators wanted someone who would be their go-to person for sexual health advice, someone who could provide input on organizing peer education activities (especially special presentations), connect them with other clubs, care for the program's property and assist with coordinating events. As a liaison with the school administration the teacher coordinators would secure permission for presenting in assemblies, accessing school resources (like the music system) and travel outside of the school. The teacher would aid in gathering students for assemblies and introducing the peer educators to the school body, thereby helping to give credibility to their role.

> "Those teachers can mobilize students when we are trying to teach our fellow students. Because sometimes when you go there as a young kid, the students say, 'You are nothing. You can't teach us.' So they should mobilize us and they should also inform the students that we are peer educators so that we can to teach them." [Luis, male, age 13, School B]

The teacher coordinators wouldn't be required to attend club meetings, but would have a standing invitation. Their presence would be requested for special meetings.

The teachers involved in the study also expressed a need for teacher involvement and saw a teacher coordinator role as being key to the program's future success. The teachers strongly felt that it was the students' responsibility to lead the program and that the teachers would respond to their action. The coordinators' function would be to perform roles and tasks that a student peer educator couldn't. This covered providing guidance on the peer educators' plans, helping to produce quality programming and trying to have a sufficient physical presence at meetings and in the peer educators' general society. The teachers saw activities outside of the school as being crucial to the program and knew this required teachers' assistance. They agreed that the coordinators should petition

the school administration on behalf of the peer educators and believed the administration would be very favourable towards outside outreach programs.

The peer educators discussed the characteristics they were looking for in teacher coordinators and compared the qualities of possible teachers. Overall they were looking for someone who was approachable and trustworthy but who would also help them accomplish program activities.

The peer educators recognized that the teacher coordinators would be part of the face of the program and that students would associate the teacher's reputation with the program. They didn't want teachers who had earned a bad reputation due to various acts (e.g. mismanagement of funds, missing classes or a lack of classroom discipline). The teacher should be liked and respected by other students, including the "wrong doers." While discussing one particularly strict teacher, a peer educator commented:

> "Since most students hate him [the teacher], when they hear that he's a member of this club, they'll not even accept you to talk to them because they'll think that you're spying on them." [Amoti, male, age 15, School B]

They preferred a teacher who communicated well with students in a clear, honest, humourous and open manner, a person who made the students feel welcome and who listened. They wanted someone who provided good advise and encouraged them. Relevant teaching knowledge (e.g., teaching religious studies) and experience with other clubs was valued. Teachers that had a "harsh" manner or who made students uncomfortable were excluded. Trustworthiness and a good history of confidentiality were strongly considered. The teacher needed to be able to keep the secrets of students and not pressure the peer educators to become "spies" who reported on other students' misbehaviour.

Involving teachers who had administrative duties was carefully considered. The benefit would be the power, authority and access that such teachers carried. The disadvantage was that they might be too busy to provide much assistance to the program. There was also concern that their position might require them to disclose information about students that could lead to expulsion. Teachers who were rarely around school, especially at the boarding school, were not looked on favourably, as were non-teaching staff members.

Selecting who would serve as coordinators of the peer education program occurred through a number of steps. Based on her observations in previous focus groups, the moderator organized a process that allowed plenty of open discussion. While the peer educators were still meeting as boys-only and girls-only, each grouped was asked, "What teachers would you and the other students feel comfortable discussing sexual health with?" Names were suggested

and a brief discussion occurred about each nominee. Later as a combined group, the peer educators discussed each candidate and whether it would be good or not good for that individual to be involved. At both schools there were differences between the names that the girls and boys suggested. The discussion format allowed peer educators to share concerns about particular teachers. Occasionally there were disagreements and students explained why they felt a particular way. The peer educators' intensity during this process indicated how much they cared about who was selected for the teacher coordinators. The peer educators decided that a male and female teacher would be selected by a show of hands. When the selections were made, they requested that the moderator be the one who approached the teachers with the peer educators' invitation to join the program. They decided as a group that the teachers shouldn't know any details about what was said during the selection process.

All the teachers who were selected accepted the invitation to serve as coordinators of the program. There were different types of teachers selected at each school. At School A, the day school, one of the selected teachers was a senior administrator. Both of the teachers had contact with ACJ at the beginning of the study and had helped to select and organize the student participants. School B selected two relatively young teachers, neither of which had a formal guidance role in the school but who were known for their approachability and care for the students. These teachers were new to the research study.

The teacher coordinators were selected before the peer educator executive committee was established. Some peer educators suggested that the executive should be selected to guide the teacher selection. However, the absence of student leadership may have created an atmosphere where every student felt comfortable to contribute and disagree and where the voting was not swayed by the student leaders' preferences.

Program Function

The peer educators discussed how the program would function in their schools. There was consensus that regular meetings should be held about once a week. These meetings would be open to peer educators and other students interested in the program. Administrative issues would be discussed, as would be the program's progress and areas for improvement. Relevant sexual health information would be communicated and mini training sessions conducted. Meetings would be advertized through posters, announcements during assemblies and word-of-mouth. Meeting minutes would be made by the secretary and used to help keep the teacher coordinators up-to-date. Reports would be written on major program events, such as travel outside the school. The treasurer, chairperson and teacher coordinators would keep financial records.

Members of the peer educator executives, especially School A, felt that a work plan was essential to the program. They envisioned a work plan that outlined what they wanted to accomplish over a period of time (such as a semester or the year), when it should happen, who would be responsible for it and how much it would cost. Teachers also wanted to see the program systematically and sufficiently implemented. Some of the early activities that peer educators wanted to see happen were to hold a public launch of the peer education program at the schools. This would help create awareness about the program and establish their official role as peer educators in the school. They also wanted to "encourage other students to join the club" and to build the "spirit" of the peer education program in them. Students wanted to create awareness of the program in local community-based organizations and NGOs and eventually establish partnerships with these organizations. They hoped to see continued partnership with the moderator and the research assistants.

Inputs

The participants were asked about what type of materials they needed to run the peer education program. For the most part, the required inputs were very modest. Stationary items were required for maintenance of records and planning events. Resource books on sexual health and peer education would be helpful for self-learning. Educative films would be used for school assemblies and costumes for dramas. During travel outside of the school refreshments would be needed. One peer educator who was keen to see the program produce videos felt that video recording and viewing equipment was necessary. Students discussed how resources, especially books, would be managed, if they would be made available to the public and how they would handle any property loss. They felt the teacher coordinators should play a role in caring for these resources; this was a role the teacher coordinators saw themselves performing. The teachers were very keen to increase the quantity of education resources that their school had access to.

The students felt that there was sufficient classroom space available for meetings but that an office would be helpful to provide storage and a private meeting space. The teachers offered to keep program materials in a secure location but could not provide an entire office just for the program. School administrators offered the peer educators use of LCD projectors for school assemblies.

Both students and teachers felt the peer educators needed something to identify them as peer educators, thereby alerting students that they offered sexual health information and guidance and to help give them credibility in the school. The most common suggestion was a customized T-shirt with the title "Peer Educator" printed on it. With the teacher coordinators' assistance the peer educators felt they could obtain permission from the school administration to

wear the T-shirts during school hours. Students also suggested tags and a passport. The passport would be shown when students traveled to different schools that are not familiar with peer education.

Both student and teacher participants mentioned that the program would need some type of financial input. School A had a modest amount of funds set aside for HIV education that would be available to their club. Peer educators from School B considered a small membership fee. Peer educators from School A felt a membership fee would be prohibitive to students' involvement. While students didn't have a clear plan of where funds from the program would come from, they didn't see fundraising as a barrier to moving forward with the program.

Role of Other Teachers and School Administration

Teachers other than coordinators were seen as being important to implementing the program successfully. Without the teachers' support, the program would have difficulty achieving its mandate. The peer educators mentioned a number of ways teachers could help: provide updates in class about the program, reinforce the program's messages, allow time to present in class, give permission to miss class, support the organization of assemblies, aid in scheduling, alert them to relevant events outside the school and provide access to school equipment. For those teachers interested in providing additional support, they could guide the organization and design of educative activities, such as dramas. Peer educators also hoped that the teachers would share their wealth of knowledge by providing helpful guidance on sexual health matters and suggestions on how to interact with the student body. There was once again a request that the teachers don't pressure the peer educators to share knowledge about other students that could jeopardize the students' trust of the peer educators. The teachers interviewed felt it was likely that the schools' teachers would be supportive of the peer education program. For the most part they described a similar role, adding that they could involve the school's "health department" in assisting the program.

Both peer educators and teachers saw the administration as being very important. Staff members with administrative roles stated they would follow the program's progress, watching to make sure the peer educators were promoting good behaviours, checking that the teacher coordinators were fulfilling their roles and requesting occasional updates from the peer educators. If they were pleased with what they found, they would happily promote the program within the school and to other schools' administrations.

By the end of the field research, there was already evidence that interest in the program was spreading among the teachers. The teacher coordinators described how they were approached by teachers inquiring about the program and interested in providing assistance.

Peer Educator Interactions & Conduct

The peer educators recognized that how well they interacted with each other would influence what they are able to achieve collectively as peer educators. Their behaviour towards their peers would also essential if they were to have influence in their schools. The peer educators identified challenges they expected to encounter while interacting with their fellow students. They felt a peer educator code of conduct should be created. The code of conduct should clearly state the expectations on a peer educator and help hold each peer educator to that standard.

Interaction with Each Other

During peer educators' discussions about how they should interact with each other, three themes emerged: mutual respect and care, togetherness and understanding.

Mutual respect and care for one another encompasses willingness to listen without reacting or discrediting the other person; showing patience, kindness and sensitivity; and providing counsel, seeking advice and correcting each other. Mutual respect also included being trustworthy with confidential information.

To achieve togetherness, there are barriers that the peer educators wanted to see overcome: gender-based isolation, poor communication and selfishness. Repeatedly they admonished each other to improve how much they interact with the opposite sex. They stressed that if they were to collaborate together well on activities, they needed to know the members of the entire group, to "be free with each other" and to have a friendship with them.

> "You find that most girls here, it's impossible for them to talk to these boys. So we should make friendship with these boys so that we can get more ideas…" [Anna, female, age 15, School B]

To improve communication, the peer educators urged each other to regularly connect, to use simple language, to make eye contact when talking and to stay focused during discussions. Selfishness would be overcome when the peer educators demonstrated commitment, sacrifice of time and labour, engaged creative methods to communicate and educate, used teamwork and were attentive to time and scheduling. Active participation and regular attendance to meetings were required since they felt a peer educator couldn't be one in name only.

There was a lively discussion on the challenges, frustrations and misconceptions of how male-female interactions happen. The girls wanted the boys to not be flippant when a girl requested advice and to not "make the girl's problem worse" by joking, being flirtatious or providing harmful advice. The girls also requested

that the boys not needlessly spread information about a girl causing her to feel bad.

> "Another thing, some boys when they see girls in problems, they try to what? Go on telling everyone that, 'I've seen this girl,' and this and this and this. But you boys know that even us girls, we are human beings like you. So you may see someone in a problem, let me give an example, that one of menstruation, you may find that someone has just marked accidentally, you can just tell her, 'Please you have this and this problem. You go.' Not to go on telling everyone. You gain nothing." [Nabulungi, female, age 17, School B]

The boys were concerned that the girls were constantly gossiping and sharing secrets because they moved in a wide social circle. They requested that the girls not spread others' personal information and to try to solve problems within a small group. The girls explained that they tended to be more social than the boys and that just because a girl has many friends doesn't mean she is disclosing information.

The peer educators discussed the complexities of when (or if) there were situations where it was okay to disclose information. The scenario posed was if you have a friend who is romantically involved in someone who you know to be HIV positive. The advice the peer educators gave to each other was to first question how good your information was. Try to reason with the person directly to see if he or she can change any risky behaviours. If you needed to make more inquiries, do it discreetly and try to protect the person's identity. If any information was shared, limit it to as little as possible, don't give details and most importantly don't cause any harm to the person.

From these discussions it was evident that the peer educators were calling upon each other to walk with a deep sense of understanding towards each other to prevent hurt, accusations and misunderstandings.

Behaviour towards Others

In their behaviour toward students and other people, the peer educators and teachers emphasized three things: earning influence, being a friend and having exemplary behaviour.

Participants felt strongly that if the peer educators were to have an impact in the schools, they needed to have influence among the student body. Influence began by showing respect for one's self and respect for the other students. The teachers anticipated that the older students may have a hard time receiving advice from very young peer educators (see Table 3-3 for a list of other

anticipated challenges), but they also felt that the young ones would rise to the challenge, prompting the older student to activeness.

> "If a big boy will see [a young peer educator] facilitating or lecturing people, then he will come to others and say, 'Look here, how can this boy do it when I'm just idle here?' So that boy will be inspired." [Mr. David, male, school staff member, School A]

Table 3-3. Anticipated Challenges from Students

- Teasing and labeling from other students
- Students who behave in a "harsh" and "tough" manner toward the peer educators
- Arguments from girls who have boyfriends that are meeting material needs
- Students who are not interested in attending events by the peer education club
- Students who seem to know more and use that knowledge to stubbornly challenge the peer educators
- Resistance to condom use based on misinformation about condoms
- The peer educators are still building their sexual health knowledge
- The younger peer educators have limited influence over older students

All teacher participants saw a direct positive relationship between academic performance and influence. The best performing students in school had authority among the students and even earned the respect of the teachers. The teachers felt that students were unlikely to listen to those who didn't do well academically. For this reason, both student and teacher participants felt it was important for the peer educators to strive to do well academically, and suggested that having the involvement of some of the academically influential students would give power to the program and attract other members. Good academic performance was also a sign of a disciplined person, something highly valued by the participants.

Having influence did not mean that the peer educators should be without humility. They instructed each other that they should be willing to take advice from other students, even if they aren't peer educators.

> "Don't take yourself to know everything. Others can also advise you. Those who are not peer educators can also advise you." [Mick, male, age 15, School A]

The peer educators felt that they should show themselves to be true friends to the other students. A friend was one who was trustworthy, showed kindness, didn't put people down and was sensitive to what was happening in people's lives. The peer educators wanted to avoid bringing offense or annoying people, knowing that the students were most likely to receive input from people whom

they “loved and trusted.” Friendliness was also to be shown in simple ways through a smiling face, greeting people and being present in the general society.

> “We should be social to the community. We should talk with them. We play with them. We should not be away from them, so that those whom we are telling information, they see our examples. They see and then they believe.” [Ruth, female, age 15, School A]

Finally, the peer educators wanted to be example students. They knew that their behaviour would be watched. They felt it was very important that they followed their own advice so that their actions matched their words. Being exemplary covered showing respect for the teachers by not being “big-headed” and by being “smart” in their dress and appearance. The felt that they could earn respect from even the difficult students if they “took themselves well.” But if they were just like the difficult students in their behaviours, the students would see that and not give them respect.

Peer Educator Code of Conduct

Peer educators were keen to develop a code of conduct that outlined the good and bad behaviours of a peer educator and created an expectation that the peer educators follow that standard. There was recognition that no person was perfect and that they were all growing as individuals and peer educators. With the peer educators’ direction, a Code of Conduct was drawn up (Table 3-4) and each person agreed to do his or her best to follow it.

Part 2: Training of Peer Educators

Training of the peer educators began after they were satisfied with the program design discussions and outcomes. The moderator sought input from students on what topics they felt should be covered during their training. Though their feedback was vague, their enthusiasm to learn was clear.

In consultation with the research assistants, an initial training schedule was drawn up. The content was directed by the scope of messages to be conveyed through the program, insights from the focus group discussions on the students’ current knowledge and existing training materials for youth sexual health educators. The objectives of the training were:

1. Strengthen the peer educators’ basic sexual health understanding;
2. Provide broader and more detailed sexual health information than what they typically received;
3. Equip the peer educators with skills for their role as peer educators (public speaking, counseling, creating engaging evidence-based presentations, correct condom use, creativity and group collaboration)
4. Prepare them for conversations on controversial and challenging issues;

5. Expand their attitudes in key areas, in particular on aspects of HIV prevention other than abstinence and the plausibility of non-sexual romantic relationships.

Table 3-4. Peer Educator Code of Conduct

As a Peer Educator in the Peer Education Program:

1. **I will be a true friend** to my fellow peer helpers and classmates, faithful to them in all ways;
2. **I will not judge a person** based on his/her appearance or what someone else has said about him/her; I will take the time and effort to know this person and his/her character;
3. **I will be a good counselor,** being patient and listening; I will provide good advise to those who ask, responding to a person's need and not acting out of my own selfish motivation;
4. **I will be confidential and trustworthy**, keeping private the secrets of others; The only time I may share this information is when it involves something of a legal or ethical nature; In this case, I will consult with the appropriate advisors and authorities and not use it as an opportunity to spread gossip;
5. **I will discipline myself to set a good example** and follow the guidelines provided to me by parents, teachers and elders; I realize that students, children and elders alike are watching me, and that my behaviour influences what people think of the peer education program and the other peer helpers;
6. **In regards to dress and clothing,** I will present myself in a tidy, smart and modest manner;
7. **I will show respect** toward myself, my fellow peer educators, my classmates and my elders;
8. **I will consistently demonstrate the qualities of a leader,** showing myself to be someone who can lead other students in right decisions and living;
9. **I choose to not participate in gossip,** neither listening to it or sharing it;
10. **I choose to not participate** in drinking alcohol at school, smoking and other activities that are not permitted at school;
11. **I will care for my fellow peer helpers** with a love like that of a brother or sister;
12. **When I see one of my fellow peers has gone wrong**, I will provide correction in a sensitive and respectful way, not seeking to abuse this person or ruin his/her reputation, but to help him/her;
13. **When I have done something wrong,** I will listen to correction from my fellow peer helpers and accept that correction;
14. **When I disagree with a fellow peer educator,** I will do so in a manner that is respectful;
15. **When I have a difference of opinion** with one of my fellow peer educators, I will carefully listen to what he/she is saying, seek to understand his/her perspective and learn from him/her even if I don't agree with him/her;
16. **I know that some peer educators will choose to act or speak** in a way that I personally do not agree with; When this happens, I will handle this difference of opinion and choice in a manner that is respectful, not abusing or shaming him/her;
17. **I will encourage** my fellow peer educators to follow the Code of Conduct;
18. **I will be active in the peer education program,** consistently attending meetings and providing creativity and enthusiasm; I understand that my participation in the club is important to its success;
19. **I will demonstrate commitment to the peer education program,** understanding that this requires a sacrifice of my time, efforts and resources;
20. **I will work to participate in the school society,** being a friend to my classmates, making myself available to them so they may share their problems with me;
21. **I will be cooperative,** working well with my fellow peer helpers, boys and girls alike; I realize that we are one team together, regardless of our differences in opinions, attitudes, behaviours, values, backgrounds, experiences, ages and gender;
22. **I desire to learn more** about peer education, sexual health and valuable skills for life; I will learn from my fellow peer helpers, classmates, elders and those who are able to teach me;
23. **I will work to do well academically;**

By signing this document, I agree to follow this Code of Conduct and commit myself to behave in this manner.

(name, signature, date)

Training with the peer educators began with an open question period. In small groups the peer educators listed their sexual health questions. As a large group the moderator or another trainer answered each question. This activity provided a clearer sense of the knowledge gaps and current attitudes, and addressed the peer educators' "burning questions" and misconceptions. The questions asked by the peer educators covered topics that were often biologically, socially and/or emotionally complex.

Training was provided on a wide range of topics and used a diversity of methods (Table 3-5). Though some lecture-style instruction was unavoidable, the training methods emphasized participatory, rather than didactic, learning. This was achieved through the use of small groups, work in pairs, student presentations, skits and audience participation. The skills built during these activities – creativity, group interaction, teamwork, conflict resolution, managing obstacles, organization and critical thinking – were crucial for them to succeed in their role as peer educators. All training sessions allowed ample opportunity for questions and discussion.

Training was provided by a number of instructors. The moderator, ACJ, had a background in adolescent sexual health education and provided training for a number of sessions. The two main research assistants came from health backgrounds – one was reproductive health educator at a medical officers' school and the other had counseling experience with a specialization in adolescents. These individuals provided training, as did other local health professionals and educators. The intention behind the involvement of these individuals was to make use of local expertise to produce high-quality training and to aid in the program's sustainability by building the program's connections with community members.

Most of the training was conducted in the same venues as the focus groups and the participants agreed to continue the training during the same time periods. For School A this was in the morning before they started classes at 1pm. These students often arrived at staggered times so a variety of sexual health print material was provided for the students to occupy themselves with until enough peer educators arrived for the training to begin. At School B the students met between the end of classes and dinnertime.

Each school also had a weekend training session. For School A it was one full day and for School B an afternoon which was poorly attended because it was unknowingly scheduled at the same time as a party. Peer educators from School A had 30 hours of training; School B had 15 hours. This difference was because School A students were available more frequently and for longer periods of time. The students of School B, the boarding school, have a very full and rather inflexible schedule. Training on Saturdays was not possible because they wrote

weekly exams. The teacher coordinators were given an open invitation to attend any of the training sessions, though it wasn't expected that the coordinators from School A would be able to attend since training occurred during hours when they would be teaching. Peer educators and teacher coordinators each received a peer education handbook. This information-rich reference book was designed to provide comprehensive facts on sexual health and help peer educators build their knowledge. Refreshments were provided at each session.

Table 3-5. Training Activities

Topic	Method	School A	School B
Questions about sexual health topics	Small group work & large group instruction	✓	✓
HIV/AIDS	Instruction & small group discussions	✓	✓
Sexually transmitted infections	Instruction & large group activity	✓	✓
Negotiating romantic relationships	Activity in pairs & large group discussion	✓	✓
Life skills	Instruction	✓	✓
Expressing love without sex	Small group activity & large group discussion	✓	
Contraceptives	Instruction	✓	✓
Condom demonstration & practice	Large group activity	✓	✓
Scenarios in sexual health	Small group & role play using skits	✓	✓
Counseling skills	Instruction with audience participation	✓	✓
Pregnancy & abortion	Instruction	✓	
Relationships	Instruction	✓	
Drug abuse	Instruction	✓	
Health services in Kabarole District	Instruction	✓	
Human development	Instruction	✓	
Progression to the sexual act	Instruction	✓	
Tips for practicing abstinence	Instruction	✓	
Creating educative presentations	Large group instruction & small group activity	✓	✓
Using resources to create presentations	Small group activity & group presentations	✓	
Leadership	Instruction	✓	
Public speaking skills	Instruction & large group activity	✓	✓
Team building	Large group activity	✓	✓
Energizers	Large group activity	✓	✓

There was flexibility in the training program. After the core topics were covered, the moderator checked in with the peer educators to see whether they wanted to focus the remaining time on beginning program activities. Training continued after they expressed this as their preference. They gave two reasons: to take advantage of the moderator's presence in Uganda and the easy access to trainers, and because the approaching end of the school year meant there was little time to organize and launch any formal educative activities.

During one training session at each school the moderator was not present. This provided a "practice run" for her departure in a few weeks time. Though trainers were lined up, it was the responsibility of the peer educators to run the training session. Upon her return, she found the peer educators had been energized by the experience and had a new confidence that they would be able to successfully continue the program in her absence.

During a special event at the end of the school year, each peer educator received a certificate acknowledging his or her participation in the peer educator training. T-shirts designed by each club were distributed.

Part 3: Events Following Program Design and Training

Program Activities

Before the close of the school year and the researcher's return to Canada, the peer education programs accomplished several tasks. Aside from the training, the School A peer educators created a work plan and sought feedback from their coordinators on it. Both clubs made tentative plans with coordinators and school administrators to conduct a formal school-wide launch of the program early in the new school year. At School B during the certificate distribution event, which was well attended by other school members, two dramatic films were shown on adolescent pregnancy and HIV infection. The coordinators spent time interacting with the peer educators, following the program's progress and spreading word on the program to other teachers. At the coordinators' urging, ACJ gathered and provided a number of educative films, sexual health education resources and additional handbooks.

Since the peer educators from both schools repeatedly expressed interest in meeting those from the other school, the two executive committees and the teacher coordinators met for a daylong meeting. Some of the topics discussed were strategies for interaction between the schools and how to strengthen sustainability of the programs. From their committees they elected an overall executive and promised to have contact in the near future.

A concluding focus group discussion occurred with each participant group. The participants were asked about what the future of the program could look like. There were several challenges they felt could possibly arise. They reiterated

those listed in Table 3-3, and added operational challenges (e.g., loss of peer educators, School A's "double shift" system, School B's full timetable, lack of funding) and challenges pertaining to the peer educators themselves (e.g., lack of participation, misbehaviour, indiscipline, insufficient peer educator numbers).

The participants were asked what would make them feel like the peer education programs were being successful. They listed changes in student health outcomes (e.g., fewer pregnancies, new HIV infections and suicide attempts due to unwanted pregnancy), student behaviours (e.g., increased HIV testing and STI prevention, reduced smoking and drinking at school, drug use and early sex) and other behaviours that were generally connected with risky sexual health (e.g., associating with bad peer groups, harassment of female students, visiting isolated places). Improvement in students' dedication to studies and academic performance were other desired outcomes. The peer educators wanted to have students approaching them with questions and to see more students joining the club. The participants also wanted collaboration outside of their schools, including the introduction of the peer education program to new schools. The researchers encouraged them to first achieve an impact in their schools and then use those experiences to guide others.

Examining the Project's Achievements

The participants reflected on the peer education project thus far. Since the program hadn't yet been formally and fully introduced to the student body, the reflections were primarily on the process of developing the program, how the peer educators had been influenced through the experience and what the program had already accomplished.

The participants appreciated the open and friendly approach that the researchers used with the students, especially when it came to discussing topics that were typically taboo in Ugandan culture.

> "I just wanted to add you because you've helped us. Some of us at home don't usually get a chance to talk to each of our parents expressing views. But you've been open to us, even explaining it all to us. So we come to understand now the things you taught us of." [Sophie, female, age 16, School B]

The students liked how the first focus groups were girls-only and boys-only. The teachers were glad to see the training go directly to the students instead it being provided to the administration, which would then have had the responsibility to share it with students. The peer educators felt the training was very valuable. The teachers believed the training had given the peer educators credibility and that other students were likely to follow them in the program. The provision of the refreshments was described as an "energizer" and the T-shirts as a

"motivation." The handbooks were highly valued and the peer educators were already using them as a resource.

> "We have gained knowledge. Here I mean that you have given us books where there is a lot of information. And whenever I'm in the dorm and someone asks me a question, I cannot fail to answer because I always read the book and I know all the answers are in the book." [Daniel, male, age 14, School B]

Participants from both schools would have liked there to be more time for the training and early program activities.

From their involvement the peer educators felt they had gained knowledge and skills that they would use themselves, such as increased understanding on how to control sexual feelings. They had more detailed knowledge in areas like ARVs, post-exposure prophylaxis, condom use and a solid understanding of how to respond to the questions students asked them. Their attitudes shifted in key areas and, in answers to other questions, they showed more openness toward condom use as a means for HIV prevention. The teachers had observations also: the peer educators had more assertiveness, confidence, togetherness and motivation and were much more open in talking about sexual health topics; they socialized "without fear of the opposite sex" and they seemed equipped for action. The peer educators also saw this in themselves and said they now knew *how* to help other people and had the skills to do it well.

In the weeks since they began their involvement, the peer educators were already active in educating. Conversations were had with their peers on drug use, the dangers of unprotected sex, proper condom use, relationships and the need to treat HIV as a serious risk. One peer educator counseled a girl to return for her final exams after she had dropped out due to an abortion. Another peer educator warned students who would be finishing secondary school about the sexual health threats outside of school. The peer educators recounted how they were earning respect among their peers and a reputation of providing good advice. The peer educators realized that not everyone they counseled would follow their advice and adopt a more protective behaviour.

Especially in School B the peer education program had already begun to establish a presence. Students from that school were making inquiries on how to join the program. The teacher participants felt the films shown at School B had a powerful influence on the students and had prompted serious self-reflection. At both schools the peer educators' T-shirts were effective advertising about the program. Teachers in both schools were gradually learning about the program through the coordinators and presentations given by ACJ.

The accomplishments thus far with the peer education program created a confidence in the participants that the program would be successful in the future.

Events Following the Research Project – Continuation & Expansion of Program
In the months following ACJ's departure from Uganda, the peer educators wasted no time in implementing their plans for the program. The new school year began with a formal launch of the program at each school, including guests from the other peer education program. The executive members of the two schools met and developed a strategy to introduce peer education to the eight largest secondary schools around Fort Portal. Following the delivery of introduction letters prepared by the school administrations, teams of two peer educators (one each from School A and School B) visited a new school. The peer educators decided to formalize the program as "Peer Education Kabarole" and registered it as a community-based organization. A launch of Peer Education Kabarole was held with distinguished guests, previous trainers and delegates from all ten schools.

In the same year, the peer educators accepted offers of free airtime at two regional radio stations and provided adolescent-focused sexual health programming. At their schools, weekly presentations were given during assemblies. Peer educators from School B organized an outreach at two neighbouring primary schools and started the first primary school peer education programs. ACJ returned to conduct a follow-up on Peer Education Kabarole's accomplishments and while there she accepted the students' invitation to serve as Director of the program. That year, two training workshops were held for peer educators and teacher coordinators. The workshops gathered representatives from each school's club and utilized local experts and experienced peer educators to provide the training.

In 2010 and 2011, Peer Education Kabarole underwent further expansion to a total of 24 schools (seven primary and 17 secondary). Schools with the program have reported positive changes in students' attitudes and behaviours towards sexual health, as the program has helped to shift the schools' environments. The peer educator clubs have provided a vehicle to use existing expertise from previous school initiatives. In a number of the schools the clubs have received awards for their activeness. Interaction between the schools has been crucial for inspiring the peer educators and knowledge sharing. It was also helped to broker peaceful conduct between schools that previously had hostilities. Peer educators have been able to provide timely guidance in difficult circumstances, like the recent death of a student due to complications from an illegal abortion.

Training workshops at each school are now conducted in addition to the two yearly district-wide workshops. The Director continues her non-paid position

from Canada and has made return trips to Uganda. Two part-time Ugandan staff members manage the program in consultation with experienced peer educators and a board of trustees.

DISCUSSION

This study sought to determine what the most appropriate strategy is for conducting peer education among Ugandan secondary school students as a means of sexual health promotion. The study demonstrated how essential it was to involve the students in the creation of the program. The findings show how an intervention's design needs to be a suitable fit for the setting and for achieving the program's objectives. The program's training was successful because it was tailored to the program activities and was delivered directly to the students implementing the program. Even though during the course of the research project the peer education program was not yet formally introduced to the school, there is data from this project that helps address the second study purpose: how has the provision of a peer education program influenced students' understanding of sexual health? This study found that even in the early stages of this program, the peer educators had seen changes in themselves and were engaging in exactly the type of peer interactions that the program had been designed for.

This study followed recommendations from other research to involve adolescents in the design of sexual health education programs (Cook, 2010; Jacob et al., 2007b; Kim & Free, 2008; Nyanzi et al., 2001). This study is one of few where the peer education program was not only peer-led but also peer-designed (Hampton, Fahlman, Goertzen, & Jeffery, 2005). The students brought with them a clear understanding of the sexual health challenges facing adolescents and the current sexual health information environment, an important program design consideration (Kim & Free, 2008). These discussions served as an informal needs assessment and were crucial for informing the design of the program (Maticka-Tyndale & Barnett, 2010). The student participants were highly enthusiastic about having a greater role in helping their peers through creating a new initiative. This has been found elsewhere (Råssjö & Kiwanuka, 2010). They had a clear sense of what the opportunities were to intervene in students' lives and used that understanding to direct the program design and the training. The students' central role in designing the program sent a clear message to the school staff members about who was directing the course of the program and may have helped to avoid unwanted teacher control of the program (Campbell & MacPhail, 2002). Though work has been done looking at the type of people adolescents would like to receive sexual health guidance from (Cook, 2010), this study is one of the few that provided adolescents with the opportunity to select which teachers would provide assist the program.

The participants in this study designed a peer education program that was a

natural fit for their schools. The administrative structure of the program was a format familiar to them and found in other school clubs. Other peer education programs have taken this approach (Norton & Mutonyi, 2007). Creating a program that is student-led was a highly suitable approach for the school setting. From the researchers' observations and the participants' input, it would be unrealistic to expect teachers to have the time and motivation to sufficiently lead and sustain such a program. It is understandable why programs that rely heavily on teachers have had implementation challenges (Visser, 2005; Visser et al., 2004). Strategies to promote peer educator retention were not explicitly discussed by the participants. However, since the program is in a setting where there is an inherent flow of students graduating and new ones arriving, how to manage peer educator turnover has likely been considered even if not raised during data collection (Maticka-Tyndale & Barnett, 2010).

The messages that the participants wanted to convey through the program were consistent with other sources of sexual health information, but had the added advantage of providing much opportunity for discussions (Cook, 2010; Flaherty et al., 2005; Jones & Norton, 2007). The students identified information delivery methods that they felt would not work in their schools. Given the participants' emphasis on taking advantage of opportunities, it is not surprising that they didn't suggest a more structured, curriculum-based approach to programming (Visser, 2007). Instead, they considered their peer educator handbooks as a resource to designing their own activities. The use of the handbooks may also help to mitigate some of the differences between the two schools in the quantity of training provided.

Lastly, the participants emphasized the role of partnerships, including links with other school peer education clubs, as important to improving activities and the program's sustainability (Norton & Mutonyi, 2007).

The training provided to the peer educators was based on the program's objectives and the needs expressed by the peer educators. By emphasizing participatory learning methods, the training helped equip the peer educators with skills and confidence to successfully carry out their role (Campbell, 2005). Woven throughout the entire project were opportunities for peer educators to engage in dialogue exploring their beliefs, knowledge and experiences around sexual health education. On a number of occasions, the peer educators experienced disagreement and had to walk through the process of reaching consensus (Mutonyi et al., 2007).

A major advantage to the training was that it was provided directly to the students implementing the program. This avoided the cascade model of training where content is lost with each tier of training (Maticka-Tyndale & Barnett, 2010). As mentioned earlier, the teachers' hectic teaching schedules mean they

little time for extra responsibilities. It was much easier for them to support students who are already trained and motivated.

One aim of the training was to provide the peer educators with information that they were not getting from other sources. Their earlier conversations on information access helped to identify what the gaps were (Jones, 2012). From the training the peer educators felt better equipped to handle the challenging questions that they receive from their peers. Other studies reported that the training increased the credibility of peer educators among their peers (Mutonyi et al., 2007). In this study the peer educators discussed how their training, certificates, T-shirts and handbooks were all used as evidence to prove their qualifications as peer educators. Given the value placed on information from health care workers (Darabi et al., 2008), receiving training from health care workers may have caused "transferable credibility" so that the peer educators were now more trusted. A recommendation for future school-based peer education programs is to build in strategies that help the peer educators gain credibility in the schools. This includes public support from the school administration, creating awareness on the peer educators' training and using simple methods like T-shirts to identify the peer educators.

From the stories shared by the peer educators, their interactions with their peers had changed through their involvement in the peer education program. The peer educators' improved knowledge and attitudes meant they were providing a different type of advice than earlier, such as recommending condom use. They also used more detailed information to respond to their peers. The peer educators found that they were being approached by friends who now saw them as a good information source and not "'equally ignorant'" (Nobelius et al., 2010, p. 98). It is likely that the peer educators' interactions with students were situations where an adult would not have been consulted. Furthermore, some of these conversations were with out-of-school adolescents, showing the program's ability to connect to hard-to-reach populations.

The Role of Participatory Action Research

The use of participatory research methods was crucial to this project's outcomes. The peer education program resulted from the students' reflection, planning and action. The product was something they saw the value of, understood and had faith in. The student participants showed a strong sense of ownership over the program, seeing it as something they had created and had responsibility for. The students willingly sacrificed substantial time for their involvement in the research study, a testament to their belief in the work.

The friendly and free atmosphere that the researchers strove to create communicated a message that this was a space for the youth. The peer educators' experience with having open exchanges will hopefully help them

replicate that atmosphere in future peer education work.

Through their involvement in the research process, the peer educators gained assurance in their own capacity to lead change in their community (McIntyre, 2008). From early stages of the project, it was the peer educators who made decisions, such as what to discuss, when to meet and where. The researcher's brief absence further inspired confidence in their ability and collective commitment. Empowerment is another outcome linked to participatory approaches (Isikwenu et al., 2010). The teacher participants observed empowerment in students and encouraged it by supporting their decisions. The continuation and growth of the peer education program after the researchers' departure is clear evidence of ownership and empowerment. All participants in the study felt like they had benefited and that the community had received something.

Limitations

Given the small sample of schools involved in this research, the study's findings will not reflect all Ugandan schools. It is possible involving different types of schools from different locations could yield other results. However, given the wide scope of material covered in this study, it is plausible that in any setting there are components of this study that could apply. The study's student participants were selected for their positive attitudes toward sexual health prevention. If a different group of students had been chosen or different teachers had chosen the students, the study outcomes may have been different. The participants may have chosen to use a different program design or may have opted to not create a peer education program.

The data in this study does not include what happened after the health intervention had been implemented. It is possible that further research could show that the program design was not appropriate. However, the program's later continuation, expansion and the other successes reported in this study support the appropriateness of the program's design.

Conclusions

This study provides evidence on how an adolescent sexual health peer education program was designed and established, an area on which this is very little information published (Norton & Mutonyi, 2007). Using participatory action research, students and other participants designed and launched a peer education program in two secondary schools in western Uganda. Through formal and informal methods, the program aims to provide essential sexual health information and guidance to students. In the two years since the program was established, the students have continued it and expanded it into additional schools and the wider community. An evaluation of the program would provide further clarity on its accomplishments and support previous research.

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Appendix A. Information Letters and Consent Forms

Information letter for student peer educators

UNIVERSITY OF ALBERTA

Hello,

My name is Amanda Jones and I am a public health graduate student at the University of Alberta in Canada. I am working in Fort Portal to learn more about how you and your classmates get information about sexual health. I am also here to help you begin a peer education program. By being involved in the program you can help your classmates learn more about sexual health topics, such as HIV/AIDS, sexually transmitted infections and pregnancy.

Procedure: You will be asked if you are interested in participating in this study. You may choose to not participate. If you agree, you will be involved in a number of activities. Being involved in this project requires quite a bit of time.

1. Talking with me and some of your classmates about how you learn about sexual health, discussing what you think makes a good peer education program and then becoming a peer educator at your school. For 2-3 weeks you will work with me for 1-2 hours each week as we prepare for the peer education program.
2. You will then be trained as a peer educator and the peer education program will begin. The training will take about 20 hours and will occur on weekends when you are not in school.
3. You will then carry out peer education activities at various times in your school. The number and timing of these activities will be decided by you later.
4. After 8 weeks of the program, I will meet with you and other peer educators to find out what your experiences as a peer educator have been. This meeting will take 1-2 hours. The meeting place will be a private location that you can easily get to. I will be tape-recording your answers.

Benefits: By being involved in this study, you can help to improve not only your understanding of sexual health, but that of your classmates also.

Risks: Talking about sexual health may make some people uncomfortable. During the study you may choose not to answer any questions. You may also choose not to participate in the study any more. I will ask that all students in the group sessions agree to keep confidential (private) what others say. However, I cannot guarantee that other students will keep what you say confidential.

Confidentiality: To make sure that your answers are kept confidential, the following procedures will take place:

1. Your name will be changed into a code that only myself, my research team and my supervisor in Canada will have access to.

2. You have the right to not answer any questions that make you feel uncomfortable.
3. You can withdraw from the study at any time without any problems.
4. Only my research team, my supervisor in Canada and I will have access to the information that you provide.
5. The information you provide will be kept in a safe place to at least five years after the study is done. The information will be kept in a locked cabinet in the office of Dr. Lory Laing, Department of Public Health Sciences at the University of Alberta, Canada.

The information gathered for this study may be looked at again in the future to help us answer questions. If so, the ethics board will first review the study to ensure the information is used ethically.

If you have any questions or concerns you may contact me (Amanda Jones) at acjones@ualberta.ca or at 0779 149 150. Or you may contact Tom Rubaale, Project Manager Community Based field research. His phone number is 0782 856 865.

Information letter for parents of peer helper students

UNIVERSITY OF ALBERTA

Hello,

My name is Amanda Jones and I am a public health graduate student at the University of Alberta in Canada. I am working in Fort Portal to learn more about how your child and his/her classmates get information about sexual health. I am also here to help the students begin a peer education program. By being involved in the program your child can help their classmates learn more about sexual health topics, such as HIV/AIDS, sexually transmitted infections and pregnancy.

Procedure: Your child will be asked if he/she is interested in participating in this study. You and your child may choose to not have your child participate. If you and your child agree, your child will be involved in a number of activities. Being involved in this project requires quite a bit of time.

1. Your child will talk with me and some of his/her classmates about how they learn about sexual health, discussing what they think makes a good peer education program and then becoming a peer educator at their school. For 2-3 weeks your child will work with me and some of their classmates for 1-2 hours each week as we prepare for the peer education program.
2. Your child will then be trained as a peer educator and the peer education program will begin. The training will take about 20 hours and will occur on weekends when your child is not in class or school.
3. Your child will then carry out peer education activities at various times in the school. The number and timing of these activities will be decided later by your child and his/her classmates.
4. After 8 weeks of the program, I will meet with your child and other peer educators to find out what your child's experiences as a peer educator have been. This meeting will take 1-2 hours. The meeting place will be a location that your child can easily get to. I will be tape-recording your answers.

Benefits: By being involved in this study, your child can help to improve not only your understanding of sexual health, but that of his/her classmates also.

Risks: Talking about sexual health may make some people uncomfortable. During the study your child may choose not to answer any questions. You and your child may also choose not to participate in the study any more. I will ask that all students in the group sessions agree to keep confidential (private) what others say. However, I cannot guarantee that other students will keep what your child says confidential.

Confidentiality: To make sure that your child's answers are kept confidential, the following procedures will take place:

1. Your child's name will be changed into a code that only myself, my research team and my supervisor in Canada will have access to.
2. Your child has the right to not answer any questions that make your child feel uncomfortable.
3. Your child can withdraw from the study at any time without any problems.
4. Only my research team, my supervisor in Canada and I will have access to the information that your child provides.
5. The information your child provides will be kept in a safe place to at least five years after the study is done. The information will be kept in a locked cabinet in the office of Dr. Lory Laing, Department of Public Health Sciences at the University of Alberta, Canada.

The information gathered for this study may be looked at again in the future to help us answer questions. If so, the ethics board will first review the study to ensure the information is used ethically.

If you have any questions or concerns you may contact me (Amanda Jones) at acjones@ualberta.ca or at 0779 149 150. Or you may contact Tom Rubaale, Project Manager Community Based field research. His phone number is 0782 856 865.

Information letter for teacher/staff focus groups and/or interviews

UNIVERSITY OF ALBERTA

Hello,

My name is Amanda Jones and I am a public health graduate student at the University of Alberta in Canada. I am working in Fort Portal to learn more about how students at your school get information about sexual health. I am also here to help begin a peer education program. By being involved in the program you can help the students at your school learn more about sexual health topics, such as HIV/AIDS, sexually transmitted infections and pregnancy.

Procedure: You will be asked if you are interested in participating in this study. You may choose to not participate. If you agree, you will be involved in the following activities. This includes talking with me and some of your colleagues about what you think makes for a good peer education program. After the peer education program has been running for about 8 weeks, I will meet with you and your colleagues ask your views on the program. All of these meetings will take 1-2 hours. The meeting place will be a private location that you can easily get to. I will be tape-recording your answers.

Benefits: By being involved in this study, you can help to improve students understanding of sexual health.

Risks: Talking about sexual health may make some people uncomfortable. During the interviews you may choose not to answer any questions. You may also choose not to participate in the interviews any more I will ask that all participants in the group sessions agree to keep confidential (private) what others say. However, we cannot guarantee that other participants will keep what you say confidential.

Confidentiality: To make sure that your answers are kept confidential, the following procedures will take place:

1. Your name will be changed into a code that only myself, my research team and my supervisor in Canada will have access to.
2. You have the right to not answer any questions that make you feel uncomfortable.
3. You can withdraw from the study at any time without any problems.
4. Only my research team, my supervisor in Canada and I will have access to the information that you provide.
5. The information you provide will be kept in a safe place to at least five years after the study is done. The information will be kept in a locked cabinet in the office of Dr. Lory Laing, Department of Public Health Sciences at the University of Alberta, Canada.

The information gathered for this study may be looked at again in the future to help us answer questions. If so, the ethics board will first review the study to ensure the information is used ethically.

If you have any questions or concerns you may contact me (Amanda Jones) at acjones@ualberta.ca or at 0779 149 150. Or you may contact Tom Rubaale, Project Manager Community Based field research. His phone number is 0782 856 865.

Consent form for peer educator and student focus groups

UNIVERSITY OF ALBERTA

Title: *Exploring Ugandan secondary school students' sexual health education needs and developing school-based sexual health interventions through participatory action research*

Part 1: Research Information

Principal Investigator: Amanda Jones, University of Alberta, Canada, acjones@ualberta.ca

Supervisor: Dr. Lory Laing, University of Alberta, Canada, +1 780 492 6211

Local Mobile: 0779 149 150

Part 2: Consent of Subject

	Yes	No
Do you understand that you have been asked to participate in focus groups (groups interviews) and/or individual interviews?		
Have you read and received a copy of the attached Information Sheet?		
Do you understand the benefits and risks involved in taking part in this research study?		
Have you had an opportunity to ask questions and discuss this study?		
Do you understand that you are free to withdraw from the study at any time, without having to give a reason and without affecting your marks in school or access to services at a health care facility?		
Has the issue of confidentiality been explained to you?		
Do you understand who will have access to the information you provide?		

Part 3: Signatures

This study was explained to me by:

_____

Date (dd/mm/yyyy):: _____

I agree to take part in this study. Yes ☐ No ☐

Name of Research Participant (*print*): _____

Signature (or X) of Research Participant: _____

Name of Parent or Guardian if Research Participant is under 18 years of age:
_____

Signature (or X) of Parent or Guardian if Research Participant is under 18 years of age:
_____

Witness: _____

Witness Signature (or X): _____

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Signature of Investigator or Designee:
_____

Date Consent Received (dd/mm/yyyy): _____

The Information Sheet must be attached to this Consent Form and a copy given to the research subject

Any concerns or questions about participant's rights regarding this study can be forwarded to the Health Research Ethics Board at the University of Alberta in Canada at +1 780 492 0302 or Tom Rubaale in Fort Portal, Uganda 0782 856 865.

Consent form for parents of students participating in peer educator and student focus groups

UNIVERSITY OF ALBERTA

Title: *Exploring Ugandan secondary school students' sexual health education needs and developing school-based sexual health interventions through participatory action research*

Part 1: Research Information

Principal Investigator: Amanda Jones, University of Alberta, Canada, acjones@ualberta.ca

Supervisor: Dr. Lory Laing, University of Alberta, Canada, +1 780 492 6211

Local Mobile: 0779 149 150

Part 2: Consent of Subject

	Yes	No
Do you understand that your child has been asked to participate in focus groups (groups interviews) and/or individual interviews?		
Have you read a copy and received a copy of the attached Information Sheet?		
Do you understand the benefits and risks involved in your child's taking part in this research study?		
Have you had an opportunity to ask questions and discuss this study?		
Do you understand that your child is free to withdraw from the study at any time, without having to give a reason and without affecting your child's marks in school or access to services at a health care facility?		
Has the issue of confidentiality been explained to you?		
Do you understand who will have access to the information your child provides?		

Part 3: Signatures

This study was explained to me by:

_____

Date (dd/mm/yyyy):: _____

I agree to having my child take part in this study. Yes ☐ No ☐

Name of Research Participant (*print*): _____

Signature (or X) of Research Participant: _____

Name of Parent or Guardian if Research Participant is under 18 years of age:

_____

Signature (or X) of Parent or Guardian if Research Participant is under 18 years of age:

_____

Witness: _____

Witness Signature (or X): _____

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Signature of Investigator or Designee:

_____

Date Consent Received (dd/mm/yyyy): _____

The Information Sheet must be attached to this Consent Form and a copy given to the parent of the research subject

Any concerns or questions about participant's rights regarding this study can be forwarded to the Health Research Ethics Board at the University of Alberta in Canada at +1 780 492 0302 or Tom Rubaale in Fort Portal, Uganda 0782 856 865.

Consent form for teacher/staff focus groups and/or interviews

UNIVERSITY OF ALBERTA

Title: Exploring Ugandan secondary school students' sexual health education needs and developing school-based sexual health interventions through participatory action research

Part 1: Research Information

Principal Investigator: Amanda Jones, University of Alberta, Canada, acjones@ualberta.ca

Supervisor: Dr. Lory Laing, University of Alberta, Canada, +1 780 492 6211

Local Mobile: 0779 149 150

Part 2: Consent of Subject

	Yes	No
Do you understand that you have been asked to be in a focus group (group interview) and/or individual interview?		
Have you read and received a copy of the attached Information Sheet?		
Do you understand the benefits and risks involved in taking part in this research study?		
Have you had an opportunity to ask questions and discuss this study?		
Do you understand that you are free to withdraw from the study at any time, without having to give a reason and without affecting your marks in school or access to services at a health care facility?		
Has the issue of confidentiality been explained to you?		
Do you understand who will have access to the information you provide?		

Part 3: Signatures

This study was explained to me by:

_____

Date (dd/mm/yyyy):: _____

I agree to take part in this study. Yes ☐ No ☐

Name of Research Participant (*print*): _____

Signature (or X) of Research Participant: _____

Witness: _____

Witness Signature (or X): _____

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Signature of Investigator or Designee:

_____

Date Consent Received (dd/mm/yyyy): _____

The Information Sheet must be attached to this Consent Form and a copy given to the research subject

Any concerns or questions about participant's rights regarding this study can be forwarded to the Health Research Ethics Board at the University of Alberta in Canada at +1 780 492 0302 or Tom Rubaale in Fort Portal, Uganda 0782 856 865.

Appendix B. Data Collection Tools

FOCUS GROUP & INTERVIEW GUIDES

Student Sexual Health Education Experiences

Question 1:
How do students in Uganda learn about sexual health?

- Prompt: How do students in Uganda learn about HIV/AIDS, sexually transmitted infections (STIs), sex and pregnancy? What are ways that they get this type of information?

Question 2:
When you learn about sexual health, where do you get this information?

- Prompt: How do you get information about sexual health? OR What are ways that you find out information about sexual health? What have been your experiences getting information about sexual health?

Question 3:
How do your friends and classmates assist you in learning sexual health information?

- Prompt: What do your friends tells you about sex and sexual health?

Question 4:
What have you learned about sexual health through these sources?

- Prompt: What sexual health topics are discussed?

Question 5:
When you need to get information about things related to sex, where do you go? Who do you speak with?

- Prompts: What are places that you go to or people that you speak with?

Question 6:
What information sources are available to you and your classmates that you choose not to use?

- Prompts: What information sources do you avoid (stay away from)?

Question 7:
When you learn information about sexual health, how do you decide if information is correct?

- Prompt: How do you decide if the information is correct? Which information sources do you think have good, trustworthy information about sexual health?

Question 8:
What information inspires you to behave in a certain way?

- Prompt: What information sources have an affect on you, cause you to think and live your life differently? In what ways does the information influence your attitudes toward sexual health or the way you behave?

Question 9:

What sexual health information do you and other students in your school need to learn about?

- Prompt: What kind of sexual health information do students need to hear? What information is missing?

Question 10:
How should sexual health information be provided to students at your school?

- Prompt: In what ways should sexual health information be given to students at your school? What should help them to learn, understand and practice the material?

Conclusion:
What do you think are the most important things students in your school need to find out about sexual health?

Student Peer Education Program Development
Question 1:
Which of these sexual health topics should be discussed in the peer education program?

- Probe: Which topics should be discussed first?
- Probe: Which topics should be discussed later?

Question 2:
What peer education activities would be most helpful to students?

- Prompt: What would help students to learn about sexual health? How should peer educators provide information to the students? How should students be taught, or learn about …(give examples from above)

Question 3:
What is the best way to share sexual health information with students who normally do not want to hear about this topic?

Question 4:
How should the peer educators work together to provide these activities?

- Prompt: What do the peer educators need to do to be able to provide peer education to students?
- Probe: How should activities be planned? Should there be a regular meeting time? How should the peer educators be organized?

Question 5:
What resources, such as supplies, literature, meeting space, do you think will be needed for the peer education program?

Question 6:
What teacher(s) would you and the other students feel comfortable discussing sexual health with?

- Prompt: Who to you feel comfortable asking sexual health questions of? Which teacher has a reputation of being trustworthy?

Question 7:
How can this teacher assist with the peer education program?

- Prompt: In what ways can this teacher be involved? How would they help with the program?

Question 8:
How can the teachers and staff at the school support the peer education program?

- Prompt: What should the teachers and staff do to help make the peer education program a success? How can they help the peer educators?

Question 9:
What will make you feel like the peer education program is achieving something good?

- Prompt: What will make the peer education program a success? What do you want to see happen in the peer education program?

Question 10:
In your perspective, what must happen in order to make this peer education program successful? (give examples from previous answers…Is there anything more that should be done for the program to be successful?)

Question 11:
When we meet together with the boys/girls, what are some things that you feel are most important to discuss?

Conclusion:
Do you have any other comments on sexual health information and peer education?

Student Peer Education Program Development – Combined Session
Question 1:
What do you think are the most serious sexual health problems for students at your school?

Question 2:
How does pregnancy affect students at your school?

Question 3:
What experiences have you and your classmates had when asking the school's teachers, counselors, nurses and staff about sexual health?

Question 4:
Ask the girls: What can the boys do to assist you as students and peer educators?
Ask the boys: What can the girls do to assist you as students and peer educators?

Question 5:
How should the boys and girls peer educators conduct themselves with each other?

Question 6:

How can you as peer educators earn the respect and trust of the students at your school?

Additional Questions
Question 7:
What are some bad behaviours at your school that you would like to see improved?

Question 8:
How do parents influence students' sexual health?
- Probe: Do they have a positive or negative influence?

Question 9:
When you talk about sex and sexual health with your friends and classmates, what do you talk about?
- Probe: How do you advise your friends about sexual health?

Question 10:
How do you decide if sexual health information is correct or wrong?

Question 11:
What information sources are available to students at your school, but students do not use?

Conclusion:
Do you have any other comments on sexual health information and peer education?

Student Peer Education Program Development – Combined Session
Question 1:
How should the peer educators work together to provide these activities?
- Prompt: What do the peer educators need to do to be able to provide peer education to students?
- Probe: How should activities be planned? Should there be a regular meeting time? How should the peer educators be organized? What will roles will be on the executive? How are these roles defined? How are people assigned the roles?

Question 2:
How should the peer educators conduct themselves?
- Probe: What behaviours are not suitable for peer educators?
- Probe: What behaviours are not permitted at your school that peer educators should not be engaged in?
- Probe: What behaviours are uncertain – may be right, may be wrong, depends on who you talk to and what the situation is.
- Amanda's comments: Some things will be very clear, other things less clear. Have to decide what to do about these grey areas.
- Probe: Should we create a code of conduct that peer educators will commit to, sign and follow.

Question 3:
How should the peer education training be provided?

- Probe: When should it be held? Where?

Conclusion:
Do you have any other comments on the peer education program?

Teacher Peer Education Program Development
Question 1:
How do students at this generally get information about sexual health?

- Prompt: What sources of sexual health information do students use?
- Probe: What sources do they prefer to use?

Question 2:
What do you think are the most common sexual health problems for students at your school?

Question 3:
Which sexual health topic(s) should be discussed in the peer education program?

- Prompt: What issues should the peer educators talk about with the students?
- Probe: Which topics should be discussed first? Which topics should be discussed later?

Question 4:
What peer education activities would be most helpful to students?

- Prompt: What would help students to learn about sexual health? How should peer educators provide information to the students?
- Probe: Which activities would not be successful at the school? Which would be very difficult to execute?

Question 5:
How should the peer educators work together to provide these activities?

- Prompt: What do the peer educators need to do to be able to provide peer education to students?
- Probe: How are student clubs at your school normally organized?

Question 6:
How can the teachers and staff at the school support the peer education program?

- Prompt: What should the teachers and staff do to help make the peer education program a success? How can you help the peer educators?

Other Questions:

- Is there any thing else you would like to say about sexual health education at this school?

Conclusion:
Does anyone have any final comments?

Teachers Peer Education Program Assessment

Question 1:
What type of impact do you see the peer education program has had on the peer educators and on students?

Question 2:
What do you think was been very good about the peer education program?

Question 3:
What do you think has not been very good about the peer education program?

Question 4:
What makes you feel like the program would be successful?

Question 5:
What partnerships do you feel are most important for the program to be successful?

Question 6:
What type of interactions have you had with the peer education program and the peer educators?

Question 7:
When you've discussed this program with other people, what have the conversations been about?

Question 8:
What challenges do you expect to the peer educators to encounter? How can the teachers support the peer educators in these challenges?

Question 9:
What can you and other teachers do to help start this program in different schools?

Closing:
Do you have any final comments about any of the topics we've discussed?

Peer Educator Peer Education Program Assessment

Question 1:
What do you think was been very good about the peer education program?

Question 2:
What do you think has not been very good about the peer education program?

Question 3:
If you could change anything about the training, what would you change?

Question 4:
If you could change anything about how the peer education program is organized, what would you change?

Question 5:
Has this peer education program influenced your understanding of sexual health? If yes, please explain.

Question 6:
What changes do you see in yourself?

Question 7:
Are there any changes in your sexual health behaviour that you plan to make in the future? If yes, what would these be?

Question 8:
How does being a peer educator influence your sexual health choices? What did you do with the information that you have learned?

Question 9:
Do you feel like the peer education program is "yours"? What makes you feel this way?

Question 10:
What are you most looking forward to about the future of peer education program?

Question 11:
What makes you feel like the program would be successful?

Question 12:
What do you plan to do to make the program successful?

Question 13:
What challenges do you expect to encourage as peer educators? How will you go about these challenges?

Question 14:
What partnerships do you feel are most important for the program to be successful?

Question 15:
When you've discussed this program with other people, what have the conversations been about?

- Probe: What type of questions have people been asking?
- Probe: Have you started any conversations about sexual health?
- Probe: Where did these conversations occur and with which people?

Question 16:
What do you think should be done to start this program in different schools?

Question 17:
What can you and other peers do to help start this program in different schools?

Question 18:
What do you think will make it successful in other schools?

Closing:
Do you have any final comments about any of the topics we've discussed?

Deputy Head Master Interview
Question 1:
How do students at this school generally get information about sexual health?

- Prompt: What sources of sexual health information do students use?
- Probe: What sources do they prefer to use?

Question 2:
What do you think are the most common sexual health problems for students at your school?

Question 3:
What peer education activities would be most helpful to students?

- Prompt: What would help students to learn about sexual health? How should peer educators provide information to the students?
- Probe: Which activities would not be successful at the school? Which would be very difficult to execute?

Question 4:
What type of impact do you see the peer education program has had on the peer educators and on students?

Question 5:
What do you think was been very good about the peer education program?

Question 6:
What do you think has not been very good about the peer education program?

Question 7:
What makes you feel like the program would be successful?

Question 8:
What partnerships do you feel are most important for the program to be successful?

Question 9:
What type of interactions have you had with the peer education program and the peer educators?

Question 10:
When you've discussed this program with other people, what have the conversations been about?

Question 11:

What challenges do you expect to the peer educators to encounter? How can the teachers support the peer educators in these challenges?

Question 12:
What can you and other teachers do to help start this program in different schools?

Conclusion:
Do you have any final comments about any of the topics we've discussed?