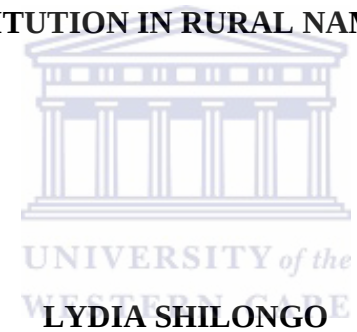
UNIVERSITY OF THE WESTERN CAPE

Faculty of Community and Health Sciences

KNOWLEDGE, BELIEFS AND PRACTICE ABOUT SEXUAL CONCURRENT PARTNERING AMONGST EDUCATION STUDENTS AT A TERTIARY INSTITUTION IN RURAL NAMIBIA.



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A mini-thesis submitted to the Faculty of Community and Health Science of the University of the Western Cape in partial fulfillment of the requirement for the degree of Masters in Public Health.

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KEY WORDS

HIV/AIDS

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Concurrent partnering

Sub-Saharan Africa

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ABSTRACT

Background: In an attempt to avert the HIV/AIDS epidemic, more research has been conducted to determine why the epidemic is more devastating in Southern African countries than anywhere else in the world. Heterosexual transmission is believed to be driving the epidemic in many sub-Saharan African countries. Recent research has indicated that having concurrent sexual partners is one of the factors contributing to the fast spread of HIV transmission in this region.

Aim: This study aimed to describe the level of knowledge about the risk of HIV transmission posed by concurrent sexual partnering as well as beliefs and practices about concurrent partnering among education students at the Rundu College of Education (RCE) in the Kavango region of Namibia. Concurrent partnering was defined as a situation where a person has more than one sexual partner at the same time, during the twelve months preceding the study.

Methodology: There were 374 students registered for the 2009 academic year at RCE. All registered students were targeted for the study and 278 completed the questionnaire**,** yielding a response rate of 73.4%. The survey described prevalence of concurrent partnering, knowledge about risk posed by concurrent partnering as well as beliefs about concurrent partnering.

Data collected was analyzed using Statistical Programs for Social Sciences (SPSS). Descriptive statistics were used to describe the prevalence of sexual concurrency, knowledge about risk posed by concurrent partnering and beliefs about concurrent partnering among the study population. Frequency of concurrency was cross tabulated

with demographic variables like age group, sex and year of study as well as by knowledge and beliefs about sexual concurrent partnering.

Results: The prevalence of concurrency in this sample was 9.4% with significantly higher prevalence (13.0%) among male students compared to females (5.3%). Males reported knowledge levels of 85.7% to 88.4% while females reported knowledge levels of 89.3% and 93.1%. More men (28.8%) than women (10.7%) agreed with the statement that sexual concurrency is a sign of manhood (p=0.00). Further, more male students (27.9%) compared to female students (6.1%) agreed with the statement that sexual concurrency is part of African culture and should continue (p=0.00).

Conclusion: The study results show a high knowledge of risk posed by concurrency. It further reveals that a high number of people believe that concurrency is acceptable especially among men.

HIV prevention activities promoting partner reduction and mutual fidelity should be implemented**.** Such activities should focus more on behavior change rather than on information giving. There is a need to create platforms for community members to debate on cultural beliefs about sexual concurrency.

DECLARATION

I declare that *Knowledge, beliefs and practices about concurrent partnering among Education students at a tertiary institution in rural Namibia* is my own work, that this work has not been submitted for any degree or examination in any university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Lydia Shilongo March 2010

Signed……

DEDICATION

This work is dedicated to my beloved parents, my late father Mr. Simeon Shoitwi Shilongo and my late mother Mrs. Natalia (Mukwaudimbe) Abrahams who laid the foundation of my education. I would also like to dedicate my work to my four children and husband, who endured my absence and missed my love and support during my study.

ACKNOWLEDGEMENT

The support and interest of the Rundu College of Education (RCE) management and students is greatly appreciated, without their cooperation and enthusiasm this study would not have been possible. I also wish to extend special thanks to my supervisor and co supervisor Dr Brian Van Wyk and Dr Naeema Abrahams for their continuous support and valuable input in this study.

Many thanks go to my friends and colleagues Selma N. Kalipi, Patricia W. Komu and Terthu K. Ngodji who supported me and gave me courage throughout my study period. I appreciate greatly the care and prayers of my family and former colleagues in Social Marketing Association (SMA) for their support and courage.

LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
BETD	Basic Education Teacher's Diploma
C&T	Counseling and Testing
HIV	Human Immuno-deficiency Virus
KAPB	Knowledge, Attitude, Practice and Behavior
MFMC	My Future My Choice
MoHSS	Ministry of Health and Social Services
MSM	Men who have sex with Men
NDHS	Namibia Demographic Health Survey
NLT	NawaLife Trust
NRCS	Namibia Red Cross Society
PSI	Population Service International
PMTCT	Prevention of Mother to Child Transmission of HIV
RCE	Rundu College of Education
RHTC	Regional Health Training Centre
SADC	Southern Africa Development Community
SPSS	Statistical Program for the Social Science
STI	Sexually Transmitted Infections
UNAIDS	Joint United Nations Program on HIV/AIDS
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Program

USAID	United States Agency for International Development
USA	United States of America
VCT	Voluntary Counseling and Testing
WHO	World Health Organization

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CHAPTER 1: INTRODUCTION AND PROBLEM STATEMENT

1.1 Background

Human Immuno-deficiency Virus (HIV) continues to pose a threat to health and socio-economic conditions in the sub-Saharan Africa region and especially in Southern African countries. The Joint United Nations Program on HIV/AIDS [UNAIDS] (2007), reported that 68% of all people living with HIV globally are in sub-Saharan Africa. The same report also indicated that 76% of all AIDS deaths in 2007 occurred in this region. Furthermore, Southern Africa accounts for 35% of all people living with HIV/AIDS globally (UNAIDS, 2007). The same report indicated that in 2007, 32% of all new HIV infections globally occurred in Southern African countries.

Namibia is one of the countries where the HIV/AIDS epidemic is generalized[1] and heterosexual transmission is the predominant mode of spread. The most recent data estimate that about 230 000 people were infected with HIV in Namibia in 2006, while 85 000 children were orphaned due to AIDS (WHO/UNAIDS/UNICEF, 2008). In order to prevent further spread of infections, prevention programs like condom promotion and distribution, treatment of other sexually transmitted infections (STI), voluntary counseling and testing (VCT) and prevention of mother to child transmission (PMTCT) among other programs have been implemented countrywide. The Ministry of Health and Social Services [MoHSS] in Namibia has been conducting sentinel HIV seroprevalence surveys among pregnant women aged 15-49 years since 1992 to monitor the trend of

[1] An HIV epidemic is generalized if the prevalence rate in the general population exceeds 1% (UNAIDS 2005). A generalized epidemic is primarily driven by risky sexual behavior in the general population.

infections and assess the effectiveness of prevention programs. In 2008, the country reported an infection rate of 17.8% among pregnant women attending antenatal care; which made Namibia one of the countries with the highest infection rate in Southern Africa that year (MoHSS, 2008a). This is a decrease from a prevalence rate of 22.0% reported in 2002 when it reached a peak before it decreased to 19.7%, 19.9% and 17.8% in 2004, 2006 and 2008 respectively.

Although the prevalence rate seems to have stabilized since 2002, there has been no significant reduction in HIV prevalence rate subsequently raising concerns as to whether prevention strategies being currently implemented have a profound impact in reducing the epidemic at population level (MoHSS, 2008a). Further analysis of the 2008 report indicates that the highest (27.0%) infection rate was recorded among pregnant women aged between 30 and 34 years in that same year. The same report also indicates variation of infection rates among different age groups as well as different regions across the country. This may be indicative of differences in behavioral and biological determinants of HIV infection in the country.

Since the discovery of HIV in 1983, a biological cure is yet to be discovered. The epidemic is primarily driven by sexual transmission and behavior change is thus an important area of prevention (UNAIDS/WHO, 2007). Unsafe sexual practices and specifically concurrent sexual partnering whereby a person has more than one sexual partner at the same time has been identified as one of the major drivers of the epidemic (Halperin & Epstein, 2004; SADC, 2006; Mah & Halperin, 2008). The situation is of

particular concern within the context where condoms are not consistently used (Mah & Halperin, 2008). The main factor identified to be fueling the epidemic in Southern African countries is its high levels of concurrent sexual partnerships coupled with insufficient correct condom use combined with low level of male circumcision (Halperin & Epstein, 2004; SADC, 2006; Halperin & Epstein, 2007). The authors further state that concurrency has a potential to increase the speed at which HIV spreads as well as its persistence in a population.

Firstly, when a person has more than one partner at the same time, it could increase the likelihood of the virus spreading to many people in a short time. Secondly, viral load increases soon after seroconversion (2-3 months of infection) and decreases thereafter, making the infected person more infectious during the seroconversion stage. The more partners an infected person has at this time of high infectivity, the more people are likely to get infected (Halperin & Epstein, 2007; Mah & Halperin, 2008; Mah, 2008; Population Service International [PSI], 2008). Lastly, in generalized epidemics, most HIV transmission occurs within regular trusting and concurrent relationship, whereby condoms are not used consistently (Potts *et al.*, 2008; Gluckstern & Christen, 2008).

2. Study setting

The Republic of Namibia covers a total area of about 824 000 square kilometers with a population of 1 830 330 people (National Planning Commission, 2002). The same report indicated that over sixty percent of the population lives in rural areas, mainly in the

northern part of the country. The report further indicates that forty- three (43) percent of the population is under the age of 15 years while four (4) percent is over the age of 65.

The country is divided into 13 political regions, 102 political constituencies and 34 health districts (MoHSS, 2008b). Kavango region is situated in the North Eastern part of Namibia and one of the poor regions in the country as reported in the Namibia Demographic and Health Survey [NDHS] of 2006/7 (MoHSS, 2008b). The same report indicated that 46.3% of the population in the region was in the lowest wealth quintile. About 34.5% of women aged 15-49 and 51.5% of men in the same age group were reported as being employed in 2006/7. These figures are lower compared to the national employment rates of 44.4% and 62.4% among women and men respectively (MoHSS, 2008b).

This study was conducted at Rundu College of Education (RCE), situated in Rundu Rural East constituency, in Rundu health district in the Kavango region. The constituency has a population of 42 764 people with an annual growth rate of 2.6% (National Planning Commission, 2002). Rundu Rural East constituency is a multi-ethnic area with Rukavango speaking people being in the majority. There are 20 state and 6 private health facilities in Rundu health district.

3. Problem statement

Regional HIV prevalence rates for Kavango region are not available. however, in 2008 an urban clinic of Rundu situated about 3km from RCE has reported a prevalence rate of

18.8% which was slightly higher than the national rate of 17.8% (MoHSS, 2008a). Further, the NDHS indicated that Kavango region reported an increase in multiple partners among men from 7% in 2000 to 13% in 2006 compared to the national rate of 16.1% (MoHSS, 2008b). The same report indicated that the highest rate of multiple partnering in Namibia was reported among men aged 20-24 at 25.0% while women of the same age group reported a rate of 4.9%. These figures revealed a high prevalence rate of multiple partnering among young adults, hence the need for this study to describe concurrency and its prevalence rate among the study population.

To date, HIV prevention efforts have had little success in significantly decreasing the number of new HIV infections in Sub-Saharan African countries. Literature indicate that countries such as Uganda, Kenya (Egesah, Voeten, Meester, & Habbema, 2000; Halperin & Epstein, 2007; UNAIDS, 2007) Zimbabwe (UNAIDS, 2007) Tanzania (Halperin & Epstein, 2007) showed decline in HIV incidences mainly due to a reduction in risky sexual behavior. These findings suggest a need to shift priorities from the current prevention strategies to the promotion of partner reduction and monogamous relationships.

A study done in Namibia in 2004 by NawaLife Trust (2004), (cited in USAID, 2008) revealed that men reported a rate of multiple partnering of between 6% and 20% while women reported a rate of between 1% and 5% in a period of 12 months. Similarly, the Namibia Demographic and Health Survey (NDHS) of 2006/7 revealed a rate of multiple partnering of up to 16.1% among men aged 15-49 while women of the same age group reported a rate of 2.5% (MoHSS, 2008b). Both studies indicated that multiple partnering is common in Namibia. However, none of these studies indicated whether such multiple

partnerships were concurrent or serial. Therefore, this study aims to determine the magnitude of concurrent partnering and beliefs about it as well as knowledge among the study population.

4. Study purpose

The purpose of the study is to provide basic information about knowledge, beliefs and practice of concurrency among the study population. The information will assist the Ministry of Health and Social Services of Namibia as well as other non-governmental organizations and the private sector in designing effective messages, policies and interventions aimed at reducing HIV transmission among the population.

5. Thesis outline

Chapter 1: Introduction and problem statement

Chapter 2: Literature review

Chapter 3: Research methodology

Chapter 4: Results

Chapter 5: Discussion and limitations of the study

Chapter 6: Conclusion and recommendations

CHAPTER 2: LITERATURE REVIEW

This chapter presents sexual concurrency and its relevance in HIV prevention. Literature about studies conducted on sexual concurrence is also presented in this chapter.

2.1 Sexual concurrent partnering

Concurrent partnering or sexual concurrency has been simply defined as a situation where sexual partnerships overlap in time; either a person has two or more partnerships at the same time or starts another partnership before the other terminates (Kretzschmar & Morris, 1996; Morris & Kretzschmar, 1997; Mah & Halperin, 2008). Concurrency is different from serial/sequential monogamy whereby a person has one partner at any given time with no overlapping with subsequent partners. With serial/sequential monogamy, a person may have several sexual partners in a specific period but such partnerships do not overlap in time. Multiple partnerships on the other hand are a situation of having more than one partner in a specified period regardless of whether such relationships are concurrent or serial/sequential. Since sexual concurrency occurs within multiple partnering, phrases 'multiple and concurrent partnerships' are often used as synonym for concurrent sexual partnerships (UNAIDS, 2009). Further, sexual concurrency is often mistaken with multiple partnering or serial/sequential monogamy. At times, the two terms are referred together as multiple concurrent partnering which does not distinguish sexual concurrency from multiple partners (SADC, 2006; Lurie & Rosenthal, 2009).

Although a number of studies have been conducted on multiple partnering (Simelane, 2005; USAID, 2008; MoHSS, 2008b) not many have identified the number of relationships that overlap in time and therefore constitute concurrency (Parker, Makhubele, Ntlabati & Connolly, 2007; Xu, Luke & Zulu, 2007; Mah, 2008). In most studies conducted in Namibia, participants were asked to report the number of sexual partners they had in a specified period and those who reported more than one partner were classified as being in concurrent partnerships (PSI, 2007; MoHSS, 2008b; USAID Namibia, 2008). The problem with this reporting is that it includes partnerships that are both multiple and concurrent and therefore does not distinguish between the two.

In a recent article by Lurie and Rosenthal (2009), it has been revealed that there has been no consensus in defining and measuring concurrency among different researchers, thus making it difficult to compare studies. The authors suggest that in order to effectively measure sexual concurrency, data about the number of partners a person had, type of partner, duration of each partnership, first and last day of sexual intercourse, frequency of sexual intercourse and condom use should be collected. This, as the authors argue further, makes it is difficult to collect data on concurrency since participants may not remember all thus, self reported data may not be entirely reliable. The authors have identified three different methods used in different researches to define and measure sexual concurrency. The first method as identified by the authors, researchers ask study participants to recall the number of partners they had in a specific period. Participants who report two or more partners would be reported as being in concurrency. in the second method identified, researchers ask study participants to report relationships they had while still engaged in

another relationship. Participants who report such relationships would be classified as being in concurrency. The third method, researchers ask study participants to recall the first and last time they had sex with each partner they had in a specified period of time in order to determine overlapping.

In an attempt to standardize the definition of sexual concurrency, UNAIDS has recently recommended in a meeting held in Nairobi, Kenya, that concurrency be defined as "Overlapping sexual partnerships where sexual intercourse with one partner occurs between two acts of intercourse with another partner" (UNAIDS, 2009:4).

This study will use the second method above to not only determine the number of participants who reported more than one partner in a specific period but also the number of those who had more than one partner at the same time.

2.2 Prevalence of multiple partnering

Having multiple partners is an old practice dating back from old generations (Embry, 2006; Syed, 2007). The practice is not only common in Africa but has also been reported in Europe and other parts of the world (Gorbach, Stoner, Whittington & Holmes, 2002). From the number of studies that measured multiple partnering prevalence rates of between 35% and 20% among males and between 25% and 4.9% among females. The 1992 Youth Risk Behavior Survey in USA revealed that 15% of female and 35% of male adolescents and young adults aged 14-22 years reported having had multiple partners in a period of 3 months (Santelli, Brener, Lowry, Bahtt & Zabin, 1998).

The practice has also been reported in countries such as Zimbabwe, (Chingandu, 2007); Tanzania, Kenya, Uganda, Lesotho and Zambia (Halperin & Epstein, 2004) and particularly among male young adults.

In Swaziland, a study on HIV/AIDS Knowledge, Attitude and Risky Sexual Behavior was conducted among third year teacher students at the Nazarene's college (Simelane, 2005). The participants were asked to report the number of partners they had in a period of 12 months. The results indicated that 23.8% of the male students reported two or more partners in 12 months compared 8.5% females.

In neighboring Botswana, a study on Multiple Concurrent Partnerships was conducted among Men and Women aged 15-34 (PSI, 2007). The participants were also asked to report the number of partners they had in 12 months. The results revealed that 33% of males reported more than one partner in a period of 12 months while women reported a rate of 17%.

In Namibia, a study conducted in 6 towns by NawaLife Trust [NLT][2] (2008), (as cited by USAID 2008), indicated that men commonly have more than one sexual partner compared to women. The survey was conducted in 10 km catchment areas of HIV/AIDS focal hospitals and a sample of 300 individuals was randomly selected using random household sampling. Participants were asked to report the number of partners they had in a specified period and therefore did not specify whether participants were in concurrent partnering or not. The highest number of multiple partnering was reported among men at 20% in Rehoboth followed by 18% in Gobabis and was lowest in Grootfontein with 6% of men who reported two or more sexual partners in one year (USAID, 2008). As for

[2] A local office for John's Hopkins University Centre for Communication Partnerships

women, multiple partnering was highest in Omaruru with 8%, followed by Oshikuku (6%), Rehoboth (4%) Gobabis (3%), Grootfontein (2%) and Ondandjokwe with only 1%.

Chinsembu, Siziya, Muula and Rudatsikira (2004), conducted a study on prevalence and correlates of sexual intercourse among school going adolescents in Namibia. The results revealed that 44.0% males and 24.8% female school going adolescents reported having had sexual intercourse in a period of 12 months. The same study indicated that, of those who reported having had sexual intercourse in 12 months, 7.6% males reported two lifetime sexual partners while 17.5% of them reported three or more life time sexual partners. As for females, among those who reported sexual intercourse in 12 months, 3.5% reported two lifetime partners while 7.4 reported three or more.

The United Nations Children's Fund (UNICEF) also conducted an HIV and AIDS knowledge, attitude, practice and behavior (KAPB) study among adolescents and young adults in three regions of Namibia (Kavango, Omaheke and Ohangwena regions). The study was conducted among youths who attended a life skill program called My Future My Choice (MFMC)[3] conducted among youths living in school surroundings. The sample also included adults living in the same areas. Among participants aged 15 to 25 years, 35.0% males and 25.5% females reported to have had multiple partners in a period of one year. About 4.5% of males reported having had sex with more than one partner in 12 months compared to 1.8% females who reported the same behavior in the same period (UNICEF, 2006).

[3]A life-skills based program implemented among youths in Namibia

The Namibia Demographic and Health Survey (NDHS) of 2006 also collected data on multiple partnering among men and women aged 15-49. The results of this survey revealed a national rate of 16.1% and 2.5% among men and women respectively (MoHSS, 2008b). Highest rates of multiple partnering were reported among young adults aged 20-25 with 25.0% reported among men while women of the same age reported 4.9%. Among the 13 regions of Namibia, higher results of multiple partnering among men were reported in Omaheke and Erongo regions with 24% and 23% respectively while the Otjozondjupa region reported the lowest rate of 8%. The Kavango region reported an increase in multiple partnering from 7 to 13 percent between 2000 and 2006 ($p = 0.05$) (MoHSS, 2008b).

Data on multiple partnering was also collected among people who sought voluntary counseling and testing (VCT) services at New Start centers in Namibia (MoHSS, undated). Analysis done for the period between 2003 and 2008 revealed that 13% of men and 2% of women who tested positive to HIV reported more than one partner three months prior to testing. Convincing evidence in literature reveals that men aged 15-49 years in Namibia tend to have more partners than women of the same age (MoHSS, 2008b; USAID, 2008).

2.3 Prevalence of sexual concurrent partnering

Although only a limited number of studies have been conducted on concurrent partnering (Parker, Makhubele, Ntlabati & Connolly, 2007; Xu, Luke & Zulu, 2007; Mah, 2008), evidence for its occurrence is strong. The few studies that have measured concurrency appear to have found a prevalence of between 13% and 61% among males

and between 17% and 5% among females. These were done among in different setting and with different age groups, thus making direct comparison difficult. The National Survey of Family Growth study conducted among men in United States found that 11% of men reported sexual concurrent partnering in a period of 12 months (Adimora, Schoenbach & Doherty, 2007).

Egesah *et al.* (2000), conducted a study on concurrency among young adults aged 15-29 in Nyanza province of Kenya. In this study, participants were asked to report about the number and duration of each relationship in a period of one year. The results revealed that 17% of women and 61% of men reported concurrency in a period of one year. Another study on concurrency was conducted among Kenyan youth aged 18-24 years (Xu, Luke & Zulu, 2007). The researchers developed a Relationship History Calendar (RHC) where the start and end of every sexual relationship was recorded. The results of the study revealed that 17% have reported concurrency in a period of 10 years.

In the Cape Metropolitan area of South Africa, 20% of young men aged 16-26 years reported sexual concurrency during their most recent sexual relationships compared to 6% women (Mah, 2008). This analysis only included young people who were sexually active at that time and respondents were asked whether they had any other partner during the recent relationships. However, this analysis included concurrency by both the participants and the participant's partner. Another study was conducted among young adults aged 20-30 years in South Africa. The study revealed that 13% males and 5% females reported concurrency in a period of one year (Parker, Makhubele, Ntlabati &

Connolly, 2007). For that study, participants who reported more than one sexual partner one month preceding the study were classified as being in concurrency.

As indicated earlier, studies conducted in Namibia asked broadly about the number of sexual partners in a specific period without necessarily measuring concurrency. During the recent NDHS, married women were asked to report whether they had co-wives while married men were asked to report the number of wives/partner they lived with.

Results from that survey indicated that 5.5% of married women aged 15-49 reported having co-wives or being in polygynous relationships (MoHSS, 2008b). The same report also indicated this was a drop from 12% in the year 2000. However, in the Kavango region, about ten percent (9.7%) of women reported having one or more co-wives. Only 2.7 of all men in Namibia reported two or more wives and none in Kavango region.

2.4 Knowledge about risk posed by sexual concurrent partnering

Having correct knowledge about HIV is one of the good steps towards behavior change (UNICEF, 2006). Many people are aware of the behavior which can put them at risk of contracting the virus (Chingandu, 2007; Namibia Red Cross Society [NRCS], 2008). However, many do not regard engaging in unprotected sex with regular partners as risky (Barclay, 2007). In Zimbabwe and Zambia where concurrent partnering takes a form of a [4]small house, men do not regard such regular partners as risky (Chingandu, 2007). The author conducted focus group discussions with young adult men in Zambia and Zimbabwe whereby men reported that they do not see a need to use condoms with regular partners because they trust them the same way they trust their primary spouses.

[4] A form of a relationship where a person has a regular partner while at the same time continuing to have sex with the primary partner.

The NRCS (2008), conducted a qualitative study about Multiple and Concurrent Sexual Partnerships in Namibia in 2008. Their results revealed that people are aware that having multiple partners puts them at risk. Other studies conducted in Namibia measured about HIV misconception and prevention methods. The NDHS asked participants to report on ways of preventing HIV infection such as condom use, having one faithful uninfected partner and abstaining from sexual intercourse (MoHSS, 2008b). Overall the level of general and comprehensive knowledge about HIV ranged between 80% and 90% among women and between 83% and 92% among men. The same NDHS also measured the level of misconception with regard to HIV infection. The study asked participants to report whether a healthy looking person can have the virus, whether HIV can be transmitted through sharing food, or through mosquitoes or supernatural powers. Overall, 67% of women reported having a comprehensive knowledge about HIV infection while men reported a level of 63% (MoHSS, 2008b). A study conducted by UNICEF Namibia in 2006 also revealed that general knowledge about HIV is high among 10-14 years (97%), 15-24 years (96%) and was also reported to be high among adults above the age of 30 years (UNICEF, 2006).

2.5 Beliefs and perceptions about sexual concurrent partnering

2.5.1 Cultural beliefs

Concurrent partnering has culturally existed in many societies in a form of polygamy whereby a person (man or woman) has more than one sexual partner at a time. Polygamy can take a form of either polygyny or polyandry. The former which is the commonest form of polygamy, is when a man has more than one wife at one time while polyandry is

when one woman has more than one husband at one time (Cook, 2007; Syed, 2007). In African countries, polygyny has also been reported among cultural leaders such as kings. In Swaziland where 42% of pregnant women are infected with HIV, the king who is the head of state currently has thirteen wives (UNDP, 2008).

In most societies, it is culturally accepted for a man to have more than one sexual partner at the same time (Chingandu, 2007; Gluckstern & Christen, 2008). Literature indicates that polygyny was introduced in African societies mainly for the purpose of creating wealth and to make sure that every woman has a husband and children to care for her economic needs (Nyanseor, undated; Cook, 2007). The authors convincingly indicated that polygyny was also established to ensure that high fertility levels prevail and thus population growth. The authors further put forward that before colonialism, wealth in Africa was created through subsistence agriculture, which required lots of manpower. Polygyny would bring more women and children for labor and it was thus preferred. The resources derived from these efforts were put together to cater for material and economic needs of the whole extended family and all family members were better cared for (Nyanseor, undated).

Cook (2007), writes that in most societies, women cannot own land or cattle which are regarded as wealth. A woman's well-being would therefore be better taken care of when she is married and especially when she has sons. Polygyny was therefore seen as a better way to care for all women and children in the society (Nyanseor, undated; Cook, 2007).

The author furthers states that having more wives was also regarded as a sign of wealth and a sign of masculinity.

In many cultures especially in Africa, it is normal practice for a man to have more than one sexual partner at the same time (Chingandu, 2007; Gluckstern & Christen, 2008; NRCS, 2008). In a qualitative study conducted in Namibia by the NRCS, it was reported that in Herero[5] culture a man is allowed to have sexual intercourse with as many of his cousins (called tjiramue) as he wants irrespective of whether he or they have spouses or not (NRCS, 2008). In Botswana, culture that supports having other sexual partners while maintaining a long-term relationship has been reported (Timberg, 2007). The author revealed that husbands and wives may have other partners especially when one of them is away.

2.5.2 Religious beliefs

Some religions allow polygyny while others prohibit the practice. Muslims offer an option of a man to practice polygyny of up to four wives with strict limitations and conditions (Syed, 2007). The author further puts forward that in the Muslim religion, a man in a polygynous relationship is allowed to have sex only within marriage but which can be with more than one wife.

Christianity on the other hand prohibits polygyny among its members. It only allows sex within a monogamous marriage and is also against premarital sex (Syed, 2007). Although Namibians are predominantly Christians, mixed beliefs about premarital sex

[5] One of the language groups in Namibia

and sex within monogamous relationships are common with some individuals in support of sex outside marriage (MoHSS, 2008b).

2.6 Variation of HIV infection rates across the globe

In 2007, there were 33.2 million people infected with HIV globally and 22.5 million of them were in Sub-Saharan Africa (UNAIDS, 2007). The same report indicated that about 90% of all children infected with HIV globally live in this region. It further indicated that while Sub-Saharan African region experiences a generalized epidemic, HIV transmission remains concentrated within at risk populations like men who have sex with men (MSM), commercial sex workers and injection drug users. The United Nations has also indicated in its report that in 2007, seven Southern African countries reported HIV prevalence rates of more than 15% (UNAIDS, 2007). These countries are: Botswana, Lesotho, Namibia, South Africa, Swaziland, Zambia and Zimbabwe. No other region of the world has such a high prevalence rate, thus causing demographers and epidemiologists to puzzle as to what factors cause the vast difference of HIV infection across the globe.

Comparison of prevalence rates and risky sexual behavior does not completely explain the global variation of HIV prevalence rates and why the infections spread so fast in Sub-Sahara Africa while remaining low and concentrated in other parts of the world. Research findings have indicated that the numbers of lifetime sexual partners in Sub-Saharan African countries are similar to those in many countries where the epidemic is concentrated (Epstein, 2008). Researchers and demographers have also found no significant difference in terms of age at first sexual debut, frequency of sexual intercourse

and condom use. It has been suggested that the key difference is the frequency of overlapping relationships; men and women aged 15-49 years in Sub-Saharan region tend to have more than one relationships lasting for months or even years (Epstein, 2008; Mah & Halperin, 2008; Green, Mah, Ruark & Hearst, 2009).

The authors also state that significant correlation has also been found between age at first sex and age at first marriage. They further argue that late marriage may result in long period of premarital sex which put many people at risk of engaging in concurrent partnering and being at risk of spreading HIV infection.

2.7 Concurrent partnering and HIV

Recently, concurrency has been recognized as one of the driving forces of the HIV epidemic and thus an important research topic in HIV prevention. Recent research suggests that concurrent partnering helps explain variation of HIV infections across the globe (SADC, 2006; Halperin & Epstein, 2007; Mah & Epstein, 2008; PSI, 2008; Potts *et al.*, 2008).

It has emerged that HIV spreads more rapidly in sexual networks that overlap compared to sexual networks where serial monogamy or monogamous are in a majority (Kalichman, Ntseane, Nthomang, Segwabe, Phorano & Simbayi, 2007; Mah & Epstein, 2008). For individuals who are not infected, adding a new partner as well as maintain more than one partnership may mean an additional risk of getting infected. Similarly, for individuals who are infected, adding a new partner may mean a chance of spreading HIV

infection to additional people (Bongaarts, Buettner, Heilig & Pelletier, 2008; Green *et al.*, 2009).

The authors further argue that concurrent partnering creates an opportunity for HIV infection to spread to many people in a short time; as soon as one partner is infected, all others in the network are immediately at risk of contracting the virus. Each individual is connected to his/her sexual partner as well as to their partners' sexual partners. The more the people with more than one partner, the more the number of people who are in the sexual network and thus at risk of being infected. In addition, Potts *et al.* (2008), argue that concurrency mostly occurs within long lasting and trusting relationships whereby condoms are not consistently used.

Concurrency is of particular concern during the seroconversion stage, when the viral load is particularly higher and therefore infectiousness as well (Halperin & Epstein, 2007; Timberg, 2007). The authors explain that this happens because soon after exposure to the HIV, the viral load increases to high levels before anti-bodies are produced. The higher the viral load, the higher the chance of passing the infection to the sexual partner. During the seroconversion stage, the rate of transmission is estimated to be the highest at 0.0082 per coital act, but drops to 0.0015 per coital act during the chronic stage and rise again to 0.0028 per coital act during the late stage of infection (Wawer *et al.*, 2005). Within concurrent partnering, it is possible that a newly infected person has unprotected sexual intercourse with more than one partner during the seroconversion stage. The other partners are also likely to have sex with other partners when they are in the seroconversion stage and this process of high infectiousness continues. This would not only expose more partners to possible infection but such partners would be exposed at a

time when the risk of transmission is highest (Chin, 2003; Halperin & Epstein, 2007). Concurrency therefore has potential to increase the number of infected people, the speed at which HIV infects a population and its persistence within any given population (Mah & Halperin, 2008). Even a person who has only one sexual partner, he/she is in the network if his/her partner has other partners (Halperin & Epstein, 2007; Epstein, 2008; Mah & Epstein, 2008).

Conversely, in serial monogamy when each person only has one partner at a time, the virus remains within the partnership for the duration of the relationship (PSI, 2007; Green *et al.*, 2009). Although one or both partners who are in a serial monogamy might be infected, the infection is unable to spread to other people since there is no connection to the outside relationships. Again, even if the couple breaks up later on and each one of them starts a new relationship, the speed of the infection would be lower since the person has to break up with the current relationship before being able to spread the infection to the new partner (Epstein, 2008).

2.8 The need to shift priorities in HIV prevention

Despite HIV prevention strategies being implemented, HIV infection rates remain high particularly in the Sub-Saharan region. For HIV prevention in generalized epidemics the emphasis has been largely on (1) condom promotion and distribution, (2) treatment of other sexually transmitted infections (STI), (3) voluntary counseling and testing (VCT) and (4) prevention of mother to child transmission (PMTCT) among other programs.

Abstinence is also one of the behavioral strategies promoted in some countries in attempt to reduce infections rates (SADC, 2006).

However, most researchers and demographers are suggesting a shift in prioritizing prevention strategies from the current ones to promotion of partner reduction and faithfulness. Morris and Kreschmar (1997), used simulation to represent a group of individuals, sexual partnerships that these people form and the spread of infectious disease. They compared sequential monogamy and concurrency and found that concurrency rapidly increase the number of infected individuals and the growth rate of the epidemic. Some years later, Shelton *et al.* (2004), reaffirm that a generalized HIV epidemic would not occur in a population where each person has sexual intercourse with one partner. Therefore, promotion of monogamous relationships as well as partner reduction could be one of the most obvious approaches to reduce HIV infection.

The Southern African Development Community (SADC) think tank meeting held in Maseru, Lesotho in 2006 also identified concurrent partnerships as one of the key drivers of the epidemic and has recommended programs to reduce the behavior (SADC, 2006). This was also supported by recent articles which also put forward that the strategies being currently implemented have been proven not to be effective in generalized epidemics (Potts *et al.*, 2008; Wilson & Halperin, 2008). The authors argue convincingly that prevention strategies that are believed to be effective in generalized epidemics have not been implemented at an adequate scale, hence the need for a shift in priorities. Bongaarts *et al.* (2008), also share the same view and argue that changing sexual behavior is the key factor in heterosexual epidemics. Furthermore, the authors argue that the following

programs being implemented in generalized epidemic are less effective based on the following:

2.8.1 Condom promotion and distribution

Latex condoms are highly effective in HIV prevention especially when used correctly and consistently (Feldblum, Welsh & Steiner, 2003; SADC, 2006). However, there is evidence in the literature that condom use has so far only been effective in reducing HIV transmission in countries like Thailand where the infection is spread mainly through sex work (Bongaarts *et al.*, 2008; Wilson &Halperin, 2008; Green *et al.*, 2009). The authors further argue that in generalized epidemics where most infections occur within regular and long-term relationships, consistent use of condoms become difficult to maintain.

2.8.2 Treatment of other sexually transmitted infections

Although it is important to treat other sexually transmitted infections (STI), there has been no sufficient proof that it can reduce HIV infection at a population level (SADC, 2006; Potts *et al*., 2008). The authors further argue that the program can only target cases that are symptomatic and not the asymptomatic ones. Furthermore, the authors also put forward that available drugs cannot treat infections that are of viral origin.

2.8.3 HIV counseling and testing

Although behavior change has been reported among clients who tested positive to HIV, significant behavior change has not been reported among those who tested negative (SADC, 2006; Potts *et al.*, 2008).

2.8.4 Prevention of Mother to Child Transmission

The Prevention of Mother to Child Transmission (PMTCT) program is quite effective in preventing HIV transmission from mother to child but the program mainly addresses relatively small proportions of the population at risk of HIV infection; babies and young children (Potts *et al.*, 2008).

2.8.5 Sexual abstinence

Literature indicates that abstinence contributed to delayed HIV infection in Uganda and can greatly reduce infections amongst adolescents (SADC, 2006). Although this behavior needs to be encouraged especially among the youth, most infections occur in young adulthood or older when most people are sexually active (SADC, 2006; UNICEF, 2006; MoHSS, 2008b; USAID, 2008). The practice is thus less relevant to adults since the majority of people engage in sexual relationships as they grow up. Furthermore, abstinence will not have a long-term effect unless it is followed by sexual intercourse within a monogamous relationship between two uninfected individuals.

In contrast, studies and models conducted in recent years suggest that reducing concurrent partnering may be an effective way of reducing HIV transmission particularly in generalized epidemics (UNAIDS, 2005; UNAIDS, 2007; SADC, 2006; Enns & Igeme, 2009; Green *et al.*, 2009). It has also been suggested that since HIV spreads mainly through heterosexual contact among the general population, promotion of monogamous relationships and partner reduction might bring about the necessary marked reduction in the number of new HIV infections.

Enns and Igeme (2009), reported about campaigns on partner reduction and campaigns aiming specifically at reducing concurrency which have been introduced in countries like Uganda, Kenya, Tanzania, Zambia and Swaziland. The authors conducted an evaluation of such behavioral intervention in Swaziland, Tanzania, Uganda and Zambia to evaluate the effectiveness of concurrency reduction campaigns on the course of HIV epidemic in a population of sexually active adults aged 15-49 years. The researchers developed a network model and used HIV and data from national surveys in those four countries. The model was then calibrated to prevalence trends, HIV incidence, and prevalence and life years gained in such countries. A comparison was then done on outcomes of campaigns that: (1) increased the number of individuals who are monogamous (2) reduced the average number of partners that an individual had and (3) reducing rates of changing partners (increased relationship duration).

According to their findings, increased monogamy decreased new HIV infections by an average of 9.4% while reducing average number of partner contributed to the reduction of new HIV infections by 6.8% in the four countries after 10 years of program

implementation. The same study indicated that the strategy of increased relationship duration yielded the least benefits by decreasing new HIV infections by 2.4%.

Uganda is one of the countries that were hard hit by the HIV epidemic and one of the few countries that has managed to significantly reduce its HIV prevalence rate (Hogle, Green, Nantulya, Stoneburner & Stover, 2002; Wilson, 2004; Genuis & Genuis, 2005; Kirby, 2008; Mishra, Hong, Bignami-Van Assche & Barrere, 2009). The authors indicated that among pregnant women in Kampala, HIV prevalence rate has reduced from 30% in 1992 to 12% by the year 2000. No other country has shown decline of the same scale despite implementation of different prevention strategies. Reasons for this profound decline in Uganda have been controversial but evidence for behavior change is strong. The authors (Wilson, 2004; Genuis & Genuis, 2005; Bongaarts *et al.*, 2008) put forward that one of the strategies that had played a major role in this reduction was the promotion of "zero grazing" which promoted faithfulness and partner reduction in that country (Potts *et al.*, 2008:750). The number of people who reported more than one partner was reportedly the lowest in 1995 compared to other African countries like Kenya, Malawi and Zambia. Similarly, Zimbabwe has shown a decline in HIV prevalence rate between 2000 and 2004 of which faithfulness was one of the major contributing factors (Wilson, 2004; UNAIDS, 2005; SADC, 2006). It has also been reported that lifetime faithfulness is associated with low HIV prevalence (Mishra *et al.*, 2009).

These studies suggest that changing risky sexual behavior and specifically promoting monogamy and partner reduction can have an effect on HIV infection at a population

level. Promotion of monogamous relationships and partner reduction may not be the best prevention strategy in reducing HIV transmissions and a combination of strategies is therefore required. However, these studies convincingly suggest that some strategies are more effective than others. They further suggest a need to shift priorities from prevention strategies currently being implemented in countries with generalized epidemics.

CHAPTER 3: RESEARCH METHODOLOGY

This chapter presents the aim and objectives of the study as well as the methodology and design used. Methods used to collect data and its management are also presented in this chapter.

3.1 Aim of the study

To describe the prevalence, beliefs, and knowledge of concurrent partnering as an HIV risk transmission factor among education students at RCE in Namibia.

3.2 Study objectives

1. To describe the prevalence of sexual concurrency among education students at RCE.
2. To describe the practices of sexual concurrency among education students at RCE
3. To describe knowledge of the risk of HIV transmission posed by concurrent partnering among education students at RCE.
4. To describe beliefs about concurrent partnering among education students at RCE.

3.3 Study site

The study was conducted at RCE situated in the Kavango region, North Eastern part of Namibia. The institution is situated about 3 kilometers from the town of Rundu and admits education students who go through a three year teachers' diploma training. Over 90% of the students are from the Kavango region and are accommodated in hostels within the college. Three hundred and seventy four (374) students were registered for the

2009 academic year. Although the study targeted all registered students, only two hundred and seventy eighty (278) students took part in the study.

3.4 Definition of variables

In a relationship: A participant who report being in a sexual relationship in a period of 12 months preceding the study irrespective of whether the relationship is formal or informal.

Not in a relationship: A participant who reports no sexual relationship (includes single, widowed or divorced) in a period of 12 months preceding the study.

One partner: A participant who reports sexual relationship with only one partner in 12 months preceding the study.

More than one (>1) partner at different times: A participant who reports sexual relationships with more than one partner but do not overlap in time. For this study, this constitutes serial monogamy.

More than one (>1) partner at the same time: A participant who reports sexual relationship with more than one partner in 12 months preceding the study, who overlap in time. For this study, this constitutes concurrent partnering.

3.5 Study methods

3.5.1 Design

A quantitative descriptive cross-sectional design was used to answer the research questions. This method will allow the researcher to describe the beliefs, prevalence of

concurrent partnering among the target group as well as their knowledge about HIV risk posed by concurrent partnering.

3.5.2 Study population and sample

The target population of this study was students at the RCE who were registered as full time students for the 2009 academic year. The study targeted all 374 students meeting the criteria from all specializations and both male and female students were included.

This population has been chosen because students live in hostel, away from home and the majority is young adults who are not yet in stable relationships. It is reported in the literature that concurrent partnering is common among young adults (Egesah *et al.*, 2000; MoHSS, 2008b; USAID, 2008).

3.6 Data collection

Data collection was integrated with class activities to minimize disturbance in academic responsibilities. Students were on two separate days assembled in the hall by their lecturers for academic purposes; the researcher was given the opportunity to address students and to collect data after the planned activity was completed. The researcher explained the aim of the study, confidentiality and that participation was voluntary. All students were given a copy of information sheet (Appendix 1) while the researcher explained its content. Students who agreed to take part in the study were given consent forms (Appendix 2) to fill in before self administered questionnaires were handed over to them. All students who participated in the study were asked to respond to the questions

one after the other while the researcher was explaining. Participants were asked to sit a distance from one another to ensure confidentiality.

3.6.1 Data collection tool

A structured self-administered questionnaire was used due to the sensitivity of the information (Appendix 3). The questionnaire has been adapted from that used in similar settings in Botswana (PSI, 2007) and was in English. All participants were good at both reading and writing English and could understand the questionnaire without the need of translation. It took about 30 minutes to complete the questionnaire.

Apart from demographic information (section A), there were knowledge questions (section B), beliefs questions (section C) and sexual relationship practices questions (section D). Concurrent partnering was operationally defined as a situation where a person has more than one sexual partner at the same time, during the twelve months preceding the study. The questionnaire was divided into 4 sections as described below:

Demographic information

This section collected socio-demographic information such as sex, year of study, date of birth, religion, marital status and dominant language.

Knowledge questions

This section was made up of knowledge questions. The participants were asked to agree or disagree with the statements: whether concurrency helps spread HIV infection to many people at a time and whether it increases the risk of contracting HIV infection.

Number of sexual partners

This is the section that measured the number of sexual partners the participants have had in the 12 months preceding the study. The numbers of sexual partners to be reported were the ones that participants had sexual intercourse with. The following options were given for participants to select only one which was applicable to each of them:

- No sexual partner for the rest of the past 12 months.
- One sexual partner for the rest of the past 12 months.
- More than one sexual partner in the past 12 months but at different times.
- More than one sexual partner in the past 12 months at the same time.

Beliefs/ perception questions

Participants were asked to indicate whether the following statements were true or false:

- A woman should have only one partner at a time
- A woman may have more than one partner at the same time
- A woman who has more than one partner at the same time is a loose woman
- A man should have only one partner at the same time
- A man may have more than one partner at the same time
- When a man has more than one partner at the same time it is a sign of manhood
- One man having more than one partner at the same time is an African culture and should continue.
- A man who has more than one partner at the same time is a loose man.

3.7 Data analysis

Completed questionnaires were coded and entered into a Statistical Programs for the Social Sciences (SPSS) [version 11.5] spreadsheet. The same program was also used for data analysis. Proportion of concurrency was estimated with 95% confidence intervals. Demographic data was summarized and initial summary statistics included calculating frequencies and distribution of all variables. Concurrent partnering was cross-tabulated with demographic variables such as age, sex and year of study and tested for statistical significance using the chi square test at = 0.05% as cut-off.

Data cleaning was done before data analysis began. A random sample of 10% of cases was recorded and all variables were checked for possible errors and outliers. Other statistics such as means, medians and standard deviation were calculated. Variables were coded to make it easy to fill in responses and for the computer to recognize them**.** A code was also allocated for missing variables.

3.8 Validity and reliability

Validity refers to the extent to which a measure actually measures what is intended to measure. Reliability on the other hand is the degree of similarity of the information obtained when the measurement is repeated on the same participants (Katzenellenbogen, Joubert & Abdool Karim, 1997). In this study, all students who were registered for the 2009 academic year had an equal chance of being included in the study; thus minimizing selection and sampling bias. The researcher explained each question the same way on both days of data collection to avoid misunderstanding and to enhance validity. The researcher was the only person to conduct the study which enhances reliability. To

minimize recall bias, participants were only asked about information that happened 12 months preceding the survey.

3.9 Pilot study

The questionnaire was piloted on 10 nursing students at the Regional Health Training Centre (RHTC) in Rundu. This was done to pre-test the questionnaire and the relevance of the questions was tested. Words that were unclear were replaced to improved clarity of the questions.

3.10 Ethical consideration

The proposal for this research was approved by the Higher Degrees Committee (HDC) of the University of the Western Cape. Written permission was granted by the management of the RCE through the office of the deputy Rector before the study was conducted. Students were provided with an information sheet each that explained the purpose of the study. Only those who agreed to participate were given consent forms to sign. The researcher explained that the study was a requirement for a Masters degree, that no personal information will be revealed and that participating in the study was voluntary.

Code numbers were used instead of names and completed questionnaires were kept under lock. The SPSS database was password protected. Respondents were free to withdraw at anytime from the study and may refuse to answer any of the questions without having to

explain the reasons for their decision. Due to the anonymity of the study, no personal information has been revealed in the final report.

CHAPTER 4: RESULTS

This chapter presents the findings of the study. The demographic data are presented and analyzed by sex, age and year of study. The findings on concurrent partners are shown including knowledge about risk posed by concurrent partnering as well as beliefs.

4.1 Response rate

As shown in Table1, out of 374 registered students, 278 participated in the study, yielding a response rate of 74.3%. A total of 147 males participated in the study thus, representing 73.9% of all males registered for the 2009 academic year. A total of 131 females participated to give a 74.9% representation of all female students. The highest non-response rate was among first year male and female students with a response rate of 61.3% and 61.4% respectively.

Table 1: Description of study sample

	Males		Females	
Year of study	**Registered**	**Participated (%)**	**Registered**	**Participated(%)**
1st year	75	46(61.3%)	57	35(61.4%)
2nd year	71	53(74.6%)	49	31(63.2%)
3rd year	53	48(90.5%)	69	65(94.2%)
Totals	199	147(73.9%)	175	131(74.9%)

4.2 Demographic and behavioral characteristics

More than half (52.9%) of the students who participated in the study were male while 47.1% were females. Third (3rd) year students made up 40.6% of all study participants while first (1st) and second (2nd) year students made up 29.1% and 30.2%, respectively. The age of participants ranged between 17 and 38 years with a mean age of 22.95 years (SD=8.51). The majority (82.4%) of students were under the age of 25 years. Fourteen religious denominations were reported with the Roman Catholic being the majority (48.6%), followed by the Lutheran church, which made up 21.9% of the participants.

Participants were asked about their marital status 12 months preceding the study. Those who reported sexual relationships (married or single) were classified as in sexual relationship while those who reported no relationship (single but not in relationship, divorced or widowed) were classified as not in sexual relationship. Seventy four (26.6%) participants reported they have not been in sexual relationships within the 12 months preceding the study. As expected, the majority (91.0%) of participants identified themselves as single and not in formal unions. However, the majority (65.1%) of participants who reported being single indicated they were in sexual relationships. The dominant language spoken by majority of participants was Rukavango (76.6%) followed by Oshiwambo with 12.2%.

4.2.1 Demographic characteristics by sex

Table 2 below shows that males and females were nearly equally distributed in the sample but fewer males (42.5%) were in the 3rd year while nearly two third of the 2nd year students were males (p = 0.01). There were no statistical difference between sex and age

groups, religion and language spoken. A borderline statistical significance was found for relationship status (p=0.08) with more males (59.5%) reporting not being in relationships compared to females (40.5%). Data on marriages (not shown) indicate that more female participants (13.0 %) reported being married compared to the male participants (4.1%).

Table 2: Demographic characteristics by sex

	Male (%)	Female (%)
Year of study (n=278)		
1st year	46(56.8)	35(43.2)
2nd year	53(63.1)	31(36.9)
3rd year	48(42.5)	65(57.5)
Age groups (n=275)		
<25	123(53.7)	106(46.3)
25+	22(47.8)	24(52.2)
Relationship status (n=278)		
In sexual relationship	103(50.5)	101(49.5)
Not in sexual relationship	44(59.5)	30(40.5)
Religion (n=276)		
Roman Catholic	74(54.8)	61(45.2)
Other	71(50.4)	70(49.6)
Dominant language (n=277)		
Rukavango	118(54.9)	97(45.1)
Other	28(44.4)	35(55.6)

4.2.2 Demographic characteristic by age groups

Overall, 83.3% of all study participants were under the age of 25 years compared to 16.7% who were 25 years and older. As expected, 1st and 2nd year students were younger (p=0.00) and also less likely to report being in a relationships (p=0.01) compared to the 3rd year students and there was statistical significance as shown in Table 3 below.

Table 3: Demographic characteristics by age groups

	Age in years	
Year of study (n=275)	**<25**	**25+**
1st year	69(86.2)	11(13.8)
2nd year	75(91.5)	7(8.5)
3rd year	85(75.2)	28(24.8)
Relationship status (n=276)		
In sexual relationship	171(84.2)	32(15.8)
Not in sexual relationship	59(80.8)	14(19.2)
Religion (n=276)		
Roman Catholic	115(85.2)	20(14.8)
Other	114(80.9)	27(19.1)
Dominant language (n=275)		
Rukavango	174(82.9)	36(17.1)
Other	56(86.2)	9(13.8)

4.3. Sexual partners in 12 months

Table 4 below presents the number of sexual partner each participant reported in 12 months. Nearly one in ten (9.4, 95% CI: 7.7-11.2%) of the participants reported more than one sexual partner at the same time. A total of 26.0% reported more than one sexual partner at different times during the same period.

Table 4: Sexual partners in past 12 months (n= 277)

Sexual partners in past 12 months	n	%	95% CI
No partner	34	12.3	10.2 – 14.2
1 partner	145	52.3	49.3 – 55.3
>1 partner at different times	72	26.0	23.4 – 28.6
>1 partner at same time	26	9.4	7.7 – 11.2

4.3.1 Number of sexual partners by sex

Table 5 below indicates that more males (13.0%) reported more than one partner at the same time compared to (5.3%) female participants (p=0.05). A similar trend was also found for having more than one partner at different times with 38.4% of male participants compared to 12.2% female participants who reported the behavior (p=0.00). Further,

more (74.0%) female participants reported having one partner compared to 32.9% males (p=0.00).

Table 5: Sexual partners by sex (n= 277)

Sexual partners in past 12 months	Male (%)	Female (%)	p value
No partner	23(15.7)	11(8.4)	0.11
One partner	48(32.9)	97(74.0)	0.00
>1 partner at different times	56(38.4)	16(12.2)	0.00
>1 partner at same time	19(13.0)	7(5.3)	0.05
Total	**146(100)**	**131(100)**	

4.3.2 Number of sexual partner by age groups

More (13.3%) of the older students (25 years and older) reported having concurrent partners compared to students under the age of 25 years (8.7%) (p=0.00) as indicated in table Table 6 below.

Table 6: Sexual partners by age groups (n=274)

	Age group in years		
Sexual partners in past 12 months	**<25**	**25+**	**p value**
No partner	32(14.0)	1(2.2)	0.00
1 partner	116(50.7)	28(62.2)	0.00
>1 partners at different times	61(26.6)	10(22.2)	0.01

>1 partners same time	20(8.7)	6(13.3)	0.00

4.3.3 Number of sexual partners by year of study

More (5.4%) third year students reported no partner compared to first and second years students who reported 17.3% and 16.7% respectively (p=0.04).

Table 7: Sexual partners by year of study (n=277)

Number of partners	**1st year (%)**	**2nd year (%)**	**3rd year (%)**	**p value**
No partner	14(17.3)	14(16.7)	6(5.4)	0.04
1 partner	40(49.4)	37(44.0)	68(60.7)	0.12
>1 partner different times	19(23.5)	25(29.8)	28(25.0)	0.66
>1 partner same time	8(9.9)	8(9.5)	10(8.9)	0.82
Total	**81(100)**	**84(100)**	**112(100)**	

4.4 Knowledge about sexual concurrent partnering

4.4.1 Frequency distribution of knowledge responses

Table 8 shows that an overwhelming majority (88.8%) of the participant agreed with the statement that concurrency makes it easy to catch HIV while 89.2 % of them agreed with the statement that concurrency help spread HIV to many people.

Table 8: Knowledge about concurrency and HIV (n=278)

Participants who agreed that:	n	%
Concurrency helps HIV spread to many	248	89.2
Concurrency makes it easy to catch HIV	247	88.8

4.4.2 Knowledge by demographic variables

Table 9 below illustrates knowledge by demographic variables. Fewer (85.7%) male participants agreed that concurrency helps HIV spreads to many people compared to female participants (93.1%) who agreed with the same statement (p=0.04).

Table 9: Knowledge about concurrency by demographic variables

	Participants who agreed that concurrency helps spread HIV to many	Participants who agreed that concurrency makes it easy to catch HIV
Sex		
Male	126/147 (85.7%)	130/147(88.4 %)
Female	122/131(93.1%)	117/131(89.3%)
P value	0.04	0.52
Age groups		
< 25 years	200/229(87.3%)	203/229(88.6%)
25 + years	45/46(97.8%)	41/46(89.1%)
P value	0.22	0.94
Year of study		
1st year	68/81(83.9%)	75/81(92.6%)
2nd year	74/84(88.0%)	74/84(88.1%)
3rd year	106/113(93.8%)	98/113(86.7%)
P value	0.08	0.40

4.4.3 Knowledge by reported concurrency

Table 10 shows knowledge among participants who reported more than one partner at the same time and those who did not. Of those who reported no concurrency 90.0% of them agreed with the statement that concurrency helps HIV spreads to many compared to

80.8% of those who reported concurrency and who agreed with the statement. Similarly, 89.6% of those who reported no concurrency agreed with the statement that concurrency helps HIV spreads to many people compared to 80.8 of those who reported concurrency.

Table 10: Knowledge about HIV and reported concurrency

	Concurrent (%) [n=26]	No concurrency (%)[n=251]	p value
Concurrency helps HIV spreads to many	21(80.8)	226(90.0)	0.32
Concurrency makes it easy to catch HIV	21(80.8)	225(89.6)	0.67

4.5 Beliefs about sexual concurrent partnering

An overwhelming majority (91.0%) of participants believe that a woman should have one partner at a time compared to 78.1% who reported a man should behave the same. Similarly, over a quarter (26.9%) of participants believe a woman may have more than one partner at a time compared to nearly half (46.4%) of the participants who believe that a man may do the same.

Table 11: Frequency distribution of beliefs

Participants who believe that:	n	%
Woman should have 1 partner at the same time	253	91.0
Woman may have >1 partner at the same time	75	26.9
Woman with >1 partner at the same time is loose	199	71.6
Man should have 1partner at a time	217	78.1
Man may have >1 partner at the same time	129	46.4
Man having >1 partner at the same time is a sign of manhood	56	20.1
Man having >1 partner at the same time is an African culture & should continue	49	17.6
Man with >1 partner at the same time is loose	141	50.7

4.5.1 Beliefs by sex

More males (54.4%) agreed that a man may have more than one partner at a time compared to females (37.4%) who agreed with same statement (Table 12). A total of 28.8% of male participants agreed that concurrency is a sign of manhood compared to only 10.7% of female participants who agreed with the same statement (p=0.00). Similarly, 27.9% of male participants agreed with the statement that concurrency among men is part of an African culture and should continue compared to only 6.1% of females who agreed with the same statement (p=0.00).

Table 12: Beliefs by sex

Participants who believe that:	Male [n=147]	Female [n=131]	p value
Woman should have 1 partner at the same time	93.2%	88.5%	0.17
Woman may have >1 partner at the same time	27.2%	26.7%	0.92
Woman with >1 partner at the same time is loose	78.9%	63.4%	0.00
Man should have 1 partner at a time	70.1%	87.0%	0.00
Man may have >1 partner at the same time	54.4%	37.4%	0.00
Man having >1 partner at the same time is a sign of manhood	28.8%	0.7%	0.00
Man having >1 partner at the same time an African culture	27.9%	6.1%	0.00
Man with >1 partner at the same time is loose	43.5%	58.8%	0.01

4.5.2 Beliefs by age group

Table 13 below shows that more (47.2%) participants who were younger than 25 agreed with the statement that man may have more than one partner at a time compared to older participants (41.3%) who agreed with the same statement (p=0.04).

Table 13: Beliefs by age group

Participants who believe that:	**Age groups in years**		
	<25	25+	
	[n=229]	**[n=46]**	**p value**
Woman should have 1 partner at the same time	91.3%	89.1%	0.68
Woman may have >1 partner at the same time	27.5%	23.9%	0.57
Woman with >1 partner at the same time is loose	71.6%	73.9%	0.00
Man should have 1 partner at a time	78.6%	76.1%	0.63
Man may have >1 partner at the same time	47.2%	41.3%	0.04
Man having >1 partner at the same time is a sign of manhood	19.7%	19.6%	0.08
Man having >1 partner at the same time an African culture & should continue	17.5%	17.4%	0.54

Man with >1 partner at the same time is loose	48.5%	58.7%	0.29

4.5.3 Beliefs by year of study

Fewer second year students (19.0%) agreed with the statement that a woman may have more than one partner at a time while more (34%) third year (3rd) year students agreed with the same statement (p=0.04). A similar pattern was found for the statement that a man is considered loose if he has more than one partner at a time (p=0.02) as illustrated in Table 14.

Table 14: Beliefs by year of study (n=278)

Participants who believe that:	1st year [n=81]	2nd year [n=84]	3rd year [n=113]	p value
Woman should have one partner at the same time	91.4%	92.9%	89.4%	0.69
Woman may have >1 partners at the same time	24.7%	19.0%	34.5%	0.04
Woman with >1 partners at the same time is loose	76.5%	66.7%	71.7%	0.30
Man should have one partner at				

the same time	79.0%	77.4%	77.9%	0.96
Man may have >1 partners at the same time	42.0%	44.0%	51.3%	0.38
Man with >1 partner at the same time is sign of manhood	19.6%	26.2%	15.9%	0.20
Man with >1 partner a time is African culture & should continue	13.6%	21.4%	17.7%	0.41
Man with >1 partner at the same time is loose	48.1%	40.5%	60.2%	0.02

4.5.4 Beliefs about HIV and reported concurrency

Table 15 below shows that more (79.7%) of the participants who reported no concurrency agreed with the statement that a man should have one partner at a time compared to participants who reported concurrency (65.4%) (p=0.04). Furthermore, fewer (15.5%) of the participants who did not report concurrency agreed with the statement that concurrency is part of an African culture and should continue compared to participants who reported concurrency (34.6%) [p=0.00].

Table 15: Beliefs about concurrency and reported concurrency (n=26)

Participants who believe that:	Concurrency n (%)[n=26]	No concurrency n(%)[n=251]	p value
Woman should have one partner at the same time	21(80.8)	231(92.0)	0.15
Woman may have >1 partners at the same time	11(42.3)	64(25.5)	0.15
Woman with >1 partners at the same time is loose	21(80.8)	177(70.5)	0.79
Man should have one partner at the same time	17(65.4)	00(79.7)	0.04
Man may have >1 partners at the same time	16(61.5)	112(44.6)	0.14
Man with >1 partner at the same time is sign of manhood	6(23.0)	49(19.5)	0.12
Man with >1 partner a time is African culture & should continue	9(34.6)	39(15.5)	0.00
Man with >1 partner at the same time is loose	7(26.9)	134(53.4)	0.02

CHAPTER 5: DISCUSSION

5.1 Prevalence and practice of concurrent partnering

This study found a sexual concurrency rate of 13.0% and 5.3% among male and female participants, respectively. Contrary to what was expected, the total concurrency rate among all participants was low at 9.4%. Further analysis indicates that participants aged 25 years and older reported a concurrency rate of 13.3% compared to participants under the age of 25 years who reported a rate of 8.7%. Concurrent partnering was almost the same across all years of study with a rate of 9.9%, 9.5% and 8.9% among 1st, 2nd and 3rd year students respectively. For this study, demographic factors significantly associated with concurrency were sex and age.

Since sexual concurrency is a new phenomenon in HIV prevention, limited numbers of studies have been conducted about the subject. Of particular concern are different definitions, durations as well as methods used to measure concurrency, thus making it difficult to compare different studies (Lurie & Rosenthal, 2009). In most studies conducted in Namibia, participants were asked to report the number of sexual partners they had in a specified period and those who reported more than one partner were classified as being in concurrent relationships (PSI, 2007; MoHSS, 2008b; USAID Namibia, 2008). In this study, participants were not only asked to report the number of sexual partners they had in the period of 12 months preceding the study, but also to indicate whether partnerships were concurrent or not. Participants who reported more than one partner at the same time were classified as being in concurrency while those

who reported more than one partner at different times were classified as being in multiple partnering. This is in contrast to what most other studies have measured and might be the possible reason for the lower prevalence in concurrency found in this study.

This study revealed lower rates of concurrency than what was found in other studies conducted in Africa (Egesah *et al.*, 2000; Parker *et al.*, 2007; Mah, 2008). In Kenya, a study conducted among young adults aged 15-29 revealed concurrency results of 17% and 61% among women and men respectively in a period of one year (Egesah *et al.*, 2000). In 2007, another study was conducted among young adults aged 20-30 years in South Africa which indicated that 13% males and 5% females reported concurrency in a period of one month (Parker *et al.*, 2007). Another study conducted in South Africa also recorded higher results. In a study conducted among young people of the Cape metropolitan area, 13% of young people aged 16-26 reported sexual concurrency during their recent relationships (Mah, 2008). The study asked respondents to report only about their recent relationships and also included concurrency by participants' partners. It is however worth noting that concurrency was measured using different durations and thus comparison of these studies should be done with caution.

5.2 Prevalence and practice of multiple partnering

Although the main objective of this study was to measure concurrency, it also measured the prevalence of multiple partnering. Of interest is that this study has revealed a high rate of multiple partnering among the study population. A total of 38.4% of all male participants reported more than one partner at different times in 12 months compared

to12.2% reported among female participants. Overall, more than a quarter (26.0%) of all the study participants reported more than one sexual partner at different times in a period of one year. Participants under the age of 25 reported higher rates (26.6%) compared to participants who were over the age of 25 who reported 22.2%.

The findings of this study reveals a much higher rate of multiple partnering than what has been reported in Namibia (MoHSS, undated; MoHSS, 2008b; USAID, 2008) and in neighboring Botswana (PSI, 2007). A report by the MoHSS in Namibia revealed that only 2% of women who tested HIV positive at New start centers between 2003 and 2008 reported more than one partner three months prior to testing (MoHSS, undated). The same report also indicated 13% of men who tested positive at the VCT centers reported more than one partner three months prior to testing. Since these were analysis of VCT data whereby clients volunteered to go for the services, interpretation and generalization of this data should be done with caution.

The NDHS conducted in 2006/7 revealed lower rates. It was reported that 25.0% of men aged 20-24 years reported more than one partner in 12 months as opposed to 5% of women of the same age (MoHSS, 2008b). A possible explanation to such huge different would be that the NDHS targeted men and women in the general public aged 15-49 years whereas this study targeted tertiary students. Participants in these two studies may not share the same characteristics like educational level, age group and marital status among other characteristics.

A study conducted in Namibia by NLT also revealed lower rates of multiple partnering at both national and regional level (USAID, 2008). The report indicated that13% of the

people aged 15- 49 years in Kavango region reported multiple partners in a period of 12 months, an increase from 7% in 2000. The same report indicated that a national percentage among men was 16% compared to 3% among women. Again, different demographic characteristics in the two studies might have caused the difference. Furthermore, a sample of 300 people was used, making it difficult to generalize these findings to the rest of the population.

Botswana also reported lower rates of multiple partnering especially among men. A study done by PSI Botswana (2007), reported that about 33% men and 14% of women who were sexually active reported having more than one partner with their recent sexual relationships. It is however important to note that in the study done in Botswana, participant reported about their recent relationships whereas in this study a duration of 12 months was used. The study also targeted the general public and thus results of the two studies should be compared with caution.

5.3 Description of knowledge about risk posed by sexual concurrent partnering.

This study revealed that the majority (88.8%) of participants agreed with the statement that concurrency makes it easy to catch HIV, while 89.2% agreed with the statement that concurrency makes it easy for HIV to spread to many people at a time. Further analysis reveals that higher knowledge was reported among participants who reported no sexual concurrency. About 89.6% of them agreed with the statement that concurrency makes it easy to catch HIV while 90.0% of them agreed with the statement that concurrency makes it easy for HIV to spread to many people. In contrast, only 80.8% of those who reported concurrency agreed with both statements.

These findings concur with findings in another local study conducted in 2008. A qualitative study conducted in 21 sites by the NRCS also revealed that people are aware that having multiple partners puts them at risk of contracting HIV infection (NRCS, 2008). The study was conducted among men and women in the age groups of 19-20 and 21-29 as well as 30 and above. Participants were from both rural and urban settings.

The high knowledge among the study population of this study might be attributed to the scale up of HIV information through different media campaign across the country. The study population of this study is students at an institution of high learning and a high level of knowledge about risk posed by concurrent partnering comes as no surprise.

5.4 Description of beliefs/perception about sexual concurrent partnering.

This study has revealed that there are beliefs/perceptions in support of sexual concurrency among the study participants. A total of 20.1% of the participants believe that concurrency is a sign of manhood while 17.6% believe that it is an African culture and should continue. These findings are similar to what was reported by NRCS (2008), in their qualitative study conducted in 21 sites across the country. The report revealed that for men, having more than one partner at the same time is a culture that has been passed on by the previous generations. The report further indicated that men perceive having more than one partner as a sign of manhood and earns them status among other men.

Further analysis indicates that more males (28.8%) agreed that concurrency is a sign of manhood compared to female participants (10.7%). Similarly, more males (27.9%)

agreed with the statement that concurrency is an African culture and should continues compared to female participants (6.1%).

Different perceptions regarding concurrency were reported between men and women. Close to half 46.4% of the participants agreed that a man may have more than one partner at a time compared to 26.9% who agreed a woman may do the same. Different perceptions were also found between participants who reported concurrency and those who did not. Among participants who reported concurrency, 34.6% of them agreed that sexual concurrency among men is an African culture and should continues, compared to 15.5% of those who reported no sexual concurrency (p=0.00). Similarly, 26.9% of those who reported concurrency agreed that a man with more than one partner at a time is a loose man while 53.4% of those who reported no concurrency agreed with the statement (p=0.02).

The NDHS also reported similar trends. A total of 86% of men agreed with the statement that married women should be faithful to their husbands compared to 80% who agreed that married men should behave the same (MoHSS, 2008b). The same was also reported among females in the same study whereby 82% women agreed married women should be faithful to their husbands compared to 80% who agreed that married men should behave the same.

5.5 Study limitations

Concurrency is a new phenomenon which is difficult to define and measure (Lurie & Rosenthal, 2009). In order to adequately describe concurrency, a researcher needs to describe the number and type of partners each participant had, frequency of sexual intercourse and the duration of the relationship with each partner. This study only describes the number of partners participants had sexual intercourse with in a period of 12 months preceding the study. Further, this study did not ask about the first and last time participants had sex with each partners to validate overlapping.

The data collected was self reported which may have contributed to information and recall bias. Furthermore, the study was conducted among students aged 17-38 years in a tertiary institution which may limit generalization only to people who share similar characteristics. Limited literature about concurrent partnering as a topic has also been noted as well as inconsistency in measurements, thus making it difficult to compare different studies.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

Contrast to what was expected; the prevalence of concurrency was low at 9.4%. While partner turnover was high among study participants, the majority of partnerships were not concurrent. This prompts the need for more local research on this specific topic.

This study has revealed a high knowledge of risk posed by concurrency among the study population. It further reveals that many people believe in cultural issues and practice that support concurrent partnering especially among men. In light of this, the effectiveness of prevention intervention is dependent on factors associated with cultural beliefs.

6.2 Recommendations

- HIV prevention activities should target more on behavior change and specifically on discouraging multiple partners for both men and women. Special attention should be given to youths and young adults under the age of 30 years.
- There is a need to conduct more research on cultural issues around sexual concurrency and multiple partnering as well as creating platforms for community members to debate about these issues.

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APPENDIX 1

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Tel: 021- 959 2809, Fax: 021- 959 2872

INFORMATION SHEET

Thank you for allowing me to interview you. Below is an explanation of the purpose and process of this study:

1. Information about the interviewer

I am Lydia Shilongo, a student studying at the University of the Western Cape. As part of requirements for my Master's degree, I am collecting information from young people related to what they know, think and do with respect to having more than one regular sexual partner at the same time. I would like you to answer some questions, which will take about 20 minutes of your time.

2. What is the study about?

HIV is a problem in our country and in our region. Having more than one regular sexual partner at a time increases the risk for HIV infection. This study will investigate what people know, believe and practice with respect to having more than one sexual partner at the same time.

3. Who are the participants?

The participants are students at the Rundu College of Education who are enrolled as full time students for the 2009 academic year. Only students who agree will take part in the study.

4. What will I be asked to do if I agree to participate?

The researcher will give you a questionnaire to fill which will ask about what you know about having more than one regular partner at the same time and the risk of HIV infection thereof. You will also be asked about what you believe and do with regard to your sexual behavior.

5. Would my participation in this study be kept confidential?

We will keep your personal information confidential at all times. All the information collected will be locked away and your name will not be included in the surveys and other collected data. Respondents may use pseudonyms or invented names which will be used. Your identity will not be revealed in the report of this study. The information will be destroyed after completion of the study and no individual information will be released in the report.

6.What are the risks of this research?

There are no known risks associated with participating in this research project.

7. What are the benefits of this research?

This research is not designed to help you personally, but it will help the researcher learn more about what people know, believe and do with sexual behaviour. This will assist the government and nongovernmental organizations in designing appropriate strategies to prevent further spread of HIV infection. We hope that, in the future, other people might benefit from this study through improved prevention programs aiming at reducing HIV infection.

***8.*Do I have to be in this research and may I stop participating at any time?**

The study is completely voluntary. You may withdraw from the study at any time, without having to give a reason or may refuse to answer a question should you so wish. Your decision to take part or not to take part will not in any way affect you negatively.

9.Is any assistance available if I am negatively affected by participating in this study?

Yes, if you require assistance, you will be referred to a counselor or a clinician for assistance.

10. What if I have questions?

This research is being conducted by Lydia Shilongo a student at the School of Public Health at the University of the Western Cape. If you have any questions about the research study itself, please contact Mrs. Lydia Shilongo at: IntraHealth International, Rundu, Tel 066 255277.

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Dr Brian van Wyk at Tel: 0027219592173 cell 0027 828049055 or write to:

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Appendix 2

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INFORMED CONSENT FORM

Title of Research Project: Knowledge on sexual risk behavior, and beliefs and practices about concurrent partnering among education students at a tertiary college in rural Namibia

I freely and voluntarily agree to participate. My questions about the study have been answered. I understand that my identity will not be disclosed and that I may withdraw from the study without giving a reason at any time and this will not negatively affect me in any way.

Participant's name……..

Participant's signature…….

Interviewer's signature……

Date……

Place:……

APPENDIX 3

INDIVIDUAL QUESTIONNAIRE: KNOWLEDGE, BELIEF AND PRACTICE OF CONCURRENT MULTIPLEL PARTNERING

INSTITUTION**:** Rundu College of Education (RCE)

Date: …../……./…..

Questionnaire number:_____

Instructions: **This questionnaire consist of 4 sections**

Please answer all the questions

Section A: Demographic information

1. **Sex (tick):**

1.1 Male…… ☐

1.2 Female……. ☐

2. **Year of study**

2.1 1st year……. ☐

2.2 2nd year……. ☐

2.3 3rd year …… ☐

3. **Date of birth:**

D	D	M	M	Y	Y	Y	Y

4. **Religion: (***tick only one)*

4.1 Roman Catholic ☐

4.2 Anglican ☐

4.3 Lutheran ☐

4.4 Methodist ☐

4.5 Full Gospel ☐

4.6 None ☐

4.7 Other ……specify ☐

5. Marital status:

5.1 Single, not dating at the moment 5.2 Single, dating at the moment ☐

5.2 Single in a relationship at the moment ☐

5.3 Married traditionally ☐

5.4 Married legally ☐

5.5 Divorced ☐

5.6 Widowed ☐

6. Dominant language you speak most often: **tick only one**

6.1 Rukavango ☐

6.2 Oshiwambo ☐

6.3 Otjiherero ☐

6.4 Silozi ☐

6.5 Damara/Nama ☐

6.6 Setswana ☐

6.7 Other ……specify ☐

Section B: Knowledge questions

Below are 2 questions on having partners. Remember there is no right or wrong answers. All the answers are valuable to us.

7 Please indicate whether you think the statements below are true or false

7.1 Having more than one partner at the same time spreads HIV to many people at a time**.** ☐ True ☐ False

7.2 Having more than one partner at the same time makes it easy for people to catch HIV | True | | False |

8 If you were to have sex with these people without a condom, how would you rank the risk of getting HIV infection?

No risk			Some risk	High risk
8.1	A prostitute			
8.2	A casual partner			
8.3	A wife or husband			
8.4	Two or more **regular** partners that you have a relationship with **at the same time**			

Section C: Practice questions

I know that some of these questions are sensitive but your input is valuable and the information will remain anonymous and confidential.

9. Have you been in a sexual relationship for the past 12 months? | Yes | | No |

10. How many sexual partners did you have in the past 12 months? **Tick only one**

10.1 No sexual partner for the rest of 12 months

10.2 One sexual partner for the rest of 12 months.

10.3 More than one sexual partner but at different times.

10.4 More than one sexual partner at the same time.

11. **Please answer the following about partner/partners.**

Tick only one

11.1 I've never had a partner in my life ☐

11.2 I think my most recent/current partner has no other partner ☐

11.3 I suspect my most recent/current partner has another partner ☐

11.4 I know my most recent/current partner has another partner ☐

Section D: Believe questions

12. **Indicate whether you think the following sentences are true or false**:

12.1 A woman should have only one partner at a time ☐ True ☐ False

12.2 A woman can have more than one partner at a time ☐ True ☐ False

12.3 A woman who has more than one partner at a time is promiscuous ☐ True ☐ False

12.4 A man should have only one partner at a time

True False

12.5 When a man has more than one partner at one time is a sign of manhood

False

True

12.6 Man having more than one partner at a time is an African culture and should continue

True False

12.7 A man who has more than one partner is promiscuous

True False