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Socio-cultural and behavioral determinants of condom use among youths in Limpopo Province, South Africa

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Chapter I

INTRODUCTION

South Africa is one of the countries hardest hit by HIV/AIDS. At the end of 2005 it was estimated that 5.54 million South Africans were living with HIV, which is the largest number of people living with the virus in any single country (DOH, 2006).Of particular concern new infections among young people, especially young women and girls are on the rise. This is reflected by the dramatic increase in HIV prevalence among antenatal clinic attendees from 10.4% to 30.2% in the last decade as reported by the National HIV and Syphilis Antenatal Survey (DOH, 2006).

Widespread awareness and prevention campaigns targeting young people have emphasized abstinence, mutual monogamy, partner reduction and consistent condom use as ways of preventing the spread of HIV (DOH; Lovelife). As young people make up a large proportion of the population in South Africa as in most developing countries, the intention of such initiatives suggests that preventing new infections among the youth today will slow down the progression of the epidemic in the longer term (Bongaarts and Cohen, 1999). However these efforts have seemingly had limited success as the prevalence of HIV and deaths caused by AIDS are still on the rise (Baleta, 1999).

Therefore further investigations into the determinants of condom use are important in developing effective HIV prevention programmes. The purpose of this study is to add to a growing body of knowledge on the factors that influence condom use among young people in rural South Africa. This is a secondary analysis of data collected as part of a

wider public health intervention, the Intervention with Micro-finance for AIDS and Gender Equity (IMAGE) study.

1.2 Objectives of this study

1. To conduct a secondary data analysis that examines the determinants of condom use, for men and women separately in relation to the following factors:

- *Socio-demographic characteristics*- age, education, marital status, migration and socio-economic status
- *Sexual behavior characteristics*- partnership type (spousal, non spousal, or both), age at sexual debut, number of lifetime sexual partners, contraceptive use (females only) and HIV-status
- *Socio-cultural characteristics* - perceived risk of HIV infection, condom self-efficacy (males only), partner communication on sex , condoms, HIV and other STIs, beliefs on gender norms, attitudes towards gender violence, knowledge on HIV/AIDS and HIV/AIDS related stigma.

2. To compare the results of this analysis to other national surveys on condom use among young people.

3. To use the results of this analysis to make recommendations to improve HIV control in rural South Africa.

1.3 Determinants of condom use

I think condoms are good but, aai… I hate those things

- MacPhail C and Campbell C (2005)

The following review of literature discusses factors that influence condom use that are pertinent to the present study. In the past, research on young peoples' sexual behavior has concentrated on pregnancy and contraceptive use including condom use (Kau, 1988). Recently, research has shown that condom use is also associated with a number of social, cultural and behavioral characteristics. Most literature discussed in this section is limited to investigations of young people from countries in sub-Saharan Africa, as this region is the epicenter of the epidemic. There are however a few studies quoted from other parts of the world. The literature review will include (a) background of HIV in sub-Saharan Africa, (b) the importance of condom use and (c) discussion of socio-cultural and behavioral determinants of condom use.

1.3.1 Background

HIV/AIDS has had devastating consequences in Sub-Saharan Africa, which is home to nearly 70% of all global cases (UNAIDS, 2005). In South Africa, one in ten people are infected with the virus (Shisana *et al.*, 2005). The epidemic has progressed at varying rates in the different provinces of South Africa. In Limpopo Province, the location of this study, the epidemic has progressed at a slower rate than other provinces, but nonetheless HIV prevalence among antenatal clinic attendees has increased dramatically from 8.5% in 1997 to 21.5% in 2005 (DOH, 2006).

No single reason drives the spread of HIV infection in sub-Saharan Africa; a host of multiple complex factors are at play (Largade *et al.*, 2001). A study in four African cities (Cotonou, Kisumu, Ndola and Yaoundé) found that the most common factors in cities with the highest HIV prevalence were; young age at women's first intercourse, young age at first marriage, a large age gap between partners, a lack of circumcision among males and the presence of HSV-2 and other STIs.

As well as the factors above, poverty, mobility and gender inequalities characterize the HIV/AIDS epidemics in sub-Saharan Africa. (Huygonnet *et al,* 2002; Gregson *et al.,* 2005; Jewkes *et al.*, 2003; Shisana *et al.*, 2005). The presence of mobile populations has been found to be associated with a high prevalence of HIV (Campbell, 2000). As in other parts of southern Africa, the impact of colonially driven social reorganization in South Africa created conditions where men moved to urban, industrial, farming or mining areas for work, leaving their wives and families in the rural areas for long periods of time. Male migrant workers engage in other relationships, either with commercial sex workers or in the context of secondary households, and in turn infect their partners upon their return to rural areas leading to increased incidence of HIV and other STIs (Lurie and Williams, 2003).

Lastly the low status of women continues to drive the spread of the virus in Africa (Gupta, 2002; Jewkes *et al., 2002*).Women are often economically vulnerable; hence they are dependent on their partners for survival and therefore cannot negotiate condom use, insist on fidelity or leave risky relationships (Parker *et al.*, 2000).

Since the advent of the epidemic, HIV prevention programmes in Africa have largely been focused on changing sexual behaviours through the promotion of condom use, reduction in the numbers of sexual partners or mutual monogamy and STI management (Speizer *et al.*, 2002). In South Africa, "ABC" messages promoting abstinence, faithfulness and condom use (DOH, 2005) have had limited success in reducing new HIV infections especially among the youth where new infections are still on the rise. Critics attribute the rapid spread of HIV in sub-Saharan Africa to the failure of these prevention strategies that focus too much on individual behaviours while failing to address the wider socio-cultural and economic conditions that promote them (Walker *et al.*, 2003). For example "ABC" messages are not practical for most young women in Africa. Abstinence and condom use are not always possible as they interfere with the need to have children and only mutual monogamy can reduce the risk of HIV infection. Nonetheless, as there is no cure to HIV/AIDS and antiretroviral treatment is still unavailable to many given low rates of HIV testing, promoting consistent condom use among young people continues to be of critical importance (Coleman and Ingram, 1999).

1.3.2 Condom use

Consistent condom use is central to the prevention of HIV and other STIs (Davis *et al.*, 1999; Hountoun *et al.,* 2005). In recent years condom use among the youth in sub-Saharan Africa has increased; a study by Cleland and Ali (2006), reported a significant rise in condom use among young women from 5.3% to 18.8% between 1993 and 2003. The main reasons cited for using condoms is to prevent unwanted pregnancies, HIV and other STIs (Nicholas, 1998; Maharaj, 2006). However, some argue that this increase in

condom use is still not sufficient to reduce the prevalence of HIV dramatically. Furthermore, young men and women alike are hesitant to use condoms because of threats to their relationships, cultural roles and at times economic survival (Bhattacharya, 2004).

1.3.3 Age

Young people disproportionately bear the burden of HIV infection in developing countries. For example, a South African national prevalence survey of HIV reported that the prevalence among 20-24 year olds to be 15.9% (Shisana *et al.*, 2005). The survey also reported new infections to be particularly high among young women and girls, who had an almost four times higher prevalence than found in their male counterparts (16.9% vs. 4.4%). This group is important as it represents people who have recently become sexually active so HIV prevalence in this age group is a proxy of HIV incidence.

1.3.4 Age at sexual debut

Early age at first sex is an important predictor of condom use and consequently HIV infection (Buga *et al.*, 1996; Large *et al.*, 2001; Manzini, 2001). For example, in a study investigating the sexual behavior of boys in Transkei, South Africa, boys who had an earlier age of sexual debut had sex more regularly, more frequently and had more lifetime sexual partners consequently making them more susceptible to contracting HIV. Another study in Kwazulu Natal showed that the 13.1% of men who had sex before the age of 15 were less likely to use condoms and hence were at greater risk of infection than their counterparts that experienced sex for the first time at an older age (Harrison *et al.*, 2005).

1.3.5 Partnership type

It is commonly considered that condom use is low among married and cohabiting couples particularly in rural areas (Maharaj, 2006). In addition, HIV prevention efforts are mainly targeted at premarital and extramarital sexual relationships (Maharaj and Cleland, 2005). This is even though in generalized epidemics up to 50% of infections occur within marriage (Huygonnet, *et al.*, 2002). Condom use within marriage is often associated with infidelity or illicit sex (Muhwava, 2003). As a man said with surprise in a focus group discussion in Kenya "You mean with my own wife? There is no need of using condoms…" (Bauni and Jarabi, 2000). Also a study in Angola found that consistent condom use was negatively associated with being married or being in a cohabiting relationship (Prata *et al.*, 2005).

In contrast, condom use is more widespread in casual relationships and among unmarried people (Bauni and Jarabi, 2000; Maharaj and Cleland, 2005; Muhwava, 2003, Prata *et al.*, 2005). This is often because many young people fear having children outside wedlock whereas having children is an expected outcome of marriage (Maharaj, 2006). As a result, a young woman might find it easier to negotiate condom use with a partner for the prevention of pregnancy than for protection against HIV infection (Cleland and Ali, 2006).

1.3.6 Gender inequalities

Unequal power in sexual relationships between men and women is a major barrier to condom use and continues to be a driving factor of the HIV/AIDS epidemic (Baleta,

1999; Jewkes *et al.*, 2003). Men often bring more money, status and security to a relationship, creating conditions of dependency for the female partner. Lacking the ability to negotiate for safe sex, women and girls find themselves in situations that increase their risk of HIV infection and other STIs (Najjumba *et al.*, 2002).

Also, men's attitudes and beliefs on sex, reproductive health and gender equality are obstacles to the reduction of the spread of HIV (Maharaj and Cleland, 2005; Muhwava, 2002; Najjumba *et al.*, 2002). Social norms allow and sometimes encourage men to have multiple sexual partners and yet discourage them from open discussions on sex and how to protect themselves (Adih and Alexandra, 1999). It has been found that men who are married, those that are significantly older than their partners and those with multiple partners were significantly more likely to refuse to use condoms (Langen, 2005).

1.3.7 Socio-cultural norms

There are many studies highlighting the importance of condom use as a way of reducing HIV, yet condoms are one of the least consistently used forms of contraception in Africa, particularly among rural populations (Muhwava, 2003). For instance, the importance of having children in most developing countries puts men and women in different positions with regards to sex and contraception (Nakayiwa *et al.,* 2006). Often the use of condoms conflicts with the need to have children, which in many cases validates a woman's position in the family and in the community (Nakayiwa *et al.,* 2006*).* In India, where women are expected to have at least two sons that survive to adulthood, they see no reason to use condoms as there is pressure to prove their fertility (Bhattacharya, 2004).

This makes it difficult to promote condom use for the prevention of HIV infection. Also, cultural norms and community values have also been found to be barriers of condom use as they at times dictate appropriate sexual behaviour for men and women. For example, married women find it difficult negotiate condom use with their husbands because insisting on condom use in a marriage alludes to lack of trust and infidelity (Gupta, 2002).

1.3.8 Communication

Research has shown that there is a positive relationship between communication and condom use (Jewkes *et al.*, 2003; Pettifor *et al.*, 2004). In a study by Coleman and Ingram, partners that had a discussion about contraception before intercourse were 79% more likely to use condoms. Another study reported that couples that were able to have conversations about sex were more likely to use condoms as compared to those that were not (Adih and Alexandra, 1999). Therefore, discussions on sex, reproduction and HIV involving young people at household level should be encouraged as a strategy of promoting condom use (Noar *et al.*, 2006).

1.3.9 Perceived risk of HIV infection

Young people's perceived risk of HIV infection has also been found to be significantly associated with condom use in a number of settings. For example, a study in Benin showed that although 94% of interviewees thought of themselves to be at risk of HIV infection, only 36.8% of males and 47.5% of women reported condom use at last intercourse (Hounton *et al.*, 2005). In KwaZulu-Natal, Macintyre *et al.* (2004) reported

living with a chronically ill family member to be one of the factors associated with increased perceived risk of HIV infection. Similarly in Ghana, young men who perceived themselves at risk of infection were up to six times more likely to use condoms than those that did not (Adih and Alexandra, 1999). On the other hand, some studies report differently, where those who do not consider themselves at risk of contacting the virus were less likely to use condoms (Najjumba *et al.*, 2002). This suggests that emphasis on personal vulnerability of acquiring HIV infection is not always enough to promote condom use.

1.4.0 Knowledge on HIV/AIDS

Knowledge on HIV/AIDS is an important predictor of condom use (Hartung *et al.*, 1999; Maharaj and Cleland, 2005; Tao *et al.*, 2003). For example, in a study by Nicholas (1998), as many as 57.8% of students reported that they had been taught about HIV prevention in school. However, knowledge on the virus and how it is spread does not necessarily mean that young people choose to or are able to protect themselves from infection. For example, in KwaZulu Natal most couples were knowledgeable about condoms and where to get them, yet only 15% of men and 18% of women reported consistent use (Maharaj and Cleland, 2005; Hartung *et al.*, 1999). Similarly, other studies in Kenya and Tanzania reported that condom use has remained relatively low and largely restricted to casual sexual partners or prostitutes despite most people knowing about the virus (Bauni and Jarabi 2003, Tao *et al.*, 2003). Awareness is yet to translate into increased condom use and reduction of risk behaviours.

1.4.1 HIV status

Finally, despite previous optimism, HIV infection rates in South Africa do not seem to be declining. Recent data released by the national Department of Health at the end of July 2006 paints a dismal scenario. There has been a continued increase in HIV prevalence among young girls and women aged below 20 years (DOH, 2006). This age group has recently become sexually active and hence represents new HIV infections and this implies that prevention strategies promoting condom use among young people have been unsuccessful in creating an AIDS free generation. Also, most worrying is that those who are HIV positive are no more likely to use condoms than those that are not infected (Olley *et al.*, 2005). A study in South Africa showed that 54.4% of HIV infected individuals who had been sexually active in the six months preceding the study, had not used a condom during the most recent intercourse (Olley *et al.*, 2005).

1.4.2 Summary

Table 1 summarizes factors that are positively and negatively associated with condom use that have been discussed in the review of literature above. For these reasons, condom use among young people is low in sub-Saharan Africa and South Africa is no exception. Young people's behavior plays a major role in the future spread of HIV, therefore identifying factors associated with condom use is critical to HIV prevention strategies.

***Table 1**: Summary of factors from literature review found to be associated with condom use*

Factors positively associated with condom use	Factors negatively associated with condom use
Good communication	Younger age
Being unmarried	Early sexual debut
Having multiple sexual partners	Gender inequalities
Perceived susceptibility of HIV infection	Desire to have children
Knowledge on HIV/AIDS	Being HIV positive

Chapter 2

METHODOLOGY

2.1 Study Population

The data used for this analysis was derived from the Intervention with Microfinance for AIDS Gender Equity (IMAGE) study – an HIV intervention research programme conducted in eight villages in the Sekhukhuneland district, a densely settled rural area, on the border of Mpumalanga and Limpopo Provinces of South Africa. The total study catchment area included approximately 9500 households and a population of 50 000 people. Appendix 1 shows the map of location of the villages in the IMAGE study.

2.2 Study Design

This study is an analysis of baseline cross-sectional data collected from the Young Person Questionnaire of the IMAGE study included as Appendix 2. The original study was a prospective, randomized community-matched intervention trial study conducted between September and December 2001, with a three-year follow-up during 2004-5.

2.3 Study Sample

This study sample was comprised of 2236 people aged 14-35 who lived in a random sample of households in the eight villages involved in the study. Given the emphasis on sexual behavior in this study; only respondents that answered ‘yes” to the question “Have you ever had sexual intercourse?” were included in the present study.

2.4 Data Collection

The data for this analysis were collected as baseline data using the *Young Person's Questionnaire* that was completed by consenting household members aged between 14-35 years in the eight IMAGE study villages. The questionnaire was administered by trained local interviewers and it covered socio-demographic data, information on sexual behavior and social- cultural factors including; perceived risk of HIV infection, partner communication on sex, condoms HIV and other STI's, beliefs on gender norms, attitudes towards gender violence and knowledge of HIV/AIDS and attitudes around HIV-related stigma. Participants were also asked to provide an oral specimen for HIV testing.

2.5 Measurement

There were two dependent variables in this study; (i) consistent condom use in the last 12 months and (ii) condom use at last sex. Consistent condom use was measured from the response to the question "How often would you say you have used a condom with this person in the last 12 months" with "always or nearly always", "half or >half the times", "less than half the time", and "never" as responses. Although it is acknowledged that only consistent condom use is effective against HIV infection and other STIs the categories "always or nearly always" and "half or >half the times" were combined as for analysis because of the low number that reported consistent condom use. Further, categories "less than half the times" and "never" were also combined for analysis and recoded as "inconsistent" condom use. Condom use at last sex for both spousal and non-spousal partners was measured from a "yes" or "no" response to the question "Did you use a condom the last time you had sex with this person?"

2.6 Predictors of condom use

Table 2 shows the exposure (independent) variables in this study. Scales were created for the following variables; perceived risk of HIV infection, partner communication, beliefs on gender norms, attitudes towards gender violence, knowledge on HIV/AIDS and HIV/AIDS related stigma. Each exposure variable will be discussed in more detail below.

***Table 2**: Exposure variables examined as possible predictors of condoms use by category, Limpopo, South Africa*

Variable	No. of items	Questions	Category
Number of lifetime partners	1	How many people would you say you have had sexual intercourse with in total up to now in your life?	**≤3** **>3**
Age at sexual debut	1	At what age did you first have sexual intercourse?	**<16** **16 years and older**
HIV Status	1	Oral fluid specimen was collected from consenting participants	**Positive** **Negative**
Contraceptive use (females only)	1	What main method of contraception are you currently using?	**Pills** **Injectables** **Condoms** **Other**[1]
Condom self-efficacy (males only)	1	In the last 12 months, have you ever purchased or picked up condoms with the intention of using them for protection during sex?	**Yes** **No**
Perceived risk of HIV/AIDS	1	Do you consider yourself at high, medium, low or at no risk at all to HIV/AIDS?	**High risk:** =high risk +med risk **Low risk:** =low risk+ no risk
Partner communication	3	In the last 12 months have you spoken to your spouse or sexual partner about (i) sex, and sexuality in general (ii) sexually transmitted diseases including HIV (iii) issues relating to sex, HIV, condoms etc	**Good**: Responded yes > 2 items **Poor**: Responded yes < or = 2 items
Beliefs on gender norms	7	(i) If a woman asks her husband to use a condom, she is being disrespectful to her husband (ii) If a woman asks her husband to use a condom it means that she must be sleeping around with other men	**Progressive**: Respond yes to < or = 3 items **Less progressive**: Respond yes to

[1] Other includes: IUD, diaphragm, calendar/mucus method, female sterilization, male sterilization, withdrawal

		(iii) A man needs to have many sexual partners, and the wife must just tolerate this In your opinion, is it acceptable for a married woman to refuse to have sex with her husband if: (iv) She doesn't want to (v) He refuses to use a condom (vi) She's angry because he has other girlfriends (vii) She is worried he may have AIDS	>3 items
Attitudes towards gender violence	3	In your opinion, does a man have a good reason to hit his wife if: (i)she refuses to have sex with him (ii)she asks him to use a condom (iii) he finds out that she has been unfaithful	**Progressive:** Responded yes to <2 items **Less progressive:** Responded yes to < or = 2 items
Knowledge on HIV/AIDS	3	(i) Do you know of anyone who is infected with HIV or who has died of AIDS? (ii) Do you think that a healthy-looking person can be infected with HIV, the virus that causes AIDS (iii) Can a pregnant woman infected with HIV transmit the virus to her unborn child?	**High:** Responded yes to 3 items **Medium:** Responded yes to 1 to 2 items **Low:** Responded yes to 0 items
HIV/AIDS related stigma	6	(i) Would you be willing to share a meal with a person you knew had HIV or AIDS? (ii) If a relative of yours became ill with HIV, the virus that causes AIDS, would you be willing to care for him in your household? (iii)If you knew a shopkeeper or food seller had the HIV virus, would you buy food from them? (iv) If a member of your family became ill with HIV, the virus that causes AIDS, would you want them to keep it a secret and not tell anyone else? (v) Have you ever participated in a march, rally or meeting around HIV/AIDS awareness? (vi) Have you ever been involved in the organization of such a meeting or gathering?	**Low:** Responded yes to items < 2 items **Medium:** Responded yes to 2-4 items **High:** Responded yes to < 5 items

2.6.1 Perceived risk of HIV/AIDS.

In the perceived risk of HIV/AIDS scale categories high and medium risk were combined and recoded as "High risk", categories low and no risk were also combined and recoded as "Low risk" for analysis.

2.6.2 Partner communication.

The partner communication scale included three questions that reflected partners' level of communication about sex, condom use and HIV and other STIs. Respondents answered either "yes" or "no" to three questions selected in this category. Each "yes" response was assigned one point. Scores were added up and ranged from 0-3. Total scores were categorized into two groups based on the distribution of scores: "Poor" communication (score = 0-1) and "Good" communication (score= 2-3).

2.6.4 Beliefs on gender norms.

The beliefs on gender norms scale consisted of seven questions which reflected what respondents thought were appropriate behaviors for men and women in the home. Each "yes" response was assigned one point. Scores were added up and ranged from 0-7. Subjects were considered to have "Progressive" beliefs if they scored they scored 3 points or less points and to have "Less progressive" beliefs if they scored more than 3 points.

2.6.4 *Attitudes towards gender violence*.

The attitudes towards gender violence scale included three questions that assessed attitudes towards violence against women in the community. Each "yes" response answer was assigned one point. Scores were added up and ranged from 0-3. Subjects were considered to have "Progressive" attitudes if they scored they scored less than 2 points and to have "Less progressive" attitudes if they scored between 2 and 3 points.

2.6.5 *Knowledge on HIV/AIDS*.

The knowledge on HIV/AIDS scale included three questions. Each "yes" response was assigned one point. Scores were added up and ranged from 0-3. Total scores were categorized into three groups based on the distribution of scores: "Poor" knowledge (score =0); "Average" knowledge (score =1-2) and "High" knowledge (score=3).

2.6.6 *HIV/AIDS related stigma*.

The HIV/AIDS related stigma scale consisted of six questions. Each "yes" response was assigned one point. Scores were added up and ranged was from 0-6. Total scores were categorized into three groups based on the distribution of scores: Respondents were considered to have "Low" stigma if they scored less than 2 points, to have "Average" stigma if they scored between 2 and 4 points and to have "High" stigma if they scored more than 5 points.

2.7 Confounding variables

From the literature review the following variables; age, education, marital status, migration and socio-economic status were identified as potential confounders. Potential confounders are factors which have (i) direct causal link to the outcome of interest (consistent condom use, condom use at last sex) and (ii) are a good proxy measure for exposure variables (Epidemiology: study design and analysis, 2004). For example, age distorts the association observed between sexual activity and condom use (Figure 1). It was therefore important to control confounding by including all potential confounders in a logistic regression model for each exposure variable.

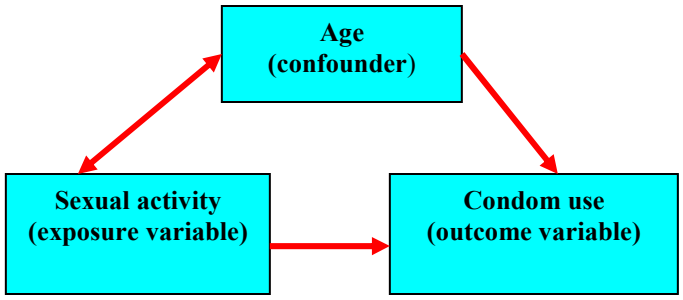


Figure 1: Schematic of the effect of confounding variables

2.8 Data Analysis

STATA 8.0 was used to analyze data in this study. Given that emphasis of this study on condom use, participants that were not sexually active at the time of the study were excluded from analysis. The following steps were taken to analyze data. Data was analyzed for males and females separately as the patterns of associations were likely to differ between them. Descriptive statistics were used to summarize the overall data set. Chi-squared tests of association were used to assess factors associated with condom use in a crude analysis. Factors considered (as exposure variables) included; number of lifetime sexual partners, age at sexual debut, partnership type, contraceptive use, HIV status, condom self-efficacy, perceived risk of HIV infection, partner communication, beliefs on gender norms, attitudes towards gender violence, knowledge on HIV/AIDS and HIV/AIDS related stigma. Odds ratios and p-values were used to define significant relationships. Relationships found to be significant in the crude analysis were included in a multi-variate model to control for confounding. Logistic regression was used to obtain adjusted odds ratios and p-values at a 5% level of significance for the final analysis of the determinants of consistent condom use and condom use at last sex.

2.9 Ethical considerations

This study has been granted ethical clearance by the Human Research Ethics Committee at the University of the Witwatersrand. (Protocol number M050929, approved 07/02/07)

In addition, the original study was approved by ethics committees at both the University of the Witwatersrand, South Africa (Protocol Number M991108, approved 31/01/00), and the London School of Hygiene and Tropical Medicine (Reference number 598, approved 06/09/00).

Chapter 3

RESULTS

3.1 Socio-demographic and behavioral characteristics

Table 3 describes the socio-demographic and behavioral characteristics of the study sample. Of the 2236 sexually active participants included in this study, there were 1325 (59.3%) females and 911 (40.7%) males. Almost all the study subjects were South African (99.5%) and most had been born in the same region as the study sites (85.6%) and spoke Sepedi[2] (88.8%) as their first language (not shown in Table 3). Respondents ranged in age from 14 to 35 years, with a mean of 23 years for both sexes. The majority of participants were single (males 88.2%; females 73.7%) and significantly more women than men were reported being married or living as married (23.3% vs. 11.3%). Most respondents had enrolled into secondary school (males 72.9%; females 75.6%). A large proportion of subjects were of a low socio-economic status: more than 90% were food insecure and only half of respondents could pay back a loan of R50 to an official body.

Overall, condom use in this study population was low; only 30.7% of males and 24.4% of females used condoms at their last sexual intercourse and 25.8% of males and 22.9% of females reported consistent condoms use in the last 12 months. Males were significantly more likely to report condom use at last sex than females. Consistent condom use was low with spousal partners, with use at 7.7% and 9.3% for males and females respectively. In contrast, consistent condom use increases dramatically with non-spousal partners (girlfriend/boyfriend). Approximately a fifth of unmarried people reported consistent

[2] Main language spoken in Limpopo province

condom use (females 22.8%, males 18%). It is interesting to note that consistent condom use was lower among respondents that reported having multiple partners as compared to consistent condom use with one partner only. These figures show that condom use was inconsistent and varied with partnership type.

Males were significantly more likely to have more than three lifetime sexual partners than women. With regards to age at sexual debut, significant differences were observed between males and females. Males were more likely to engage in sexual activity before the age of 16 than their female counterparts (10.8% vs. 2.5%).

Although not found to be statistically significant, more women than men felt at high risk of HIV infection. Approximately, two-thirds of men reported condom self-efficacy defined as having picked up or purchased condoms in the last 12 months with the intention of using them for protection during sex. A larger proportion of male participants reported good communication on sex, condoms and HIV with their partners (males 62.7% vs. females 57.2%). Women were more likely than men to have progressive beliefs on gender norms (56.4% vs. 52.4%). Only a few of respondents of both sexes had less progressive attitudes towards gender violence. HIV-related knowledge seemed to be high – with more than 90% of men and women being in the high and medium categories for this indicator. The majority of respondents of both sexes held stigmatizing attitudes. More than 80% of participants were not willing to share a meal with someone they knew to be HIV positive and would not be willing to look after a relative who became ill with HIV.

Table 3: Socio-demographic and behavioral characteristics of the study sample, Limpopo, South Africa

Socio-demographic characteristics	**Males (N=702) N (%)**	**Females (N=1325) N (%)**	**p-value**
Age (years)			
14-19	279 (31.3)	364 (28)	**0.063****
20-24	282 (31.7)	401 (31)	
25-29	191 (21.4)	284 (22)	
30-35	139 (15.6)	254 (19.5)	
Mean age (SD)	23 (5.4)	23 (5.6)	
Education			
No education	8 (0.9)	12 (0.9)	0.877
Primary school only	192 (19.2)	250 (21.6)	
Secondary school only	650 (72.9)	985 (75.6)	
Post secondary	41 (4.6)	56 (4.3)	
Marital status			
Single	786 (88.2)	960 (73.7)	**0.000***
Married or living as married	101 (11.3)	304 (23.3)	
Separated/divorced	4 (0.5)	28 (2.2)	
Widowed	0	11 (0.8)	
Condom use at last sex	*(n=841)*	*(n=1198)*	
Yes	258 (30.7)	292 (24.4)	**0.002***
No	583 (69.3)	906 (75.6)	
Condom use in last 12 months	*(n=911)*	*(n=1325)*	
Consistent	235 (25.8)	304 (22.9)	0.121
Inconsistent	676 (74.2)	1021 (77.1)	
Condom use by partnership type in the last 12 months			
Spousal partner only			
Consistent use	70 (7.7)	123 (9.3)	**0.000***
Inconsistent use	133 (15.5)	365 (27.6)	
Non- Spousal partner			
Consistent use	208 (22.8)	239 (18)	**0.000***
Inconsistent use	527 (57.9)	649 (49)	
Multiple partners (spousal partner + non-spousal partners or multiple non-spousal partners)			
Consistent use	6 (0.7)	1 (0.1)	**0.000***
Inconsistent use	16 (1.8)	7 (0.5)	
No. of lifetime sexual partners			
≤3	374 (41)	931 (70.3)	**0.000***
>3	537 (59)	394 (29.7)	
Age at sexual debut			
<16	92 (10.8)	32 (2.5)	**0.049***
16 years and older	763 (89.2)	125 (97.5)	
Range	10-26	11-29	

Migration: *How many nights in the past month have you slept at home?*			
usually sleeping at home in the last month	786 (86.3)	1143 (86.3)	0.992
not usually sleeping at home in the last month	125 (13.7)	172 (13.7)	
Socio-economic status			
(i)*Food security*			
Food insecure	723 (82.2)	1,054 (83.5)	0.434
Food secure	157 (17.8)	209 (16.5)	
(ii) *Could you pay back R50 to an official body by the end of the month for the household?*			
Impossible, difficult	384 (43.7)	542 (43)	0.746
Possible, no problem	495 (56.3)	719 (57)	
Perceived risk of HIV infection			
High risk	347 (40.8)	503 (40.7)	0.195
Low risk	564 (59.2)	822 (59.3)	
Condom self-efficacy (males only)			
Yes	603 (66.4)		
No	305 (33.6)		
Partner communication about sex, condoms, HIV			
Poor	289 (37.3)	467 (42.8)	**0.017**
Good	486 (62.7)	624 (57.2)	
Beliefs on gender norms			
Progressive	477 (52.4)	748 (56.4)	**0.056***
Less progressive	434 (47.6)	577 (43.6)	
Attitudes towards gender violence			
Progressive	526 (79.2)	760 (81.6)	0.229
Less progressive	138 (20.8)	171 (18.4)	
Knowledge on HIV/AIDS			
Low	48 (5.4)	75 (5.8)	**0.000***
Medium	717 (80.5)	1114 (85.5)	
High	126 (14.1)	114 (8.8)	
HIV/AIDS related stigma			
Low	128 (14.4)	186 (14.3)	**0.013***
Medium	646 (39.3)	997 (76.5)	
High	117 (13.1)	120 (9.2)	

***p<0.05 **p<0.01**

3.1.1 Contraceptive use

The majority of females chose injectables (76%) followed by oral contraceptives/ pills (14%) as their main forms of contraception (Figure 2). This was regardless of age and

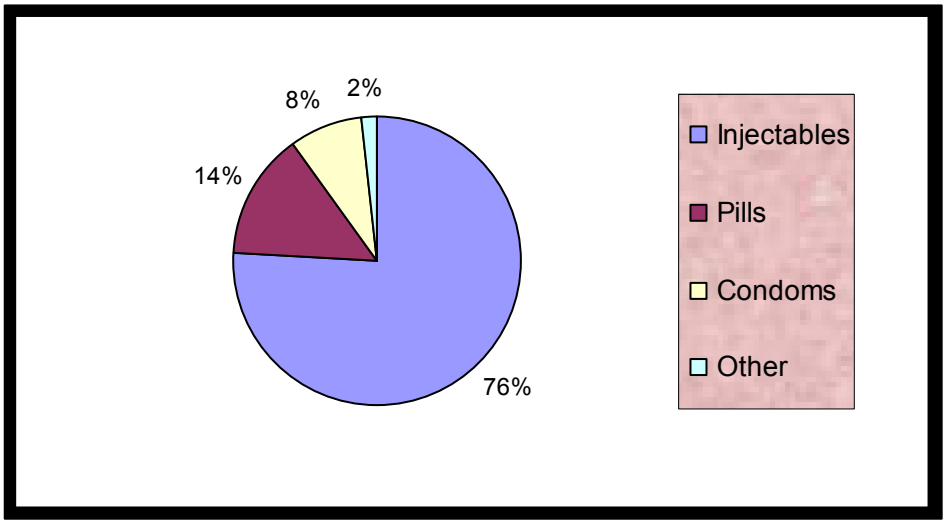
marital status (Table 4). Only 8% of the 1325 women and girls in this study reported using condoms as their main method of contraception. Further, the use of condoms as a main method of contraception decreased with increasing age. Interestingly, a higher proportion of married women used condoms as their main method of contraception as compared to their single counterparts.

***Table 4**: Contraceptive methods currently used by females aged 14-35 (n=702), by marital status and age, Limpopo, South Africa*

Variable	n/N	Injectables	Pills	Condoms	Other	p-value
Age (years)						
14-19	192/702	141 (75)	22 (11.7)	21 (11.2)	4 (2.13)	**0.053***
20-24	220/702	170 (76.2)	33 (14.8)	19 (8.5)	1 (0.5)	
25-29	164/702	128 (78.5)	23 (14.2)	9 (5.5)	3 (1.84)	
30-35	126/702	86 (73.5)	20 (17.1)	8 (6.8)	3 (2.6)	
Marital status						
Single	530/702	416 (76.9)	74 (13.7)	44 (8.1)	7 (1.3)	0.343
Married	156/702	100 (70.9)	24 (17)	13 (9.2)	4 (2.84)	
Separated/divorced	11/702	7 (100)	0	0	0	
Widowed	5/702	2 (100)	0	0	0	

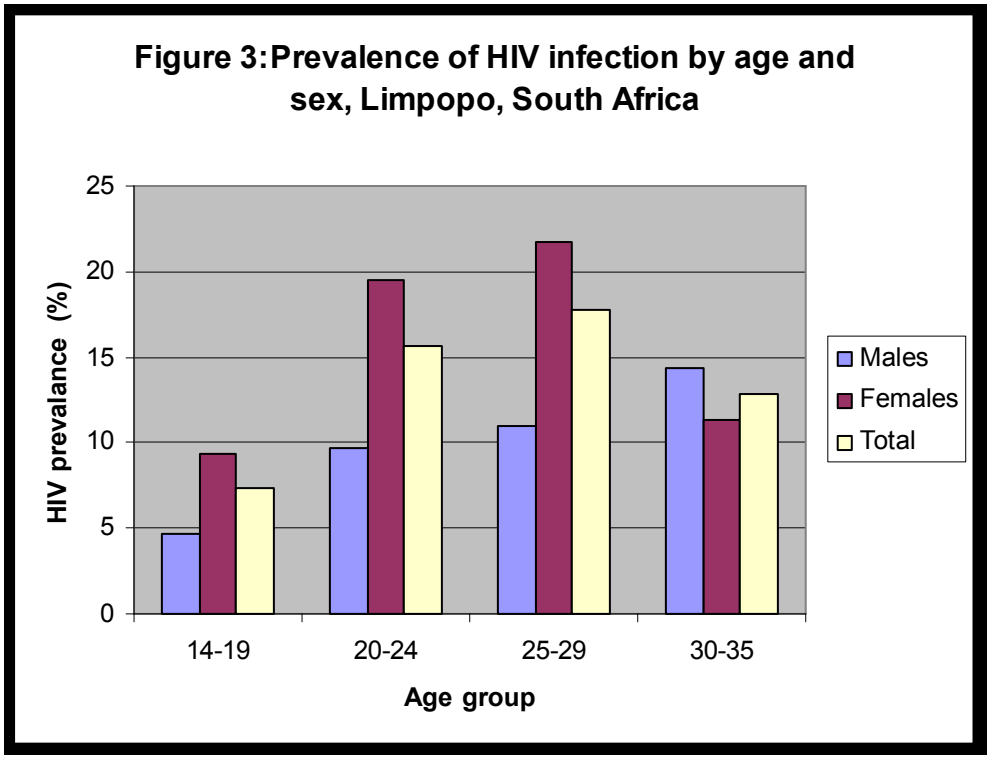
***p<0.05 **p<0.01**

***Figure 2**: Contraceptive methods currently used by females aged 14-35 (n=702), Limpopo, South Africa*



3.1.2 HIV prevalence

The overall HIV prevalence in this study sample was 12.9 % (males 8.9%, females 15.5%). The prevalence of HIV infection was found to be higher among females than males in all age groups except in the 30-35 age group (14.4% vs. 11.3%). HIV prevalence peaks at 21.7% in the 25-35 age group for females and at 14.4% in males aged between 30-35 years.



3.2 Determinants of condom use (males and females separately)

In bivariate analyses, predictors of consistent condom use and condom use at last sex among males are shown in Table 5. Condom self-efficacy was found to be the strongest predictor of consistent condom use. Other significant predictors of consistent condom use included, good communication, low perceived risk of HIV infection and high levels of stigma. Further, using condoms as last sex was significantly associated with high condom

self-efficacy, low risk perception of HIV infection, progressive attitudes towards gender violence. Number of lifetime sexual partners, age at sexual debut, HIV status and HIV/AIDS knowledge were not significantly associated with consistent condom use.

In adjusted analysis, factors found to be significantly associated with condom use in crude analysis were entered into a multiple logistic regression model. This model calculated adjusted odds ratio for each independent variable and included the following confounding variables: age, education, marital status, migration and socio-economic status.

Among males, all of the five variables found significant in bivariate analysis, were also found to be significant predictors of consistent condom use in the multivariate analyses. Condom use self-efficacy was found to be the most important predictor of consistent condom use: males who reported low condom use self-efficacy were more likely to be inconsistent users (aOR= 0.11, 95% CI= 0.07-0.19). Males who considered themselves to be at low risk of HIV infection were more likely to report consistent condom use (aOR=1.96, 95% CI=1.22-3.15). Levels of consistent use were higher among respondents who communicated well with their partners (aOR= 2.36 95% CI=1.63-3.42. Interestingly, males who held stigmatizing attitudes were more likely to use condoms consistently than those that did not (aOR= 2.63, 95% CI=1.41-4.90).

There were five significant variables associated with condom use at last sex among males. Of these, condom self-efficacy was again found to be the most powerful predictor

of condom use at last sex. Males who had low self-perceived risk of HIV infection were 1.84 times more likely to report condom use at last sex than those who perceived themselves at high risk (aOR=1.84, 95% CI =1.33-2.56). Good communication was positively associated with use at last sex (aOR= 1.38, 95% CI =0.95-2.00). Significant differences were observed in age at sexual debut; males who initiated sex after the age of 16 were more likely to reported condom use at last sex (aOR=1.46, 95% CI =1.05-2.03).

Among females, significant predictors of consistent condom use included: using condoms as a main method of contraception, good communication and high levels of stigma (Table 6). Further, levels of consistent use were less likely among females with less progressive attitudes towards gender violence and those who had more than six lifetime sexual partners. Women who reported condom use at last sex had less than 3 lifetime sexual partners, used condoms as a main method of contraception, felt at low risk of HIV infection and had good communication with their partners. Age at sexual debut, HIV status, perceived risk of HIV infection, beliefs on gender norms and HIV/AIDS knowledge were not significantly associated with condom use at last sex.

In multivariate analyses, only three of the selected variables were found to be significant predictors of consistent condom among females. The first and most important finding was that females who used condoms as a main method of contraception were up to twenty times more likely to use condoms consistently (aOR=20.21, 95% C I=8.31- 49.19) and at last sex (aOR=20.40, 95% C I=8.53-49.00). Secondly, women who reported good communication with sexual partners were 2.52 times more likely to be consistent users

(aOR= 2.52, 95% CI= 1.83-3.46). Lastly females that held less progressive attitudes towards gender violence were also less likely to be consistent users (aOR=0.74, 95% CI=0.56-.97).

In addition, females who had sex for the first time after the age of 16 were more likely to have used condoms at last sex compared to those who engaged in sex earlier (aOR= 1.40, 95% CI= 1.40-1.89). Respondents who held stigmatizing attitudes were also more likely to have used condoms at last sex (aOR= 1.98, 95% CI= 1.12-3.50). Finally, less progressive attitudes towards gender violence were associated with lower levels of condom use at last sex. (aOR= 0.70, 95% CI= 0.52-0.93).

3.2.1 Summary

In summary, condom use in this population is low: less than a quarter of respondents used condoms consistently and less one-third of men and women used condoms at last sex. This was especially true of females, married couples and those who have multiple partners. In multivariate analyses, significant predictors of consistent condom use for both sexes included good communication and high HIV-related stigma. High condom self-efficacy, defined as the intention to pick up or purchase condoms with the intention of use, was the most powerful predictor of both condom use indices among males. Among females only, having fewer than three lifetime sexual partners and progressive attitudes towards gender violence was positively associated with using condom consistently. Lastly, females who used condoms as their main method of contraception were up to 20 times more likely to use them consistently and at last sex.

Table 5: Logistic regression analyses assessing associations between condom use and selected variables for males (n=911), Limpopo, South Africa

Variables	Consistent condom use in the last 12 months						Use		
	n/N	%	Crude OR[1]	95%CI	aOR[2]	95%CI	n/N	%	Cru OI
No. of lifetime sexual partners									
≤3	97/235	41.3	1.00		1.00		104/258	40.3	1.00
>3	138/235	31.8	0.99	0.73- 1.34	0.95	0.68-1.33	154/258	59.7	0.90
Age at sexual debut									
<16	19/230	8.26	1.00		1.00		24/248	9.68	1.00
16 years and older	211/230	91.7	1.32	0.98-1.78	1.33	0.96-1.86	224/248	90.3	1.24
HIV status									
Negative	177/189	93.7	1.00		1.00		192/208	92.3	1.00
Positive	12/189	6.4	0.63	0.33-1.20	0.63	0.33-1.23	16/208	7.7	0.84
Perceived risk of HIV infection									
High risk	76/235	32.3	1.00		1.00		78/258	30.2	1.00
Low risk	159/235	67.7	**1.40**	**1.02-1.92***	**1.40**	**1.02-1.94***	180/258	69.8	**1.70**
Condom self-efficacy									
Yes	216/234	92.3	1.00		1.00		226/257	87.9	1.00
No	18/234	7.7	**0.11**	**0.07-0.19***	**0.11**	**0.07-0.19***	31/257	12.1	**0.21**
Partner communication									
Poor	47/194	24.3	1.00		1.00		59/211	27.3	1.00
Good	147/194	75.8	**2.36**	**1.63-3.42***	**2.28**	**1.54-3.36***	157/211	72.7	**1.41**
Beliefs on gender norms									
Progressive	112/235	47.7	1.00		1.00		126/258	48.8	1.00
Less progressive	123/235	52.3	1.28	0.96-1.73	1.25	0.92-1.71	132/258	51.2	1.20
Attitudes towards gender violence									
Progressive	148/235	63.0	1.00		1.00		161/258	62.4	1.00
Less progressive	87/235	37.0	0.75	0.55-1.01	0.73	0.53-1.00	97/258	37.6	0.74
Knowledge on HIV/AIDS									
High	37/229	16.2	1.00		1.00		43/252	17.1	1.00
Medium	182/229	19.5	1.12	0.63-2.65	1.21	0.59-2.53	192/252	76.2	0.60
Low	10/229	4.4	1.58	0.71-3.50	1.48	0.66-3.33	17/252	6.3	0.82
HIV/AIDS related stigma									
Low	21/229	9.2	1.00		1.00		33/252	13.1	1.00
Medium	165/229	72.1	1.75	1.06-2.88	1.64	0.93-2.76	179/252	71.0	1.16
High	43/229	18.8	**2.96**	**1.62-5.40***	**2.63**	**1.41-4.91***	40/252	15.9	1.55

***p<0.05 **p<0.01**

[1] Crude OR: calculated from a univariate logistic regression
[2] Adjusted OR: calculated multivariate logistic regression including age, education, marital status, socio-economic status and migration

***p<0.05 **p<0.01**

[1] Crude OR: calculated from a univariate logistic regression
[2] Adjusted OR: calculated multivariate logistic regression including age, education marital status, socio-economic status and migration

Table 6: Logistic regression analyses assessing associations between condom use and selected variables for females (n=1325), Limpopo, South Africa

Variables	Consistent condom use in the last 12 months								
	n/N	%	Crude OR[1]	95%CI	aOR[2]	95%CI	n/N	%	Cr OR
No. of lifetime sexual partners									
≤3	228/304	75.0	1.00		1.00		215/292	73.6	1.00
>3	76/304	25.0	**0.74**	**0.55-0.99***	0.84	0.61-1.15	77/292	26.4	**0.7**
Age at sexual debut									
<16	6/289	2.1	1.00		1.00		8/302	2.7	1.00
16 years and older	282/289	97.9	1.15	0.89-3.149	1.10	0.83-1.45	292/302	97.4	1.2
Contraceptive use									
Pills	21/190	11.1	1.00		1.00		18/176	10.2	1.00
Injectables	118/190	62.1	1.05	0.62-1.77	1.08	0.65-1.87	109/176	61.9	1.1
Condoms	47/190	24.7	**17.46**	**8.42-48.3***	**20.21**	**8.31-49.19***	46/176	26.1	**20.**
[3]Other	4/190	2.11	2.12	0.35-6.12	1.53	0.56-6.56	3/176	1.7	1.5
HIV status									
Negative	210/251	89.7	1.00		1.00		201/242	83.1	1.00
Positive	41/251	16.3	1.08	0.74-1.59	1.10	0.73-1.63	41/242	16.9	1.1
Perceived risk of HIV infection									
High risk	105/304	34.5	1.00		1.00		102/292	34.9	1.00
Low risk	199/304	65.5	1.21	0.92-1.58	1.23	0.93-1.62	190/292	65.1	1.3
Partner communication									
Poor	77/263	29.3	1.00		1.00		86/252	34.1	1.00
Good	186/263	70.7	**2.25**	**1.67-3.04***	**2.52**	**1.83-3.46***	166/252	65.9	1.2
Beliefs on gender norms									
Progressive	174/304	57.2	1.00		1.00		163/292	55.8	1.00
Less progressive	130/304	42.8	0.94	0.74-1.24	1.03	0.79-1.35	129/292	44.2	1.0
Attitudes towards gender violence									
Progressive	192/304	63.2	1.00		1.00		184/292	63.0	1.00
Less progressive	112/304	36.8	**0.73**	**0.56-0.95***	**0.74**	**0.56-0.97***	108/292	37.0	**0.7**
Knowledge on HIV/AIDS									
Low	16/300	5.3	1.00		1.00		19/289	6.7	1.00
Medium	256/300	85.3	1.10	0.62-1.95	1.13	0.63-2.07	241/289	83.4	0.8
High	28/300	9.3	1.20	0.60-2.41	1.26	0.612.59	29/289	10.0	1.0
HIV/AIDS related stigma									
Low	46/300	15.3	1.00		1.00		41/289	14.2	1.00
Medium	212/300	70.7	0.82	0.57-1.19	0.79	0.54-1.16	211/289	73.0	0.9
High	42/300	14.0	**1.64**	**0.99-2.71***	1.63	0.97-2.76	37/289	12.8	**1.6**

***p<0.05 **p<0.01**

[1] Crude OR: calculated from a univariate logistic regression
[2] Adjusted OR: calculated multivariate logistic regression including age, education, marital status, socio-economic status and migration

***p<0.05 **p<0.01**

[1] Crude OR: calculated from a univariate logistic regression
[2] Adjusted OR: calculated multivariate logistic regression including age, education marital status, socio-economic status and migration

Chapter 4

DISCUSSION

The results of this study show that there are a number of factors associated with condom use among young people in Limpopo province and that these associations vary by gender. Significant predictors of consistent condom use for both sexes included good communication and high HIV-related stigma. High condom self-efficacy, defined as the intention to pick up or purchase condoms with the intention of use, was the most powerful predictor of condom use among males. Among females only, having fewer than three lifetime sexual partners was positively associated with consistent use. Lastly, females who used condoms as their main method of contraception were up to 20 times more likely to use them consistently.

Condom use at last sex is a more frequently used measure of condom use as participants are more likely to remember this information; however this measure does not capture condom use over a longer period of time. A meta-analysis study on condom use measurement by Noar *et al*. recommends that measuring consistent condom use is a more sensitive way of identifying predictors of condom use. In this study both condom use at last sex and consistent condom use were measured and trends of associations were similar for both outcomes.

Overall, condom use was very low among both young men and women. Other studies investigating condom use in rural populations in South Africa have concluded similar findings (Giles et al., 2005; Maharaj, 2006; Maharaj and Cleland, 2005). Whereas young

people in urban areas have reported higher levels of condom use (RHRU, 2004). This shows that greater efforts are required to promote condom use among young people in rural areas.

Consistent with other studies, males were more likely than females to report condom use at last sex. However, consistent condom use did not vary by sex. In contrast to other studies (Adih *et al*., 1999; Maharaj, 2006; Prata *et al*., 2005; Reddy *et al*., 2000), this study suggests that those with multiple partners were less likely to report consistent condom use and condom use at last sex. As expected, married women were less likely to report condom use than their single counterparts. This is likely due to the fact that the desire to have children often conflicts with the need to practice safe sex (Bhattacharya, 2004; Maharaj, 2006; Nakiyiwa *et al*., 2006). Also married women often find it difficult to negotiate condom use with their husband as it may be associated with a lack of trust and infidelity.

Related to this, unmarried women were more likely to report consistent condom use in this study. This may be because many young women fear pregnancy outside marriage and this could be an important motivator for use (Maharaj, 2006). There was no direct measure of the reasons for condom use in this study. However, since a majority of females reported using hormonal methods to prevent pregnancy and only 8% reported using condoms as a main method of contraception we can therefore conclude that very few women used condoms to prevent HIV and other STIs. Indeed, this study suggests that females who used condoms as their main method of contraception were up to 20

times more likely to use condoms in at last sex and to be consistent users. Therefore, programmes promoting condom use among women in this population should emphasize the dual protection offered by condoms against unwanted pregnancies and protection against HIV and other STI's.

For young men, condom self-efficacy (having picked up or purchased condoms with the intention of use) was found to be the most powerful predictor of both condom use at last sex and consistent use. This is consistent with other studies that have shown similar results in a number of settings (Adih, 1999; Tao *et al*., 2006) Interventions to promote condom use should aim to increase condom self-efficacy among young men. This can be achieved by making condoms more accessible to young men in places they frequent such as in schools, spaza shops, drinking halls and other non- clinical settings.

In this study, men who perceived themselves to be at low risk of HIV infection were more likely to use condoms. Other studies have found the reverse to be true; the level of condom use increases as perceived risk of HIV increases (Adih and Alexandra, 1999; Maharaj, 2006; Macintyre *et al*., 2004). A possible explanation is in a mature generalized epidemic such as in South Africa, where levels of knowledge of the virus and how it is transmitted is generally high, young men who engage in risky behaviors do so knowing that they are at high risk of infection. The group of young men who in this survey reported high levels of condom use also believed themselves at low risk to HIV infection.

Contrary to previous research, perceived risk of HIV infection was not a predictor of condom use among women (Maharaj and Cleland, 2005). This could be because women believed they were at no risk because they were faithful to their partners or because they believed that they were at high risk to infection already and therefore felt powerless to protect themselves. Nonetheless these findings suggest that HIV prevention programmes for youth should emphasize personal susceptibility to HIV. This can be achieved through supporting disclosure by people living with HIV in the community in places such as schools, churches, etc to sensitize young people on the dangers of HIV/AIDS.

In South Africa, gender inequalities have increasingly been found to be significant barriers to the use of condoms among both young men and women especially in rural areas (Jewkes *et al*. 2003). Gender inequalities in this study were measured by attitudes towards gender violence and beliefs on gender norms. For both indicators it was found that respondents that held less progressive beliefs and attitudes were less likely to use condoms consistently and at last sex. This suggests that programmes that support the empowerment of women can play an important role in challenging less progressive gender norms and should be incorporated in HIV prevention strategies for young men and women.

Delayed sexual debut has been previously found to be associated with protective sexual behaviour including higher levels of condom use (Harrison *et al*, 2006). In this study the majority of young people who used condoms consistently initiated sex after the age of 16 and as a result were at reduced risk of HIV infection. The results are encouraging as a

delay in age at first sex is an important factor attributed to HIV decline (Hallett *et al*., 2006). It is therefore important, to start HIV prevention messages at an early age. This can be done through media campaigns such as Lovelife, or by encouraging early HIV testing in schools to support "staying negative".

Knowledge has been found to be an important predictor of condom use (Maharaj, 2006; Tao *et al*., 2006). Although knowledge of HIV/AIDS and how it is transmitted is high, in the current study this was not found to be a significant predictor of condom use. This is likely due to existing high levels of HIV-related knowledge in South Africa with little room for measurable improvement.

Interestingly, respondents that reported high levels of HIV-related stigma were more likely to use condoms at last sex and consistently. Other studies have found high levels of stigma to be negatively associated with condom use (Baleta, 1999). A possible explanation for this is that respondents who held stigmatizing attitudes were also more fearful of the disease and therefore more likely to use condoms.

Lastly, the results of these analyses show no association between HIV status and condom use. In many other studies HIV status had been found to be positively associated with condom use because people who engage in risky behaviors use condoms more often. In this study sample, only a few of the respondents knew their HIV status. Efforts to encourage young people to get tested are crucial.

4.1 Limitations of the study

The major limitation of this study, as with all studies of sexual behaviours was the potential for respondents to give socially desirable responses. Another limitation that is common with analyses of secondary data is that the researcher attempted to analyze questions that she did not craft. This narrowed the scope of this study, for instance analyses were confined to socio-cultural and behavioural determinants of condom use, whereas other important determinants such as economic status were omitted because questions around this were not asked in the original study. Furthermore, this is a cross-sectional study where associations were determined from "snap-shot" information. As such, associations do not necessarily reflect causal relationships which could only be properly assessed with longitudinal studies. The effect of recall bias is yet another limitation; participants were asked to remember conversations they had around certain sensitive issues with members of their household in the preceding twelve months. Lastly analyses of this study excluded participants that were not sexually active at the time of the study, most of whom were aged between 14 –19 years. Information from this age group is important as these respondents were not sexually active and therefore intervention strategies targeted at this group would have the greatest impact.

4.2 Conclusions

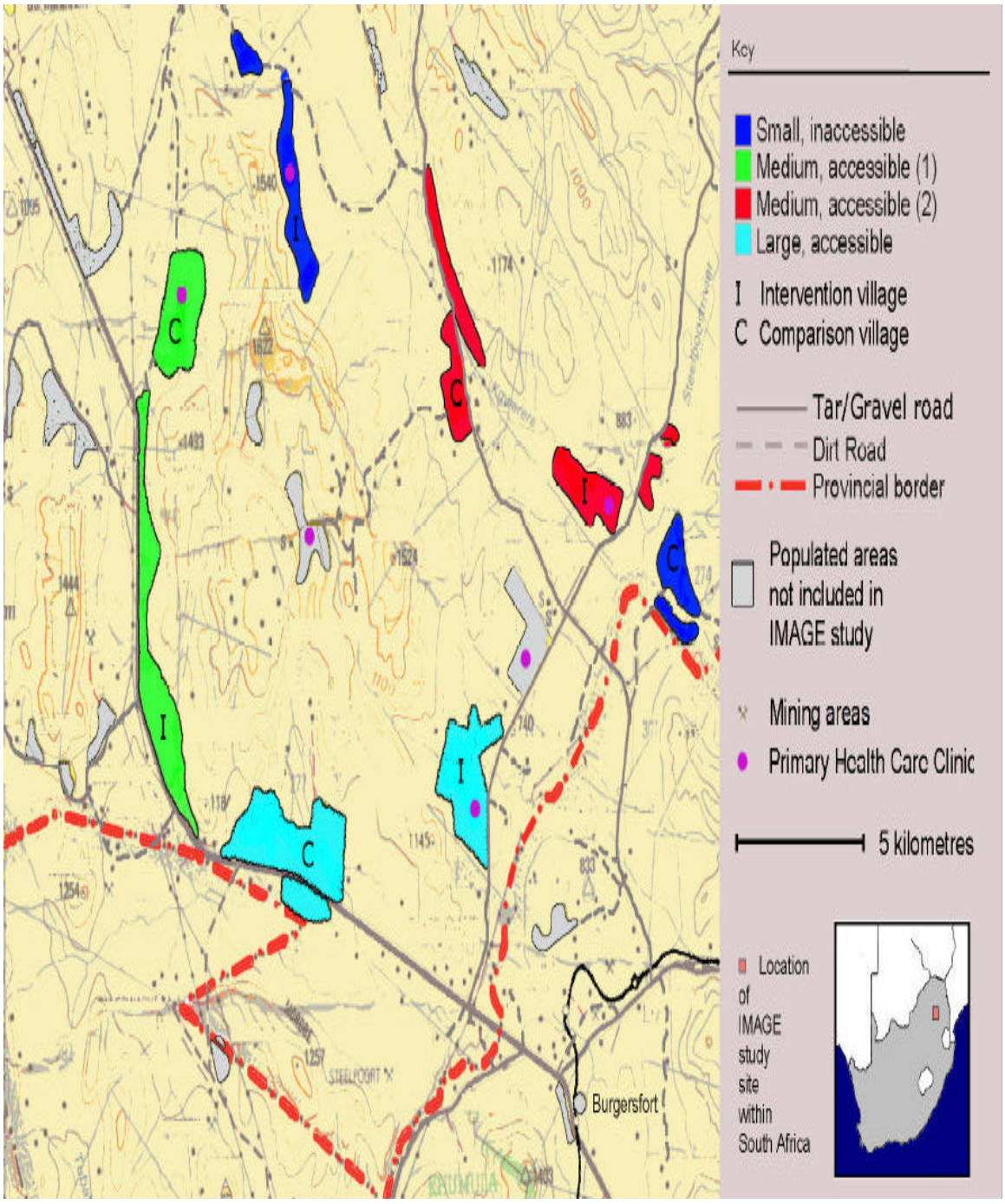
In conclusion, despite high levels of HIV infection, consistent condom use among young people in rural Limpopo is extremely low. Data from this study suggest that efforts to reduce HIV risk among young people in this population should focus on delaying sexual debut, increasing perceived risk of HIV infection, encouraging partner communication,

making condoms more easily accessible to young men and addressing gender inequalities. Furthermore, the dual protection offered by condoms against unwanted pregnancies and against HIV and other STI's should be emphasized in this population particularly among young women and girls as it plays an important role in the prevention of HIV.

The reasons for low levels of consistent condom use are complex and involve structural factors such as community beliefs as well as individual behaviors and are difficult to infer from structured questionnaires. Further investigations using qualitative research techniques such as focus group discussions may reveal more nuanced information

APPENDICES

***Appendix A**: Map of location of the villages included in the IMAGE study*



***Appendix B**: Young Person's Questionnaire*

Rural AIDS and Development Action Research Programme
Sekhukhuneland IMAGE Study

YOUNG PERSON QUESTIONNAIRE

INTERVIEW IDENTIFICATION	Village No *Nomoro ya motse*	Household No *Nomoro ya lapa*	Individual No *Nomoro ya motho ka motho*

PART 1 : INTERVIEW SET UP

Visit 1 : ____ / ____ / ____ **_____ Code** **___ ___ Initials**

Visit 2 : ____ / ____ / ____ **_____ Code** **___ ___ Initials**

Visit 3 : ____ / ____ / ____ **_____ Code** **___ ___ Initials**

Codes

1	Interview completed	4	Refused
2	Not at home	5	Partly completed
3	Postponed	6	Incapacitated

PART 2 : INTERVIEW INTRODUCTION

Hello, my name is "_____", I am from the Health Systems Development Unit at Tintswalo Hospital. As you may know we have arranged to do some interviews within your household. We realise this may take some time so we want to make this as convenient for you as possible. We want to question young people in the household on some issues about their lives and about their attitudes.

Thobela, Leina laka ke "_____" wa lefapa la tsa tlhabollo ya tsa maphelo (Health Systems Development Unit) sepetleng sa tintswalo. Bjale ka ge re beakantse dipoledishano le maloko a lelapa. Re lemogile gore seo se ka tsea nako gomme re le tsebisa e sa le bjale. Re nyaka go botsisa baswa baka mo lapeng mabapi le ditaba tseo di amanago le maphelo a bona le gore ba di tsea bjang.

- Describe HSDU and RADAR / *Hlalosa HSDU le RADAR*
- Explain why we are working in this area / *Hlalosa mabaka o go shoma motzeng wo*
- Briefly describe what will be asked in the questionnaire / *Hlalosha dipotzizo tzeo di tla go botsiswa ka boripana*
- Explain information will be confidential / *Hlalosa gore tshedimosho etla ba sephiri*
- Check suitable, confidential surroundings / *Lebelela lefelo leo elego la maleba*
- Explain that taking part is entirely voluntary / *Hlalosa gore go tsea karolo gase kgapeletso*
- Ask if there are any questions – and answer questions / *Botzisa gore a gona dipotzizo - o arabe dipotzizo*
- Tell the interviewee how long the interview will take / *Ba botse gore poledisano e tla tzea nako e kae.*

I confirm that The Consent Statement has been read to the interviewee and that he/she understands and consents to participate in the interview

Signed : _____ *Date :* _____

PART 3 : INTERVIEW DETAILS

Date of Interview : ____ / ____ / ____

Time Start Interview : ____ : ____ **Time finish Interview :** ____ : ____

Interview conducted in Language : _____

PART 4 : INTERVIEW CLOSURE

Thank you for your time. I know we have covered some personal issues today. I would like to go back over some of the issues we have covered and spend some time talking about them with you.

Ke leboga nako ya gago. Ke a tseba gore re boletse ka tse dingwe tsa ditaba tsa siphiri tsa gago lehono. Ke rata go boela morago go tse dingwe tsa ditaba tzeo re boletsego ka tsona gomme ke tsee nako ke bolela le wena ka tsona

1. Take interviewee through answers to the questions on HIV knowledge / *Hlahloba dikarabo tsa dipotsiso mabapi le tsebo ya HIV le mmotsoloswa.*
2. Ask if they need condoms – distribute if necessary / *Botsisa ge ele gore ba nyaka dicondom – efa ge ele gore go bohlokwa.*
3. Describe and refer to Voluntary Counselling and Testing at local clinic / *Hlalosa gape o ba romele go diteko tsa bopithaopo (Voluntary Counselling and Testing) cliniking ya kgauswi.*

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Y100 : Background Information

Question			Codes	
Y101	Sex *Monna/Mosadi*		1 = Male / *Monna* 2 = Female / *Mosadi*	
Y102	Date of Birth		dd/mm/yy	
Y103	Have you ever been married or lived as being married? *O kile wa nyala/nyalwa goba wa dula ekare o nyetswe/nyetse?*	1 = Never married / *A se nke* 2 = Currently married / living as married / *Nyetswe/Nyetse / dula ekare o Nyetswe/Nyetse* 3 = Separated / Divorced / *Kgaogane/ Hlalane* 4 = Widowed / *Mohlologadi / Mohlolo*		
Y104	Nationality *Bodulo*	1 = South African 2 = Mozambican 3 = Zimbabwe 4 = Other / *Tse dingwe*		
Y105	What is your first language ? *Polelo ya ka gae*	1 = Tsonga 2 = Sepedi 3 = Sepulana 4 = English 9 = Other / *Tse dingwe* _____		
Y106	How long have you been a *permanent resident of* this village? *Ke nako e kae ole modudi wa mo motseng?*		Number of years / *Mengwaga* 98 = since birth / *ke belegetswe mo.*	
Y107	Where was your family living when you were born? [Mark only one answer] *Le be le dula kae ge belegwa?*	1 = This house / *Ntlong yona ye.* 2 = Other house in this village / *Ntlong e ngwe gona mo motseng* 3 = Other village in this region / *Motseng o mongwe gona mo nageng ye.* 4 = Other region in South Africa / *Nageng e ngwe gona mo South Africa.* 5 = Outside South Africa / *ka ntle ga South Africa*		
Y108	Have you made an overnight trip to a large city during the last year? *O kile wa tsea leeto go ya nageng e ngwe gomme wa robala gona mo ngwageng wa go feta?*		1 = Yes / *Ee* 2 = No / *Aowa* 99 = No response / *A gona karabo*	
Y109	For how many months of the last year were you staying here? *Ke dikgwedi tse kae tseo o di tserego o dula mo?*		Give no. of months *Efa palo ya dikgwedi.*	
Y110	**If less than 7 months** How was the pattern of your visits home in the last year ? *O be etela gae ka mokgwa ofe ngwageng wa gofeta?*	1 = Mainly weekends / *Mafelelo a beke* 2 = Mainly month ends / *Mafelelo a kgwedi* 3 = Occasional extended trips / *Ka maeto ago amana le mediro* 4 = Migrated in this year / *O hudugile ngwageng o* 5 = Other / *Tse dingwe*		
Y111	Have you ever worked in any of the following industries ? *O kile wa shoma go le lengwe la mafapa a meshome*		1 = Mining industry 2 = The Military / *Boshole* 3 = Truck driver / *Mootledi wa Truck* 4 = None of the above / *Ago setee sa tseo*	
Y112	Is your mother alive ? *Mme wa gago oa phela?*	1 = Yes, household member / *Ee, Leloko la lelapa* 2 = Yes, non household member / *Ee, Ga se leloko la lelapa* 3 = No / *Aowa* 9 = Don't know / *Ga ke tsebe*		
Y113	**If Household Member** Give no. from HH questionnaire *Ge ele gore go bjale, gape ke leloko la lelapa efa nomoro go tswa go HH questionnaire*			
Y114	Is your father alive ? *Ntate wa gago oa phela?*	1 = Yes, household member / *Ee, Leloko la lelapa* 2 = Yes, non household member / *Ee, Ga se leloko la lelapa* 3 = No / *Aowa* 9 = Don't know / *Ga ke tsebe*		
Y115	**If Yes, Household Member** Give no. from HH questionnaire *Ge ele gore go bjale, gape ke leloko la lelapa efa nomoro go tswa go HH questionnaire*			
Y116	**WOMEN ONLY** / **BASADI FELA** How many children have you had up to now in your life ? *O bile le bana baba kae go fihla ga bjale bophelong bja gago?*		Give number 98 = No response	

Y200 : Communication in the household

I am going to ask you a series of questions about who you communicate with around certain sensitive issues. For each question, consider the last 12 months ….
Ke tla go botsisa dipotsisa mabapi le bao o boledisanang le bona ka dilo tse "sensitive". Go potsiso engwe le engwe lebelela dikgwedi tse 12 tseo di fetilego…

			Have you spoken to …					
			A	B	C	D	E	F
Question Number	In the last 12 months Have you spoken about … *Mo dikweding tse 12 o kile wa bolela ka ….*	Codes	Your own Children (aged 10-25 yrs) *Bana ba gago (mengwaga(10-25)*	Your own spouse or sexual partner(s) *Molekane wa gago*	Your parents / guardians *Batswadi ba gago goba bahlokomedi ba gago*	Other household members of your own age group *Maloko a lelapa bao e ka bago dithoka tsa gago*	Teachers *Barutishi*	Friends from outside the household *Bagwera go tswa ka ntle*
Y201	Sex, and sexuality in general *Thobalano ka kakaretso*	1 = Yes / *Ee* 2 = No / *Aowa* 3 = Not applicable / *Ga e gona* 9 = No response / *A gona karabo*						
Y202	Sexually transmitted diseases including HIV *Malwetsi a go fetela ka thobalano go akaretswa le HIV*							
Y203	**Sought** advice on any issues relating to sex, HIV, condoms etc *O kile wa kgopela dikeletso mabapi le ditaba tseo di amanago le thobalano, HIV, condoms, bjale bjale…*		-					

Question Number		Codes	
Y204	How old were you when your parents / guardians first talked to you about sex *O be o nale mengwaga e me kae ge batswadi / bahlokomedi bagago ba boledishana le wena la mathomo ka tsa thobalano.?*	Give age / *Efa mengwaga* 98 = Never talked / *A se nke ba bolela* 99 = Don't know / *A ke tsebe*	
Y205	In your household, do you feel 'free' /open to discuss issues of sex and sexuality? *Ka gae o kwa o lokologile go ka boledishana ka ditaba mabapi le thobalano?*	1 = Yes / *Ee* 2 = No / *Aowa* 99 = Don't know / *A ke tsebe*	
Y206	In your household, has communication around sensitive issues like relationships or sex become easier or more difficult over the past year? *Ka gae, poledishano mabapi le tsa thobalano e bile bonolo goba ebile boima mo ngwageng wago feta?*	1 = Easier / *Bonolo* 2 = More Difficult / *Boima kudu* 3 = Stayed about the same /*A gona karabo* 99 = Don't know / *A ke tsebe*	
Y207	If you had a problem in a relationship – like an unwanted pregnancy – are you confident that you could turn to someone in your **household** for support? *Ge o kaba le bothata ditabeng tsa marato – go swana le mpa yeo esa nyakegego – o kwa o nale maatla gore o ka llela go yo mongwe wa ka gae gore a go thushe?*	1 = Yes / *Ee* 2 = No / *Aowa* 99 = Don't know / *A ke tsebe*	
Y208	**IF NO,** Who would you turn to for support? ***GE E LE GORE A GO BJALE*** *O ka llela go mang gore a go thuse?* Mark one answer	1 = Other family / *Ba bangwe baleloko* 2 = Friend / *Mogwera* 3 = Clinic 4 = Pastor/Church / *Kereke* 5 = Other / *Tse dingwe*	

Y300 : Females only : Contraception

If MALE, go to NEXT PAGE

We are interested in knowing more about how people in your community control their family size by using family planning methods. I am now going to ask you some questions about family planning, There are many ways in which people can prevent a pregnancy from happening ….

Re nale kgahlego mabapi le go tseba tse dintshi ka fao batho ba mo motseng ba laolago bogolo bja malapa a bona ka go shomisha mekgwa ya peakanyo. Ga bjale ke tla go botsisa dipotsiso mabapi le tsa peakanyo ya lelapa, go nale mekgwa e mentshi eo ka yona batho baka thibelago go ba mmeleng ...

Question Number		Codes	
Y301	Have you ever used anything, or tried in any way to delay or avoid getting pregnant? *O kile wa shomisha se sengwe, goba wa leka tsela e ngwe go thibela pelego?*	1 = Yes / *Ee* 2 = No / *Aowa* 3 = Never had intercourse / *A se nke ka robalana* **If NEVER, go to Page 5**	
Y302	Are you currently doing something, or using any method, to avoid getting pregnant? *Ga bjale o nale seo o se dirago, goba mokgwa o mongwe, go thibela pelego*	1 = Yes / *Ee* 2 = No / *Aowa* **If NO, go to page 5**	
Y303	What (main) method are you currently using? *O shomisha mokgwa ofe ga bjale* IF MORE THAN ONE, ONLY MARK MAIN METHOD *GE ELE GORE E FETA O TEE, BONTSHA MOKGWATHWADI*	1 = Pill / Tablets / *Dipilisi* 2 = Injectables / *Injections* 3 = Implants (Norplant) 4 = IUD / *Loop* 5 = Diaphragm / Foam / Jelly 6 = Calender/Mucus Method 7 = Female Sterilization 8 = Condoms 9 = Male Sterilization 10 = Withdrawal 11 = Herbs 98 = Other	
	ASK THE NEXT QUESTIONS ONLY IF THE RESPONDENT IS CURRENTLY MARRIED OR HAS A CURRENT PARTNER **If NO CURRENT PARTNER, go to page 5**		
Y304	Does your husband/partner know that you are using a method of family planning? *Afa molekane wa gago oa tseba gore o shomisha mokgwa wa peakanyo ya lelapa?*	1 = Yes / *Ee* 2 = No / *Aowa* 8 = Don't know / *Ga ke tsebe* 9 = No response given / *A gona karabo*	
Y305	Has / did your current / most recent husband/partner ever refused to use a method or tried to stop you from using a family planning method to avoid getting pregnant? *Molekane wa gago o kile a leka go go thibela go shomisha mokgwa wa go thibela pelego ?*	1 = Yes / *Ee* 2 = No / *Aowa* 9 = No response given / *A gona karabo*	
Y306	**If YES,** In what ways did he let you know that he disapproved of using methods to avoid getting pregnant? *Ge ele gore go bjalo,O bontshitse ka tsela efe gore ga a rate geo shomisha dithibela pelego?* MARK ALL THAT APPLY *BONTSHA TSOHLE TSEO DI LEGO GONA*	1 = Told Me That Did Not Approve / *O mpoditse gore ga a dumele* 2 = Shouted or Got Angry / *O dirile leshata/O kgopishegile* 3 = Threatened To Beat Me / *O ntshosheditse ka go mpetha* 4 = Threatened To Leave or Throw Me Out Of Home / *O nsthosheditse kago ntlogela / go ntsha ka ntlong.* 5 = Beat Me / Physically Assaulted / *O mpethile* 6 = Took Or Destroyed Method / *O tsere goba o sentse mokgwa* 9 = Other / *Tse dingwe* _____	

Y400 : Males only

If FEMALE go to next page

Question Number		Codes	
Y401	Have you been circumcised? *O tswa komeng naa?*	1 = Yes / *Ee* 2 = No / *Aowa* 9 = No response given / *A gona karabo*	
Y402	**If YES** At what age did you undergo circumcision ? *Ge ele gore go bjalo* *O ile komeng o nale mengwaga e me kae*	Give age in years / *Efa mengwaga*	
Y403	In the last 12 months, have you ever purchased or picked up condoms with the intention of using them for protection during sex? *Mo dikgweding tse 12 tsa go feta, o kile wa reka goba wa tsea di condom ka maikemisetso a tshirelatso nakong ya thobalano*	1 = Yes / *Ee* 2 = No / *Aowa* 9 = No response given / *A gona karabo*	
	ASK THE NEXT QUESTIONS ONLY IF THE RESPONDENT IS CURRENTLY MARRIED OR HAS A CURRENT PARTNER **If NO CURRENT PARTNER, go to page 5**		
Y404	Does your <u>current</u> spouse/partner use a method of family planning? *Afa molekane wa gago wa bjale o shomisha mokgwa wa peakanyo*	1 = Yes / *Ee* 2 = No / *Aowa* 3 = Don't know / *A ke tsebe* 9 = No response given / *A gona karabo*	
Y405	Have you ever discussed the use of contraception with your partner? *O kile wa boledishana le molekane wa gago mabapi le dithibela pelego?*	1 = Yes / *Ee* 2 = No / *Aowa* 9 = No response given / *A gona karabo*	
Y406	Have you ever tried to stop your <u>current</u> / <u>most recent</u> spouse/partner from using a family planning method to avoid getting pregnant? *O kile wa leka go thibela molekane wa gago wa bjale go shomisha dithibela pelego?*	1 = Yes / *Ee* 2 = No / *Aowa* 9 = No response given / *A gona karabo*	
Y407	**If YES,** In what ways did you let her know that you disapproved of using methods to avoid getting pregnant? *O bontshitse ka tsela efe gore ga o rate ge a shomisha dithibela pelego?* MARK ALL THAT APPLY ***BONTSHA TSOHLE TSEO DI LEGO GONA***	1 = Told Her That You Did Not Approve / *O mmoditse gore ga o dumele* 2 = Shouted / Got Angry / *O dirile leshata/O kgopishegile* 3 = Threatened To Beat Her / *O tshosheditse ka go mmetha* 4 = Threatened To Leave / Throw Her Out Of Home / *O tshosheditse go mo tlogela/ go mo ntsha ka ntlong.* 5 = Beat Her / Physically Assaulted / *O mmethile* 6 = Took Or Destroyed Method / *O tsere goba o senitse mokgwa* 9 = Other / *Tse dingwe* _____	

Y500 : Sexual Behaviour

In the next section of the interview I shall ask you some more questions, some of which are quite personal. You don't have to answer them if you don't want to, but I just want to remind you that the answers you give me in this interview will be confidential. Is it alright for me to continue? As you may know, a person may get the AIDS virus through sexual activity. To help prevent the spread of AIDS, we need to know more about all the different types of sexual practices people engage in. Since this survey is confidential, no one will know your answers. If you really don't want to answer a question you may refuse and we will go on. We would appreciate your cooperation in answering these questions – the information you give will be important to help us understand ways to stop the spread of HIV infection.

"Karolong yeo e latelago ya poledisano ke tla rata go go botsisa dipotsiso, tse dingwe tsa tsona di "personal". Ga o gapeletswe go araba le ge ele gore ga o nyake, ke rata gogo gopotsa gore dikarabo tseo o mphago tsona mo poledisanong ye e tla ba sephiri. Go lokile gore nka tswela pele? Ka ge o tseba , motho a ka humana twatsi ya AIDS ka thobalano. Go thusa go thibela phatlalalo ya AIDS, re rata go tseba tse dintshi ka ditiragalo tsa thobalano tseo batho ba ikamantsego le tsona. Ka ge nyakishisho ye ele sephiri, a gona yo a tlogo tseba dikarabo tsa gago. Ge ele gore ga o nyake go araba potsiso o kano gana gomme re tla tswela pele ntle le bothata. Re tla thabela tirisano ya gago go arabeng dipotsiso – tshedimosho yeo oe fago e tla ba bohlokwa go re thusha go kweshisha ditsela tsago thibela phatlalalo ya HIV. "

Question Number		Codes	
Y501	Have you *ever* had sexual intercourse? *O kile wa robalana?*	1 = Yes / *Ee* 2 = No / *Aowa* 9 = No response given / *A gona karabo* **If NO, go to page 8**	
Y502	At what age did you first have sexual intercourse? *O thomile tsa thobalano o nale mengwaga e me kae?*	Age in years / *Efa mengwaga* 88 = Don't know / *Ake tsebe* 99 = No Response / *A gona karabo*	
Y503	How would you describe the first time that you had sex? Would you say that you wanted to have sex, you did not want to have sex but it happened anyway, or were you forced to have sex? *O ka hlalosa bjang letsatsi la gago la mathomo ge o thoma tsa thobalano? O ka bolela gore o be o nyaka go robalana goba o be o sa nyake efela gwano direga ka tsela e ngwe, goba o gapeleditswe go robalana.*	1 = Wanted to have sex / *O be o nyaka* 2 = Did not want but happened / *O be o sa nyake, efela gwa no direga ka tsela e ngwe* 3 = Forced to have sex / *O gapeleditswe* 99 = No Response / *A gona karabo*	
Y504	How many people would you say you have had sexual intercourse with in total up to now in your life ? *Ke batho ba ba kae bao o ka rego o robetse le bona go fihla ga bjale, bophelong bja gago?*	Give total number / *Efa palo kamoka* 88 = Don't know (too many) *A ke tsebe(Ba bantshi kudu)* 99 = No Response / *A gona karabo*	
Y505	Have you had sexual intercourse in the last 12 months? *O kile wa robalana mo dikgweding tse 12 tsa go feta*	1 = Yes / *Ee* 2 = No / *Aowa* 9 = No response given / *A gona karabo*	
	For WOMEN: Think about all the male sexual partners you've had in the last 12 months / *Nagana ka balekane ba banna bao o bilego nabo dikgweding tse12 tsago feta* **For MEN:** Think about all the female sexual partners you've had in the last 12 months / *Nagana ka balekane ba basadi bao o bilego nabo dikgweding tse12 tsago feta*		
Y506	How many of your partners in the last 12 months were <u>Your spouse / live in partner(s)</u> *Mo dikgweding tse 12 tsa go feta ke ba bakae ba balekane ba gago ba thobalano bao elego gore obe nyalane/dula le bona?*	*Efa palo.* *88 = A ke tsebe* *99 = A gona karabo*	
Y507	How many of your partners in the last 12 months were <u>Sexual partners that you are not married to and have never lived with</u> *Mo dikgweding tse 12 tsa go feta ke ba bakae ba balekane ba gago ba thobalano bao elego gore obe osa nyalana/dule le bona?*	*Efa palo.* *88 = A ke tsebe* *99 = A gona karabo*	

Y600 : Spousal Partners
(Include details of up to 3 spouses)

[ ] If NO Spousal Partners check this box and go to page

			1	2	3
Y601	INITIAL		___	___	___
Y602	No. from HH interview if household member (99 if not) *Efa nomoro go tswa go HH questionnaire, ge ele leloko la lelapa*		___	___	___
Y603	How old are they ? (99 = Don't know) *Ba nale mengwaga e me kae? (99 = Ake tsebe)*		___	___	___
Y604	How old were you when you first married this person? *O be o nale Mengwaga e me kae ge o nyalana le motho yo?*		___	___	___
Y605	During the last 12 months how often would you say you have had sexual intercourse with this person ? (0 = None, 1 = Once only, 2 = 2 – 5 times, 3 = 6 – 20 times, 4 = >20 times) *Mo dikgweding tse 12 tsa go feta o ka bolel a gore o robalane le motho yo ga kae? (0 = lefela, 1 = ga tee feela, 2 = ga 2-5, 3 = ga 6- 20, 4 = go feta 20*		___	___	___
Y606	How often would you say you have used a condom when having sex with this person in the last 12 months ? *O kare o shomishitse condom gakae ge o robalana le motho yo mo dikgweding tse 12 tsa go feta?* (1 = Never, 2 = Less than half the times, 3 = Half or >half the times, 4 = Always or nearly always)		___	___	___
Y607	Did you use a condom the last time you had sex with this person (1 = Yes, 2 = No) *O shomishitse condom ge o robalana le motho yo la mafelelo? (1= Ee, 2 = Aowa)*		___	___	___
	FOR MEN /Banna	**FOR WOMEN / Basadi**			
Y608	Have you ever physically forced this partner to have sex with you when you felt like she didn't want to? *O kile wa gapeletsa molekane wa gago thobalano le ge a be a sa ikwele go dira seo?* (1 = Yes, 2 = No)	Have you ever had sex with your partner because he physically forced you to, or because you were afraid of what he might do if you refused? *O kile wa robalana le molekane wa gago ele ge a go gapeleditse, goba ka lebaka la gore o tshaba seo a kago dirago sona ge oka gana?* (1 = Yes, 2 = No)	___	___	___
Y609	Do **you** ever have other sexual partners? *O nale dinyatsi?* (1 = Yes, 2 = No)	Do **you think** this person has other partners? *O nagana gore molekane wa gago o nale dinyatsi* (1 = Yes, 2 = No)	___	___	___
	If YES, Have you ever discussed the following issues with this person? (1 = Yes, 2 = No) *Ge ele gore go bjalo, o boledishane le molekane wa gago ka tse di latelago? (1= Ee, 2 = Aowa)*				
Y610	The fact that **you** have other sexual partners *Gore onale dinyatsi*	The fact that **he** has other sexual partners *Ge eba ba nale dinyatsi*	___	___	___
Y611	That **she** would like you to use condoms with your other partners *Ge eba o rata ge o shomisha condom go robalana le dinyatsi*	That **you** would like him to use condoms with his other partners *Gore o rata ge ba ka shomisha dicondom go robalana le dinyatsi*	___	___	___
Y612	That **she** would like you not to have other partners *Ge eba ga a rate gore o be le dinyatsi*	That **you** would like him not to have other partners *Gore ga o rate ba eba le dinyatsi*	___	___	___
Y613	Have you discussed HIV/AIDS in general ? (1 = Yes, 2 = No) *Le boledishane ka HIV/AIDS ka kakaretso. (1= Ee, 2 = Aowa)*		___	___	___
Y614	Have you discussed getting an HIV/AIDS test ? (1 = Yes, 2 = No) *Le boledishane ka go ya ditekong tsa HIV/AIDS. (1= Ee, 2 = Aowa)*		___	___	___
Y615	In your opinion is this person at risk of HIV infection? (1 = Yes, 2 = No) *Go ya ka wena motho yo o kotsing ya go fetelwa ke HIV? (1= Ee, 2 = Aowa)*		___	___	___

Y700 : Non spousal partners
Last 3 partners during past 12 months. Start with most recent (1).

[ ] If NO NON Spousal Partners check this box and go to page

		1	2	3
Y701	INITIAL	___	___	___
Y702	Give no. from HH interview if household member *Efa nomoro go tswa go HH questionaire, ge ele leloko la lelapa.*	___	___	___
Y703	How old is that person? (99 = Don't know) *Motho yo o nale mengwaga e me kae? (99 = A ke tsebe)*	___	___	___
Y704	Do you regularly provide financial support to this person ? (1 = Yes, 2 = No) *O fela o mo thusha ka tsa ditshelete? (1= Ee, 2 = Aowa)*	___	___	___
Y705	Do you regularly receive financial support from this person ? (1 = Yes, 2 = No) *O fela o amogela thusho ka tsa ditshelete go tswa go motho yo? (1= Ee, 2 = Aowa)*	___	___	___
Y706	During the last 12 months how often would you say you have had sexual intercourse with this person (1 = Once only, 2 = 2 – 5 times, 3 = 6 – 20 times, 4 = >20 times) *Mo dikgweding tse 12 tsa go feta o ka bolel a gore o robalane le motho yo ga kae?* *(0 = lefela, 1 = ga tee feela, 2 = ga 2-5 , 3 = ga 6- 20, 4 = go feta 20*	___	___	___
Y707	How often would you say you have used a condom when having sex with this person in the last 12 months (1 = Never, 2 = Less than half the times, 3 = Half or >half the times, 4 = Always or nearly always) *O kare o shomishitse condom ga kae ge o robalana le motho mo dikgweding tse 12 tsa go feta? (1= a se nke, 2 = gago fete seripa, 3 = gofeta seripa, 4 = ka mehla)*	___	___	___
Y708	Did you use a condom the last time you had sex with this person (1 = Yes, 2 = No) *O shomishitse condom ge o robalana le motho yo la mafelelo? (1= Ee, 2 = Aowa)*	___	___	___
Y709	During the last 12 months, have you ever paid this person with money or material goods in exchange for sex? (1 = Yes, 2 = No) *Dikgweding tse 12 tsa go feta, o kile wa fa motho yo tshelete goba se sengwe gore o robalane le yena (1= Ee, 2 = Aowa)*	___	___	___
Y710	During the last 12 months, have you ever received money or material goods from this person in exchange for sex? (1 = Yes, 2 = No) *Dikgweding tse 12 tsa go feta, o kile wa amogela tshelete goba se sengwe gotswa go motho yo gore o robalane le yena (1= Ee, 2 = Aowa)*	___	___	___
Y711	Would you describe the relationship as Currently ongoing, or Now Ended (1 = Current, 2 = Ended) *O ka hlalosa gore lerato la lena le tswela pele goba le fedile?*	___	___	___
Y712	Do you think this person has other sexual partners ? (1 = Yes, 2 = No) *O nagana gore motho yo o nale dinyatsi ? (1= Ee, 2 = Aowa)*	___	___	___
Y713	In your opinion is this person at risk of HIV infection? (1 = Yes, 2 = No) *Go ya ka wena motho yo o kotsing ya go fetelwa ke HIV? (1= Ee, 2 = Aowa)*	___	___	___

Y800 : Other general sexual behaviour questions

Question			Codes	
Y801	In the last 12 months have you felt like you wanted to do anything to decrease your risk of infection with HIV? *Dikgweding tse 12 tsa go feta o kile wa kwa o kare oka dira se sengwe go fokotsa kgonagalo ya go fetelwa ke HIV?*		1 = Yes / *Ee* 2 = No / *Aowa* 9 = No response given / *A gona karabo*	
Y802	In the last 12 months have you tried to do anything to decrease your risk of infection with HIV? *Dikgweding tse 12 tsa go feta o kile wa leka go dira se sengwe go fokotsa kgonagalo ya go fetelwa ke HIV?*		1 = Yes / *Ee* 2 = No / *Aowa* 9 = No response given / *A gona karabo*	
Y803	**If YES,** What did you try to do ? *Ge ele gore go bjalo, O lekile eng?* [Do not read out list] *[O se bale tseo di ngwadilwego]* Mark all mentioned	1 = Abstain from sex / *Go ila thobalano* 2 = Have less partners / *Go ba le palo e nyenyane ya balekane* 3 = Used a condom for the first time / *O shomishitse condom La mathomo* 4 = Used a condom more often / *O shomishitse condom ka mehla* 5 = Tried to get partner to change behaviour / *O lekile gore molekane wa gago a fetole maitshwaro* 6 = Other / *Tse dingwe* _____		
Y804	How successfully do you feel you were able to change your life in the ways that you wanted ? *O kwa o kgonne go fihla kae, ka go fetola bophelo bja gago gore bo be ka tsela eo o nyakago bo eba ka yona?*		1 = Very successfully / *Kgonne kudu* 2 = Quite successfully / *kgonne* 3 = Not very successfully / *kgonne ga nyenyane* 4 = Not at all / *Paletswe* 99 = No response / *a gona karabo*	
Y805	**If NO**, Why not *Ge ele gore gago bjalo,* *Efa mabaka a tshitego*	1 = Hadn't thought about it / *O hlokile nako* 2 = Don't think it's necessary / *A se o nagane botse* 3 = Find difficult to change behaviour / *O hwetsa go le boima go fetola mokgwa wa go phela* 8 = Other / *Tse dingwe* _____		

Y900 : Community beliefs

People have different ideas about families and what is acceptable behaviour for men and women in the home. I am going to read you a list of statements, and I would like you to tell me whether you generally agree or disagree with the statement. There are no right or wrong answers.

Batho ba nale dikgopolo tsa go fapana mabapi le malapa gape le maitshwaro ao a amogelegilego go banna le basadi ka gae. Ke tla go balela mafoko a se mmalwa, gomme wena o mpotse ge o dumelelana goba ge o ganana le ona. A gona karabo eo e foshagetsego.

Qu No		Codes	
Y901	If a woman asks her husband to use a condom, she is being disrespectful to her husband *Ge mosadi a kgopela molekane wa gagwe go shomisha condom nakong ya thobalano, se sera gore ga ana thlompho ?*	1 = Agree / *Dumelelana* 2 = Disagree / *Ganana* 9 = Don't know / *A ke tsebe*	
Y902	If a woman asks her husband to use a condom it means that she must be sleeping around with other men *Ge mosadi a kgopela molekane wa gagwe go shomisha condom nakong ya thobalano, se sera gore a kano ba a robalana le bangwe kantle?*		
Y903	A man needs to have many sexual partners, and the wife must just tolerate this *Monna oswanetse goba le dinyatsi, gomme mosadi wagagwe a kgotlele seo?*		
	In your opinion, does a man have a good reason to hit his wife if: *Go ya ka wena, monna o nala mabaka ago betha molekane wa gagwe ge :*		
Y904	She refuses to have sex with him /*A gana go robalana le yena*	1 = Yes / *Ee* 2 = No / *Aowa* 3 = Don't know / *A ke tsebe*	
Y905	She asks him to use a condom /*A mokgopela gore a shomishe condom*		
Y906	He finds out that she has been unfaithful / *Ge a humane gore ga a tshepege*		
	In your opinion, is it acceptable for a married woman to refuse to have sex with her husband if: *Go ya ka wena, go a amogelega gore mosadi eo a nyetswego a gane go robalana le molekane wa gagwe ge:*		
Y907	She doesn't want to / *A sa nyake*	1 = Yes / *Ee* 2 = No / *Aowa* 3 = Don't know / *A ke tsebe*	
Y908	She's angry because he has other girlfriends / *Ge kgopishitswe ke gore o nale dinyatsi.*		
Y909	He refuses to use a condom / *Ge a gana go shomisha condom.*		
Y910	She is worried he may have AIDS / *Ge a belaela gore o nale AIDS.*		

Y1000 : Knowledge on HIV / AIDS

The next sets of questions will ask you a little about your own thoughts about HIV / AIDS …..
Dipotsishong tse dilatelago ke tla go botsisha gore o nagana eng mabapi le HIV/AIDS.....

Question Number		Codes	
Y1001	Do you know of anyone who is infected with HIV or who has died of AIDS? *O tseba e mongwe yo a fetetswego goba a bolailwego ke HIV/AIDS?*	1 = Yes, But Not A Friend or Relative / *Ee, efela esego mogwera goba leloko* 2 = Yes, Friend Or Relative / *Ee, mogwera goba leloko* 3 = No / *Aowa* 8 = Don't Know / *A ke tsebe* 99 = No Response / *A gona karabo*	
Y1002	Do you think that a healthy-looking person can be infected with HIV, the virus that causes AIDS? *Ge o nagana motho wa lebelelega a phelegile a ka ba ana le HIV, twatsi eo e hlolago AIDS?*	1 = Yes / *Ee* 2 = No / *Aowa* 8 = Don't Know / *A ke tsebe* 99 = No Response / *A gona karabo*	
Y1003	Can a pregnant woman infected with HIV transmit the virus to her unborn child? *Mosadi yo a le go mmeleng gomme a tsenwe ke HIV aka fetishetsa twatsi ngwaneng yoo a sego a belegwa ?*	1 = Yes / *Ee* 2 = No / *Aowa* 8 = Don't Know / *A ke tsebe* 99 = No Response / *A gona karabo*	
Y1004	Is it possible in your community for someone to get a confidential test to find out if they are infected with HIV? *Go a kgonagala gore motho aka hwetsa teko ya HIV mo motseng wa geno ntle le gore o mongwe a tsebe dipoelo tseo ge se yena fela ?* By confidential, I mean that no one will know the result if you don't want them to know it.	1 = Yes / *Ee* 2 = No / *Aowa* 8 = Don't Know / *A ke tsebe* 99 = No Response / *A gona karabo*	
Y1005	I don't want to know the result, but have *you* ever had an HIV test? *A ke nyake go tseba dipoelo, efela okile wa ya ditekong tsa HIV?*	1 = Yes / *Ee* 2 = No / *Aowa* 99 = No Response / *A gona karabo* **If NO go to next page**	
Y1006	Did you voluntarily undergo the HIV test, or were you required to have the test? *O ithaopile go dira diteko goba o gapetswe go dira seo ?*	1 = Voluntary 2 = Required 9 = NO RESPONSE	
Y1007	Please do not tell me the result, but did you find out the result of your test? *Ke kgopela gore ose mpotse dipoelo, efela okile wa humana dipoelo tsa gago mabapi le teko ya HIV?*	1 = Yes / *Ee* 2 = No / *Aowa* 99 = No Response / *A gona karabo*	
Y1008	When did you have your most recent HIV test? *Ke neng la mafelelo mo o dirilego diteko tsa HIV ?*	1 = Within The Past Year / *Ngwageng wa go feta* 2 = Between 1-2 Years / *Magareng ga 1-2 ya mengwaga* 3 = Between 2-4 Years / *Magareng ga 2-4 ya mengwaga* 4 = More Than 4 Years Ago / *Mengwaga ye 4 ya go feta* 8 =Don't Know / *A ke tsebe* 9 = No Response / *A gona karabo*	

Y1100 : Stigma / Discrimination

Question Number		Codes	
Y1101	Would you be willing to share a meal with a person you knew had HIV or AIDS? *Oka ikemisetsa go kopanela dijo le motho yo o tsebago gore o nale HIV/AIDS ?*	1 = Yes / *Ee* 2 = No / *Aowa* 8 = Don't Know / *A ke tsebe* 99 = No Response / *A gona karabo*	
Y1102	If a relative of yours became ill with HIV, the virus that causes AIDS, would you be willing to care for him in your household? *Ge e mongwe wa leloko la geno aka tsenwa ke HIV, twatsi eo e hlolago AIDS o ka kgona go mo hlokomela ka mo gae?*	1 = Yes / *Ee* 2 = No / *Aowa* 8 = Don't Know / *A ke tsebe* 99 = No Response / *A gona karabo*	
Y1103	If you knew a shopkeeper or food seller had the HIV virus, would you buy food from them? *Ge obe oka tseba gore morekishi lebenkeleng goba morekishi wa dijo o tsenwe ke twatsi ya HIV, obe o ka reka dijo go bona?*	1 = Yes / *Ee* 2 = No / *Aowa* 8 = Don't Know / *A ke tsebe* 99 = No Response / *A gona karabo*	
Y1104	If a member of your family became ill with HIV, the virus that causes AIDS, would you want them to keep it a secret and not tell anyone else? *Ge e mongwe wa leloko la geno aka tsenwa ke HIV, twatsi eo e hlolaga AIDS o ka kganyoga gore ebe sephiri, ba se botse motho?*	1 = Yes / *Ee* 2 = No / *Aowa* 8 = Don't Know / *A ke tsebe* 99 = No Response / *A gona karabo*	
Y1105	Have you ever participated in a march, rally or meeting around HIV/AIDS awareness? *O kile wa tsea karolo mogwantong goba kopanong yogo tsebagatsa HIV/AIDS ?*	1 = Yes / *Ee* 2 = No / *Aowa* 8 = Don't Know / *A ke tsebe* 99 = No Response / *A gona karabo*	
Y1106	Have you ever been involved in the organization of such a meeting or gathering? *O kile wa tsea karolo thulaganyong ya kopano yeo?*	1 = Yes / *Ee* 2 = No / *Aowa* 8 = Don't Know / *A ke tsebe* 99 = No Response / *A gona karabo*	
Y1107	Have you ever thought about your own potential risk of HIV / AIDS? *O kile wa nagana gore okaba kotsing ya go fetelwa ke HIV/AIDS?*	1 = Yes / *Ee* 2 = No / *Aowa* 8 = Don't Know / *A ke tsebe* 99 = No Response / *A gona karabo*	
Y1108	If you were to consider that question now would you consider yourself at high, medium, low or no risk at all of HIV / AIDS *Ge o lebeletse potsisho ela ga bjale, o bona kotsi yago re o fetelwa ke HIVele godimo,magareng, fase goba ga o bone kotsi?*	1 = High / *Godimo* 2 = Medium / *Magareng* 3 = Low / *Fase* 4 = No risk / *A gona kotsi* 99 = No response / *A gona karabo*	

Sample Collection Procedure : Informed Consent

I confirm that "The Consent Statement for Sample Collection and Testing" statement has been read to the interviewee and that he/she understands and consents to participate in the interview.

Interviewer Signature _____ Date _____

Y2000 : Data Collection for Sample Collection

Qu. No.		Codes	
Y2001	Does the patient agree to provide a sample? *O dumetse go neelana ka mare?*	1 = Agreed, provided sample / *Dumetse, o fane ka mar* 2 =Agreed, no sample provided / *Dumetse, Ga fana ka mare* 3 = Disagreed, no sample provided / *Ganne, Ga a fana ka mare*	
	If NO sample provided / *Ge o se wa fiwa mare,*		
Y2002	Give reason why *Efa lebaka*	1 = Problem collecting sample / *Bothata bja go kgoboketsa mare* 2 = Confidentiality issues / *Ditaba tsa sephiri* 3 = Other / *Tse dingwe*	
Y2003	More details *Hlalosa ka botlalo*		

Qu. No.	**If SAMPLE provided,** *Ge o filwe mare,*	
Y2004	Date collected *Letsatsi kgwedi la kgoboketso*	
Y2005	Number on sample bottle *Nomoro ya lebotlelong la mare* [stick label here]	

Qu. No.			
Y2006	Date sent for analysis *Letsatsikgwedi leo le di rometswego tlhahlobong*		
Y2007	Date received result from Lab *Letsatsi kgwedi la kamogelo go tswa laboratory*		
Y2008	Result from Laboratory *Dipoelo go tswa laboratory*	1 = Processed, result available / *Dirilwe,dipoelo di gona* 2 = Processed, result unavailable / *Dirilwe, dipoelo ga digona* 3 = Lab not received / *A se tsa amogelwa laboratory* 4 = Lab received, but damaged in transit / *Di amogetswe laboratory, efele di senyegile* 5 = Other / *Tse dingwe* _____	

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