DETERMINANTS OF RISKY SEXUAL BEHAVIOUR AMONG YOUNG ADULTS OF SOUTH AFRICA

Diana Zhou

Student number: 0417652T

A research report

submitted to the faculty of Health Sciences,

University of the Witwatersrand

in partial fulfilment of the requirements for the degree of

Masters of Science (Med)

in Epidemiology and Biostatistics

Johannesburg 2010

Supervisor: Dr Gill Schierhout

Declaration

I Ms…..Diana Zhou…….do hereby solemnly declare that this work is as a result of my efforts and has never been presented by anybody or appeared anywhere for any qualification, certificate or publication.

Signature: Diana Zhou

Date: 10/12/2010

Acknowledgements

Firstly, I would to thank my supervisor, Dr Gill Schierhout and my lecturer Mr Marinda for their contribution and guidance provided; all my other lecturers in the School of Public Health, especially Dr Mary Kawonga; the University for the post graduate merit award towards my tuition; my family and friends who encouraged me; and last but not least, my God for pulling me through when I hit stumbling blocks.

Table of contents

List of tables

List of annexure

List of abbreviations and definition of terms

Act Consortium	Organisation that was awarded a tender in 2001 by the National Department of Health, South Africa to carry out the Khomanani survey
AIDS	Acquired Immune Deficiency Syndrome
aOR	Adjusted odds ratio
DHS	Demographic Health Survey
EA	Enumerator Area. These were areas demarcated during the 2001 census to show enumerator boundaries. The Khomanani survey, on which this research is based upon, used these boundaries to carry out the Khomanani survey.
HDA	Health and Development Africa
HIV	Human Immune-deficiency Virus
Khomanani Campaign 2002-2003	A South African Government mass media and social mobilisation campaign aimed at reducing HIV infections and to increase care and support for those affected and infected.
Khomanani Survey Findings	The evaluation data compiled from the 2003 survey to assess the impact of the 2002-2003 Khomanani Campaign.
OR	Odds Ratio
Risky sexual behaviour	Individuals who are not using condoms at last sexual encounter, individuals not using condoms in the past year and not using them consistently, individuals with sexual debut before 16 years.
Rural	Any area that is not classified urban. Rural areas are subdivided into tribal areas and commercial farms
Stata	Stata is a general-purpose statistical software package created in 1985 by StataCorp. It is used by many businesses and academic institutions around the world. Most of its users work in research, especially in the fields of economics, sociology, political science, and epidemiology.
STI/STD	Sexually transmitted Infections/Sexually transmitted diseases
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organisation

Abstract

Background

Risky sexual behaviour, especially among 15-24 year olds, is a public health concern in South Africa since this age group is the most at risk of contracting HIV. The concern is to what extent youth are indulging in risky sexual behaviour. In 2002, the Department of Health conducted a nationally representative survey on issues surrounding HIV/AIDS. A mass media intervention was launched in the same year, i.e. the Khomanani Campaign, and a year later, in 2003, a survey was conducted to assess the impact of the Khomanani Campaign.

Objectives

The main question being asked is, "What are the factors associated with risky sexual behaviour amongst the young people of South Africa". The indicators of risky sexual behaviour being explored are age of sexual debut, condom use at last sexual encounter, condom use in the past year and use of condoms consistently over the entire sexual lifetime. The three objectives of the research report are to describe the cohort of the youth in the sample under investigation, to describe the indicators of risky sexual behaviour among youth that are deemed at risk, and to investigate the factors associated with these indicators of risky sexual behaviour.

Data

The research uses the Khomanani Survey Findings of the Khomanani survey which was conducted in 2003, a year after the Khomanani Campaign. Only youth aged 15-24 years old who indicated that they were sexually active were included in the sample.

Method

The research is a cross sectional, secondary analysis of existing data, i.e. the Khomanani Survey Findings. Descriptive statistics were carried out and Chi-squares or Fisher's exact tests were used for the initial bivariate analysis testing for associations between the indicators of risky sexual behaviour and the factors deemed to affect such behaviour. Factors such as media, self-esteem, self-efficacy, beliefs and accessibility of condoms which were deemed to be associated with risky sexual behaviours were explored in this report. Multiple

logistic regression models were carried out with variables which were significant at $p<0.20$ in the bivariate analysis being included in the models. Factors that were significant in the multiple regression models were regarded as the most important variables to be associated with risky sexual behaviour.

Results

The final sample comprised 481 sexually active respondents with slightly more girls than boys (55% vs. 44% with 1% not indicating the gender); 48% of respondents were aged 15-19 years compared with 52% of respondents in the 20-24 age group. The majority of the youth had a partial secondary education. Only 5% of the youth were reported as married.

The proportion of youth that had used a condom at last sexual encounter was 57%. The proportion of youth reporting that they used condoms consistently in the past year was 39% and some 28% of youth had used condoms consistently during the entire sex life. Of the 481 youth in the sample, 31% reported their first sexual encounter as before 16 years ("early sexual debut").

In the final regression model for condom use at last sex, females were 48% (aOR=0.52; 95% CI=0.34, 0.78) less likely to have used a condom at last sexual encounter compared with males. Being a youth from metropolitan areas was associated with condom use at the last sexual encounter (aOR=2.60; 95% CI=1.47, 4.57). Youth who have heard the term 'safe sex' were twice (aOR=1.98; 95% CI=1.10, 3.56) as likely to have used a condom at the last sexual encounter as to those who hadn't heard the term "safe sex". Being comfortable talking about using condoms with partners was also associated with use of condoms at last sex (aOR=3.86; 95% CI=1.74, 8.53).

Concerns over the quality of government issued condoms were postulated to have an impact on condom use. Therefore respondents were asked whether they thought that government condoms differed from those purchased from shops. Respondents who indicated that condoms were the same were 2.71 times (aOR=2.71; 95% CI=2.28, 5.73) as likely to have used condoms consistently in the past year as those who indicated that government condoms were better than the ones from shops. Respondents who indicated that government condoms are of poor quality were 2.18 times (aOR=2.18; 95% CI=1.04, 4.58) as likely to have used condoms

consistently in the past year as those who indicated that government condoms were better than the ones from the shops.

Consistency in using condoms since being sexually active was associated with being from a metropolitan area (aOR=1.99; 95% CI=1.12, 3.51) and also respondents who had the opinion that condoms are the same (aOR=3.04; 95% CI=1.33, 7.07) whether they are government issued or from the shops..

The age of the respondent and also the belief that one should have sex with a partner to show their love were the only factors associated with early sexual debut. Respondents who were older (20-24 years) were 61 %(OR=0.39; 95% CI=0.23, 0.65) less likely to have had early sexual debut below the age of 16 compared to their counterparts aged 15-19 years. Respondents who did not believe that a person should have sex with their partner to show their love were 41 %(OR=0.59;95% CI=0.37,0.94) less likely to have had early sexual debut to those who believed that a person should have sex with their partner to show their love controlling for gender, area of stay, age group and employment.

Conclusions

The findings from the survey point out that more than half of the youth are using condoms at most recent activities, with differences between men and women. Some youth are consistently using condoms and not only using at last sex. Hence programs targeting youth should continue taking into account issues that may be contributing to youth not using condoms and not using them consistently. Messages on safe sex, messages encouraging youth to communicate with partners on sexuality issues, as well as the government making condoms accessible in all areas, should continue to be reinforced. Future research should also focus on development and evaluation of interventions to delay sexual debut with issues of beliefs, and community beliefs being discussed.

CHAPTER 1. BACKGROUND AND INTRODUCTION

1.1. Why risky sexual behaviour among young adults is a public health concern

Epidemiological studies have shown that the peak incidence of HIV occurs in young people aged 15-24 years of age in sub-Saharan Africa; one of the most important health concerns in Africa (UNAIDS, 2009). The United Nations (UN) reported that the AIDS epidemic claimed 3.1 million lives worldwide in 2005, of which 570 000 were children. In 2009, a reduced but higher number of deaths occurred with two million people dying from AIDS-related illness worldwide. Furthermore, by the end of 2008, an estimated 33.4 million people were living with HIV in the world.

In South Africa, it was shown that by 2008 there had been a stabilisation in the prevalence of HIV (UNAIDS, 2009). The National HIV Population Survey reported HIV prevalence among the young adults group as 8.6% (Shisana, *et al.*, 2009). Infections among the 15-19 year olds had changed very little since year 2000. In another South African study conducted in 2005, Pettifor *et al.*(2005) reported that 15% and 7% of 15-24 year old sexually active females and males respectively knew their HIV status. The remainder do not know their HIV status.

HIV is known to be transmitted through sexual intercourse, mother-to-child transmission through delivery and breastfeeding, contaminated needles and infected blood products. The main transmission mode in South Africa is through heterosexual sex (UNAIDS, 2002). With limited funding and capacity in the health care system, an increase in STIs and HIV infections overloads the health care system. HIV-related illness is not only a drain on financial and human resources, but results in the premature end of productive lives (UNAIDS and WHO, 2005). It also creates a burden for the carers of infected people (Department of Health, South Africa, 2004) while the number of orphans increases.

Risky sexual behaviour among the 15-24 year olds is thought to not only drive the HIV epidemic in this group, but results in a high number of sexually transmitted diseases and unwanted pregnancies. Increases in school dropouts due to pregnancies result in pressure on

the government's financial resources through child grants. The long term effects include a loss of potential human resources for the country (UNAIDS, 2005).

Studying sexual behaviours such as early sexual debut, condom use and having many sexual partners, is of paramount importance as the consequences of such behaviours have health-related implications. By the age of 14 some youth have had their first sexual encounter, with boys reporting an early sexual debut compared with their female counterparts (Pettifor *et al.*, 2005). Many of these youth are not emotionally prepared for this entry into adulthood. Because youth are still in the developmental stage, especially youth aged 15-19 years, they are likely to be ill informed about issues of sexuality and have little or no knowledge of preventive measures, and do not realise the importance of such knowledge. A nationally representative survey of school going age children reported in 2008 that the learner pregnancy rate was 62.81 per 1 000 (Panday *et al.*, 2009). Most of the pregnancies are unplanned due to not using any form of contraceptive. In a way, youth are still not well equipped to deal with sexuality issues.

The ripple effect is that the youth drop out of school due to pregnancy, even though the South African government allows them to return to school after giving birth. Only a small percentage returns to school to finish their studies. The remaining become unemployed, uneducated and depend on the social or child grant, which creates a burden on the country. This only increases the poverty levels of the country and the African region as a whole. Education is still regarded as the key to freedom from the poverty trap.

Some of the pregnant girls die during child birth. On the other hand, because the pregnancies are unplanned and unwanted, teens turn to abortions. Although South Africa has legalized abortions, some youth still seek illegal abortions. In the 2008 National School Survey of teens, the teens reported the stigma they face when trying to access abortion facilities (Reddy, *et al.*, 2010). The teens do seek alternative facilities such as backyard abortions which are illegal and unsafe. The study reported that 56% of female youth of the school-going age who had been pregnant at some point, had used the hospital or clinic for an abortion, and the remaining 44% had used other places (Reddy, *et al.*, 2010). Complications

occur, which can result in death or permanent damage to the reproductive system. The emotional trauma that the youth experience also leaves a scar which may become a health problem in their adult years.

Behaviours such as alcohol consumption and drug use are a problem worldwide. Some studies have attempted to link risky sexual behaviour, such as an early sexual debut and non-use of condoms, with other risky behaviours such as substance and alcohol abuse. These studies have inferred that risky behaviours of any sort are interlinked. Youth are more likely to engage in risky sexual behaviour when they are under the influence of drugs or alcohol (Morojele, Brook & Kachieng'a, 2006). According to Morojele *et al.*, (2006), youth do report being under the influence of drugs and alcohol during their first sexual encounter and almost half the youth do not use condoms. The authors of this study also found that the likelihood of engaging in sexual activities also increases with non-casual partners. This further alludes to the increased likelihood of contracting an STI, especially HIV.

Some of the issues regarding early sex among youth are immaturity and un-preparedness to enter adulthood. Female youth report that on average the age of the partner is one to five years older (Pettifor *et al.*, 2009). There is an increased possibility that the older partners might be HIV positive due to more exposure to sexual activities. As a result, this places the youth at risk of contracting HIV. Having an older partner may also mean that female youth have limited relationship power and might not be able to negotiate issues of condom use, furthering their exposure to STIs.

A public health concern which is also of paramount important is cervical cancer. Cancer of the cervix is one of the leading health problems for women. One of the risk factors of cervical cancer is an early sexual debut as this means an increased exposure to sexual activities. A case-control study of older women showed that those who had cancer of the cervix had a sexual debut at a younger age compared with the control group. (Cooper, *et al.*, 2007). Another study among rural Indian women showed that early sexual debut was associated with cervical cancer (Biswas *et al.*,1997). Although there are various risk factors for this cancer, it

is still important to lower the age of sexual debut and reduce the chances of developing cervical cancer.

1.2. The Khomanani Campaign in South Africa

In 2002, the South African government launched a mass media and social mobilisation campaign, the Khomanani Campaign, aimed at reducing new HIV infections and increasing the care and support for those infected and affected (Department of Health, South Africa, 2004). The Khomanani Campaign had six main themes; namely the Youth campaign, Circles of Support campaign, Positive Living campaign, STI campaign, Stop TB campaign and Health Worker Excellence campaign. The programme started with a baseline survey in 2002, followed by the full Khomanani Campaign in August and September 2002, and an evaluation survey to assess its success in 2003. The data for this research is derived from the Khomanani Survey Findings – the assessment data for the 2003 survey.

1.2.1 Khomanani Survey Findings

A nationwide survey was conducted by the Act Consortium (A group of organisations that was awarded a tender by the Department of Health to carry out the Khomanani survey) (September 2003) to assess the impact of the Khomanani Campaign. The findings are referred to in this research study as the Khomanani Survey Findings.

Some of the main findings from the Khomanani Survey Findings include an apparent shift among 15 to 19 year olds regarding knowledge about abstinence and condom use as safe sex methods; more awareness of the HIV/AIDS epidemic, as well as the importance of HIV knowledge (Department of Health, South Africa, 2004). Analysis of the Khomanani Survey Findings thus concentrated on what impact the mass media campaign and its various sub-campaigns had on their desired outcomes.

1.2.2 Objective of the research

This study attempts to further explore other interlinked issues surrounding HIV/AIDS, including youth and sexual behaviour matters. This report seeks to do an in-depth analysis only on the youth. The aim is to identify factors associated with risky sexual behaviour among young adults in South Africa. Factors investigated include age at first sexual encounter, and consistent use of condoms.

1.3. Importance of the research

The research addresses an area of critical public health importance in South Africa. Using data from a nationally representative survey, this research aims to identify factors associated with risky sexual behaviour amongst youth. This information has the potential to inform the design of interventions aimed at reducing the key known drivers of HIV infection amongst young people, namely, age of sexual debut, and condoms use. The findings may also be used together with findings from future surveys, in order to understand trends in behaviour over time. The findings may be useful to Government departments and other organisations promoting public health, especially those focusing on reducing STIs such as HIV, teen pregnancies, school dropouts, and risky sexual behaviours linked with alcohol and substance abuse.

CHAPTER 2. LITERATURE REVIEW

2.1. Youth and sexual behaviour

Risky sexual behaviours cited in the literature as drivers of STIs and HIV include early age at first sexual intercourse, having many sexual partners, and unprotected sex (Pettifor *et al*. 2004; Eaton, Flisher, & Aaro, 2003; Simbayi, Chauveau, & Shishana, 2004).

An early sexual debut places youth at a higher and early risk of contracting HIV. In 2005, the Demographic Health Survey (DHS) of South Africa reported that among the 15-24 year group, 12% of females and 5% of males had sexual intercourse before the age of 15 (UNAIDS, 2005; WHO, 2005). In a study in rural Kwa-Zulu Natal, 13.1% of the 15-24 year old boys had sex by the age of 15 (Harrison *et al*., 2005). A review of articles by Eaton *et al*. (2003) illustrated that among the 14-35 years olds, almost 50% were sexually active by the age of 16. In another study, a household survey conducted across South Africa, 16.5% of youth reported having had sex by age 16. There is no doubt that youth are engaging in sex at an early age; i.e. 16 years and younger.

With health concerns such as STIs and unwanted pregancies being reported, the youth' behavour is believed to be shaped at the start of their sexual behaviours. There are many drivers that force youth to be engaged in early sexual encounters. At this first sexual encounter, almost 50% of youth in a study by Shafii *et al*. (2004) reported not using condoms. This has the authors arguing that this sets a precedent in determining the sexual pattern of youth during their entire sexual life. This in turn creates an increased likelihood of contracting HIV and/or STIs or unwanted health-related problems.

A study by Pettifor *et al*. (2004) describes low condom usage during the first sexual debut, especially for young women who have older partners. This further increases the likelihood of youth contracting STIs since low condom usage has been associated with an increased chance of contracting HIV (Pettifor *et al*., 2004).

Due to the early sexual debut, there is an increased length of sexual activity for youth before they settle down in marriages or stable relationships. South Africans marry late although the

sexual debut is around 14 years. By delaying marriage, there is an increased length of time between the time of first sexual encounter and time of marriage, thus a longer duration for risker behaviour which ultimately leads to a higher likelihood of contracting HIV (Bakilana, 2005).

Early sexual debut has also been associated with having an increased number of concurrent sexual partners, increasing the risk of contracting the HIV. A study by Harrison *et al.* (2005) on youth aged 15-24 from the rural areas in South Africa showed that youth who reported three or more partners in the past 3 years of the study had an early sexual debut. As the age of sexual debut lowers, youth are engaging in first time sexual acts at a younger age, and the more they are at risk of STIs and HIV/AIDS as there is a greater likelihood of partners changing (O'Donnell, O'Donell, & Stueve, 2001). Having many sexual partners has been shown to increase the chances of contracting the HIV infection if youth do not use protection.

Besides the early sexual debut, one of the most documented risky behaviours is non-usage of condoms or inconsistent use of condoms (Brook *et al.*, 2006; Eaton *et al.*, 2003; Hallman, 2004; Harrison *et al.*, 2005; HRSC, 2005; Pettifor *et al.*, 2004; Macphail & Campbell, 2001). The three most emphasised preventive measures since the emergence of HIV/AIDS are abstinence, being faithful (one partner) and the use of condoms. Condom use has been shown to be associated with declining HIV numbers in some countries such as Zambia (Fylkesnes *et al.*, 2000) although this is debatable with some authors pointing out to the contrary. However, on the other hand, low condom usage has been associated with an increased chance of contracting HIV (Pettifor *et al.*, 2004).In some cases, condoms have been used as a form of familly planning (Fylkesnes *et al.*, 2000).

Studies in South Africa continue to show new HIV infections occurring every year, especially among young men and women aged 15-24 years. Though it was reported to stabilise in 2008, the numbers are still high as sub-Saharan regions continue to be the most affected, especially the youth (UNAIDS, 2009). Condom use statistics differ from study to study and between different population groups. A national HIV prevalence representative survey carried out between March and August 2003 in South Africa showed that 57% of men and 48% of females

had used a condom at last sexual encounter (Pettifor *et al.*, 2005). Studies by Pettifor *et al.* (2005) and Simbayi *et al.* (2004), which are based on nationally represented survey studies, show condom use at last sexual encounter being around 50-60% for men and around 40-50% for females, where ideally, the youth should be using condoms consistently and correctly everytime they engage in sexual activities.

However, it is important to understand the issues and context in which youth are engaged in risky sexual behaviour. Many models and theories have been put forward and, according to Eaton *et al.* (2003), some of the factors are culture, traditions, issues of self-esteem, and their living environment. These do not occur in isolation but are interlinked. It is of paramount importance to understand the contextual background in which youth operate, as far as sexual behaviour is concerned. An examination of the literature as to how some of the factors are associated with risky sexual behaviour is explored next.

2.2. Interpersonal and physical environment and associations with risky sexual behaviour

Peers are a good and a bad influence on the youth. Boys in relationships are encouraged by their friends or in some cases, by the community, to indulge in early sex during their teen years. They are allowed to "experiment" and this has led young boys to have sex at an early age.

However, for the young girls, some also feel the need to be "cool" with friends who are also engaging in sexual relations as they fear rejection and being called "children" (Wood, Jewkes, & Maforah, 1997). Furthermore, individuals are also pressured not to use condoms in order to be "cool", which increases the risk of contracting STIs.

Boys are less likely to use condoms for fear of being ridiculed by peers as being cowards or being sexually inexperienced (Macphail & Campbell, 2001). A study by Sayles *et al.*(2006) showed that peer pressure contributes to youth' self-esteem issues for condom use. However, some peers are seen as a good influence for those youth belonging to groups that

believe in waiting, and not rushing into early sex. A delayed sexual debut has been shown to reduce the likelihood of contracting STIs or having unwanted pregnancies.

Gender differences also play a part in accounting for the age difference between the youth and their sexual partners, with girls' partners being older than the boys'. A study by Pettifor *et al*. (2009) showed that boys were more likely to have had their first sexual debut with girls of the same age, whereas for girls the partner was likely to be between one and four years older. For boys, it is most likely that the girl partner would also be a virgin, however for girls; the likelihood of partners having had prior sexual experiences is higher, thus increasing their chances of contracting STI if safe sex is not practiced.

Because of the power dynamics in these relationships due to age differences, girls tend to be at a disadvantage in negotiating the terms of a relationship such as condom use and being coerced into sex to show their love. As a result, they feel obliged to give in to what the boys' request. Girls, mostly blacks who come from urban areas, reported being coerced into having sex during their first sexual encounter (Maharaj & Munthree, 2007). Some of these youth end up having unwanted pregnancies or increased chances of contracting STIs or HIV. Furthermore, regarding gender differences, women suffer violence when men want to show their masculinity and control (Varga, 1997; Vundule, 2001) coupled with the fact that it is a social norm for some communities for the man to be in control of the relationship (Varga, 1997). As a result women do not communicate with their partners regarding issues such as condom use or being faithful to one another for fear of violence (Macphail & Campbell, 2001). Issues of condom negotiation become an issue as these relationships lack communication, and it has been documented that condom usage increases if partners talk about safe sex.

The sexual debut has had different effects on different groups of youth. Orphans have been associated with an early sexual debut compared with non-orphaned youth (Thurman *et al*.,2006) although the study had a selective group of youth aged 14-18 and only black youth. For some orphans, this is a form of survival and a form of escaping the poverty trap; hence sex becomes economically viable. Since they are in vulnerable positions they have no or non-existent negotiation powers for safer sex, resulting in indulging in risky sexual behaviour.

Some of the important issues affecting vulnerable children are the lack of family connectedness, parental guidance and monitoring; some of the factors also associated with an early sexual debut and thus the likelihood of engaging in risky sexual behaviour.

Orphans are also at risk of violence with some communities abusing vulnerable children, especially where social services are not in place. A study on the sexual behaviour of orphans showed that orphans were more likely to be abused compared with non-orphans (Thurman *et al.*, 2006). Lacking parents or a protective guardian, some communities take advantage of the orphans through unwanted sexual advances. In some cases the youth give in to these advances for fear of victimisation, and because they are in a vulnerable position issues of safe sex become a problem as they are not able to negotiate condom use.

Sexual behaviour has also been linked with other risky behaviours such as alcohol and drug abuse in the environment the youth live or the people they interact with, such as family or friends or the community as a whole. A study done on the effects and associations of risky behaviour and risky sexual behaviour showed that alcohol and drugs are indirectly associated with low condom use (Simbayi *et al.*, 2004).

Another study among youth aged 18-30 years in Lima, Peru, attempts to show that the use of condoms decreases by half if one has a history of drug abuse, and for men, the probability of interacting with a casual sex worker doubled or tripled the probability of STIs (Galvez-Buccollini *et al.*, 2009). In other words, the use of drugs and abuse of alcohol further increases the likelihood in engaging in risky sexual behaviour. It is also believed that youth sometimes initiate early sex when under the influence of drugs hence also contributing to the early age of sexual debut (Liu *et al.*, 2006).

The South African government distributes free condoms in government clinics and VCT centres (Department of Health, South Africa, 2005). This has been done to encourage the use of condoms to prevent contracting HIV and other sexually transmitted infections. There is not a much literature comparing condom usage in rural and urban areas; however urban areas are known to have better infrastructure and thus easier access to these centres. However, with the current prevailing HIV pandemic, the issue is especially pertinent as to whether

youth make use of these centres since accessibility of condoms has also been associated with high condom use (Sayles *et al.*, 2006).

2.3. Sexual behaviour and association with self esteem, self-efficacy and self-worth

Youth are knowledgeable about HIV prevention, including condom usage (Department of Health, South Africa, 2004). The challenge is whether this knowledge translates into behaviour. Youth with a sense of direction and life goals are seen to have high self-efficacy for condom use and sexual negotiation in a relationship. These youth are more empowered in knowing their true self and their self-worth; hence they are in a position to negotiate relationship issues thus reducing the likelihood of engaging in risky sexual behaviour.

Self esteem issues are the biggest threat to risky behaviour among youth. The youth are still trying to find themselves, and sometimes struggle with self esteem issues which sometimes lead to risky sexual behaviour by seeking approval and affirmation in the wrong way.

A review of articles and reports by Eaton *et al.* (2003) alludes to the fact that low self esteem leads to risky sexual behaviour such as low condom usage. Youth do this to seek approval and affirmation from sexual partners (Eaton *et al.*, 2003). Another study of South African adolescents in Cape Town in grades 9 and 10 showed that having future optimism and high self esteem were associated with intentions to use condoms (Bryan, Kagee, & Broaddus, 2006). Building youth' self esteem is an important tool in preparing responsible youth and will reduce the likelihood of them engaging in risk sexual behaviour.

Parents, teachers and the communities present as role models to youth. For girls, having a close-knit family influences the pathway for their behaviour, whereas boys are more influenced by what their peers think (Brook *et al.*, 2006). Lacking a family member as a confidante is associated with an early sexual debut for girls since girls are more connected to the family. This is further fuelled if the girls stay away from the family hence losing that family connectedness. For boys, their peers are their confidants (Liu *et al.*, 2006).

Issues, such as trust, are as equally important as in some cases they hinder condom negotiation and consistent usage. Sayles *et al*. (2006) argue that there is low self-efficacy for condom use because of mistrust issues when a partner suggests using condoms.

2.4. Traditions, societal beliefs and their association with risky sexual behaviour

Community beliefs and culture are also seen to be influential on sexual debut as well as methods of safe sex. In some areas religion plays a role in delaying sexual relations. Youth, especially women who come from religious backgrounds where sex before marriage is shunned, tend to delay their sexual debut. However, some of these girls do preserve their virginity but engage in other sexual acts such as anal sex which still places them at risk of contracting STIs (Gupta, Weiss & Mane, 1996).

When condoms were introduced, society had the misconception that they are only used by high risk groups such as commercial sex workers. There is thus a misconcpetion associated with condom usage, where people using them are thought to be promiscous. Stable relationships suffer from this misconception. Women are more trusting in stable relationships or marital relationships and more likely to have one sexual partner, whereas men have more than one sexual partner exposing them and their partners to an increased risk of STIs including HIV. Unfortunately, in such relationships, there is low condom usage (Maharaj & Cleland, 2004). This poses a health risk as some cultures in South Africa believe that men can have as many women as they want and it's acceptable and a woman is not supposed to question that behaviour (Varga, 1997).

CHAPTER 3. RESEARCH OBJECTIVES AND METHODOLOGY

3.1. Study objectives

This research report aims at identifying factors associated with indicators of risky sexual behaviour among youth aged 15-24 years. The indicators of sexual behaviour explored are age of sexual debut, condom use at last sexual encounter, condom use in the past year, and use of condoms consistently over the entire sexual lifetime.

This study analysed existing data from the Khomanani Survey Findings to answer the following question:

What factors are associated with early age at sexual debut and condom usage amongst young people of South Africa?

The specific study objectives were:

- To describe the cohort of the youth in the sample under investigation.
- To estimate prevalence of risky sexual behaviour defined as:
    - Age at first sexual experience, (sex before the age of 16).
    - Using condoms at last sexual encounter.
    - Using condoms in the past year.
    - Consistent condom use during entire sex life.
- To investigate factors associated with early age at sexual debut and condom usage.

3.2. Methodology

This section describes the methods and data collection tools as well as ethical issues. Further, the sampling procedures and analytical methods used in the report are detailed.

3.3. The Khomanani Survey, 2003

3.3.1 Study sample

In 2003 an evaluation survey of the Khomanani Campaign was conducted by the ACT Consortium, targeting respondents aged between 15 and 65 years of age. A total of 2 340 respondents were interviewed and there was a response rate of 93.6%. There is no age specific information to determine the specific youth group response rate.

3.3.2 Questionnaire

A standardised questionnaire, comprising 132 closed questions, which was designed by the ACT Consortium group, was used to collect data in 2003 to evaluate the success of the Khomanani Campaign. The survey comprised questions on the following:

- Demographics: This included province, sex, age, race group, marital status, age of children if one was caring for a child, type of dwelling, place of residence (whether metropolitan, urban or rural), number of rooms in the house, language spoken at home, level of education and employment status.
- Exposure to television and radio.
- Knowledge of tuberculosis (TB)
- Knowledge, attitude and behaviour about HIV/AIDS, STIs and sex.
- Media campaigns: The respondents were asked to name any of the HIV/AIDS campaigns that they were aware of, the help lines they were aware of, whether they knew of the Khomanani Campaign, and were asked to state the slogans used in the campaign.

See Annexure 1 for the original questionnaire used in 2003.

3.3.3 Data collection process

The following section briefly describes the data collection process (Department of Health, South Africa, 2004) of the Khomanani survey. Each interviewer or data collector was given a map for the EA that they were working in. The map gave an indication of where the residences in the EA were located. In each EA, eight residential addresses were supposed to be included for interviews; i.e. eight respondents, with an additional ninth interview of a

youth aged between 15 and 19 years if such a person resided at that household. This inclusion of participants aged 15 to 19 was meant to increase participants in this age group in the sample. A systematic random sampling method was used to identify the households to interview. In each identified household, a random number grid was used to select a respondent aged between 15 and 65. Substitution was allowed in this study, but only if the interviewer was unable to select a respondent due to non-contact after three days, or had not been able to get onto the property or if a residence had been vacated. Where there was non-response or refusal, the interviewer was supposed to state the reason for this refusal clearly on the cover page, and return the blank questionnaire to his/her supervisor. Interviews were conducted in the language of the respondent.

People aged 15 and below and above 65 were excluded from the original survey due to the sensitivity of some of the sexual behaviour questions. Visitors, people living in institutions and those with extreme mental and physical disabilities were also excluded from the survey.

3.4. Methodology of this research study

This research comprises a cross sectional analytical study of the existing data collected by the ACT Consortium (i.e. the Khomanani Survey Findings) through their evaluation survey conducted after the nationwide Khomanani Campaign. Relevant data were extracted from the Khomanani Survey Findings to answer the research objectives described in the previous section.

3.4.1 Research sample

The sample for this research report was based on the South African youth definition of 15-24 year olds, and this data was extracted from the Khomanani Survey Findings. This age group comprised 766 youth, with 481 being sexually active. Only the sexually active youth are included in this study.

3.4.2 Statistical analysis

STATA 8.0 was used for the analysis. Descriptive analysis was carried out and Chi-square or Fishers' exact tests (as appropriate) were used to compare associations between categorical variables. The prevalence of risky sexual behaviour was estimated using frequencies and percentages. The following outcome indicator variables were used as measures of risky sexual behaviour:

- Early age at sexual debut: Indicated as 1 if respondent indicated having sex before the age of 16, and 0 if their first sexual experience occurred at or after age 16.
- Condom use at last sexual encounter: This variable was also a binary variable, where respondents indicated use of a condom (coded 1) or not (coded 0).
- Condom use in the past year: This variable coded 1 and 0 for those indicating using a condom at least once in the last year or not using a condom respectively, and was also used to investigate patterns of condom usage.
- Condom use consistently in the entire sex life: This was a derived variable with respondents indicating condom use at last sexual encounter as well as in the past year, and also it indicated always using condoms for each sexual encounter coded 1, and the rest coded as 0.

In order to investigate factors associated with risky sexual behaviour, bivariate analysis and multiple logistic regression models were used. Firstly, in the bivariate analysis, indicators of risky sexual behavior (early sexual debut, condom use at last sex, consistent condom use in the past year and consistent condom use in the entire lifetime) were analysed with potential predictors and effect modifiers, which included demographic variables, media variables, self esteem variables, self-preservation variables, quality of condoms and accessibility of condoms. Among the demographic variables included were gender, race, province, area, employment status, education level and age. The bivariate analysis aided in identifying factors that would go into the multiple logistic models; all variables with a chi-square *p*-value of 0.2 or less were candidates to go into the multiple regression models for the four indicators of risky sexual behavior. Possible effect modification by including interaction terms in the

models and checking for significance were explored. Interactions between area and province; area and education level; education level and employment status; sex and employment status; sex and education level; were explored. However, these were not statistically significant.

A confounder which is defined as a factor independently related to the exposure of interest and the outcome variable were considered in the research. However, some of the important confounders were not measured such as sexual abuse in childhood for the outcome variable sexual debut and the exposure variable being rural/urban. Hence, this had the effect of overestimating, underestimating or changing the direction of the effects of the exposure variables. Although the study did not collect data on all the potential confounders such as childhood sexual debut, several other potential confounders such as gender were explored in the analysis.

Log-likelihood tests were used to assess the significance of factors in the multiple logistic regression models as well as for comparisons between different models during model building as possible predictors of the indicators of sexual behaviour were added to the model. The socio-demographic variables were retained in the model. However, due to low numbers in categories for some factors, race, province and education level were excluded in the model. The final multiple logistic regressions had predictors or factors whose fixed effects remained significant, with demographics variables included as control variables.

The following factors and co-variables were investigated:

- Demographics - sex, race, age, education, area, province, employment status, marital status.

- Time spent watching and listening to the radio: How often, if ever, do you listen to the radio? How often, if ever, do you watch television?

- Condom quality: When thinking about the quality of condoms, would you say that government condoms are better than the ones you can buy in shops, or they are all the same, or that government condoms are of poor quality, or don't know?

- Condom accessibility - When you need condoms, are they easily available? Yes/No

- Condom accessibility - Where would you go if you ever needed condoms?

- Condom negotiation in a relationship - How comfortable do you feel talking about condoms with your partner? Would you ever consider asking your partner to use a condom to prevent getting HIV/AIDS? Have you ever asked your partner to use a condom to prevent getting HIV/AIDS?

- Individual perceptions whether there is a cure for AIDS - Is there a cure for AIDS? Yes/ No.

- Individual perceptions about AIDS - Have you ever worried about getting HIV/AIDS yourself? Yes/No.

- Individual perceptions about safe sex being taught in schools - Teachers should teach children at school about safe sex. Do you agree or disagree?

- Individual perceptions about discussing sexual issues with partner or parents - How important do you think it is to discuss sex with your partner? How important do you think it is for parents to discuss sex with their children?

- Community influence and individual beliefs questions.

3.5. Ethical considerations

Verbal informed consent was obtained from the respondents, and the data used for this report did not have participants' names or identifiers. The Human Research Ethics Committee at the University of Witwatersrand approved this research, i.e. carrying out a

secondary data analysis on the Khomanani Survey Findings (see Annexure 1 for original questionnaire). Permission to use the survey data for the secondary analysis was also granted by Health and Development Africa as they are the managers of the Khomanani data (see Annexure 4).

3.6. Limitations of the study

Possible limitations of the study are outlined below:

- Although the researcher adjusted for a number of potential confounders through inclusion of a range of socio-demographic and other measures in the model (e.g. socio-economic status, age etc), some residual unmeasured confounding may have remained. Unmeasured confounding may lead to false or spurious inferences of causality.

- Recall bias could have been introduced, especially on questions related to sexual debut. Often questions of a sexual nature are most often an underestimate or overestimate of the real situation. Questions asking condom use in the past year and entire sex life could have been affected by recall bias.

- When using secondary data where one has to confirm to the data at hand, one particular question could have been of importance. The question on the number of sexual partners in the past year and episodes of STIs. The question was not included in the original study. Some of the questions were not properly unpacked for example questions on sexual power, quality of government condoms.

- Questions on the reasons why youth engage in such behaviour could have produced even a more comprehensive report to understand why youth are behaving in such a manner. Questions on why youth are not using condoms, why they are engaging in early sex.

- The study's reliance on questionnaire data is likely to introduce unknown degree of reporting bias common to all social research on sexual behaviour.

- When interpreting age at first sexual behaviour as risk behaviour one has to be careful because of the time difference between first sex and second or subsequent sexual acts and the infrequency of sexual intercourse.

- The time effect. It is difficult to establish whether the risky sexual behaviours preceded the factors associated with the behaviours

- Findings on the sexual debut did not produce a lot of information due to the limitations to the questions asked in the questionnaire. Questions such as the circumstances that led to the first sexual debut which could have been of importance to analyse confounding.

- There were some issues due to sample size; some socio-demographic variables (race, marital status, province and education level) could not be used in the multiple logistic regressions as some categories had fewer respondents. Hence these were not controlled for in the models.

CHAPTER 4. RESULTS OF THE RESEARCH

4.1. Introduction

In this section, the results describing the factors associated with risky sexual behaviour, as extracted from the Khomanani Survey Findings for this secondary analysis, are presented.

4.2. Descriptive analysis

There were 768 youth aged 15-24 years who participated in the survey. Of these, 220 (29%) were not sexually active, and 67 (9%) refused to answer questions on sexual behaviour. The final sample used for this secondary analysis comprised 481 sexually active youth.

Table 1 presents the descriptive statistics of the youth in the study. There were 44% male participants, and about 52% were aged between 20 and 24 years of age. The Eastern Cape and KwaZulu Natal provinces had 19% and 18% respondents respectively, with the rest of the provinces providing around 10% each, with the smallest contribution coming from the Northern Cape.

Almost 46% of the respondents were students, 35% were unemployed and 12% were formally employed. The education level of the majority of the respondents was partial secondary education (59%) followed by those who had completed secondary education, i.e. matric (28%), while a majority of those reported as being employed had matric or a post-matric qualification (60%). Forty five percent (45%) of the respondents were from rural areas, 35% from urban centres and 20% from metropolitan areas. The majority with a post-matric qualification were from urban areas (70%). Approximately 5% were already married and the rest (95%) were unmarried. Almost two-thirds of the married respondents had a partial secondary qualification.

Table 1: Demographic characteristics of the youth in the study

	Variable	N	Percentage (%)
Total sample	**Total**	**481**	**100**
Sex	Male	213	44
	Female	266	55
	Gender not given	2	1
Province	Gauteng	52	11
	North West	43	9
	Limpopo	57	12
	Free State	27	6
	Eastern Cape	89	19
	Northern Cape	23	5
	Western Cape	47	10
	Mpumalanga	55	11
	KwaZulu Natal	88	18
Area	Metropolitan	98	20
	Urban	168	35
	Rural	215	45
Age-group	15-19	230	48
	20-24	251	52
Race	African	390	81
	Coloured	47	10
	Indian	12	2
	White	30	6
	Race not given	2	1
Marital status	Married	24	5
	Not married	457	95
Employment status	Employed	60	12
	Unemployed	199	41
	Student	222	46
Highest education completed	No formal schooling	9	2
	Primary & part primary	28	6
	Part secondary	285	59
	Secondary (matric)	136	28
	Post-matric studies	23	5

4.3. Descriptive analysis of the indicators of sexual behaviour

The current study explored four 'indicators' of risky sexual behaviour; age at sexual debut, condom use at last sexual encounter, condom use in the past year and consistent condom use since being sexually active. Tables 2, 3, 4 and 5 provide a summary of the results by indicators of sexual behaviour and the socio-demographic factors.

Table 2 Proportion of youth engaged in early (below 16 years) sexual debut

Variable	Variable levels	Engaged in sex before the age of 16 (n=125) %	Engaged in sex at and after age of 16 (n=276) %	Chi-square p-value
Sex	Male	47.2	42.3	0.41
	Female	52.8	57.2	
Province	Gauteng	13.6	10.5	0.01
	North west	4.0	11.2	
	Limpopo	14.4	11.2	
	Free State	4.8	5.8	
	Eastern Cape	20.0	21.3	
	Northern Cape	2.4	7.2	
	Western Cape	8.0	7.9	
	Mpumalanga	19.2	8.3	
	KwaZulu Natal	13.6	16.6	
Area	Metropolitan	19.2	21.7	0.77
	Urban	32.0	33.2	
	Rural	48.8	45.1	
Age-group	15-19	62.4	40.4	<0.01
	20-24	37.6	59.6	
Race	African	88.0	78.9	0.08
	Coloured	8.0	10.9	
	Indian	1.6	1.8	
	White	2.4	8.4	
Marital status	Married	6.4	5.4	0.69
	Not married	93.6	94.6	
Employment status	Employed	6.4	15.2	0.04
	Unemployed	43.2	41.9	
	Student	50.4	43.0	
Highest education completed	No formal schooling	0.8	2.9	0.08
	Primary & part primary	8.8	5.4	
	Part secondary	67.2	57.4	
	Secondary (matric)	20.8	28.9	
	Post matric studies	2.4	5.4	

Missing information is not presented.

Thirty-one percent of the respondents reported their first sexual encounter (early sexual debut) as before the age of 16. Table 2 above shows the associations between the demographic factors and early sexual debut. Odds of respondents having sexual debut of

below 16 years was higher if they were from Gauteng, Mpumalanga, Limpopo and Western Cape (P=0.01), younger (aged 15-19 years; P<0.01), or being unemployed or student (P=0.04). On the other hand, residing in other provinces not mentioned above, being in the 20-24 age groups and being employed were associated with sexual debut of 16 years and above. Table 3 below shows the associations between the socio-demographic variables and condom use at last sex.

Table 3: Proportion reporting using a condom at last sexual encounter

Variable	Variable levels	Did not use a condom at last sexual encounter (n=207) %	Used a condom at last sexual encounter (n=270) %	Chi-square p-value
Sex	Male	34.5	52.0	<0.01
	Female	65.5	48.0	
Province	Gauteng	8.2	13.0	<0.01
	North west	8.7	9.3	
	Limpopo	16.9	8.2	
	Free State	4.4	5.9	
	Eastern Cape	23.7	14.1	
	Northern Cape	4.4	5.2	
	Western Cape	8.2	11.1	
	Mpumalanga	13.5	10.0	
	KwaZulu Natal	12.1	23.3	
Area	Metropolitan	15.0	24.8	0.01
	Urban	33.3	36.3	
	Rural	51.7	38.9	
Age-group	15-19	46.4	48.9	0.59
	20-24	53.6	51.1	
Race	African	84.9	78.5	0.31
	Coloured	8.3	11.1	
	Indian	2.4	2.6	
	White	4.4	7.8	
Marital status	Married	6.8	3.7	0.13
	Not married	93.2	96.3	
Employment status	Employed	10.6	14.1	0.39
	Unemployed	44.0	38.9	
	Student	45.4	47.0	
Highest education completed	No formal schooling	3.4	0.7	<0.01
	Primary & part primary	8.7	3.7	
	Part secondary	63.8	55.9	
	Secondary (matric)	22.2	32.6	
	Post matric studies	1.9	7.0	

(***Missing information is not presented)***

Fifty-seven of respondents indicated having used a condom at last sex. Respondents were more likely to have used a condom at last sex if they were males (P<0.01), or being from Gauteng, Northern Cape, KwaZulu Natal, Free State or Western Cape (P<0.01), or living in a metropolitan area (P=0.01), or having a secondary (matric) or Post matric (P<0.01). Table 4

below shows whether respondents indicated using condoms consistently in the past year of the year this study was carried out.

Table 4: Proportion reporting using a condom consistently in the past year

Variable	Variable levels	Did not use a condom consistently in the past year (n=289) %	Used a condom consistently in the past year (n=188) %	Chi-square p-value
Sex	Male	42.0	48.1	0.19
	Female	58.0	51.9	
Province	Gauteng	11.8	9.6	0.02
	North west	7.6	11.2	
	Limpopo	13.2	10.1	
	Free State	4.2	6.9	
	Eastern Cape	19.4	17.0	
	Northern Cape	3.1	7.5	
	Western Cape	10.0	9.6	
	Mpumalanga	14.9	6.4	
	KwaZulu Natal	15.9	21.8	
Area	Metropolitan	17.3	25.5	0.05
	Urban	34.3	35.6	
	Rural	48.4	38.8	
Age-group	15-19	46.7	50.0	0.48
	20-24	53.3	50.0	
Race	African	83.3	78.2	0.47
	Coloured	9.4	10.6	
	Indian	2.1	3.2	
	White	5.2	8.0	
Marital status	Married	6.2	3.2	0.14
	Not married	93.8	96.8	
Employment status	Employed	11.8	13.8	0.60
	Unemployed	42.6	38.3	
	Student	45.7	47.9	
Highest education completed	No formal schooling	2.4	1.1	0.36
	Primary & part primary	6.2	5.3	
	Part secondary	61.9	55.9	
	Secondary (matric)	24.9	32.5	
	Post matric studies	4.5	5.3	

(Missing information is not presented)

Thirty-nine percent of respondents indicated using condoms consistently in the past year. Odds of using condoms consistently in the past year were higher if respondents were from North West, Free State, Northern Cape and Kwa-Zulu Natal (P=0.02), or staying in a metropolitan or urban area (P=0.05).

Table 5: Proportion reporting using a condom consistently since being sexually active

Variable	Variable levels	Did not use a condom consistently since being sexually active (n=347) %	Used a condom consistently since being sexually active (n=134) %	Chi-square p-value
Sex	Male	41.9	51.1	0.07
	Female	58.1	48.9	
Province	Gauteng	11.2	9.7	0.03
	North west	8.4	10.5	
	Limpopo	12.7	9.7	
	Free State	4.6	8.2	
	Eastern Cape	19.6	15.7	
	Northern Cape	3.8	7.5	
	Western Cape	9.8	9.7	
	Mpumalanga	13.8	5.2	
	KwaZulu Natal	16.1	23.9	
Area	Metropolitan	17.0	29.1	0.01
	Urban	35.7	32.8	
	Rural	47.3	38.1	
Age-group	15-19	46.7	50.8	0.42
	20-24	53.3	49.3	
Race	African	83.2	76.9	0.33
	Coloured	9.3	11.2	
	Indian	2.3	3.0	
	White	5.2	9.0	
Marital status	Married	6.1	2.2	0.09
	Not married	94.0	97.8	
Employment status	Employed	11.2	15.7	0.11
	Unemployed	44.1	34.3	
	Student	44.7	50.0	
Highest education completed	No formal schooling	2.3	0.8	0.34
	Primary & part primary	6.3	4.5	
	Part secondary	59.9	57.5	
	Secondary (matric)	27.7	29.9	
	Post matric studies	3.8	7.5	

(Missing information not presented)

Only twenty-eight of respondents indicated using condoms consistently since becoming sexually active. Socio-demographic factors that were associated with the likelihood of using condoms consistently since being sexually active were respondent being from North West, Free State, Northern Cape or KwaZulu Natal(P=0.03) or staying in a metropolitan area(P=0.02).

Tables 6, 7, 8 and 9 shows the bivariate associations between the factors deemed to be associated with sexual behaviour and the four indicators of risky sexual behaviours under investigation.

Table 6: Media, self-esteem and self-preservation, and possible association with early sexual debut

Variable	Engaged in sex before the age of 16 (n=125) %	Engaged in sex at and after age of 16 (n=276) %	P-value
Media			
How often do you listen to radio? Every day (vs sometimes)	63.2	66.1	0.58
How often do you watch TV? Every day (vs sometimes)	54.0	61.0	0.19
Have you ever heard of the Khomanani Campaign? Yes (vs No)	52.8	52.7	0.99
Have you ever seen the Khomanani logo? Yes (vs No)	72.1	74.6	0.61
Self-esteem			
Have you ever discussed sex with your partner? Yes (vs No)	79.5	79.1	0.93
Have you ever discussed sex with your friends? Yes (vs No)	86.3	81.7	0.26
Have you ever discussed sex with your parents? Yes(vs No)	27.2	25.2	0.67
Have you ever discussed sex with your teacher? Yes (vs No)	50.0	44.9	0.40
Self-preservation			
Have you ever worried about getting HIV/AIDS yourself? Yes vs (No)	72.8	70.0	0.57
Do you think there are any advantages in young people delaying sex? Yes (vs No)	82.4	87.7	0.15
Beliefs			
Most people in your community believe that men have a right to have sex with their girlfriends. Agree (vs Disagree)	44.5	33.2	0.03
Do you believe that men have a right to have sex with their girlfriends? Agree (vs Disagree)	19.0	15.1	0.34
Most people in your community believe that a person should have sex with their partner to show their love. Agree (vs Disagree)	52.1	45.4	0.23
Do you believe that a person should have sex with their partner to show their love? Agree (vs Disagree)	38.7	25.6	0.01
Most people in your community believe that if a couple are in a relationship, they should have sex. Agree (vs Disagree)	25.4	20.1	0.24
Do you believe that if a couple are in a relationship, they should have sex? Agree (vs Disagree)	8.9	5.5	0.20
Most people in your community believe that a man has a right in expecting a woman to have sex without a condom. Agree (vs Disagree)	37.8	31.2	0.21
Do you believe that a man has a right in expecting a woman to have sex without a condom? Agree (vs Disagree)	16.7	14.3	0.55
Most people in your community believe that boys should wait until they are married to have sex. Agree (vs Disagree)	39.1	47.2	0.15
Do you believe that boys should wait until they are married to have sex? Agree (vs Disagree)	47.6	59.1	0.03
Most people in your community believe that girls should wait until they are married to have sex. Agree (vs Disagree)	51.7	59.0	0.18
Do you believe that girls should wait until they are married to have sex? Agree (vs Disagree)	58.1	64.1	0.25

Note: missing information excluded.

Several factors were associated with a higher likelihood of having sex before the age of 16 (early sexual debut). No factors regarding media, self-esteem and self-preservation were

significantly associated with sexual debut. Only factors from individual and community beliefs were associated with sexual debut. Respondents were likely to have early sexual debut if they lived in a community that believed in men having a right to have sex with their girlfriends (P=0.03), or if the respondent believed that a person should have sex with their partner to show their love (P=0.01). However, respondents were more likely to have sex at or after the age of 16 if they believed that boys should wait to have sex until they are married (P=0.03).

Table 7: Media, self-esteem and self-preservation, condom accessibility and possible association with condom use at last sexual encounter

Variable	Did not use a condom at last sexual encounter (n=207) %	Used a condom at last sexual encounter (n=270) %	P-value
How often do you listen to radio? Every day (vs sometimes)	61.7	70.2	0.05
How often do you watch TV? Every day (vs sometimes)	54.1	65.4	0.01
Have you ever heard of the Khomanani Campaign? Yes (vs No)	51.2	56.3	0.27
Have you ever seen the Khomanani logo? Yes (vs No)	71.7	75.6	0.35
Have you ever discussed sex with your partner? Yes (vs No)	72.0	86.4	<0.01
Have you ever discussed sex with your friends? Yes (vs No)	77.5	88.4	<0.01
Have you ever discussed sex with your teacher? Yes (vs No)	43.5	46.1	0.62
Have you ever heard the term safe sex? ? Yes (vs No)	80.2	91.5	0.00
Have you ever worried about getting HIV/AIDS yourself? Yes vs (No)	69.6	70.7	0.78
Do you think there is a cure for AIDS? Yes(vs No)	5.8	5.6	0.94
When you need condoms are they easily accessible? Yes (vs No)	98.0	96.6	0.73
How comfortable would you feel talking about using condoms with your partner?			
Comfortable	74.5	81.3	<0.01
Very comfortable	12.0	14.6	
Not comfortable	7.5	1.9	
Not comfortable at all	6.0	2.2	
When thinking about condoms, would you say…			
Government condoms better than those from shops	14.6	10.0	0.22
They are all the same	31.1	38.2	
Government condoms are poor quality	36.9	40.0	
Don't know	17.5	11.9	
Where would you go if you ever needed condoms?			
Clinic	82.1	73.7	<0.01
Hospital	6.3	3.3	
Pharmacy	5.8	10.7	
Shops	3.4	10.0	
CBO/Other	1.0	2.2	

Note: missing information excluded.

Several factors were associated with the likelihood of using condoms at last sex. Respondents were more likely to report condom use at last sex if they listened to the radio everyday (P=0.05), watched television everyday (P=0.01), have discussed sex with their partner (P<0.01), have discussed sex with friends (P<0.01), have heard the term safe sex (P=0.00),

would feel comfortable and very comfortable discussing using condoms with partner (P<0.01), or those who would go to the pharmacy, shops and CBO if they needed condoms.

Table 8: Media, self-esteem and self-preservation, condom accessibility and possible association with using condoms consistently in the past year

Variable	Did not use a condom consistently in the past year (n=289) %	Used a condom consistently in the past year (n=188) %	P-value
How often do you listen to radio? Every day (vs sometimes)	66.3	66.1	0.97
How often do you watch TV? Every day (vs sometimes)	56.6	66.5	0.03
Have you ever heard of the Khomanani Campaign? Yes (vs No)	51.9	56.9	0.28
Have you ever seen the Khomanani logo? Yes (vs No)	72.9	75.4	0.54
Have you ever discussed sex with your partner? Yes (vs No)	77.1	84.4	0.06
Have you ever discussed sex with your friends? Yes (vs No)	83.9	82.8	0.75
Have you ever discussed sex with your teacher? Yes (vs No)	44.0	47.1	0.55
Have you ever heard the term safe sex? ? Yes (vs No)	71.6	68.1	0.41
Have you ever worried about getting HIV/AIDS yourself? Yes vs (No)	6.2	4.8	0.55
Do you think there is a cure for AIDS? Yes(vs No)	85.5	87.8	0.48
When you need condoms are they easily accessible? Yes (vs No)	99.5	94.6	0.01
How comfortable would you feel talking about using condoms with your partner?			
Comfortable	75.8	82.5	0.08
Very comfortable	13.7	13.1	
Not comfortable	6.0	1.6	
Not comfortable at all	4.6	2.7	
When thinking about condoms, would you say…			
Government condoms better than those from shops	15.1	7.5	0.08
They are all the same	31.7	40.9	
Government condoms are of poor quality	39.8	38.7	
Don't know	13.4	12.9	
Where would you go if you ever needed condoms?			
Clinic	79.6	74.4	0.23
Hospital	4.8	4.3	
Pharmacy	6.9	11.2	
Shops	5.9	9.6	
CBO/Other	1.7	1.6	

Note: missing information excluded.

Odds of using condoms consistently in the past year were higher for respondents if they watched television everyday (P=0.03) or being able to access condoms easily (P=0.01).

Table 9: Media, self-esteem and self-preservation, condom accessibility and possible association with using condoms consistently in the past year

Variable	Did not use a condom consistently since being sexually active (n=347) %	Used a condom consistently since being sexually active (n=134) %	P-value
How often do you listen to radio? Every day (vs sometimes)	64.7	70.5	0.24
How often do you watch TV? Every day (vs sometimes)	58.1	67.2	0.07
Have you ever heard of the Khomanani Campaign? Yes (vs No)	54.2	53.0	0.81
Have you ever seen the Khomanani logo? Yes (vs No)	73.1	75.9	0.53
Have you ever discussed sex with your partner? Yes (vs No)	78.0	84.7	0.10
Have you ever discussed sex with your friends? Yes (vs No)	82.6	86.4	0.32
Have you ever discussed sex with your teacher? Yes (vs No)	43.0	50.5	0.18
Have you ever heard the term safe sex? ? Yes (vs No)	85.0	89.6	0.20
Have you ever worried about getting HIV/AIDS yourself? Yes vs (No)	70.6	69.4	0.80
Do you think there is a cure for AIDS? Yes(vs No)	5.5	6.0	0.95
When you need condoms are they easily accessible? Yes (vs No)	97.0	96.2	0.76
How comfortable would you feel talking about using condoms with your partner?			
Comfortable	76.5	83.3	0.41
Very comfortable	14.1	11.4	
Not comfortable	5.0	2.3	
Not comfortable at all	4.4	3.0	
When thinking about condoms, would you say…			
Government condoms better than those from shops	11.7	6.7	0.02
They are all the same	31.1	44.8	
Government condoms are poor quality	39.8	38.8	
Don't know	15.4	9.7	
Where would you go if you ever needed condoms?			
Clinic	79.8	70.2	0.02
Hospital	5.2	3.0	
Pharmacy	6.6	13.4	
Shops	5.5	11.9	
CBO/Other	2.0	1.5	

Note: missing information excluded.

Only two factors were associated with a higher likelihood of using condoms consistently since being sexually active. Respondents were significantly more likely to report using condoms consistently if they felt that condoms are all the same regarding quality (P=0.02) or if they accessed condoms at pharmacies or shops if they needed one (P=0.02).

The next section presents the results from the multiple logistic regression examining predictors of early sexual debut, condom use at last sex, using condoms consistently in the past year and using condoms consistently in since being sexually active.

4.4. Factors associated with sexual behaviour

Multiple logistic regressions were carried out to explore the relationship between risky sexual behaviour indicators and the factors deemed to be associated with the four indicators of risky behaviours. Results from bivariate analysis aided in the identifying factors to be included in the regression and the background literature to factors associated with risky behaviour (that is, early sexual debut, condom use at last sex, using condoms consistently in the past year and using condoms consistently in the entire sexual life). Socio-demographic variables, that is, gender, age group, area of stay, province, race, marital status, highest level of education and employment status were retained as control variables. However, due to some factors having many categories and having too few cases in some of the categories, these were eliminated from the model building. The factors not included in the models were province, race, marital status and highest level of education. Interaction terms were explored during model building for each of the multiple logistic regression models. Table 10 below shows the results from the multiple logistic regressions of early sexual debut and possible factors associated with the risky behaviour.

Table 10: Factors associated with early sexual debut among sexually active youth

Characteristics	Adjusted OR (95 % CI)	p-value
Female	Reference group	-
Male	0.90(0.57-1.42)	0.66
Rural	Reference group	-
Urban	1.00(0.61-1.67)	0.98
Metropolitan	0.85(0.47 -1.54)	0.59
15-19	Reference group	-
20-24	0.39(0.23-0.65)	0.00
Employed	Reference group	-
Unemployed	0.43(0.18-1.02)	0.06
Student	0.74(0.44-1.26)	0.27
Do you believe that a person should have sex with their partner to show their love? Agree	Reference group	-
Disagree	0.59(0.37-0.94)	0.03

There were no significant interactions between area and province, area and education level, education level and employment status, sex and employment status, or sex and education level hence they were excluded from the model. Log-likelihood tests were used to assess the significance of factors in the multiple logistic regression models as well as for comparisons between different models during model building. Socio-demographic variables (except for age group) retained in the model did not contribute significantly to the model (P values greater than 0.05). The regression results showed that respondents who were older (20-24 years) were 61 %(OR=0.39; 95% CI=0.23, 0.65) less likely to have had early sexual debut below the age of 16 compared to their counterparts aged 15-19 years. In other words, they were more likely to have had delayed sexual debut. Respondents who did not believe that a person should have sex with their partner to show their love were 41 %(OR=0.59;95% CI=0.37,0.94) less likely to have had early sexual debut to those who believed that a person should have sex with their partner to show their love controlling for gender, area of stay, age group and employment.

Table 11: Factors associated with condom use at last sex among sexually active youth

Characteristics	Adjusted OR (95% CI)	p-value
Male	Reference group	
Female	0.52(0.34-0.78)	0.02
Rural	Reference group	
Urban	1.45(0.93-2.27)	0.10
Metropolitan	2.60(1.47-4.57)	<0.01
15-19	Reference group	-
20-24	0.85(0.54-1.34)	0.49
Employed	-	-
Unemployed	1.00(0.50-1.99)	0.99
Student	0.93(0.58-1.50)	0.77
Have you ever heard the term safe sex? No	Reference group	-
Have you ever heard the term safe sex? Yes	1.98(1.10-3.56)	0.02
How comfortable would you feel talking about using condoms with your partner? Not very/at all comfortable	Reference group	-
How comfortable would you feel talking about using condoms with your partner? Very comfortable	3.86(1.74-8.53)	<0.01
Where would you go if you ever needed condoms? Clinic	Reference group	-
Where would you go if you ever needed condoms? Hospital	0.67(0.27-1.69)	0.40
Where would you go if you ever needed condoms? Pharmacy	1.77(0.82-3.82)	0.15
Where would you go if you ever needed condoms? Shops	2.71(1.10-6.67)	0.03
Where would you go if you ever needed condoms? CBO/Other	9.57(0.52-108.69)	0.07

The socio-demographic variables of age group and employment status did not significantly contribute to the regression model (P values greater than 0.05). Respondent living in a metropolitan area were 2.6 times (OR=2.60; 95% CI=1.47, 4.57) as likely to have used a condom at last sex as those who lived in the rural areas. There were no significant difference between respondents living in urban areas and those living in rural areas (OR=1, 45; P=0.10). Respondents who indicated having heard of the term “safe sex” were almost twice (OR=1.98; 95% CI=1.10, 3.56) as likely to also have used a condom at last sex as those who indicated that they had not heard of the term. However, they were no follow up questions to ask if respondents knew what the term meant. Respondents who would feel comfortable talking to

their partners about using condoms were almost 4 times (OR=3.86; 95% CI=1.74, 8.53) as likely to have used a condom at last sex as those who would not feel comfortable. Whether this assertion led to condom use is difficult to deduce. Accessing condoms from shops was also significantly associated with use of condoms at last sex compared to those accessing condoms from clinics (OR=2.71; 95% CI=1.10, 6.67). On the other hand, being a female was significantly associated with not using condoms at last sex (OR=0.52; 95% CI=0.34, 0.78).

Table 12: Factors associated with using condoms consistently in the past year, among sexually active youth

Characteristics	Adjusted OR (95% CI)	p-value
Male	Reference group	-
Female	0.97(0.63-1.50)	0.90
Rural	Reference group	-
Urban	1.07(0.66-1.75)	0.78
Metropolitan	1.78(1.01-3.14)	0.05
15-19	Reference group	-
20-24	0.76(0.47-1.23)	0.27
Employed	-	-
Unemployed	1.11(0.57-2.16)	0.76
Student	1.10(0.66-1.82)	0.72
When you need condoms are they easily accessible? Yes	Reference group	-
When you need condoms are they easily accessible? No	10.5(1.30-84.7)	0.03
When thinking about condoms, would you say: government condom better than one from shops	Reference group	-
When thinking about condoms, would you say: They are all the same	2.71(2..28-5.73)	<0.01
When thinking about condoms, would you say: government condoms are of poor quality?	2.18(1.04-4.58)	0.04
When thinking about condoms, would you say: Don't know	2.20(0.91-5.32)	0.08

The issue of accessibility and quality of condoms were the significant factors associated with using condoms in the past year. The multiple logistic regression showed that respondents who indicated that condoms were the same were 2.71 times (OR=2.71; 95% CI=2.28, 5.73) as likely to have used condoms consistently in the past year as those who indicated that government condoms were better than the ones from shops. Respondents who indicated that government

condoms are of poor quality were 2.18 times (OR=2.18; 95% CI=1.04, 4.58) as likely to have used condoms consistently in the past year as those who indicated that government condoms were better than the ones from the shops. Of importance to ask respondents was whether the issue of government condoms was based on perception or actual experience. Regarding accessibility, respondents who indicated that condoms were not easily accessible were 10.5 times (OR=10.5; 95% CI=1.30, 84.7) as likely to have used condoms consistently in the past year as those who indicated that they were accessible.

Table 13: Factors associated with using condoms consistently since being sexually active, among sexually active youth

Characteristics	Adjusted OR (95% CI)	p-value
Male	Reference group	-
Female	0.89(0.57-1.40)	0.62
Rural	Reference group	-
Urban	0.97(0.58-1.61)	0.90
Metropolitan	1.99(1.12-3.51)	0.02
15-19	Reference group	-
20-24	0.77(0.47-1.26)	0.31
Employed	-	-
Unemployed	1.68(0.85-3.33)	1.40
Student	1.40(0.83-2.36)	0.21
When thinking about condoms, would you say: government condom better than one from shops	Reference group	-
When thinking about condoms, would you say: They are all the same	3.04(1.33-7.07)	<0.01
When thinking about condoms, would you say: government condoms are of poor quality?	2.22(0.99-5.08)	0.06
When thinking about condoms, would you say: Don't know	1.38(0.51-3.75)	0.53

In the multiple logistic regression examining factors associated with using condoms consistently since being sexually active, respondents who had the opinion that condoms are the same were 3 times (OR=3.04; 95% CI=1.33, 7.07) as likely to have used condoms consistently since they became sexually active as compared to those who had the opinion that government condoms were better than the ones from the shops. Similarly, respondents who

were residing in metropolitan areas were almost twice (OR=1.99; 95% CI=1.12, 3.51) as likely to have used condoms consistently since becoming sexually active.

CHAPTER 5. DISCUSSION AND CONCLUSIONS

5.1. Introduction

The main objective of this research was to find factors that were associated with risky sexual behaviour, defined as an early sexual debut (first sexual encounter at age 16 or younger), and not using condoms at last sexual encounter, and not using condoms consistently.

There is a lot of work being done to help prevent new HIV infections. Among these are interventions that aim to reduce high risk sexual behaviour among youth. Data used for this research were collected after a nationwide campaign aimed at lowering HIV transmissions by educating the youth about sexuality issues through the media. For such interventions to be effective there is need for continuous reviews of the prevailing situation so as to devise the most effective interventions and policies.

5.2. Factors that affect the use of condoms

There has been emphasis on Abstain, Be faithful and Condomise (ABC) prevention methods for combating STIs, especially HIV. Over the years, emphasis has been placed on the "condomise" message as it has been proven that condoms are an effective method of preventing unwanted pregnancies and reducing the risk of contracting STIs if used consistently and properly. The government of South Africa provides condoms freely and makes them available in public places, clinics and hospitals (Pettifor *et al.*, 2005, HRSC, 2005; Warren, 1997; Shelton & Johnston, 2001). In 2003 alone, the Department of Health distributed an estimated 98 million condoms (Cruz, 2004), but the question is: are these condoms being used and if so, are they being used consistently?

The proportion of youth in this study who used a condom at their last sexual encounter was 57%, with boys more likely to use condoms compared to girls (66% vs 49%). However, only 39% were consistent in using condoms every time they had sex in the past year. The proportion of the respondents reporting consistent condom use during their life time was 28%. Condom use

in this study was slightly higher for boys than that reported elsewhere – but similar for girls - in this national survey, 57% boys and 48% of girls aged 15-24 had used a condom at their last sexual encounter (Pettifor *et al.*, 2005; Shishana & Simbayi, 2002). In both studies, girls are less likely to use condoms compared with the boys.

The literature has suggested various reasons why there are such gender differences in condom use, and one reason is that girls have less control in relationships in terms of negotiating powers (Pettifor *et al.*, 2004); i.e. the power dynamics in the relationship (Hallman, 2004). In instances were young females are involved with older men and where these women gain an economic benefit from the relationship, women do not have much say in the relationship, including condom negotiation (Hallman, 2004). Sexual power dynamics prevent communication to take place. Women with low negotiating power in the relationship are 12 times more likely not to use condoms (Pettifor et al., 2004).

A study on self efficacy for condom use and sexual negotiation among the South African youth inferred that fear of condoms implying mistrust in the other partner was associated with low self efficacy for both boys and girls (Sayles *et al.*, 2006). However, this research did not explore further reasons why women were more at risk and hence there is need for further research as there are possible diverse reasons why condom use is lower in females than males, why there are such differences between men and women. Although young girls are more likely not to use condoms and use them consistently, the young men, on the other hand, might suffer from peer pressure such as friends not approving condom use (Macphail & Campbell, 2001) hence reducing the chances of using condoms. Evidence suggests that males are more likely to be affected by peers in how they behave sexually (Brook *et al.*, 2006). Another possible explanation for the observed gender difference in condom use are well known gender differences in reporting of sexual behaviour, where boys tend to over report sexual activity, and girls under-report; this may apply to condom use also. It was beyond the scope of this study to explore this issue in any detail.

Among the issues that the Khomanani Campaign addressed, the most important message was emphasising the principles of safe sex (Department of Health, South Africa, 2004). In the 2002 HSRC study that looked at behavioural risks among the 15-24 year olds (Shishana & Simbayi, 2002) most youth recalled messages on abstinence and condom use as a way of safe behaviour. Risk perception has been theorised to be an important antecedent for adopting protective behaviour (Macintyre, Rutenberg, & Brown, 2004). In the present study, youth who were aware of the term 'safe sex', were twice as likely to have used condoms. Although the question in the current study examined whether the youth knew about the term safe sex', inferences can be made that they were aware of what 'safe sex' is all about.

Regarding accessibility of condoms, Sayles *et al*. (2006) argues that among boys, the ease with which they can obtain condoms is likely to be a factor for high self efficacy for condoms. The present study showed significant associations between youth accessing condoms from CBOs and shops and having used a condom during their last sexual encounter – youth who accessed condoms from CBO's were more likely to have used a condom than those accessing from other outlets. It is possible that this association may reflect some unique unmeasured activity at the CBO's e.g. support programs or counselling, that encourages condom use beyond simply making condoms available. The Department of Health in 2005 reported distributing free condoms in all public places such as clinics and VCT centres (Department of Health, South Africa, 2005). However, access to these facilities differs between areas. In the present study, youth from metropolitan areas were significantly more likely to have used condoms compared with their rural counterparts. The current study also reported youth from metropolitan more likely to have used condoms consistently. The result from this study supports other studies (Vered & Mulula, 2005) that youth from rural areas are less likely to have used condoms at their last sexual encounter. While access to condoms may play a part in explaining this difference, it is also possible that in this study, area of residence is a proxy for a host of unmeasured social and cultural norms and expectations that work against youth

using condoms in rural areas. Further exploration of these factors would be important in understanding the lower use of condoms in rural areas.

Communication has been reported to play an important role in safe sexual behaviour. From this study it was found that youth who were comfortable talking to their partners about using condoms were 4 times more likely to have used condoms at their last sexual encounter compared with those who were uncomfortable talking about sex. The proportion that reported being comfortable talking about condom usage was between 59% and 62% in this study. In a study on 15-24 year olds by Simbayi et al., (2004), 74% of youth had indicated that they discussed HIV prevention with their partners in the past year which is slightly higher than the figures from the present research. This may be due to the different phrasing of the question – many people who discussed HIV prevention may have felt uncomfortable doing it. In SImbayi et al 2004, discussion about HIV prevention showed a positive association with condom use.

Some studies have researched how people view condoms and the results show that the perception of the quality of condoms can hinder progress in reducing the spread of HIV (Eaton *et al.*, 2003). In the present study, the researcher found that youth who agreed with the statement that government condoms were better than condoms from other sources, were significantly less likely to use condoms consistently than those who thought there was no difference, or those who thought shop bought condoms were better. This is difficult to explain, except again, there may be some unmeasured confounding here – for example, those who believe that government condoms are better may be less 'educated' or streetwise, than those who, more reasonably, see no quality difference. If future studies wanted to focus on this area further, they could ask directly whether the person has first-hand experience of using Government issued condoms, which would aid in interpreting responses about views on quality.

5.3. Factors associated with age at first sexual debut

Some studies have shown that raising the age of the first sexual encounter might help lower the risk of HIV infection among youth. Findings from this population suggest that the most important factors affecting age at first sexual debut are beliefs and community perceptions. Not a lot of information revealed itself in this study about factors associated with early sexual debut. This is probably due to the fact that the factors being researched dealt with the current situation whereas the sexual debut may have happened some years back. This study does not give a clear picture of the factors associated with early sexual intercourse. This issue needs further exploration in studies that are specifically designed to take into account these issues.

The current study showed that 31% of the youth had sexual debut before turning 16 - 33% of boys and 29% of girls had their first sexual encounter before turning 16. A study by Pettifor *et al*. (2005) reported the proportion of youth with an early sexual debut at 14 years or younger as 17.5% for males and 7.8 % of females among the 15-24 year age group which is lower than the current results. This lower proportion would be expected as that study looked at a sexual debut before age 14 and the current report looked at a sexual debut before 16.

Findings from the analysis reported here, indicates that early sexual debut is closely linked with community attitudes to sex on a number of measures. Youth living in a community that disagreed with the issue that a partner should have sex to show their love were less likely to have an early sexual debut compared with those who agreed with that statement.

The most significant variable from the full regression model associated with early sexual debut was whether youth agreed that boys should wait until they were married to have sex. Those that disagreed with the statement and hold the belief that boys shouldn't wait had increased odds of having an early sexual debut. This shows the gender differences and how they are perceived to behave. Boys are supposed to experiment, whereas girls are supposed to keep their virginity, especially in religious communities. This also indicates the importance of community-level factors in shaping youth behaviour and practices (Bessingern,

Katende, & Gupta, 2004; Macintyre, Rutenberg, & Brown, 2004; John, 2003). Further, these findings suggest that interventions targeting general community beliefs, or social interventions, may be more important in reducing the age of sexual debut, than interventions targeting young people alone.

5.4. Conclusions and recommendations

The results from this study have several implications in terms of planning the way forward in reducing high risk sexual behaviour among youth. Factors that seem to be associated with risky sexual behaviour of the youth are: where they live, gender, condom accessibility, being comfortable with a partner in discussing condom use, and the knowledge of the term 'safe sex'.

From these findings, sexual behaviour among youth is seen to be multi-faceted. It's at the biological and individual levels where boys and girls differ in practicing safe sex. It's also at the individual level where youth need to have high self esteem to be able to openly discuss safe sex issues with their partners. It's also at the community level, as Eaton *et al*. (2003) pointed out. Area of residence and condom accessibility go hand-in-hand as the availability of condoms depends on where condoms are distributed.

Not only is this study important for intervention planning, but there is also need for a continuous review of these studies as behaviour changes with time. Further, this study can be used to compare information on sexual and reproductive behaviour as well as other health-related issues.

Further research is needed to understand factors associated with early sexual debut. Future questionnaires on sexual behaviour should be constructed to include issues or factors that are associated with age at sexual debut. It is also likely that different study designs, including qualitative research, and analysis of longitudinal cohort data, such as the BirthtoTwenty dataset, would be more helpful in answering this question. In the meantime, further

attention should be paid to developing and testing innovative interventions targeting community perceptions of sexuality, rather than targeting youth alone with this issue.

Bibliography

Bakilana, A. (2005). Age at sexual debut in South Africa. *African Journal of AIDS Research , 4* (1), 1-5.

Bessingern, R., Katende, C. & Gupta, N. (2004). Multi-media campaign exposure effects on knowledge and use of condoms for STI and HIV/AIDS Prevention in Uganda. *Evaluation and Programme Planning , 27*, 397-407.

Biswas, L., Manna, B., Maiti, P., & Sengupta, S. (1997). Sexual risk factors for cervical cancer among rural Indian women: a case-control study. *International Journal of Epidemiology*, *26*(3), 491-5.

Brook, D.W., Morojele, N.K., Zhang, C. & Brook, J.S. (2006). South African Adolescents: Pathways to risky sexual behaviour. *AIDS Education and Prevention , 18* (3), 259-272.

Bryan, A., Kagee, A. & Broaddus, M.R. (2006). Condom use among South African adolescents/Developing and testing models of intentions and behaviour. *AIDS Behaviour , 10*, 387-397.

Cooper, D., Hoffman, M., Carrara, H., Rosenberg, L., Kelly, J., Stander, I., et al. (2007). Determinants of sexual activity and its relation to cervical cancer. *BMC Public Health*, *7*(341).

Cruz, D. (2004). From policy to practise. In: Kauffman, K.D. & Lindauer, D.L. (eds). Basingstoke: Palgrave Macmillan.

Department of education. (n.d.). Retrieved from Department of education website: http://www.education.gov.za/Documents/policies/DoEPolicyGuideEnglish.pdf.

Department of Health, South Africa. (2005). Retrieved from Department of Health, South Africa.http://www.doh.gov.za/docs/sp/2005/sp0408.html

Department of Health, South Africa. (2004). MOVING THE NATION TO ACT. A research report on the Khomanani Campaign 2001-2004.

Department of Social Development. (n.d.). *Department of Social Develpoment*. Retrieved from Department of Social Develpoment-Legislative mandate: http://www.dsd.gov.za/index.php?option=com_content&task=view&id=30&Itemid=56

Dunkle, K., Jewkes, R. & Brown, H. (2004). Gender-based violence, relationship power, and risk of HIV infection in wonem attending antenatal clinics in South Africa. *Lancet , 363*, 1415-1421.

Eaton, L., Flisher, A.J. & Aaro, L.E. (2003). Unsafe sexual behaviour in South African youth. *Social Science and Medicine*, (56), 149-165.

Fylkesnes, K., Musonda, R., Sichone, M., Ndhlovu, Z., Tembo, F. & Monze, M. (2000). Declining HIV prevalence and risk behaviours in Zamba: evidence from surveillance and population based surveys. *AIDS , 14*, 427-434.

Galvez-Buccollini, J.A., DeLea, S., Herrera, P.M., Gilman, R.H. & Paz-Soldan, V. (2009). Sexual behaviour and drug consumption among young adults in a shantytown in Lima, Peru. *BMC Public Health , 9* (23).

Gupta, G.R., Weiss, E. & Mane, P. (1996). *'Talking about sex:a Prerequisite for AIDS Prevention'*. New York: Columbia University Press.

Hallman, K. (2004). Socioeconomic disadvantage and unsafe sexual behaviours among young women and men in South Africa. Policy research division, Population Council.

Hanna, K. (1999). An adolescent and young adult condom self-efficacy scale. *J Pediatr Nurs , 14*, 59-66.

Harrison, A., Cleland, J., Gouws, E. & Frohlich, J. (2005). Early sexual debut among young men in rural South Africa:heightened vulnerability to sexual risk? *Sex Transm Infect* (81), 259-261.

Hendriksen, E.S., Pettifor, A., Lee, S.-J., Coates, T.J. & Rees, H.V. (2007). Predictors of condom use among young adults of South Africa:The reproductive health and HIV research Unit national Youth Survey. *American Journal of Public Health , 97* (7), 1241-1248.

Hoffman, S., Harrison, A. & Dozezal, C. (2006). HIV risk behaviours and the context of sexual coercian in young adults' sexual interactions:results from a diary study in rural South Africa. *Sex Trans Dis , 33*, 52-58.

Human Sciences Research Council, HRSC Mandela/HSRC study of HIV/AIDS. (2005). South African National HIV Prevalence,Behavioural Risks and Mass media:Household Survey 2005. HSRC.

John, K.A. (2003). To change or not to change:Obstacles and resistance to Sexual Behavioural change among the youth of Ghana in the era of AIDS. *Research review, 19* (1), 27-45.

Karim, A.M., Magnani, R.J., Morgan, G.T. & Bond, K.C. (2003). Reproductive health risk and protective factors among unmarried youth in Ghana. *Intrenational Family Planning Perspectives , 29* (1), 14-24.

Kelly, K., Ntlabati, P. (2002). Early adolescent sex in South Africa:HIV intervention challenges. *Social dynamics , 28* (1), 23-45.

Lagarde, E., Auvert, B., Chege, J., Sukwa, T., Glynn, J. & Weiss, H. (2001). Condom use and its association with HIV/sexually trasmitted diseases in four urban communities of sub-Saharan Africa. *AIDS , 15 (Suppl 4)*, S71-S78.

Liu, A., Kilmarx, P., Jenkins, R.A., Manopaiboon, C., Mock, P.A. & Jeeyapunt, S. (2006). Sexual intiation, Substance use, and Sexual Behaviour and Knowledge among Vocational Students in Northern Thailand. *International Family Planning Perspectives , 32* (3), 126-135.

Macintyre, K., Rutenberg, N. & Brown, L.K. (2004). Understanding Perceptions of HIV risk Among Adolescents in KwaZulu Natal. *Aids and Behaviour , 8* (3).

Macphail, C. & Campbell, C. (2001). 'I think condoms are good but, aai, I hate those things':condom use among adolescents and young people in a Southern African township. *Social Sccience and Medicine , 52* (11), 1613-1627.

Maharaj, P. & Cleland, J. (2004). Condom use within marital and cohabitating partnerships in KwaZulu Natal, South Africa. *Stud Fam Plann. , 35*, 116-124.

Maharaj, P. & Munthree, C. (2007). Coerced first sexual intercourse and selected reproductive health outcomes among young women in KwaZulu Natal,South Africa. *Journal of Biosocial Science , 39*, 231-244.

Morojele, N.K., Brook, J.S. & Kachieng'a, M.A. 2006 Perceptions of sexual risk behaviours and substance abuse among aolescents in South Africa: A qualitative investigation[Special issue]. *AIDS CARE , 18* (3), 215-219.

O'Donnell, B., O'Donell, C. & Stueve, A. (2001). Early sexual initiation and susequent sex-related risks among urban minority youth:the reach for health study. *Family Planning Perspectives , 33* (6), 268-275.

Panday, S., Makiwane, M., Rancod, C. & Letsoalo, T. (2009). *Teenage pregnancy in South Africa-with specific focus on school-going learners.* Pretoria: Child, Youth, Family and Social Development, Human Sciences Reserach Council.

Pettifor, A.E., Measham, D.M., Rees, H.V. & Padian, N.S. (2004). Sexual Power and HIV Risk, South Africa. *Emerging Infectious Diseases , 10* (11).

Pettifor, A.E., Rees, H.V., Kleinschmidt, I., Steffenson, A.E., Hlongwa-Madikizela, L. & Vermaak, K. (2005). Young people's sexual health in South Africa: HIV prevalence and sexual behaviours from a nationally representative household survey. *AIDS* (19), 1525-1534.

Pettifor, A.E., Rees, H.V., Stefeenson, A., Hlongwa-Madikizela, L., McPhail, C. & Vermaak, K. (2004). *HIV and sexual behaviour among young South Africans:A national survey of 15-24 years olds.* Johannesburg: THRU,University of Witwatersrand.

Pettifor, A., O'Brien, K., MacPhail, C., Miller, W.C. & Rees, H. (2009). Early Coital Debut and Associated HIV Risk Factors Among Young Women and Men in South Africa. *International Perspectives on Sexual and Reproductive Health , 35* (2), 74–82.

Reddy, S., James, S., Sewpaul, R., Koopman, F., Funani, N. & Sifunda, S. (2010). *Umthente Uhlaba Usamila-The South Africa Youth Risk Behaviour Survey 2008.* Capetown: South African Medical Research Council.

Reproductive Health. (1998). Behaviour affects condom use. *Reproductive Health, 18* (3).

Reproductive Health. Condoms offer STI protection: Condom use should be encouraged among people at risk of HIV and other STIs. *Network 2001 , 20* (4).

Sayles, J.N., Pettifor, A., Wong, M.D., MacPhail, C., Lee, S.-J. & Hendriksen, E. (2006). Factors associated with Self-Efficacy for Condom Use and Sexual Negoatiation Among South African Youth. *43* (2).

Shaffi, T., Stovel, K., Davis, R. & Holmes, K. (2004). Is condom use habit forming?:condom use at sexual debut and subsequent condom use. *Sex Transm Dis , 31*, 366-372.

Shelton, J. & Johnston, B. (2001). Condom gap in Africa:evidence from donor agencies and key informants. (323).

Shisana, O., Rehle, T., Simbayi, L., Zuma, K., Jooste, S. & Pillay-van-Wyk, V. (2009). South African national HIV prevalence, incidence, behaviour and communication survey 2008:A turning tide among teenagers? Cape Town: HSRC Press.

Shishana, O. & Simbayi, L. (2002). Nelson Mandela/HSRC Study of HIV/AIDS South African National HIV Prevalence,Behavioural Risks and Mass Media, Household Survey. Capetown: Human Sciences Research Council.

Simbayi, L.C., Chauveau, J. & Shishana, O. (2004). Behavioural responses of South African youth to the HIV/AIDS epidermic:a nationwide survey. *AIDS CARE , 16* (5), 605-618.

Simbayi, L., Kalichman, S., Jooste, S., Mathiti, V., Cain, D. & Cherry, C. (2004). Alcohol use and sexual risks for HIV infection among men and women receiving sexually transmitted infection clinics services in Cape Town, South Africa. *J Stud Alcohol , 65*, 434-442.

Summary report national HIV and syphillis.antenatal seroprevalence survey in South Africa, 2002. Pretoria: South African Department of Health.

The Government of South Africa. (2005). Portfolio committe to education law amendment bill.

Thurman, T.R., Brown, L., Richter, L., Maharaj, P. & Magnani, R. (2006). Sexual Risk Behaviour among South African Adolescents: Is Orphan Status a Factor? *AIDS Behav , 10*, 627-635.

UNAIDS. (2002). Report on global HIV/AIDS epidemic. GENEVA: UNAIDS.

UNAIDS. (2005). AIDS epidemic update: December 2005. Geneva: UNIADS.

UNAIDS. (2009). *AIDS Epidemic Update*. Geneva: UNIAIDS.

UNAIDS/WHO. (2005). AIDS epidemic update: Special report on HIV Prevention.

UNAIDS/WHO. (2008). UNAIDS/WHO Epidemiological Fact sheets on HIV/AIDS,2008 Update. UNAIDS/WHO.

Varga, C. (1997). Sexual decision-making and negotiation in the midst of AIDS: youth in KwaZulu Natal South Africa. *Health Transit Rev., 7* (Suppl 3), 45-67.

Vundule, C., Maforah, F., Jordaan, E. & Jewkes, R. (2001). Relationship dynamics and teenage pregnancy in South Africa. *Social Science &Medicine , 52* (5), 733–744.

Vered, S.-N. & Mulula, L. (2005). AIDS-Related Knowledge, Attitudes and Behaviour Among Adolescents in Zambia. *AIDS and Behaviour , 9* (2).

Warren, M. (1997). Condom use in South Africa:facts and fantasies. 1, 4-6.

Wood, K., Jewkes, R. & Maforah, F. (1997). The violence connection in reproductive health:Teenage accounts of sexual relationships in Khayelitsha. *Urbanisation and health newsletter , 34*, 21-24.

Annexure

Annexure 1 Khomanani Survey Questionnaire

Khomanani Evaluation Study

EA Number		Interviewer Number	
Visiting Point Number		Province	
Questionnaire Number		Area	

Address of Respondent	
Telephone Number	

Particulars Of Visits	Date	Time Started	Time Ended	Response
First visit				
Second visit				
Third visit				

Reason for refusal:

No. of Substitutions before this interview	

Fieldwork control

Supervisor Name	

Check back	Yes	No	Date	Remarks
Personal				
Telephonic				

Signature:
Date:

My name is …… I am working for an independent research organisation called C A S E.
We would like to ask you some questions about health and related issues.

Your answers are confidential and will be put together with responses from 2500 other people from around the country. No-one will be able to pick out what you or anyone else said in the interview. The only reason that we asked for your address is because someone from C A S E may come back to check whether you were actually interviewed. The page that contains your address will be kept separate from the questionnaire with your answers. There are no right or wrong answers. We would like your honest opinion about these issues. If you do not understand a question, please tell me.

Household Grid
Write down the name (or initials), sex and age of each person in the household. In the 'Sex' column, write 1 for male, 2 for female. Start with the oldest person and finish with the youngest person. Identify who is aged between 15 and 65 years of age. These are the people who are eligible to be interviewed in this survey. Use the random number grid to choose the respondent who should be interviewed from those who are eligible.

	Initials/First names Of Household Members	SEX	AGE
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			

Respondent:

Khomanani Evaluation Study

EA Number		Interviewer Number	
Questionnaire Number		Respondent Initials Number	

Is anyone else other than the respondent in the room during the interview? If yes, what is their relationship to the respondent?

Parent	1
Child	2
Adult relative	3
Friend	4
No one else is present	6
Other (specify)	7

Other:

Demographics
Province

Gauteng	1
North West	2
Northern Province	3
Free State	4
Eastern Cape	5
Northern Cape	6
Western Cape	7
Mpumalanga	8
KwaZulu/Natal	9

Sex [Code by observation]

Male	1
Female	2

How old are you? [in completed years]

What race group do you belong to?

African	1
Coloured	2
Indian	3
White	4
Other (specify)	5

Other:

Are you married?

Yes	1
No	2

Are you a parent or are you caring for children in your home?

Yes	1	If 'yes', go to Q.
No	2	If 'no', go to Q.

How old is your child/are your children?

Child	Age
1	
2	
3	
4	
5	
6	

Type of dwelling [Code By observation]

House	1
Part of house	2
Apartment/townhouse	3
Hostel compound	4
Shack in backyard	5
Shack in informal settlement	6
Traditional hut	7
Caravan/tent/zozo	8
Other (explain)	9

Other:

Area [Code by observation)

Metropolitan	1
Urban	2
Rural	3

How many rooms (excluding the bathroom) are there in this dwelling? [Rooms must be divided by a solid partition such as a wall or board, not a curtain]

What language do you mainly speak at home? **[ONE ANSWER ONLY]**

Zulu	1	Venda	7
South Sotho	2	Shangaan/Tsonga	8
Xhosa	3	Ndebele	9
Tswana	4	Afrikaans	10
North Sotho/Pedi	5	English	11
Swazi	6	Other (specify)	12

What is the highest level of education that you have completed? **[ONE ANSWER ONLY]**

No formal schooling	1	Std 7/ Grade 9	10
Grade 1/Sub A	2	Std 8/ NTC 1/ Grade 10	11
Grade 2/ Sub B	3	Std 9/ NTC 2/ Grade 11	12
Std 1/ Grade 3	4	Std 10/matric/NTC 3/ Grade 12	13
Std 2/ Grade 4	5	Diploma without matric	14
Std 3/ Grade 5	6	Diploma after matric	15
Std 4/ Grade 6	7	Some university	16
Std 5/ Grade 7	8	Bachelor degree	17
Std 6/ Grade 8	9	Further studies/post graduate degree	18

Which of the following employment categories do you belong to? **[READ OUT, ONE ANSWER ONLY]**

Employed full time	1	Unemployed	6
Employed part-time	2	Student	7
Self-employed in informal sector	3	At home (looking after home/children)	8
Self-employed in formal sector	4	Pension (old age or disability)	9
Causal work	5		

Now I Would Like To Ask You Some Questions About Television And Radio

How often, if ever, do you listen to the radio? **[DO NOT READ OUT, ONE ANSWER ONLY]**

Every day	1
Once a week	2
2-3 times a week	3
2-3 times a month	4
Hardly ever	5
Never	6

How often, if ever, do you watch television? **[DO NOT READ OUT, ONE ANSWER ONLY]**

Every day	1
Once a week	2
2-3 times a week	3
2-3 times a month	4
Hardly ever	5
Never	6

Now I would like to ask you some questions about health issues.

Thinking about the last three months, how often have you gone or taken someone else to a doctor, clinic, or health worker? **[DO NOT READ OUT, ONE ANSWER ONLY]**

Never	1
Once	2
Twice	3

Three times	4
Four or five times	5
More than five times	6

When you are sick (e.g. have the flu), who do you usually consult for treatment? **[DO NOT READ OUT, RECORD ALL ANSWERS]**

A community health worker	1
Sangoma	2
Inyanga	3
A doctor	4
A nurse	5
Pharmacy	6
Other (specify)	7

Other:

Now I will ask you some questions about Tuberculosis (TB)

Have you heard of Tuberculosis or TB before?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.

Who do you think is most likely to get TB? **[DO NOT READ OUT, CODE ALL RESPONSES]**

Anyone can get TB	1
Old people	2
Children	3
HIV positive people	4
Poor people	5
Alcoholics	6
Other (specify)	7

Other:

Can TB be cured? **[DO NOT READ OUT]**

Yes	1
No	2
Don't know	3

What are the common symptoms that people with TB have? **[DO NOT READ OUT, RECORD ALL RESPONSES]**

Persistent cough	1
Night sweats	2

Coughing up blood	3
Weight loss	4
Swollen glands	5
Body swelling	6
Sore joints	7
Other (specify)	8

Other:

If you have a cough, after how long should you go to see a doctor? **[WRITE EXACT RESPONSE]**

Which ONE of the following two statements do you think is correct? **[READ OUT, ONE ANSWER]**

People with TB can stop taking their medication when they feel better, **OR**	1
People with TB have to take their medication until they finish the course of treatment	2

Where can you go for free treatment for TB? **[DO NOT READ OUT]**

Government hospital/clinic	1
Nowhere	2
Don't know	3
Other (specify)	4

Other:

How long does it take to finish a course of TB treatment? **[WRITE DOWN EXACT RESPONSE]**

Complete the following slogan: Stop TB because…. **[WRITE DOWN EXACT RESPONSE IN THE BOX]**

Don't know	99

I will now ask you some questions relating to sex. Everyone will be asked these questions and some of them may not apply to you. Please answer as honestly as you can. You do not have to respond if you feel uncomfortable.

[CODE BY OBSERVATION] Is anyone else other than the respondent in the room at this point? If yes, what is their relationship to the respondent?

Parent	1
Child	2
Adult relative	3
Friend	4

No-one	6
Other (specify)	7

Other:

Have you ever discussed sex with any of the following people? **[READ OUT EACH OPTION AND ASK RESPONDENT TO SAY YES OR NO]**

	Yes	No	N/A
Boyfriend/girlfriend	1	2	3
Friends	1	2	3
Parents	1	2	3
Sister/brother	1	2	3
Relative	1	2	3
School/guidance teacher	1	2	3
Husband or wife	1	2	3
Children	1	2	3
Other (specify)	1	2	3

How important do you think it is to discuss sex with your partner? **[READ OUT OPTIONS]**

Very important	1
Quite important	2
Neutral	3
Not very important	4
Not at all important	5

How important do you think it is for parents to discuss sex with their children? **[READ OUT OPTIONS]**

Very important	1
Quite important	2
Neutral	3
Not very important	4
Not at all important	5

What do you think the effects of discussing sex with young people are? **[DO NOT READ OUT OPTIONS, RECORD ALL RESPONSES]**

It helps to inform young people about sex	1
Guides young people in deciding whether they are ready to have sex or not	2
Helps prevent young women from having unwanted pregnancies	3
Prevents young people getting Sexually Transmitted Illnesses	4
Prevents young people getting HIV/AIDS	5

Young people who discuss sex will enjoy it more	6
Helps young people to overcome pressure to have sex from peers or partners	7
Will make them sleep around	8
Other (specify)	9

Other:

At what age do you think that MOST South African **boys** start to have sex?

At what age do you think that MOST South African **girls** start to have sex?

At what age do you think that South African girls and boys SHOULD start to have sex? [If respondent does not specify a particular age (e.g. only when they are married) enter 99]

Age when **girls** SHOULD start to have sex	
Age when **boys** SHOULD start to have sex	

If you are sexually active, at what age did you start to have sex? [Do Not Read Out Options. The Respondent Does Not Need to Answer if They Feel Uncomfortable]

Age started	
Not sexually active	1
Respondent refuses to answer	99

Do you think there are any advantages of delaying the time when girls and boys start to have sex?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.

If yes, what are some of these advantages? [Do Not Read Out, Record all Spontaneous Responses]

Prevents unwanted pregnancies	1
Prevents spread of STI's	2
More emotionally mature	3
Self-employed in formal sector	4
More time to get to know their partner	5

Prevents abuse	6
More independent	7
Can focus on studies	8
Wait until marriage	9
It is morally correct to abstain from sex	10
Other	11

Other:

[Ask only if Response for Q. was 'No'] If 'no', why not? [Record Exact Response]

Complete the Following Slogan: Our Time, Our Choice…**[RECORD EXACT RESPONSE IN THE BOX]**

Don't Know	99

Now I am going to read some statements and I'd like you to tell me whether you think they are true or false. Some will be about what people in your community think and some will be about what you personally think.

MOST PEOPLE IN YOUR COMMUNITY believe that boys or men have the right to have sex with their girlfriends if they buy them gifts or spend money on them.

True	False	Don't know
1	2	3

Do you believe that boys or men have the right to have sex with their girlfriends if they buy them gifts, or spend money on them?

True	False	Don't know
1	2	3

MOST PEOPLE IN YOUR COMMUNITY believe that a person should have sex with their girlfriend or boyfriend to show that they love them.

True	False	Don't know
1	2	3

Do you believe that a person should have sex with their girlfriend or boyfriend to show that they love them?

True	False	Don't know
1	2	3

MOST PEOPLE IN YOUR COMMUNITY believe that if a couple are in a relationship, the boy is entitled to have sex with the girl, even if she doesn't want to.

True	False	Don't know
1	2	3

Do you believe that if a couple are in a relationship, the boy is entitled to have sex with the girl, even if she doesn't want to?

True	False	Don't know
1	2	3

MOST PEOPLE IN YOUR COMMUNITY believe a man is right in expecting a woman to have sex with him without a condom.

True	False	Don't know
1	2	3

Do you believe a man is right in expecting a woman to have sex with him without a condom?

Yes	No	Don't know
1	2	3

MOST PEOPLE IN YOUR COMMUNITY believe that BOYS should wait until they are married to have sex.

True	False	Don't know
1	2	3

Do you believe that BOYS should wait until they are married to have sex.

True	False	Don't know
1	2	3

MOST PEOPLE IN YOUR COMMUNITY believe that GIRLS should wait until they are married to have sex.

True	False	Don't know
1	2	3

Do you believe that GIRLS should wait until they are married to have sex.

True	False	Don't know
1	2	3

I am now going to ask you some questions about safe sex.
Have you heard of the term 'safe sex'?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.

What does the term 'safe sex' mean? **[Do Not Read Out, Record All Responses]**

Not sleeping around	1
Only having one partner at any time	3
Ensuring that my partner is not HIV+ and only has sex with me	4
Using condoms with casual partners	5
Using condoms every time I have sex	6
Never having sex	7
Having HIV/AIDS tests regularly	8
Using contraceptives to prevent pregnancy	9
Delaying sex	10
Only having sex in marriage	11
Other (specify)	12

Other:

Can you think of any advantages of people practicing safe sex? **[DO NOT READ OUT, RECORD ALL RESPONSES]**

Prevents unwanted pregnancies	1

Prevents the spread of STI's	2
Prevents the spread of HIV/AIDS	3
It is the morally correct thing to do	4
Other (specify)	5

Other:

I am going to read you some statements. Listen to the statements and tell me whether you strongly agree, agree, feel neutral, disagree or strongly disagree with each statement.
Parents who talk to their children about sex are encouraging their children to have sex.

St. agree	Agree	Neutral	Disagree	St. disagree	Don't know
1	2	3	4	5	6

Children who know the facts about sex will be safer.

St. agree	Agree	Neutral	Disagree	St. disagree	Don't know
1	2	3	4	5	6

It is okay for young people to wait until they are older before they have sex.

St. agree	Agree	Neutral	Disagree	St. disagree	Don't know
1	2	3	4	5	6

Parents who know that their teenage children are having sex should advise them to practice safe sex.

St. agree	Agree	Neutral	Disagree	St. disagree	Don't know
1	2	3	4	5	6

Most young people in my community practice safe sex.

St. agree	Agree	Neutral	Disagree	St. disagree	Don't know
1	2	3	4	5	6

Teachers should teach children at school about safe sex.

St. agree	Agree	Neutral	Disagree	St. disagree	Don't know
1	2	3	4	5	6

It is okay for girls under the age of 18 to have a relationship with a man five or more years older.

St. agree	Agree	Neutral	Disagree	St. disagree	Don't know
1	2	3	4	5	6

Now I would like to ask you some questions about condom usage. Again, everybody is being asked these questions and some of them may not apply to you. Please answer as honestly as you can, but you do not have to respond if you feel uncomfortable.
How comfortable do you feel talking about using condoms with the following: [Read Out First Column and the Five Options, and Then the Second Column etc.]

	A. Your partner	B. Your parents	C. Your children

Very comfortable	1	1	1
Comfortable	2	2	2
Not very comfortable	3	3	3
Not at all comfortable	4	4	4
Not applicable	5	5	5

Have you ever used condoms?

Yes	1	Go to Q.
No	2	Go to Q.

Did you use condoms the last time you had sex? **[DO NOT READ OUT]**

Yes	1
No	2
Not sexually active	3

Have you had sex in the last year without using a condom? **[DO NOT READ OUT]**

Yes	1
No	2
Not sexually active	3

When do you use condoms? [Read Out All Options but Circle only ONE answer]

Not sexually active	1
Always	2
Only with casual partners	3
Only with sex workers	4
Only if my partner insists	5
Only with a new partner	6
Never	7
Other (specify)	8

Other:

When you need condoms, are they easily available? **[DO NOT READ OUT]**

Yes	No	Don't know
1	2	3

When thinking about the quality of condoms, would you say that: **[READ OUT OPTIONS, ONLY ONE ANSWER]**

Government condoms are better than the ones you can buy in shops	1
They are all the same	2
Government condoms are of poor quality	3

Don't know	4

Where would you go if you ever needed condoms? **[DO NOT READ OUT, ONLY ONE ANSWER]**

Clinic	1	Government office	5
Hospital	2	Local organization	6
Pharmacy	3	Taxis	7
Shops/ supermarkets	4	Other	8

Other:

Now I would like to ask you some questions about Sexually Transmitted Infections or STIs. STIs are sometimes also called STDs

Have you heard of Sexually Transmitted Infections/Diseases?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.

Have you ever talked about STIs/STDs?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.

Have you talked to any of the following about STIs/STDs? **[READ OUT ALL OPTIONS]**

	Yes	No	N/A
Husband or wife	1	2	3
Boyfriend/girlfriend	1	2	3
Friends	1	2	3
Parents	1	2	3
Sister/brother	1	2	3
Other relatives	1	2	3
Health worker	1	2	3
Teacher	1	2	3
Children	1	2	3

How can someone prevent getting an STI/STD? **[DO NOT READ OUT, RECORD ALL RESPONSES]**

Using a condom	1
Only having sex with people who do not have an STI/STD	2
Only having sex with one partner	3
Not having sex	4
Don't know	5
Other (specify)	6

Other:

Do you know any of the common symptoms of STIs/STDs?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.

Can you describe any common symptoms of STIs/STDs? **[DO NOT READ OUT, RECORD MULTIPLE RESPONSES]**

Pain or burning when you urinate	1	Smelly discharge	7
Pain when you have sex	2	Pain in lower abdomen	8
Sores or warts on the genitals	3	Swelling of the glands in the neck	9
Swelling of the genitals	4	Menstrual bleeding	10
Discharge from the genitals	5	STI's have no symptoms	11
Itching of the genitals	6	Other (specify)	12

Other:

Can you always tell if you have an STI/STD? **[DO NOT READ OUT]**

Yes	1
No	2
Don't know	3

If someone has an STI/STD, what should they do? **[DO NOT READ OUT, RECORD ALL RESPONSES]**

Get treatment from a health worker	1
Stop having sex until they are cured	2
Use a condom until the STI is cured	3
Inform their partner (s)	4
Keep the information secret	5
Ignore it	6
Other (specify)	7

Other:

Can most STIs/STDs be treated?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.
Don't Know	3	If the answer is 'don't know', go to Q.

Why do you think it is important to get treatment for STIs? **[DO NOT READ OUT, RECORD ALL RESPONSES]**

Decreases Increases chances of HIV infection	1
STIs can cause infertility	2
To prevent infecting one's partner	3
They are easier to treat at an early stage of infection	4
STIs can affect the baby if a woman is pregnant	5
Other (specify)	6

Other:

If you had an STI/STD, which of the following would you go to for treatment? **[READ OUT OPTIONS, ONE ANSWER ONLY]**

Private doctor	1
Government hospital/clinic	2
Sangoma	3
Inyanga	4
Pharmacy	5
Other (specify)	6

Other:

Where can one go for FREE treatment for STIs? **[DO NOT READ OUT]**

Government hospital/clinic	1
No free treatment	2
Don't know	3
Other (specify)	4

Other:

Did you hear about 'STI/Condom week' this year?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.

Where did you hear about it? **[DO NOT READ OUT]**

TV	1
Radio	2
Print media	3
Friend/relative	4

Other (specify)	5

Other:

Now I would like to ask you some questions about HIV/AIDS in South Africa. Please indicate whether you think the following statements are true or false.

There is nothing you can do to prevent getting HIV/AIDS. **[READ OUT OPTIONS]**

True	False	Don't know	If the answer is 'True', go to Q.
1	2	3	If the answer is 'False'/'Don't Know', go to Q.

How can one prevent HIV infection? [Do Not Read Out Options, Record all Responses]

Never having sex	1
Avoiding close contact with HIV+ people	2
Using condoms every time you have sex	3
Partners being faithful to each other and both are HIV negative	4
Taking HIV/AIDS tests regularly	5
Not sharing needles and syringes	6
Giving a mother ante-retrovirals before delivering her baby	7
Other (specify)	8

Other:

Is there a cure for AIDS?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.
Don't Know	3	If the answer is 'don't know', go to Q.

If yes, what is the cure? [Do Not Read Out, Record all Responses]

Ante-retroviral drugs such as AZT	1
Traditional medicine	2
Homeopathic treatment	3
Having sex with a virgin	4
Other (specify)	5

Other:

Have you ever worried about… **[READ OUT ALL OPTIONS]**

	Yes	No

Someone you care about getting HIV/AIDS	1	2
Your partner getting HIV/AIDS	1	2
Getting HIV/AIDS yourself	1	2

Do you personally… [Read Out All Options]

	Yes	No
Know someone with HIV or AIDS?	1	2
Know someone affected by HIV or AIDS in their family?	1	2
Know anyone who has died from AIDS?	1	2

Where would you go for free HIV/AIDS testing? **[DO NOT READ OUT, RECORD ALL RESPONSES]**

Government hospital/Clinic	1
Private doctor/clinic	2
ATTICs	3
NGOs	4
Nowhere	5
Other (specify)	6

Other:

If you go for an HIV test, who can the health worker tell about your results? **[DO NOT READ OUT, RECORD ALL RESPONSES]**

Myself	1	Other relatives	6
My doctor	2	Friends	7
Other health workers	3	My employer	8
My partner	4	Anyone	9
My parents	5	Other	10

Other:

If you found out you were HIV positive, where would you go for help? **[DO NOT READ OUT, RECORD ALL RESPONSES]**

Government hospital/clinic	1	AIDS helpline	6
Private doctor/clinic	2	NAPWA	7
Religious institution	3	Social worker	8
Counsellor	4	Nowhere	9
Traditional healers	5	Other (specify)	10

Other

Would you ever consider: **[READ OUT OPTIONS]**

	Yes	No	Don't know
Phoning an AIDS helpline	1	2	3
Helping someone who has HIV/AIDS in any way	1	2	3
Asking your partner to use a condom to prevent getting HIV/AIDS	1	2	3
Asking your partner to go for an HIV/AIDS test	1	2	3
Going for an HIV/AIDS test yourself	1	2	3

Have you ever: [Read Out Options]

	Yes	No	Don't know
Phoned an AIDS helpline	1	2	3
Helped someone who has HIV/AIDS in any way	1	2	3
Asked your partner to use a condom to prevent getting HIV/AIDS	1	2	3
Asked your partner to go for an HIV/AIDS test	1	2	3
Gone for an HIV/AIDS test yourself	1	2	3

If you found out you were HIV positive, would you tell someone about your HIV status?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.
Don't know	3	If the answer is 'don't know', go to Q.

Who would you tell? [Do Not Read Out, Record All Answers]

Husband or wife	8	Friends	2
Boyfriend/girlfriend	1	Teacher	6
Parents	3	Health Worker	7
Sister/brother	5	Religious person	9
Other relatives	4	Other (specify)	10

Other:

How do you think it could help people to know their HIV status? **[DO NOT PROMPT]**

Testing Positive

Testing Negative	
Won't help	98
Don't know	99

Would you stand up or publicly support someone with HIV/AIDS?

Yes	1
No	2
Don't know	3

Have you ever stood up for or publicly supported someone with HIV/AIDS?

Yes	1
No	2

Would you eat a meal with someone who has AIDS?

Yes	1
No	2
Don't know	3

Would you let your child play with an HIV positive child?

Yes	1
No	2
Don't know	3

Now I would like to ask you some questions about children & HIV.
In what ways do you think children have been affected by HIV/AIDS in South Africa? **[DO NOT READ OUT, RECORD ALL ANSWERS]**

Orphaned	1	Move/relocate	6
Responsible for parenting	2	Socially isolated	7
Emotionally affected	3	Infected with HIV at birth	8
Financially affected	4	Vulnerable to abuse	9
Drop out of school	5	They are not affected	10
		Other (specify)	11

Other:

If you are caring for a child, where would you go for help if you needed it? **[WRITE DOWN EXACT RESPONSE]**

Would you consider offering help to children in your community who are affected by HIV/AIDS?

Yes	1	If the answer is 'yes', go to Q.

No	2	If the answer is 'no', go to Q.
Don't Know	3	If the answer is 'don't know', go to Q.

What kind of help/support would you consider offering to them? **[DO NOT READ OUT , RECORD ALL RESPONSES]**

Helping with schoolwork	1
Helping with housework	2
Visiting them	3
Talking or listening to them	4
Playing with them	5
Donating food or clothing to them	6
Giving them money	7
Buying them gifts	8
Fostering children	9
Other (specify)	10

Other:

Have you ever offered any help to children affected by HIV/AIDS?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.

What kind of help have you offered? [Do Not Read Out Options, Record All Responses]

Helped them with schoolwork	1
Helped them with housework	2
Visited them	3
Talked to or listened to them	4
Played with them	5
Donated food or clothing to them	6
Gave them money	7
Bought them gifts	8
Offered to foster children	9
Other (specify)	10

Other:

What would stop YOU from offering help to children in your community who have been affected by HIV/AIDS? **[DO NOT READ OUT OPTIONS, RECORD ALL RESPONSES]**

Fear of infection	1

Fear that people may think that I have HIV/AIDS (stigma)	2
Lack of money	3
Lack of time	3
Fear that people in the community will no longer talk to me	4
I wouldn't want to get involved	5
Nothing would stop me	6
Other (specify)	7

Other:

Now I would like to read you some statements. Please tell me whether you strongly agree, agree, feel neutral, disagree or strongly disagree with each statement.
Someone who is HIV positive can live a healthy life for many years after they have been diagnosed.

St. agree	Agree	Neutral	Disagree	St. disagree	Don't know
1	2	3	4	5	6

People who are HIV positive cannot work.

St. agree	Agree	Neutral	Disagree	St. disagree	Don't know
1	2	3	4	5	6

People who are HIV positive should not be allowed to prepare food

St. agree	Agree	Neutral	Disagree	St. disagree	Don't know
1	2	3	4	5	6

People who have HIV or AIDS deserve to have it.

St. agree	Agree	Neutral	Disagree	St. disagree	Don't know
1	2	3	4	5	6

What can people who are HIV positive do to help them stay healthy? **[DO NOT READ OUT, RECORD ALL RESPONSES]**

Exercise	1
Healthy diet	2
Rest	3
Reduce alcohol intake	4
Stop smoking	5

Practice safe sex	6
Seek counselling	7
Get treatment for infections	8
Get early treatment for TB	9
Nothing	11
Other (specify)	10

Other:

Do you know of any FAMOUS SOUTH AFRICAN who is HIV positive or who has AIDS?

Yes	1
No	2

If so, who? [Write Down Exact Response.]

Now I would like to ask you some questions about the government and HIV/AIDS in South Africa

Do you think the government is taking enough action on the issue of HIV/AIDS in South Africa?

Yes	1
No	2
Don't know	3

Have you heard of the child support grant?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.

Who is eligible for this grant? **[WRITE DOWN EXACT RESPONSE]**

To end with I would like to ask some questions about Media Campaigns

What are some of the HIV/AIDS campaigns that you are aware of? **[WRITE DOWN EXACT RESPONSE, DO NOT PROMPT]**

1.
2.
3.

What are some of the helplines that you have heard of? **[WRITE DOWN EXACT RESPONSE, DO NOT PROMPT]**

1.
2.
3.

Have you heard of the Circles of Support Helpline?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.

Don't Know	3	If the answer is 'don't know', go to Q. 0

What does this Helpline offer? [Do Not Read Out, Record all Responses]

Have you ever phoned the Circles of Support Helpline?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.

Why not? [Write Down Exact Response]

Have you heard anything about STIs/STDs on sports programmes on television or the radio recently?

Yes	1
No	2
Don't know	3

Have you ever heard of the Khomanani campaign?

Yes	1	If the answer is 'yes', go to Q.
No	2	If the answer is 'no', go to Q.
Don't Know	3	If the answer is 'don't know', go to Q.

Where did you hear about Khomanani? [Do Not Read Out; Prompt for Multiple Responses]

TV	1	Community event	5
Radio	2	Schools	6
Posters	3	Friend/relative	7
Pamphlets/booklets	4	Don't remember	8
		Other (specify)	9

Other:

How often have you heard of it? **[READ OUT ALL OPTIONS]**

Once	1
A few times	2
Often	3
Never	4
Don't Know	5

Have you seen any of these logos before? [Show Logos One AT A Time. If Respondent Recognises The Logo, Ask What It Stands For and Record Exact Response in Box Below]

Logo	Yes	No

Khomanani	1	2	
Circles of Support	1	2	
AIDS Ribbon	1	2	If yes, Ask What It Stands For
Stop TB	1	2	If yes, Ask What It Stands For
Our time, our choice…	1	2	If yes, Ask What It Stands For

AIDS Ribbon

Stop TB

Our time, our choice, our future [If Respondent is 15-19 yrs, Go To Q.]

[ONLY FOR 15-19 YEAR OLDS] Where did you hear about "Our Time, Our Choice, Our Future"?
[DO NOT READ OUT]

TV	1	Community event	5
Radio	2	Schools	6
Posters	3	Friend/relative	7
Pamphlets/booklets	4	Don't remember	8
		Other (specify)	9

Other:

[Only for 15-19 year olds] How often have you heard of it? [Read Out All Options]

Once	1
A few times	2
Often	3
Never	4
Don't Know	5

End of interview.
Thank the Respondent for their time and for taking part.
What language was this interview conducted in?

Zulu	1	Venda	7
South Sotho	2	Shangaan/Tsonga	8
Xhosa	3	Ndebele	9

Tswana	4
North Sotho/Pedi	5
Swazi	6

Afrikaans	10
English	11
Other (specify)	12

Annexure 2 Approval from post graduate office

Faculty of Health Sciences
UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
7 York Road PARKTOWN Johannesburg 2193 Telegrams WITSMED Telex 4-24655.SA
FAX 643-4318 TELEPHONE 717-2075/2076
E-MAIL healthpg@health.wits.ac.za

MISS D ZHOU
PO BOX 110
SUNNINGHILL
2157

APPLICATION NUMBER 0417652T
STATUS (DEG 79) (MM043) PZZ

2005-12-13

Dear Miss Zhou

Approval of protocol entitled Determinants of risky sexual behavior among young adults of South Africa

I should like to advise you that the protocol and title that you have submitted for the degree of Master Of Science In Medicine (Pt).(Coursework) have been approved by the Postgraduate Committee at its recent meeting. Please remember that any amendment to this title has to be endorsed by your Head of Department and formally approved by the Postgraduate Committee.

Dr GH Schierhout has/have been appointed as your supervisor/s. Please maintain regular contact with your supervisor who must be kept advised of your progress.

Please note that approval by the Postgraduate Committee is always given subject to permission from the relevant Ethics Committee, and a copy of your clearance certificate should be lodged with the Faculty Office as soon as possible, if this has not already been done.

Yours sincerely

S Benn (Mrs)
Faculty Registrar
Faculty of Health Sciences

Telephone 717-2075/2076

Copies - Head of Department____Supervisor/s

Annexure 3 Approval from University of Witwatersrand Ethics Committee

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Zhou

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER M050907**
PROJECT	Determinants of Risky Sexual Behaviour among Young Adults of South Africa
INVESTIGATORS	Mr D Zhou
DEPARTMENT	School of Public Health
DATE CONSIDERED	05.09.30
DECISION OF THE COMMITTEE*	Approved unconditionally

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE 05.10.28 **CHAIRPERSON** _____
(Professor PE Cleaton-Jones)

*Guidelines for written 'informed consent' attached where applicable

cc: Supervisor : G Scheirhout

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and ONE COPY returned to the Secretary at Room 10005, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. I agree to a completion of a yearly progress report.

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Annexure 4 Approval from Health and Development Africa to use the Khomanani survey data

Health and Development Africa (Pty) Ltd
Postal address:-
Postnet Suite #129
Parkview, 2122
South Africa
27-11-8807654 telephone
Physical address:-
102 Dashing House
25 Bath Avenue
Rosebank
Johannesburg
South Africa

18/07/2005

TO WHOM IT MAY CONCERN:

Re: Secondary analysis of ACT Consortium/Khomanani Database towards the Degree of MSc in School of Public Health, 2005

This letter serves to confirm that Health and Development Africa, as research managers of the Khomanani campaign authorise the use of the above mentioned data by Diana Zhou and her supervisors for the purposes of post graduate study. The data is to be analysed in accordance with the student's research protocol. It is not to be published or distributed to third parties without the prior consent of Health and Development Africa.

Sincerely

Gill Schierhout