Assessing the high-risk behaviour of first year students entering the University of the Western Cape

Melissa Dione Abels

A mini-thesis submitted in partial fulfilment of the requirements for the degree of Magister Scientiae in the Department of Statistics, University of the Western Cape.

Supervisors:
Prof. R. J. Blignaut
Dr. H. V. Doctor

November 2007

Assessing the risk behaviour of first year students entering the University of the Western Cape

Melissa Dione Abels

Keywords

Alcohol use

Cigarette smoking

Drug use

First year entering students

Gender

Non-condom use

Number of sexual partners

Racial groups

Sexual activity

Sexual violence

Transactional sex

Young age at first sex

Abstract

Assessing the risk behaviour of first year students entering the University of the Western Cape

M. D. Abels

MSc Mini-thesis, Department of Statistics,
University of the Western Cape.

Globally, new HIV infections are heavily concentrated among the youth, i.e., persons aged 15-24 years old (UNAIDS, 2006b). In South Africa, the estimated national HIV prevalence was 10.4% among the youth in 2006 (Dorrington *et al*. 2006). The 2005-2006 national South African HIV rates ranged from 31.8% to 39.3% among female youth and from 7.5% to 10.1% among male youth (Dorrington *et al.* 2006*;* Pettifor *et al.* 2004; Shisana *et al.* 2005). UNAIDS (2006) stated that the future course of the HIV epidemic hinges on the high-risk behaviours the youth adept or maintain.

The motivation for the study is to assess the high-risk behaviours that contribute to the spread of HIV and AIDS among the youth. The most influential high-risk behaviours that contribute to the spread of HIV and AIDS are unprotected sexual intercourse and having more than one sexual partner (Nattrass, 2004, Pettifor *et al.* 2004; Shisana *et al.* 2005; UYF & HSRC, 2005). Those who are in violent relationships, fear the threat of violence, which prevents them from insisting on condom use and this increases the risk of HIV infection (MacPhail & Campbell, 2001). Factors that leave the youth unable to set boundaries on when they want to have sex, what type of sex, or the use of contraception increase the risk of HIV infection. These factors include transactional sex, young age at first sex, cigarette smoking, alcohol use, drug use and suicidal behaviour (Aitken, 2005; Basile *et al.* 2006; Flisher *et al.* 1993c; Kaufman & Stavrou, 2002; Pettifor *et al.* 2004; Shisana *et al.* 2005).

The population for this study included all full time first year students who registered at UWC for the first time in 2006 that attended the orientation week. A stratified, sequential random sample was drawn from the students attending the orientation. The Science Faculty Research Committee of UWC gave the consent to undertake the study. Informed consent was obtained from the 796 respondents and anonymity of their participation was ensured. The measuring instrument was a self-administered questionnaire. SAS package (SAS Institute Inc. 2004-2005) was used to clean the data and to do the analyses. Frequencies and percentages were provided for nominal and medians were provided for ratio scales. Rao-Scott Chi-square test was used to test the bivariate analysis between the high-risk behaviours. Multivariate logistic regression models were used to provide a clearer perspective on the effects of high-risk behaviours on non-condom use at last sex.

The results showed that 50% of the sexually active first year students did not use a condom the last time they had sexual intercourse. Sixty percent of the sexually active first year students had one sexual partner within the year prior to the survey. Both the median age at first vaginal sex and the median age at first oral sex were 17 years while the median age at first anal sex was 16 years. Prevalence rates of sexual violence among sexually active first year students were as follows: 11% did not give their consent/permission the first time they had sex, 4% had forced someone to have sex and 15% had been forced to have sex. Three percent of the sexually active students reported that they had exchanged sexual intercourse for money or gifts. Rates of current cigarette smoking, current alcohol use and current drug use were 20%, 44% and 11% respectively. Experiencing suicidal ideation within the 12 months prior to the survey was 5%. Bivariate analysis showed significant associations between current cigarette smoking, current alcohol use and current drug use.

Future research concerning high-risk behaviours among university students should examine both the group and individual factors such as the environment (i.e., bars, parties, on campus residences) that induce these risky behaviours. Additionally, high-risk behaviours coexist and should be examined so that appropriate interventions can be designed to prevent and reduce risky behaviours in this young adult population.

November 2007

Declaration

I declare that **Assessing the high-risk behaviour of first year students entering the University of the Western Cape** is my own work, that it has not been submitted for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledge by complete references.

MELISSA DIONE ABELS November 2007

Signed: ……

Acknowledgements

I would like to convey my appreciation to those whose support and encouragement made this project possible. I especially thank:

- My supervisors, Prof R. J. Blignaut and Dr. H. V. Doctor, without their attention to detail, assistance and patience, this project would not have been successfully completed.
- Dr. T. Vergnani, her comments and direction with the methodology was very helpful.
- My family, particularly my parents for their encouragement and selflessness throughout my studies.
- God, our Father, for carrying me through this challenge.

List of tables

List of figures

Abbreviations

AIC	Akaike's information criterion
AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Clinic
ASSA	The Actuarial Society of South Africa
CAS	College Alcohol Study
CDC	Centres for Disease Control Prevention
CHS	Community and Health Sciences
CI	Confidence Interval
DoH	Department of Health
EA	Enumerator Areas
EMS	Economic and Management Sciences
HIV	Human Immunodeficiency Virus
HSRC	Human Sciences Research Council
KFF	Kaiser Family Foundation
MDMA	Methylenedioxymethamphetamine
MRC	Medical Research Council
OR	Odds Ratio
PPS	Probability Proportional to Size
RHRU	Reproductive Health Research Unit
SABC	South African Broadcasting Corporation
SANTED	The South African Norway Tertiary Education Development Programme
SAS	Statistical Analysis System
SC	Schwartz's criterion
SHB	Student Health Behaviour
SPSS	Statistical Package for the Social Sciences
SYR	Status of the Youth Report
UNAIDS	The Joint United Nations Programme on HIV and AIDS
UWC	University of the Western Cape
UYF	Umsobomvu Youth Fund
VCT	Voluntary HIV Testing
YRBS	Youth Risk Behaviour Survey
YRBSS	Youth Risk Behavioural Surveillance System

Table of contents

CHAPTER 1

Introduction

1.1 Background to the study

Acquired Immunodeficiency Syndrome (AIDS) is a global pandemic. The Joint United Nations Programme on HIV and AIDS (UNAIDS) estimated that 39.5 million persons were living with the human immunodeficiency virus (HIV), 4.3 million persons were newly infected with the virus and an estimated 2.9 million lost their lives to AIDS in 2006 (UNAIDS, 2006a). Sub-Saharan Africa has carried the heaviest HIV and AIDS burden, of which, South Africa's national HIV prevalence is one of the highest in the world and shows no sign of relenting (UNAIDS, 2005).

In South Africa, there are differences in national HIV prevalence rates arising from different estimation techniques. The next section introduces four South African studies each with a different methodology. A summary of the national South African HIV prevalence rates, at the end of the following section, shows a difference in HIV prevalence rates with respect to gender, racial group, province and age. Most new HIV infections are among persons aged 15 to 24 years and reducing high-risk behaviours will have an impact on the HIV epidemic (Kebede *et al.* 2005; UNAIDS, 2006a). In this study, persons aged 15 to 24 years are referred to as the "youth". High-risk behaviours include unprotected sexual intercourse, having a number of sexual partners, young age at first sex, sexual violence, transactional sex, cigarette smoking, alcohol use, drug use and suicidal behaviour. The study is an assessment of the high-risk behaviours of the youth.

1.1.1 South African national HIV prevalence rates

The '2005 South African national HIV prevalence, HIV incidence, behaviour and communication' survey (or 2005 South African national Human Sciences Research Council (HSRC) study) was a national population based survey and included males and females aged two years and older, even from remote rural areas. Complex multi-stage sampling was used to create a master sample of 1,000 census enumerator areas (EA), which was the primary sampling unit. The secondary sampling unit was the household. The individual selected for the survey was the ultimate sampling unit. All the respondents completed a questionnaire and donated a dried blood spot sample for HIV testing. The researchers weighted the sample to represent the South African population by province, age, race and gender. In total, 23,275 individuals completed the interview, of which, 15,851 (68%) agreed to HIV testing. Of the 15,851 HIV tested respondents, the majority were female (68.3%, n=10,826), Coloured (72.3%, n=11,460) and from the Northern Cape Province (78.8%, n=12,491). The limitations of this survey were firstly, the exclusion of persons in institutions such as hospitals, army barracks, boarding schools and university hostels. Secondly, non-response rates lead to an under-estimation of HIV prevalences (Shisana *et al.* 2005). A person's absence or refusal to participate is correlated with a strong likelihood of HIV infection (UNAIDS, 2005).

The anonymous, unlinked and cross-sectional surveys, where blood samples of childbearing women are tested for HIV, were conducted by the South African Department of Health (DoH) since October of 1990 (DoH, 2006; UNAIDS, 2005). These annual national antenatal clinic (ANC) surveys were selected by using the probability proportional to size (PPS) sampling method. In total, 33,034 childbearing women at 1,415 health facilities participated in 2006. Half of the participants (51%) were aged younger than 24 years (DoH, 2007). The sample of ANCs is predominantly urban or peri-urban (DoH, 2006). Childbearing women are an accessible population for HIV testing among the sexually active female population because they have to attend clinics for antenatal, delivery, and post natal care and undergo routine obstetric examinations (Batter *et al.* 1994). Thus, HIV testing is repeated at each visit to the ANC. The ANC surveys have a number of limitations. Firstly, this survey does not provide direct evidence of HIV

prevalence among males, among women younger or older than 15-49 years, women who attend private medical facilities, nor women who are having protected sexual intercourse. Secondly, HIV reduces fertility and as such, data gathered by testing childbearing women might not reflect the proportion of women who are HIV infected and are unable to become pregnant (UNAIDS, 2005).

Another survey that attempted to estimate HIV prevalence was the 2003 South African national Reproductive Health Research Unit (RHRU) study, which was a three-stage household survey similar to the 2005 South African national HSRC study. However, this study only included the youth aged 15-24 years from the nine provinces of South Africa. One of the objectives of the survey was to identify trends in HIV infection and related determinants of infection among the youth. Sampling included three stages: firstly, the 2001 EA was used as a primary sampling unit; secondly, a segment of the EA was randomly selected and all dwelling units/stands in the selected segment were visited and enumerated; and finally, an eligible respondent aged 15-24 years within the dwelling was randomly selected. Overall, 15,414 households contained an eligible youth, however, 23% (n=3,510) either refused to participate in the study or did not complete their interviews. Of all eligible youth, 11,904 (77%) completed a questionnaire and donated an oral fluid sample for HIV testing. The weighted results represented the South African population aged 15-24 years by province, age, race, geography type and gender. The majority of respondents were female (66%, n=7,841), African (83%, n=9,867) and from KwaZulu-Natal Province (17%, n=2,070) (Pettifor *et al.* 2004).

Apart from surveys, demographic models have also been used to estimate the national and provincial HIV prevalences. For example, the demographic model of the Actuarial Society of South Africa (ASSA) uses a wide range of empirical evidence from different sources to provide HIV estimates. The latest version ASSA2003 incorporates the results of the 2003 antenatal prevalence data and registered deaths up to 2003. Included in the model is the influence of prevention and treatment activities in the health sector at both national and provincial levels (Dorrington *et al.* 2006).

Estimates of the national HIV prevalence from the studies reviewed earlier have been high, ranging from 16.2% (Shisana *et al.* 2005) to 18.3% (Dorrington *et al.* 2006) among persons aged 15-49 years. The South African provincial HIV prevalence ranged from the lowest 1.9% in the Western Cape Province to 16.5% in Mpumalanga Province among persons aged 2 years and older (Shisana *et al.* 2005). This is lower compared to the HIV estimates obtained from childbearing women, which ranged from 15.1% in Western Cape Province to 32.1% in Mpumalanga Province and 39.1% in KwaZulu-Natal Province in 2006 (DoH, 2007). Regarding racial groups, the national 2005 South African HIV prevalence is highest among the Blacks/Africans at 13.3% and decreases to 1.9% among the Coloureds, Indians at 1.6% and Whites at 0.6% among persons aged 2 years and older (Shisana *et al.* 2005). Among persons aged 15-49 years, the 2005 South African HIV prevalence was higher among females (20.2%) compared to males (11.7%) (Shisana *et al.* 2005). Similar results were documented by the ASSA2003 model such that more females (21.2%) compared to males (15.4%) aged 15-49 years where HIV positive in 2006 (Dorrington *et al.* 2006). A particularly vulnerable group and the key to the future course of the HIV and AIDS epidemic are the youth. The national South African HIV prevalence among the youth was 10.4% in 2006 (Dorrington *et al.* 2006).

Table 1.1: National HIV prevalence (%) stratified by age group and gender, South Africa

Age group	ANC (2006)	HSRC (2005)		ASSA2003 (2006)		RHRU (2003)	
	Childbearing women	Males	Females	Males	Females	Males	Females
15-19	19.1*	3.2	9.4	0.3	7.5	2.5	7.3
20-24	31.7	6.0	29.9	7.2	26.5	7.6	24.5
25-29	23.2	12.1	33.3	21.8	32.5		
30-34	15.2	23.3	26.0	26.5	28.2		
35-39	7.7	23.3	19.3	23.9	22.9		
40-44	2.2	17.5	12.4	21.0	17.7		
45-49	0.3**	10.3	8.7	17.7	11.1		

Source: DoH, 2007; Dorrington *et al.* 2006; Pettifor *et al.* 2004; Shisana *et al.* 2005
*: HIV estimate for childbearing women aged younger than 20 years
**: HIV estimate for childbearing women aged older than 45 years

1.2 Motivation for the study

The most influential factors that contribute to the spread of HIV and AIDS are unprotected sexual intercourse and having more than one sexual partner (Nattrass, 2004, Pettifor *et al.* 2004; Shisana *et al.* 2005; UYF & HSRC, 2005). Knowledge that your sexual partner is having sex with others should be an encouragement to insist on using a condom every time. Those who are unable to insist on condom use, mostly females, feel threatened that they might lose their partner. Others, who are in violent relationships, fear the threat of violence, which prevents them from insisting on condom use and this increases the risk of HIV infection (MacPhail & Campbell, 2001). Factors that leave the youth unable to set boundaries on when they want to have sex, what type of sex, or the use of contraception increase the risk of HIV infection. These factors include transactional sex, young age at first sex, cigarette smoking, alcohol use, drug use and suicidal behaviour (Aitken, 2005; Basile *et al.* 2006; Flisher *et al.* 1993c; Kaufman & Stavrou, 2002; Pettifor *et al.* 2004; Shisana *et al.* 2005).

Against this background, the researcher is motivated to assess the high-risk behaviours of a subset of the South African youth, i.e., the full time first year students who registered at University of the Western Cape (UWC) for the first time in 2006. This motivation is also based on the premise that entering a university marks a time of change in a person's life, and offers opportunities for self-governance and independence (Rich, 2004). Young first year university students welcome the freedom this newfound independence offers, which might lead them to participate in a variety of high-risk activities. On the other hand, the first year university students already fall in the high-risk behaviour age group and by entering into university, some of them are likely to increase their frequency of high-risk behaviour. Consequently, these high-risk behaviours place them at risk of contracting HIV and AIDS. An assessment of the relationship between the high-risk behaviours would be a useful guide to design suitable policies, action plans and strategies, which will enable the relevant role players to design suitable programmes for prevention and intervention on HIV and AIDS among the South African youth.

1.3 Objectives of the study

The objectives of this exploratory study conducted on full time first year students who registered at UWC for the first time in 2006 are as follows:

- To assess the high-risk behaviours including unprotected sexual intercourse, number of sexual partners, young age at first sex, sexual violence, transactional sex, cigarette smoking, alcohol use, drug use and suicidal behaviour.To profile gender and racial differences among the high-risk behaviours.
- To determine whether significant associations exist between non-condom use at last sex, current cigarette smoking, current alcohol use, current drug use and other high-risk behaviours.
- To determine whether a significant association exists between non-condom use at last sex and gender, race, current age group, number of sexual partners in the year prior to the survey, current cigarette smoking and current alcohol use.

1.4 Summary

Chapter 1 presented the background and introduction to the study. Assessment of the high-risk behaviours of the full time first year students who registered at UWC for the first time is an essential key to develop prevention and control programs. These programs could modify high-risk behaviours, which might lead to a reduction in the HIV infection.

This study is organized as follows: Chapter 2 presents the relevant literature review and discusses the high-risk behaviours outlined in Section 1.1. Chapter 3 will outline the methodology of the study, including the data collection, measuring instrument, study measure, sampling and the data analysis. Ethical consideration and limitations of the study will conclude this chapter. Chapter 4 presents the descriptive results, bivariate associations and multivariate logistic regression analyses. Chapter 5 will discuss the results of the study and compare it with previous studies. The implications and recommendations for future research will be explored.

CHAPTER 2

Literature review

2.1 Introduction

This chapter presents a review of the literature relating to the high-risk behaviours among the youth. This study introduces the methodology and results of 15 articles that investigated the high-risk behaviours among university/college students (Akvardar *et al.* 2003; Brown & Vaniable, 2007; Di Pietro *et al.* 2007; Eisenberg, 2001; Maharaj & Cleland, 2006; Maswanya *et al.* 1999; Meyer & Le Roux, 1994; Parikh *et al. 2007*; Reed *et al.* 2007; Reisen & Poppen, 1995; Rich, 2004; Roberts & Kennedy, 2006; Romito & Grassi, 2007; Vergnani *et al.* 2005; Weitzman & Chen, 2005). Additional literature documented in this study concerns the high-risk behaviours of youth from South Africa, Malaysia, Ethiopia, the United States, and Tanzania. Gender comparisons present the relationships of the high-risk behaviours between males and females. Previous South African government segregated the land according to the different racial groups. In the present study, the racial comparisons present the relationships of the high-risk behaviours between Black/Africans, Whites, Indian/Asians and Coloureds. The following sections introduce sexual intercourse and the high-risk behaviours.

2.2 Sexual intercourse

Sexual intercourse is not a high-risk behaviour if it is protected or safe. Using a condom properly is one of the few interventions that are effective in protecting oneself against the risk of HIV infection (Caldwell *et al.* 1993; Shisana *et al.* 2005; Pettifor *et al.* 2004) since it provides a barrier to HIV (Barnett & Whiteside, 2002). On the other hand, having sexual intercourse without using a condom puts a person in a risky position of acquiring HIV and

AIDS. This section discusses sexual intercourse, whether protected or unprotected, among the university/college students.

At the 2005 UWC first year orientation programme, 44% of the first year students reported that they have had vaginal, oral and anal sex (Vergnani *et al.* 2005). The 2005 South African Norway Tertiary Education Development Programme (SANTED) study included a stratified sequential sample of full-time first year UWC students attending the 2005 first year orientation program. The sample was the first year population, which was stratified into the different faculties. Approximately 70% of the each faculty's orientated groups were sequentially sampled. In total, 974 students completed the questionnaire relating to sexual behaviour. The researchers excluded married students and students aged 25 years and older. Questionnaires that showed inconsistent answers (e.g., a student indicating that he/she never had sexual intercourse in one question but indicated age at first sexual activity etc.) were excluded. After exclusion, the researchers included 811 questionnaires for analysis. Most of the respondents were female (69%, N=560), matriculated in the Western Cape Province (81%, n=657), speak English as home language (54%, n=438) and their mean age was 18.4 years. Statistical Analysis System (SAS) and SAS Enterprise Miner were used to conduct descriptive statistics, cross-tabulations and create decision trees. Cross-tabulations were used to find the differences between gender, home language groups and sexual activity. Decision trees extracted the variables that could differentiate between sexually active and non-active students. Most of the students who were sexually active practiced either only vaginal sex (18%) or a combination of vaginal and oral sex (19%). Less than 1% (i.e., 0.12%) of first year students only had anal sex and 4% only had oral sex (Vergnani *et al.* 2005).

In a 2003 study, 70% of college students at three public colleges in Durban, South Africa reported that they have had sexual intercourse (Maharaj & Cleland, 2006). The researchers collected the qualitative data from six focus group discussions held in February and March 2003. Each focus group consisted of six to eight participants. Additionally, they collected quantitative data at the same tertiary institutions between April and May 2003. The 3,000 respondents had to complete self-administered questionnaires. The data were analysed using Statistical Package for the Social Sciences (SPSS). Separate analyses were conducted for males and females. Cross-tabulations identified gender differences in

attitudes towards condoms and use of condoms. Most of the participants were female (57%) and their ages ranged from 17 years to 24 years. Three-quarters of the respondents were Black, 17% were Indian, 6% were White and 2% were Coloured. Ninety-four percent have never been married (Maharaj & Cleland, 2006).

In the 1997 United States College Alcohol Study (CAS), the participants were randomly sampled from 116 colleges located in 39 states. Investigators excluded married students and female students who had sexual contact exclusively with females from the study. After exclusion, 7,905 (40%) females and 5,351 (60%) males were included in the analysis. SAS was used for statistical analyses. Analyses were conducted separately for males and females. Descriptive statistics, cross-tabulations and multivariate logistic regression were performed to calculate the sexual behaviour of the students. Multivariate logistic regression models calculated the relationship between condom use (always vs. not always), multiple partners (<2 recent partners vs. 2+ recent partners), sex group (only heterosexual, bisexual, homosexual), age (<23 years vs. 23+ years), race (white vs. non-white), Hispanic (non-Hispanic vs. Hispanic) and housing (On-campus vs. off-campus). Condom use and multiple partners were the dependent variables respectively. Odds ratios (OR) were reported with 95% CI. The majority of the respondents were White (79%) and aged 18-22 years (83%). More than half of the respondents did not live on campus (53%). The results showed that almost three-quarters (71%) of the students had had sexual intercourse (Eisenberg, 2001).

In 1996, only 12 secondary schools and four colleges in Dar-es-Salaam, Tanzania were attended by approximately 12,000 students. Maswanya *et al.* (1999) conducted a cross-sectional survey among eight secondary schools and two colleges that responded positively to the research proposal. Objectives of the study were to define two risk groups according to condom use and sexual behaviour. The Risk-1 group consisted of students who were sexually active and did not always use condoms. The Risk-2 group was the portion of the Risk-1 group who had multiple sexual partners in the previous year. More than one-thousand students (1,053) completed the questionnaires. Statistical analyses were performed using the SAS. Adjusted and unadjusted odds ratios were calculated on the cross-tabulations and multivariate logistic regression. Cross-tabulations were calculated between socio-demographic characteristics (i.e., age, gender, place of birth and religion);

sources of AIDS-related information (i.e., radio, newspaper, television, etc.); awareness and perception of risk; and attitude towards condom use and sexual behaviour. Multivariate logistic regression models were performed to explain the influence of socio-demographic variables on Risk-1 and Risk-2 groups. In total, 1,041 (99%) respondents aged 16-24 years were included in the analysis, of which 40% (n=419) were males and 60% (n=622) were females. Overall, 69% (n=718) were Christians and 31% (n=319) were Muslims. Only 10% (n=99) of the sample were first year college students, including 93% (n=92) males and 7% (n=7) females. They found that 54% of all the respondents had had sexual intercourse. Of the sexually active respondents, 15% were first year college students (Maswanya *et al.* 1999). Being sexually active is not a high-risk behaviour for contracting HIV and AIDS. However, not using a condom during sexual intercourse and having multiple sexually partners are contributing factors to the spread of HIV and AIDS. The following sections present the high-risk behaviours that contribute to HIV and AIDS.

2.3 High-risk behaviours

Sections 2.3.1 to 2.3.9 present each of the nine high-risk behaviours considered in this study. The high-risk behaviours considered were also investigated by other researchers (Aitken, 2005; Basile *et al.* 2006; Flisher *et al.* 1993c; Kaufman & Stavrou, 2002; MacPhail & Campbell, 2001, Nattrass, 2004, Pettifor *et al.* 2004; Shisana *et al.* 2005; UYF & HSRC, 2005).

2.3.1 Unprotected sexual intercourse

Unprotected sexual intercourse is an important catalyst of the AIDS pandemic especially in Africa and other less developed countries where the transmission is overwhelmingly heterosexual (Nattrass, 2004). The section ends with the relationship between contraceptive usage and number of sexual partners, cigarette smoking, alcohol use, drug use and suicidal behaviour.

A 2007 study reported that 40% United States university students reported to have had unprotected vaginal sex at their last sexual encounter (Brown & Vaniable, 2007). The researchers recruited students from Introductory Psychology courses to participate in the

study. Each of the 547 respondents completed a self-administered questionnaire. However, the study was restricted to a subset of participants who reported having had vaginal sex during their most recent sexual encounter. After exclusion, only 320 students were included for analysis. Objective for analyses were to determine the relationship between alcohol use and unprotected sexual intercourse. The variables that were measured included an event-level assessment of sexual behaviour and substance use (i.e., questions on the most recent sexual experience, type of sexual intercourse, condom use and alcohol use at most recent sexual encounter); relationship status (i.e., the nature of the most recent sexual relationship); and global alcohol consumption (i.e., the quantity of alcohol consumed). The researchers did not specify the statistical techniques that were used. Sixty-seven percent (n=221) of the respondents were female, 82% (n=271) were White and the median age was 19 (Brown & Vaniable, 2007). One of the preferred methods of contraception among university students are condoms (Meyer & Le Roux, 1994). The 1997 United States CAS found that 34% of the sexually active students never used condoms (Eisenberg, 2001).

The 2007 South African national Kaiser Family Foundation (KFF) study consisted of a weighted sample of 3,926 persons aged 15-24 years. The majority of the respondents of this household survey were aged 15-19 years (58%) and female (57%) (KFF & South African Broadcasting Corporation (SABC), 2007). They reported that among the 67% sexually active respondents, 37% did not use a condom the last time they had sexual intercourse (KFF & SABC, 2007).

More males than females use condoms (Shisana *et al.* 2005) mainly because condoms are 'male controlled' devices and females often cannot negotiate condom use in both stable and unstable relationships (DoH, 2000). The 2005 South African national HSRC study showed that among the sexually active youth, more females (44%) compared to the males (27%) did not use a condom at their last sexual encounter (Shisana *et al.* 2005). Roberts & Kennedy (2006) reported that 64% of young females at a United States university were inconsistent or non-condom users. The investigators recruited sexually active females aged 18-24 years to participate in a descriptive/correlational designed study. The convenience sample of 100 females completed self-administed questionnaires. Instruments measured the students' perception of control over the sexual encounter, perception of risk,

perceived sexual assertiveness, condom use intention, actual condom use, partner resistance to condom use, substance use, STD history, sexual risk behaviours and perceived parental support. Bivariate correlation analyses using Spearman correlations were conducted to determine the relationships among the variables. Multivariate logistic regression models were conducted on the significant correlations. The majority of the respondents were never married (85%, n=85), had a regular sexual partner (58%, n=58), had one to two years of college experience (56%, n=56), were Catholic (36%, n=36), were White (41%, n=41) and 22% (n=22) were Black. The mean age of the respondents was 20.2 years (Roberts & Kennedy, 2006).

Previous research considered the relationship between unprotected sex, number of sexual partners, cigarette smoking, alcohol use, drug use and suicidal behaviour (Flisher & Chalton, 2001; Kebede *et al.* 2005; KFF & SABC, 2007; Maswanya *et al.* 1999). A recent study found no statistical significant difference with cigarette smoking, alcohol use, drug use and suicidal behaviour between contraception non-use and contraception use among sexually active respondents (Flisher & Chalton, 2001). The researchers conducted a multi-stage sampling survey that produced a sample representative of high-school learners in Cape Town. The random sample of learners had to complete a self-administered questionnaire. In total, 5,308 learners aged 11-25 years were recruited of which 913 (17%) sexually active learners were included into the final analysis (Flisher & Chalton, 2001). Consequently, the 1996 Tanzanian study showed that the sexually active youth who had multiple sex partners and did not always use condoms in the past year were statistically significant to drinking alcohol (Maswanya *et al.* 1999). The next section presents the number of sexual partners and its relationship with high-risk behaviours.

2.3.2 Number of sexual partners

Having more than one sexual partner increases a person's potential to HIV infection (Pettifor *et al.* 2004; Shisana *et al.* 2005; UYF & HSRC, 2005). The 2005 South African national HSRC survey found that persons aged 15 years and older with more than one sexual partner had a higher HIV prevalence (21%) compared to persons with one sexual partner (16%) (Shisana *et al.* 2005). The rate of partner change indicates having one and more sexual partners or regular turnover of sexual partners either serially or

simultaneously. In a serial sexual relationship, a person has only one sexual partner at a time, but changes the sexual partners frequently. Consequently, these persons have more than one sexual partner but not all at once. In a simultaneous sexual relationship, a person has more than one sexual partner in a given timeframe.

The 2005 UWC survey reported that among the sexually active first year students, 37% had more than one sexual partner in the year preceding the survey. Additionally, significantly more male first year students than female first year students had more than one sexual partner in a year preceding the survey (31% vs. 10%) (Vergnani *et al.* 2005). A previous study reporting on the sexual attitudes and practice at a South African university, found that similar proportions of sexually active female students (18%) and male students (17%) had had more than one sexual partner (Meyer & Le Roux, 1994). The researchers recruited a representative sample of 139 students according to their gender, number of years at university, faculty and accommodation (private or university residence). Each respondent had to complete a self-administered questionnaire. The researchers gave no description of the statistical techniques used. More of the participants were female (57%, n=79) (average age = 20.13 years) than male (43%, n=60) (average age = 21.37). More than 80% of the respondents were Afrikaans and the remaining had English as a home language. Fifty-nine percent (n=82) of the students were single, while the remaining respondents were in a steady relationship (Meyer & Le Roux, 1994).

Shier *et al.* (1996) pointed out that current cigarette smoking, current alcohol use and current drug use were significant predictors of the number of sexual partners within the three months prior to the survey. They recruited 51 schools in the United States and 45 (88%) agreed to participate in their study. Within these 45 schools, researchers randomly selects three to five classrooms of 9^{th} to 12^{th} grade learners to participate in the study. The respondents were tested using self-administered questionnaires. In total, 1,078 sexually active United States learners were included in the analysis. The majority of the respondents were female (53%, n=570), White (74%, n=802), 17 years old (31%, n=337) and in Grade 12 (31%, n=332) (Shier *et al.* 1996). The next section presents young age at first sexual intercourse.

2.3.3 Young age at first sex

A sexual encounter at age thirteen or younger is an indicator of an early age at first sex. The 2002 South African national Youth Risk Behaviour Survey (YRBS) found that 14.4% of sexually active learners had their first sexual encounter at age of 13 years or younger (Reddy *et al.* 2003). However, age at first sex is a poor indicator of acquiring HIV and AIDS due to the possibility of a long time interval between the first and subsequent sexual encounters and infrequency of sexual activity (Brooks-Gunn & Furstenberg, 1989). Brooks-Gunn & Furstenberg (1989) stated that age at first sex at 14 or 15 years age group is common but most will not have sexual intercourse again for a year or two. Nevertheless, previous research found that young age at first sex places the youth at risk of contracting HIV and AIDS (Aitken, 2005; Basile *et al.* 2006; Flisher *et al.* 1993c; Gregson *et al.* 2002; Kaufman & Stavrou, 2002; Maharaj & Cleland, 2006; Maswanya *et al.* 1999; Pettifor *et al.* 2004; Reisen & Poppen, 1995; Shisana *et al.* 2005, UYF & HSRC, 2005).

Age at first sex is slightly younger for males compared to females (Maharaj & Cleland, 2006; Maswanya *et al.* 1999; Pettifor *et al.* 2004; UYF & HSRC, 2005). A sample of South African college students' median age at first sex was younger for male students at 15 years compared to female students at 17 years (Maharaj & Cleland 2006). Similarly, South African national youth studies reported that the median age of first sexual encounter for males was 16 years and 17 years for females (Pettifor *et al.* 2004; UYF & HSRC, 2005). Although age at first sexual encounter is slightly younger for males compared to females, more females compared to males have unprotected sexual intercourse, frequent coital acts and their sexual partners are more likely to be 5-10 years older. This result in females being more susceptible to HIV infection compared to males (Gregson *et al.* 2002).

However, females that abstained from having their first sexual encounter until they are older (i.e., 17 years or older) are more likely to use condoms on every occasion since sexual activity is still a relatively new experience and elicit greater caution (Reisen & Poppen, 1995). Reisen & Poppen (1995) sampled 295 college females aged 17 to 24 years old at a private, urban United States university. The investigators excluded international students, lesbians and females older than 24 years from the study. After exclusion, the

final sample consisted of 272 heterosexual females. The questionnaires were administered either to groups or in the residence halls, and were collected in a manner to preserve anonymity. Statistical analyses measured the sexual history (i.e., sexual orientation, age of first sex, number of partners, past and current contraception and condom use, and STD history); barriers to condom use (include questions on negative attitudes toward condom use); current and previous relationships (include questions on when the sexual relationship started and ended). Multivariate logistic regression measured the influence of the predictor variables on condom use with the current sexual partner. The researchers did not state the statistical programme they used for analyses. The majority of the female students were White 80% (n=218) and the mean age was 19.3 years (Reisen & Poppen, 1995). The next section presents sexual violence.

2.3.4 Sexual violence

Sexual violence increases the risk of HIV infection because the lesions and abrasions caused during a violent act can facilitate the entry of HIV into the body (Barnett & Whiteside, 2002; Usdin, 2003). On the other hand, the threat of violence mostly prevents females from insisting on condom use, which increases the risk of HIV infection (MacPhail & Campbell, 2001). In this study, sexual violence includes (1) not giving consent/permission at the first sex; (2) forcing someone to have sex; and (3) ever been forced to have sex.

The 2003 South African national youth RHRU survey reported that among 7,692 sexually active youth, 13% stated that they did not want to have sex the first time and 6% conveyed that they were forced to have sex (Pettifor *et al.* 2004). They found that more sexually active females (23%) compared to sexually active males (1%) did not want to have sex the first time (Pettifor *et al.* 2004).

In 2001, university students in North-East Italy reported that significantly more females (20%) compared to males (11%) have experienced sexual violence (Romito & Grassi, 2007). In total, 510 students were recruited to complete the anonymous and self-administered questionnaires. However, eight questionnaires were not completed and were

therefore discarded. The instruments measured violence (i.e., family violence, peers/school violence and sexual violence) and the mental health (i.e., depression, anxiety, eating problems, alcohol use, suicide and self-evaluation of health) of the students. Statistical analyses were performed with the R software package. Separate analyses were conducted between males and females. The relationship between different types of violence and between violence and health were measured. Multivariate logistic regression models were used to obtain OR and confidence interval (CI). These models measured the influence of health on the different types of violence. Most of the students were 25 years and younger (92%) and 64% were female (Romito & Grassi, 2007).

Similar findings were reported by a United States study in 2003. Basile *et al.* (2006) found that more female learners (12%) compared to male learners (6%) reported ever being forced to have sex. The Centres for Disease Control and Prevention (CDC) developed a youth risk behavioural surveillance system (YRBSS) to assess the prevalence of health risk behaviours among the youth in the United States. The YRBSS uses a three-stage cluster sample design in which private or public high schools are randomly selected from a sample of sites, followed by a random selection of classrooms within the schools and a random sample of learners. The YRBSS was designed to analyze and monitor trends related to high-risk behaviours that contribute to the leading causes of death, disability, and social problems among private and public high-school learners in Grade 9-12 (ages 13-18 years). The six priority areas of high-risk behaviours includes: (1) behaviours that contribute to unintentional injuries and violence; (2) drug and alcohol use; (3) sexual behaviours resulting in unintended pregnancies and sexually transmitted infections; (4) tobacco use; (5) unhealthy diet-related behaviours; and (6) low levels of physical activity, including levels of overweight. The YRBSS is used to compile the youth risk behavioural study (YRBS), which is conducted bi-annually from February to May of each odd-numbered year since 1991. The learners have to complete anonymous, self-administered questionnaires. The sample was weight based on gender, racial differences and school grade to adjust for student non-response and over-sampling (Basile *et al.* 2006). Basile *et al.* (2006) conducted an analysis on the data from the 2003 United States national YRBS. A total of 15,240 high-school United States learners were included in the sample. The majority of the learners were male (51%, n=7,833), White (61 %; n=9,357) and 14% (n=2,118) were Black. Although the YRBS is designed as a national survey for the United

States, modified versions of the survey have been successfully conducted in other countries including Malaysia (Chen *et al.* 2005) and South Africa (Reddy *et al.* 2003).

In 1999, youths aged 16-20 years participated in a phone survey. Researchers recruited participants from 110 communities in the United States. Later, in 2000, they conducted a follow-up survey in which the same 110 communities participated and 34 more communities were included. In total, 1,281 males and 1,236 females participated in the phone survey. The researchers found that 88 (7%) of the females and 36 (3%) of the males have been forced to have sex in their lifetime. Given the small sample size of males that reported ever being forced to have sex, they were excluded from further analysis. After excluding the males, the overall sample of females were mostly White (89%) and 35% were 18 years or older. Results showed a significant association between forced sex, unprotected sex and dagga use during the 30 days prior to the survey (Champion *et al.* 2004). The following section presents transactional sex.

2.3.5 Transactional sex

Sexual intercourse in exchange for money, gifts, favours, drugs, meals at restaurants, drinks at a club, accommodation, good grades or other material and non-material items (i.e., transactional sex) is a high-risk sexual activity that is putting young people at risk of HIV infection (Kaufman & Stavrou, 2002).

Kaufman & Stavrou (2002) explored transactional sex among adolescents aged 14 to 22 years from the Durban Metropolitan area. Kaufman & Stavrou (2002) stratified the respondents into 10 focus groups consisting of an average of seven participants. They found that transactional sex especially early in the relationship meant that sexual partners had the right to demand sexual intercourse (Kaufman & Stavrou, 2002).

More females than males are attracted to sexual partners with money who will offer them financial assistance and gifts (MacPhail & Campbell, 2001; Nattrass, 2004). MacPhail & Campbell (2001) reported on a focus group study and used existing qualitative and quantitative studies to assess high-risk behaviours among the youth in the mining town of

Khutsong near Carltonville. The sample comprised of 44 persons aged 13-25 years, of which 50% were females. The researchers recruited the respondents using snowball sampling. Researchers recruited the initial contacts through part-time staff of a large HIV-prevention programme. These participants had neither a relationship with the project nor involvement with HIV prevention. Data was collected by eight focus group discussions consisting of 6-8 participants in each group. MacPhail & Campbell (2001) stratified the focus groups according to their gender and three age groups: 13-16 years, 17-20 years and 21-25 years. They found that young females engage in sexual relationships in exchange for gifts and financial assistance. Sexual intercourse is a driving force for males to engage in sexual relationships (MacPhail & Campbell, 2001) and older males are attracted to younger females because they are less likely to be HIV positive (Caldwell *et al.* 1993). However, these older males are more likely to be HIV positive (Gregson *et al.* 2002).

Other research showed that transactional relationships are 'the exception, rather than the rule'. Many of the youth stated that they expect gifts in the course of their relationship and relationships are not a source of income (MacPhail & Campbell, 2001). In general, flowers, chocolates, jewellery, clothes, CDs, tickets to concerts, entrance fees to clubs, vacations, and books were the most frequently mentioned items from the young respondents (Kaufman & Stavrou, 2002). Respondents viewed gift giving among same age adolescents as commonplace, a part of courtship and a means with which to establish relationships and intimacy (Kaufman & Stavrou, 2002). The following three sections present substance use, starting with cigarette smoking.

2.3.6 Cigarette smoking

Cigarette smoking is associated with having multiple sexual partners, alcohol use, drug use and suicidal behaviour (Easton & Kiss, 2005; Everett *et al.* 1998; Reed *et al.* 2007; Weitzman & Chen, 2005). The 1999 Budapest Student Health Behaviour (SHB) study reported that, among sexually active learners, current smokers were significantly more likely to have had four or more partners in their lifetime compared to non-current smokers (34% vs. 16%) and had attempted suicide (7% vs. 3%) (Easton & Kiss, 2005). Cigarette smokers are significantly more likely to use alcohol and to use drugs compared to non-

smokers (Easton & Kiss, 2005; Everett *et al.* 1998; Reddy *et al.* 2003). As a result, Everett *et al.* (1998) concluded that cigarette smoking is a risk factor for use of alcohol and drugs.

Weitzman & Chen (2005) used data drawn from a 2001 Harvard School of Public Health CAS to investigate the co-occurrence of smoking and drinking among United States College students. In total, Weitzman & Chen (2005) randomly selected 140 colleges using PPS sampling. The respondents had to complete anonymous self-reported and mailed questionnaires. However, due to non-response only 10,924 students from 120 colleges were included in the analysis. The variables that were measured were smoking and alcohol use. Analyses were conducted on data weighted according to the actual age, gender and racial/ethnic distribution of each school. SAS was used to perform analyses. Multivariate logistic regression models performed the influence of alcohol use on cigarette smoking. The researchers found that 26% of the respondents were current smokers (i.e., respondents that reported smoking during the 30 days preceding the survey) (Weitzman & Chen, 2005).

A random sample of 6,150 undergraduate students attending a United States university participated in an internet survey during 2005. In total, 1,113 students aged 18-24 years were included in the final analysis. The survey measured cigarette smoking, alcohol use and drug use (i.e., dagga, cocaine, ecstasy and prescription drugs). Multivariate logistic regression models were used to measure the relationship between alcohol use and smoking status. They did not mention the type of statistical programme they used. Most of the respondents were female (74%, n=817), White (59%, n=651), and the mean age of the sample was 20.2 years. They found that 16% of the respondents were smokers (i.e., respondents that reported smoking more than 100 cigarettes in their lifetime) whereas, 14% of the United States university students were experimenters (i.e., respondents that reported smoking less than 100 cigarettes in their lifetime). The sample of smokers was limited to respondents that indicated that they smoked in the last 30 days prior to the survey to ensure current smoking behaviour (Reed *et al.* 2007).

The Medical Research Council (MRC) conducted the 2002 South African national youth risk behaviour study (or the 2002 South African national YRBS), which was commissioned by the National DoH. The researchers contacted 207 governmental schools (i.e., 23 schools from each province) to participate in the study and only 188 (91%) agreed

to participate. Of the 188 schools, 14,766 learners were randomly selected. Of the learners selected, 10,699 learners aged 14 to 18 years old submitted completed questionnaires. The majority of the respondents were female (54%, n=5,777), Black (79.5%, n=8,506), from the Western Cape Province (13%, n=1,432) and aged 14-18 years (78.7%, n=8,420) (Reddy *et al.* 2003). Their study reported that significantly more White (18%) and Coloured (16%) learners were current frequent smokers (i.e., smoking cigarettes on 20 or more days in the 30 days preceding the survey) compared to Indian/Asian (5%) and Black/African (4%) learners (Reddy *et al.* 2003). Furthermore, significantly more males (10%) compared to females (4%) were current frequent smokers (Reddy *et al.* 2003).

Between April and May of 2002, 335 first year medical students (juniors) and 210 sixth-year medical students (seniors) from three universities in Turkey were included in a survey. The administrators collected the questionnaire from all students present at the university on the day of the survey. In total, 304 juniors (91%) and 143 seniors (68%) completed a self-administered, anonymous questionnaire. The variables that were included in the questionnaire were on smoking, alcohol use, use of illegal drugs (i.e., dagga, cocaine, heroin, ecstasy, LSD and inhalants), anxiety and depression. Results were analysed using SPSS (version 11.0). Descriptive statistics measured the demographic variables. The chi-square tests calculated the relationship between categorical variables. Multivariate logistic regression models used smoking and drinking status as the dependent variables separately. The independent variables were gender, year of medical school, anxiety and depression levels. Regarding the juniors, their mean age was 19.1 years and 37% (n=111) were female whereas, the mean age of the seniors was 24.1 years and 45% (n=64) were female. Overall, prevalence for lifetime smoking was 40%. They found that male students (39%) were significantly more likely to smoke than female students (22%) (Akvardar *et al.* 2003).

Conversely, the 1999 Budapest SHB study found little difference with current smoking (i.e., smoking on one or more days of the preceding 30 days) between males (45%) and females (47%). Their association was not significant (Easton & Kiss, 2005). The researchers used a two-stage cluster sampling design and included a representative sample of high-school learners in Grade 9-12 in Budapest. The objective of the study was to

identify trends between cigarette smoking, unintentional injuries, suicidal behaviour, alcohol use, sexual risk behaviour and physical activity. Sampling was done in two stages: firstly, 30 schools (from 222 high-schools in Budapest) were selected via PPS sampling; secondly, three to four intact classes (Grade 9-12) within the selected schools were randomly picked. Of the 3,092 eligible learners, 2,615 (85%) completed a self-administered questionnaire. However, 2,410 learners were included into final analysis due to non-response. The majority of the respondents were female (51%, n=1,209), 17 years old (49%, n=843) and attending Grade 11 (50%, n=733) (Easton & Kiss, 2005). The following section investigates the use of alcohol as high-risk behaviour.

2.3.7 Alcohol use

Alcohol use is significantly associated with unprotected sexual intercourse and suicidal behaviour (Chen *et al.* 2005, Kebede *et al.* 2005). Kebede *et al.* (2005) reported statistical significance with alcohol use and having unprotected sexual intercourse during the 12 months preceding the survey. Kebede *et al. (2005)* conducted a national Ethiopian survey between December 2001 and May 2002. This Ethiopian survey used a two-stage design. Firstly, classes were selected via PPS sampling, then secondly, the respondents were selected via systematic sampling. The sample consisted of (1) in-school youth aged 15-19 years, unmarried, high-school students attending grades 9-12 or vocational training schools; and (2) out-of-school youth aged 15-24 years, unmarried, not attending day or night school, unemployed or employed informally. The final sample consisted of 20,434 persons aged 15-24 years old of which, 50% (n=10,198) were male. They found that the respondents using alcohol daily were three times more likely to have unprotected sexual intercourse compared to the respondents that did not use alcohol (Kebede *et al.* 2005).

Chen *et al.* (2005) conducted a cross-sectional descriptive study designed with reference to the United States YRBS but excluding sexual behaviours. The study consisted of 4,500 Malaysian secondary school learners aged 12 to 19 years. The majority of the learners were females (54%; n=2,411) and the median age was 15.3 years. Chen *et al.* (2005) found that learners who drink alcohol were significantly more likely to have made suicide plans and attempted suicide compared with those who did not drink alcohol.

Rich (2004), investigated the relationship between alcohol use, unprotected sexual intercourse and having more than one sexual partner among UWC students. In the original sample, the 2,288 students from both under- and post-graduate level were from all of the faculties at the UWC. Only 1,837 (80%) completed the self-administered questionnaire which took 15-20 minutes during lecture time. Analysts excluded non-sexually active students. After exclusion, 777 (42% of 1,837) sexually active UWC students aged 17 to 25 years were included in the final analysis. Analyses were conducted by the SPSS programme. Descriptive analyses determined the students' perception regarding unprotected sex, the relationship between alcohol use and unprotected sex and measures that reduce HIV risk practices. Chi-square tests were used to calculate the statistical influence of unprotected sex and number of sexual partners on alcohol use. The majority of the students were female (60%, n=466), full-time students (96%, n=746), in their first year of study (40%, n=311), living with parents/relatives (55%, n=427) and 94% (n=730) were South African students. They found that 64% of the respondents reported having consumed alcohol (Rich, 2004). The 2002 Turkish university study reported that the prevalence of lifetime alcohol use among Turkish medical students was 46%. They reported no association with alcohol use between male students and female students (Akvardar *et al.* 2003). The next section presents drug use.

2.3.8 Drug use

This section presents drug use among the youth such as dagga (cannabis or marijuana), mandrax (methaqualone), heroin, cocaine (crack), tik (methamphetamine), ecstasy, methylenedioxymethamphetamine (MDMA) and inhalants. Drug use alters perception and timing of sexual intercourse (Kaufman & Stavrou, 2002). This means that the use of drugs could lead to having unplanned and unsafe sexual intercourse which increases the risk of HIV infection.

One of the most frequently used drugs among university/college students in Brazil is dagga (16%) excluding alcohol use (77%) and tobacco use (20%). Analysts calculated these results from a sample of 456 medical students at a Brazilian university. The assessment of the recent use of substances included alcohol, tobacco, and dagga. The investigators

collected the data by means of self-administered questionnaires. The instruments measured substance use (i.e., alcohol, tobacco, dagga, hallucinogens, cocaine, amphetamines, anti-cholinergic, organic solvents, tranquilizers, opiates, sedatives and barbiturates). SPSS programme was used to perform the statistical analyses. Chi-square tests were used to measure relationships between categorical variables and the t-tests measured the relationships between continuous variables. Associations were assessed using OR and their respective CI. Their study included slightly more males (54%) and the mean age of all the students was 21 years (Di Pietro *et al.* 2007).

In the 2003 South African national youth RHRU survey, 11% of youth reported that they have used drugs (Pettifor *et al.* 2004). Among these drug users, 4% have injected drugs (Pettifor *et al.* 2004). Intravenous drug users spread HIV by sharing needles and syringes (MRC, 2006).

The 2003 national South African Status of the Youth Report (SYR) documented that among persons aged 18 to 35 years, more males (18%) than females (10%) used drugs. Mostly Whites (34%) reported ever using drugs, followed by Indians (20%), Coloureds (19%) and Africans (10%) (UYF & HSRC, 2005). The SYR was conducted by the Umsobomvu Youth Fund (UYF) and commissioned by the HSRC. After excluding non-response, the weighted sample of this household survey consisted of 3,541 South Africans aged 18 to 35 years. Most of the respondents were female (52.3%, 1,853), African (78.1%, n=2,765), aged 18-24 (58.5%, 2,081), IsiZulu speaking (24.5%, n=866) and from KwaZulu-Natal province (21.4%, n=758) (UYF & HSRC, 2005). The following section presents the last high-risk behaviour discussed in this research project namely, suicidal behaviour.

2.3.9 Suicidal behaviour (including suicidal ideation and attempt)

This section defines suicidal behaviour, which includes suicidal ideation and suicidal attempt. Suicidal behaviour includes: (a) ‘feeling sad or hopeless for almost two weeks and not being able to do some usual activities’; (b) ‘seriously considering attempting or thinking about suicide’; (c) ‘making a plan to attempt suicide’; (d) ‘ever telling someone

that you intended to put an end to your life'; (e) 'obtaining the means to end your life'; (f) 'attempting to kill oneself'; and (g) 'carrying out the act successfully' (Reddy *et al.* 2003).

Nineteen percent to 25% high-school learners reported 'feeling sad or hopeless for almost two weeks and not able to do some usual activities' and 10% to 16% reported 'making a plan to attempt suicide' (Chen *et al.* 2005; Reddy *et al.* 2003). A Malaysian youth study found that 7% of the learners had 'seriously considered attempting or thinking about suicide' and 5% reported 'attempting to kill oneself'. Females are more inclined to suicidal behaviour than males (Chen *et al.* 2005). They reported that more female learners (22%) compared to male learners (15%) reported 'feeling sad or hopeless for almost two weeks and not being able to do some usual activities'. They also found that more female learners (5%) compared to male learners (4%) reported 'attempting to kill oneself'. There was no gender difference concerning seriously considering attempting suicide and making a plan to attempt suicide (Chen *et al.* 2005).

Suicidal ideation and suicidal attempt include suicidal behavioural factors but they are mutually exclusive i.e., suicidal ideation does not necessarily lead to an actual suicidal attempt (Flisher *et al.* 1993b). Suicidal ideation is having thoughts or wishes to be dead or to kill oneself. Parikh *et al.* (2007) assessed suicidal ideation among college students in Bombay, India. In total, 1,357 college students were recruited to the survey. Details of the statistical techniques used were not given. Majority of the students were female (56%) and their mean age was 19.3 years. Results showed that 25% have experienced suicidal ideation. They found no significant difference in suicidal ideation between males and females. Chi-square tests and Mann Whitney-U tests were used for cross-tabulations (Parikh *et al.* 2007). Suicidal attempt includes self-inflicted behaviours intended to result in death. The Malaysian youth study found that males are more likely to complete suicide attempt because most males would use firearms, hanging or other typically fatal techniques (Chen *et al.* 2005).

2.4. Summary

There has been an increase in national South African research that investigated the high-risk behaviours of the youth (Flisher & Chalton, 2001; KFF & SABC, 2007; Pettifor *et al.* 2004; Reddy *et al.* 2003; UYF & HSRC, 2005). The researcher found four articles concerning high-risk behaviours among South African university/college students (Maharaj & Cleland, 2007; Meyer & Le Roux, 1994; Rich, 2004; Vergnani *et al.* 2005) and eleven articles including university/college students from other countries (Akvardar *et al.* 2003; Brown & Vaniable, 2007; Di Pietro *et al.* 2007; Eisenberg, 2001; Maswanya *et al.* 1999; Parikh *et al.* 2007; Reed *et al.* 2007; Reisen & Poppen, 1995; Roberts & Kennedy, 2006; Romito & Grassi, 2007; Weitzman & Chen, 2005).

The present study presents surveys representative of the youth aged 15-24 years. Previous studies restricted their sample to include only sexually active respondents (Brown & Vaniable, 2007; Rich, 2004). Other researchers included only female respondents (Reisen & Poppen, 1995; Roberts & Kennedy, 2006). Most of the previous surveys collected data by administering self-administered questionnaires (Akvardar *et al.* 2003; Brown & Vaniable, 2007; Di Pietro *et al.* 2007; Maswanya *et al.* 1999; Meyer & Le Roux, 1994; Reisen & Poppen, 1995; Rich, 2004; Roberts & Kennedy, 2006; Romito & Grassi, 2007; Vergnani *et al.* 2005). Weitzman & Chen (2005) collected their data by anonymous self-administered questionnaires that were mailed to the respondents. Maharaj & Cleland (2006) collected qualitative data from focus groups consisting of 6-8 participants and quantitative data from anonymous and self-administered questionnaires. Most recent surveys collect data by using the internet (Reed *et al.* 2007).

The first objective is to assess the high-risk behaviours. Among the sexually active United States students, 40% had unprotected sex (Brown & Vaniable, 2007) and 34% have never used condoms (Eisenberg, 2001). Of the sexually active first year students at UWC, 37% had more than one sexual partner within the year prior to the survey (Vergnani *et al.* 2006). Six percent of the sexually active youth reported that they were forced to have sexual intercourse and 13% did not want to have their first sexual encounter (Pettifor *et al.* 2004). Current cigarette smoking among United States university/college students ranged from

14% to 26% (Reed *et al.* 2007; Weitzman & Chen, 2005). Of the sexually active UWC students, 64% have consumed alcohol (Akvardar *et al.* 2003; Rich, 2004). Eleven percent of South African youth have reported using drugs (Pettifor *et al.* 2004) and the most frequently used drugs among Brazilian medical students is dagga (16%) (Di Pietro *et al.* 2007). One in five (25%) of the Indian medical students had experienced suicidal ideation (Parikh *et al.* 2007*).*

The next objective of the study is to determine gender and racial comparisons with respect to high-risk behaviours. Some researchers separated males from females to assess gender differences with regard to high-risk behaviours (Eisenberg, 2001; Maharaj & Cleland, 2007; Romito & Grassi, 2007). For example, Maharaj & Cleland (2007) used separate analyses for males and females to assess the differences in condom use. A recent UWC survey showed that significantly more sexually active males compared to sexually active females had had more than one sexual partner in the year preceding the survey (Vergnani *et al.* 2005). Significantly more males compared to the females were cigarette smokers (Akvardar *et al.* 2003; Reddy *et al.* 2003). Among Italian university students, significantly more females compared to males have experienced sexual violence (Romito & Grassi, 2007). Only South African studies investigate the racial comparisons concerning high-risk behaviours (Pettifor *et al.* 2004; Reddy *et al.* 2003; UYF & HSRC, 2005; Vergnani *et al.* 2005). Cigarette smoking and drug use is significantly higher among the Coloureds compared to the Black/Africans (Reddy *et al.* 2003; UYF & HSRC, 2005).

A review on the association between cigarette smoking, alcohol use, drug use, unprotected sex and the other high-risk behaviours was also done. Chi-square tests were used to find significant relationships between categorical data and t-tests were used to find significant associations between continuous variables. Multivariate logistic regression models were used to assess the influence of predictor variables on the dependent variable. Akvardar *et al.* (2003), Di Pietro *et al.* (2007) and Reed *et al.* (2007) measured the influence of predictor variables on cigarette smoking, alcohol use and drug use separately. Weitzman & Chen (2005) went a bit further and assessed the influence of alcohol use on cigarette smoking. Eisenberg, (2001) and Maswanya *et al.* (1999) investigated the influence of socio-demographic variables on unprotected sex with multiple sexual partners. Brown & Vaniable (2007) measured the influence of predictor variables on unprotected sex and

alcohol use separately. Rich (2004) went a step further and measured the influence of unprotected sex and number of sexual partners on alcohol use. The results showed that current smokers are significantly more likely to have four or more sexual partners in their lifetime, use alcohol, use drugs and have attempted suicide (Easton & Kiss, 2005). Alcohol users are significantly more likely to have had unprotected sex within the year prior to the survey and have experienced suicidal behaviour compared to non-alcohol users (Kebede *et al.* 2005; Chen *et al.* 2005). The researcher found no significant association between drug use and the other high-risk behaviours. The present study uses cross-tabulations to assess the significance between high-risk behaviours and multivariate logistic regression models to investigate the influence of high-risk behaviours on non-condom use. See Chapter 3 for a more detailed description of methodology used in the present study.

CHAPTER 3

Methodology

3.1 Introduction

The literature reviewed in Chapter 2 presents the need for further study on risky behaviour among the youth. This chapter presents the objectives of the study in the form of research questions. Then the methodology will clarify the approach to achieve the objectives in terms of data collection, measuring instrument, study measure, sampling and data analysis. The representativeness of the sample and the weighting of the data will follow. Finally, this chapter will examine the ethical requirements and the limitations of the study. This chapter ends with a brief conclusion.

3.2 Research questions

Investigating the high-risk behaviours is very important because of their association with the risk of HIV infection. In an attempt to achieve this research aim and objectives (as mentioned in Chapter 1), the following research questions will be asked:

- Are there gender and racial differences in high-risk behaviours of the full time first year students who registered at UWC for the first time?
- Are there correlations between non-condom use, current cigarette smoking, current alcohol use, current drug use and other high-risk behaviours of the full time first year students who registered at UWC for the first time?
- Does gender, race, current age group, number of sexual partners in the year prior to the survey , current cigarette smoking and current alcohol use influence non-condom use at last sex of the full time first year students who registered at UWC for the first time?

3.3 Methodology

For the 2006 academic year, the orientation period at UWC started before commencement of classes, that is, at the end of January 2006. All first year students were divided into small groups of 15 to 20 students each according to their faculty. The first year students were to stay in their respective groups for the entire orientation week. Each peer facilitator was responsible for his/her group. The peer facilitator helped members of their group with registration procedures and introduced them to the campus by taking them to different lectures / presentations such as the two-hour HIV and AIDS workshop. Specially trained peer educators presented the workshop to the students in a small group situation. The content of the workshop included students discussing and identifying high-risk behaviours and how to prevent and negotiate these. In these group workshops, peer educators focused on imparting key facts about HIV and AIDS, ensuring that students knew where to access services on campus (i.e., condoms and free HIV testing), and encouraged students to know their HIV status (Vergnani *et al.* 2005).

3.3.1 Data collection

Each of the students present at the HIV and AIDS workshop had to complete and hand-in a consent form and a self-administered and anonymous questionnaire (see Appendices A and B). The signature on the consent form was not linked to the questionnaire. A witness signed the consent form to indicate that the particular student was not forced to complete the consent form and was willing to complete the questionnaire. The respondents placed their completed consent forms and questionnaires in different envelopes. These envelopes were sealed. One of the research team members was available during the administration of the questionnaire to respond to any queries. Peer educators at the HIV and AIDS workshop assisted the first year students if needed and conducted the HIV training workshop after completion of the questionnaire.

3.3.2 Measuring instrument

This section presents the measuring instrument used, which was a self-administered questionnaire. The questionnaire addressed specific issues relating to sexual activity, high-risk behaviours, attitudes, prevention and perception toward HIV and AIDS and gender specific questions. The questionnaire integrated the following variables to determine the high-risk behaviours of the full time first year students who registered at UWC for the first time:

(1) Non-condom use at last sex
(2) Number of sexual partners in the year preceding the survey
(3) Young age at first sex
(4) Sexual violence
(5) Transactional sex
(6) Cigarette smoking
(7) Alcohol use
(8) Drug use
(9) Suicidal behaviour during the year prior to the survey

Completion of the questionnaire was voluntary and respondents could choose not to complete it if they felt uncomfortable with any of the questions.

3.3.3 Study measures

Table 3.1 illustrates the measures used to define the high-risk behaviours. Non-condom use includes the following responses: (1) 'Not using a condom at last vaginal sex?' (2) 'Not using a condom at last oral sex?' and (3) 'Not using a condom at last anal sex?' A new variable called '*drugs*' was created which include dagga, mandrax, cocaine, heroin, tik, glue, petrol, thinners, ecstasy, tik and hallucinogens. Suicidal ideation was created by combining the responses of the four questions relating to suicidal behaviour (see Table 3.1). Appendix C tables all the names, description and response format of all the variables used in the study.

Table 3.1: Measures used in study

Variable	Questions / measures
Sexual intercourse	Have you ever had vaginal sex?
	Have you ever had oral sex?
	Have you ever had anal sex?
Condom use	Did you use a condom the last time you had vaginal sex?
	Did you use a condom the last time you had oral sex?
	Did you use a condom/barrier the last time you had anal sex?
Transactional sex	Have you ever received money or gifts in exchange for sex (vaginal, oral or anal)?
Young age at first sex	How old were you when you first had vaginal sex? *
	How old were you when you first had oral sex? *
	How old were you when you first had anal sex? *
Number of sexual partners	How many sexual partners have you had in the last 12 months?
Sexual violence	Think back to the first time you had sex. Was it with your consent/permission?
	Have you ever forced anyone to have sex?
	Have you ever been forced to have sex?
Current cigarette smoking	Do you currently smoke?
	How often do you smoke?
	During the past 30 days, on how many days did you smoke cigarettes? *
	During the past 30 days, on the days you smoked, how many cigarettes on average did you smoke per day? *
Current alcohol use	Do you currently use alcohol (including beer and wine)?
	During the past 30 days, on how many days did you have at least one drink of alcohol (including beer and wine)?
	During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?
Suicidal behaviour	During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?
	During the past 12 months, did you seriously consider attempting suicide?
	During the past 12 months, did you make a plan about how you would attempt suicide?
	During the past 12 months, did you ever tell someone that you intend putting an end to your life?
Current drug use	Do you currently use dagga on its own?
	Do you currently use mandrax on its own?
	Do you currently use dagga + mandrax (i.e., mixed “white pipe”, “buttons”)?
	Do you currently use cocaine?
	Do you currently use heroin?
	Do you currently use glue, petrol or thinners?
	Do you currently use tik?
	Do you currently use derbisol?
	Do you currently use ecstasy?
	Do you currently use hallucinogens such as LSD, MDMA?

Note: *Ratio scale transformed into ordinal scale
For details of the full questionnaire, see Appendix B

3.3.4 Sampling

The population for this study included all full time first year students who registered at UWC for the first time in 2006 that attended the orientation week. A stratified, sequential random sample was drawn from the students attending the orientation. The students were stratified according to their respective faculties and peer facilitator groups were sequentially selected. In these selected groups, all students were requested to complete the self-administered questionnaire. Originally, 796 students completed the questionnaire. The final number of questionnaires read was 502 representing 63% of the original sample. This section describes the types of inconsistencies that were found and excluded.

First year students who were married and/or older than 24 years were excluded for analysis purposes as it was felt that these first year students might well have sexual practices that cannot be compared to younger or unmarried students (Vergnani *et al.* 2005). First year students were asked if they had used a fictitious drug (Derbisol) (Flisher *et al.* 2003), and the one student that responded positively to this question was excluded for further data analysis. Examples of inconsistent associations are illustrated in Table 3.2.

Table 3.2: Examples of inconsistent associations

	Sexually active		**Always used a condom**	
	Yes	**No**	**Yes**	**No**
Gave an age at first (vaginal, oral or anal) sex	Included	Excluded		
Did not use a condom at last sexual encounter			Excluded	Included
Had no sexual partners within the last year	Included	Excluded		
Did not give consent/permission at first sexual encounter	Included	Excluded		
Had forced anyone to have sex	Included	Excluded		

3.3.5 Data analysis

Data were captured using Microsoft Excel and transferred into the SAS (version 9) package (SAS Institute Inc., 2004-2005). The SAS package (SAS Institute Inc., 2004-2005) was used to clean the data and to do the analysis. The results were calculated by using weighted data (see Section 3.5). Procedures were performed at a 5% level of

significance. SAS (version 9) includes the SURVEYFREQ procedure. This procedure computes cross-tabulations and tests associations. These tables include estimates of population totals, population proportions, and corresponding errors, confidence limits and tests of independence (e.g., Rao-Scott chi-square test). Frequencies and percentages were provided for nominal data. (e.g., gender) and medians were provided for ratio scales (e.g., age). Bivariate associations were calculated to evaluate associations between

- gender and each of the high-risk behaviours;
- racial group and each of the high-risk behaviours;
- non-condom use at last sex and each of the high-risk behaviours;
- current cigarette smoking and each of the high-risk behaviour;
- current alcohol use and each of the high-risk behaviours; and
- current drug use and each of the high-risk behaviours.

Rao-Scott Chi-square test was used to test the bivariate associations. The Rao-Scott Chi-square test is a design-adjusted version of the Pearson Chi-square test, which involves differences between observed and expected frequencies (SAS Institute Inc., 2004-2005).

Included in SAS is the SURVEYLOGISTIC procedure. This procedure performs multivariate logistic regression models. These models include model fit statistics, R-square, maximum likelihood estimates, odds ratio estimates and classification tables. Multivariate logistic regression models were used to provide a clearer perspective on the effects of gender, racial group, current age group, number of sexual partners in the 12 months prior to the survey, current cigarette smoking and current alcohol use, on non-condom use at last sex. Firstly, an examination of the bivariate associations between non-condom use and respective demographical variables and high-risk behaviours were done. Most of these bivariate associations were insignificant (see Chapter 4, Section 4.5.1). As a result, only those variables with weighted categorical sample sizes greater than or equal to 30 were included in the multivariate logistic regression models. Firstly, the full model measures the influence of the predictor variables on non-condom use at last sex was created. The dependent variable, *safe_sex* was dichotomized to allow comparisons of non-condom use vs. condom use. The predictor variables were dichotomized to enable evaluations of (1) male vs. female; (2) Black/African vs. Coloured; (3) (15-19) years age

group vs. (20-24) years age group; (4) having one sexual partner vs. having more than one sexual partner; (5) currently smoking vs. non-smoking; and (6) currently using alcohol vs. non-alcohol use. The second regression model illustrates the effects of gender on non-condom use by excluding gender from the full model (i.e., Model 2). Finally, the researcher excluded racial group, from the full model (i.e., Model 3).

3.4 Sample representativeness

This section describes the representativeness of the sample by comparing it to the first year full-time student population (or study population). In 2006, 2,971 full-time students registered for the first time at UWC. The sample used in the study represented 17% of all full time first year students who registered at UWC for the first time in 2006. Figure 3.1 shows a comparison of the gender and racial profiles of the sample and that of the study population. The sample had a slightly higher percentage of females (64%) compared to the study population studied at 63%.

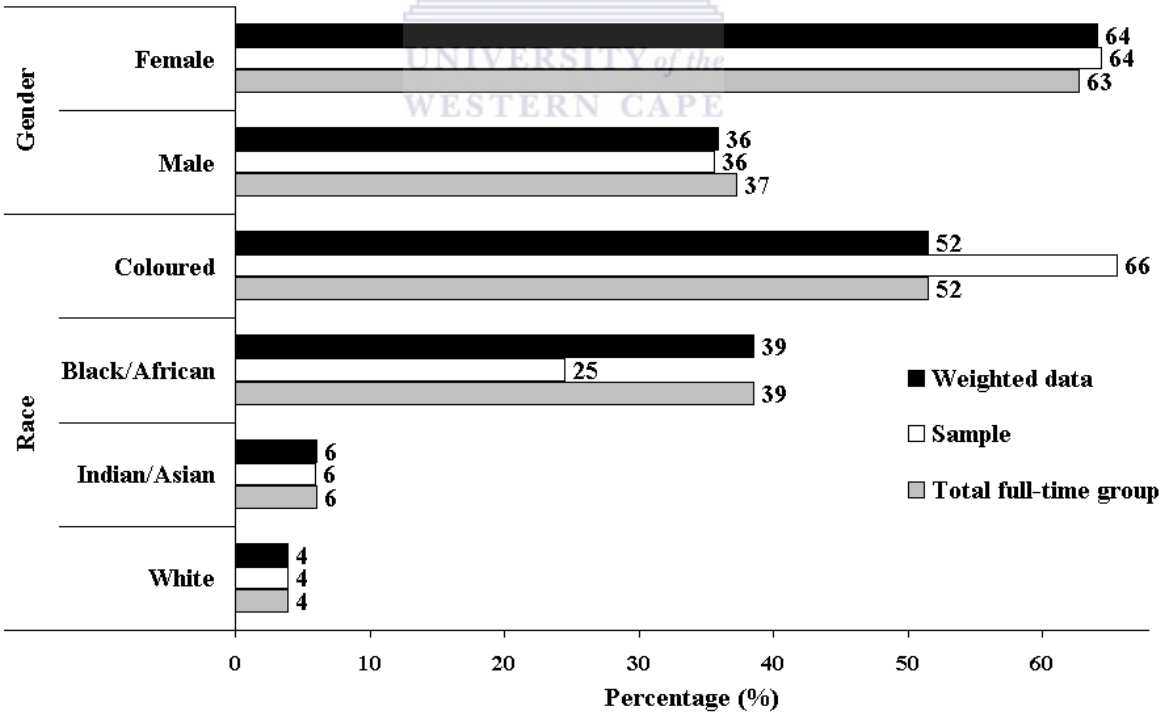

Figure 3.1: Comparison of full time first year student population, sample data and weighted data, 2006
Source: Student Administration, UWC, 2006

Figure 3.1 shows that the sample representing Indian/Asian and White students was similar to that of the study population. Both the sample and the study population comprised of 6% Indian/Asian and 4% White students. There was a difference in the proportion of Black/African and Coloured students with respect to the sample and the study population. The sample comprised of 66% Coloured students and 25% Black/African students whereas the study population comprised of 52% Coloured students and 39% Black/African students.

Because of the small sample sizes for Indian/Asian and White students, they were not included in the bivariate and multivariate analysis. The following section discusses the weighting procedure.

3.5 Weighting of the sample

The weighting procedure was introduced to adjust the proportions of respective racial groups relative to that of the study population. Data were weighted to reduce potential bias owing to sampling error such as the non-response of the Black/African respondents and over-sampling of the Coloured respondents.

Table 3.3: Weighting of sample

Racial group	Study population (%)	Sample (%)	Weight
Black/African	38.57	24.50	1.57415590
Coloured	51.50	65.54	0.78573466
White	3.92	3.98	0.98363699
Indian/Asian	6.02	5.98	1.00664604

Estimates were required for demographical characteristics (e.g., gender and racial groups) of the study population and these were obtained from the Students Administration of full time first year students who are registered at UWC. After obtaining these estimates, the sample design and non-response were taken into account, as the estimates could have been biased. This was achieved by assigning a weight to each sample unit. In this study, the sample unit was each of the four racial groups (e.g., Black/African, Coloured, Indian/Asian and White). The weight for each racial group was the inverse of the percentage of each

racial group in the sample multiplied with the percentage of each racial group in study population (see Table 3.3). The weighted sample consisted of 502 respondents. Figure 3.1 illustrates the adjusted data (weighted data) of gender and the four racial groups, which is similar to that of the study population. All the results reported in Chapter 4 were derivations from the weighted data.

3.6 Ethical requirements

The Science Faculty Research Committee of UWC gave the consent to undertake the study. Every precaution was taken to respect the privacy of the respondents, maintain the confidentiality of personal information and safeguard their health and human rights. No names or student numbers were used thereby making it impossible to identify individual respondents.

Participation of respondents in the research was voluntary. There was no potential risk of the students because of participation in this study. Some of the items in the questionnaire relating to sexual experiences may potentially be sensitive, however, most of these questions have been part of adolescent research for many years and there has been no harm pointed out (see CDC, 2004 for details). Given the high incidence of HIV in South Africa and the resultant publicity, public health efforts, and media attention, the questions included in the questionnaire are unlikely to surprise anyone. All students participating in the study were given an information leaflet with general information on Voluntary HIV Testing (VCT), alcohol and drug-related problems; suicidal behaviour during the 12 months prior to the survey and where they could access help for any of these problems.

It was made clear to participants that all the information collected for this study would be used for the purpose of this study only and were not available to any person or organisation not involved in this study. All data were kept secure in the project co-ordinator's office. Questionnaires will be destroyed on completion of the study.

3.7 Reliability and validity of the study

Validity determines whether the research was an actual measure of how truthful the research results are (Golafshani, 2003). Data are reliable if they are capable of measuring the same variable repeatedly and giving the same or almost the same results each time (Williams *et al.* 1995). This section states the validity and the reliability of the study.

This questionnaire draws from previous studies done on respondents at UWC and among high school students in the United States (CDC, 2004). Questions used in this study are reliable and valid in a number of study settings. For example, the CDC conducted two test-retest reliability studies of the national YRBSS in 1992 and 2000. The 1992 reliability study for the YRBSS questionnaire was administered to a convenience sample of 1,679 students in grades 7-12 on two occasions, two weeks apart. Roughly, 75% of the questionnaire items were rated as having a higher reliability (kappa ranging between 61% and 100%). Further, no statistically significant differences were observed between the prevalence estimates for the first and second times that the questionnaire was administered. Similar results were found in the 2000 reliability study (CDC, 2004).

In 2003, CDC conducted a review of existing empirical literature to assess cognitive and situational factors that might affect the validity of adolescent self-reporting of behaviours measured by the YRBSS questionnaire (Brener *et al.* 2003). In this review, CDC determined that, although self-reports of these types of behaviours are affected by both cognitive and situational factors, these factors do not threaten the validity of self-reports of each type of behaviour equally (Brener *et al.* 2003). Based on these results, the questions used in this study among UWC students are expected to be consistent with the test-retest reliability and validity results established in previous studies.

3.8 Limitations of the study

Only students attending the orientation week could be selected for the sample. The study included full time first year students who registered at UWC that attended the 2006 orientation. The aim was to include two thirds of all first year students attending the

orientation. However, the sample plan for selecting the stratified, sequential random sample could not be implemented as not all students that were accepted at UWC attended the orientation programme. In total, the orientation group consisted of 796 students, which was far less than was expected number. Due to the limited numbers, the entire orientation group was sampled. This influenced the representativeness of the sample. Among Indian/Asian and White racial groups, there was no difference between the sample and population studied. However, there was a large difference with respect to the proportion of Coloured and Black/African students included in the sample (see Figure 3.1). In addition, the study excluded first year students that did not attend the orientation week whose behaviour may differ from that of students that attended.

Another limitation was that mostly students who lived in and around Cape Town attended the orientation programme, which did not represent the racial profile of the population studied. To correct for this problem, a weighting procedure was introduced to correct for the imbalance in racial groups. The weighting procedure produced a final sample (see Figure 3.1) representative of the full time first year student population of UWC with regard to racial distribution and gender.

Validity stems from two sources: (1) under-reporting, arising out of the apprehension of being exposed and the embarrassment and possible legal consequences; and (2) over reporting (Flisher *et al.* 1993a). The questionnaire has no items to measure under-reporting. Over-reporting occurs when respondents are tempted to provide incorrect answers that were expected from them. Considering the nature of the subject matter and the fact that the measuring instrument was a self-administered questionnaire, the possibility of response 'dishonesty' remains. With regard to over-reporting, an item concerning the use of a fictitious drug (Derbisol) was inserted in the questionnaire. Only one student who answered affirmatively to this question was excluded from the study, which reduced the effect of this bias. However, those who over-reported with respect to other forms of risk-taking behaviour may not have been detected by this method (Flisher *et al.* 1993a). Every effort was made to stress confidentiality and anonymity. The assistance of peer educators and research team members, who assisted the respondents if needed, encouraged the respondents to answer honestly.

Finally, the study was conducted among respondents at UWC, a unique sample of the youth. Any attempt to generalise from these findings outside of a similar population must be made with caution.

3.9 Summary

In this chapter the research question, methodology, representativeness of sample ethical requirements and limitations of the study were identified. Chapter 4 follows with the results of the statistical analysis. These results will be presented in terms of descriptive statistics and inferential statistics.

CHAPTER 4

Results

4.1 Introduction

This chapter provides the results of the statistical analysis. Firstly, descriptive statistics related to demographical characteristics and sexual activity of full time first year students who registered at UWC for the first time would be provided. Secondly, descriptions of the high-risk behaviours are also provided. Thirdly, is the bivariate associations exploring the high-risk behaviours with respect to gender and racial groups; and then follows the bivariate associations of the high-risk behaviours. Finally, this chapter describes the multivariate logistic regression models with non-condom use at last sex as the dependent variable. This chapter ends with a brief conclusion. Definitions of variables are tabled in Appendix C. The documented bivariate analyses in this chapter were all statistically significant unless otherwise stated. All the results are derivations from the weighted data.

4.2 Frequencies

4.2.1 Demographic characteristics of the respondents

The demographic characteristics of the sample show that most of the respondents were female (64%) and aged 15-19 years (85%). The median age of all the respondents was 18 years. The majority of the respondents were Coloured (51%) followed by 39% Black/African respondents, 6% Indian/Asian respondents and 4% White respondents. The sample sizes for Indian/Asian and White respondents were very small and were not included in further analysis. After exclusion of Indian/Asian and White respondents, there were 43% Black/African respondents and 57% Coloured respondents. The most common home languages were English (40%), Xhosa (28%) and Afrikaans (23%) (see Table 4.1).

Table 4.1: Demographic characteristics of respondents

Variable		Frequency	Weighted Frequency	Weighted Percent
Gender *(genderc)*	Male	174	180	36
	Female	327	321	64
	Total	501	500	100
Frequency missing		1		
Current age group *(age_group)*	15-19	438	427	85
	20-24	64	75	15
	Total	502	502	100
Frequency missing		0		
Racial group *(Q7)*	Black/African	123	194	39
	Coloured	329	259	51
	White	20	20	4
	Indian/Asian	30	30	6
	Total	502	502	100
Frequency missing		0		
Racial groups *(racial_gr)*	Black/African	123	194	43
	Coloured	329	259	57
	Total	452	452	100
Frequency missing		50		
Home language *(Q5)*	Xhosa	90	139	28
	English	234	197	40
	Afrikaans	142	116	23
	Zulu	7	10	2
	Other	21	32	7
	Total	494	494	100
Frequency missing		8		
In which province did you matriculate? *(Q6)*	Western Cape	401	366	73
	Eastern Cape	50	74	15
	Northern Cape	13	13	3
	Gauteng	6	6	1
	Other	29	41	8
	Total	499	499	100
Frequency missing		3		
In which province did you matriculate? *(prov)*	Western Cape	401	366	73
	Other	98	133	27
	Total	499	499	100
Frequency missing		3		
Faculty *(Q9)*	Science	69	70	14
	Education	12	11	2
	EMS	111	109	22
	CHS	81	81	16
	Law	84	82	16
	Dentistry	24	25	5
	Arts	120	121	24
	Total	501	500	100
Frequency missing		1		

Note: 1. Refer to Tables D1 to D6 in Appendix D for detailed results

The province where the respondents matriculated was the Western Cape at 73% and Eastern Cape Province (15%), Northern Cape Province (3%), Gauteng Province (1%) and 'Other' provinces (8%). Eastern Cape Province, Northern Cape Province, Gauteng Province and 'Other' provinces were grouped together and consisted of 27% of the respondents. Respondents were registered in the Arts faculty (24%) followed by the Economic and Management Sciences (EMS) faculty (22%), the Law faculty (16%), the Community and Health Sciences (CHS) faculty (16%) and the Science faculty (14%) (see Table 4.1).

Table 4.2: Demographic characteristics of respondents

Variable		Frequency	Weighted Frequency	Weighted Percent
Where do you live when you are at university? *(Q8)*	Home with relatives	374	350	70
	UWC hostel	97	121	24
	Rented accomodation with friends	15	15	3
	Rent a room alone	12	13	3
	Total	498	499	100
Frequency missing		4		
Where do you live when you are at university? *(res)*	Off campus	401	378	76
	On campus / UWC hostel	97	121	24
	Total	498	499	100
Frequency missing		4		
Religion *(Q13)*	Christianity	388	399	80
	Islam	89	75	15
	Traditional	6	9	2
	Other	14	14	3
	Total	497	497	100
Frequency missing		5		
Religion *(newQ13)*	Christianity	388	399	84
	Islam	89	75	16
	Total	477	474	100
Frequency missing		25		
How important is your religion in influencing your sexual behaviour *(Q14)*	Very important	294	292	59
	Somewhat important	117	109	22
	Slightly important	35	38	8
	Not sure	31	36	7
	Unimportant	22	23	5
	Total	499	497	100
Frequency missing		3		

Note: 1. Refer to Tables D6(i) to D9 in Appendix D for detailed results

Seven out of 10 respondents lived at home with relatives and 24% lived on campus in a UWC hostel, 3% rented accommodation with friends and 3% rented a room alone. These four groups were divided into two: off campus and on campus/UWC hostel. Overall, 76% of the respondents lived off campus, which included those respondents that lived at home

with relatives, rented accommodation with friends or were living individually in a rented room (see Table 4.2).

Eighty percent of the respondents were Christians, 15% were Muslims, Traditionalists (2%) and 'Other' (3%). However, the sample sizes for Traditional and 'Other' religions were very small and were therefore excluded in further analysis. After exclusion of Traditional and 'Other' religions, there were, 84% Christians and 16% Muslims. Of all the respondents, 59% stated that their religion was very important, 22% stated that their religion was somewhat important, 8% stated that their religion was slightly important, 7% stated that they were not sure and 5% stated that their religion was unimportant in influencing their sexual behaviour (see Table 4.2).

4.2.2 Sexual activity

This section presents ever having had vaginal, oral and/or anal sex. Table 4.3 illustrates that 48% of all the respondents indicated that they had had sexual intercourse. Thirty-four percent of all the respondents indicated that they had had vaginal sex occasionally, 12% had had vaginal sex often, 24% had had oral sex and 5% had had anal sex (Table 4.3, Panel A).

Of the 502 respondents, 23% had had only vaginal sex, 18% had had vaginal and oral sex, and 4% have had vaginal, oral and anal sex. One percent had had only oral sex, 1% had had vaginal and anal sex, 0.4% had had only anal sex and 0.2% had had anal and oral sex (see Table 4.3, Panel B). Among the sexually active respondents, 72% indicated that they had had vaginal sex occasionally, 25% had had vaginal sex often, 50% had had oral sex and 11% had had anal sex (see Table 4.3, Panel C).

Table 4.3: Sexual activity

Variable		Frequency	Weighted Frequency	Weighted Percent
Panel A: Sexual activity (all respondents)				
Are you sexually active *(sex_active)*	Yes	217	236	48
	No	279	260	52
	Total	496	496	100
Frequency missing		6		
Have you ever had vaginal sex *(Q15)*	No, never	285	265	54
	Yes, occasionally	152	169	34
	Yes, often	57	60	12
	Total	494	494	100
Frequency missing		8		
Have you ever had oral sex *(Q19)*	No	369	362	76
	Yes	107	115	24
	Total	476	477	100
Frequency missing		26		
Have you ever had anal sex *(Q24)*	No	451	446	95
	Yes	19	25	5
	Total	470	471	100
Frequency missing		32		
Panel B: Type of sexual intercourse				
Only vaginal sex *(only_vsex)*		106	115	23
Only oral sex *(only_osex)*		6	5	1
Only anal sex *(only_asex)*		1	2	0.4
Only vaginal and oral sex *(only_vosex)*		86	92	18
Only vaginal and anal sex *(only_vasex)*		3	5	1
Only oral and anal sex *(only_oasex)*		1	1	0.2
Vaginal, oral and anal sex *(voasex)*		14	18	4
Total		217	238	48
Panel C: Sexual activity (only sexually active respondents)				
Have you ever had vaginal sex? *(newQ15)*	No, never	7	6	2
	Yes, occasionally	152	169	72
	Yes, often	57	60	25
	Total	216	235	100
Frequency missing		1		
Have you ever had oral sex? *(newQ19)*	No	106	115	50
	Yes	107	115	50
	Total	213	230	100
Frequency missing		4		
Have you ever had anal sex? *(newQ24)*	No	187	199	89
	Yes	19	25	11
	Total	206	224	100
Frequency missing		11		

Note: 1. Refer to Tables D10 to D13 (iii) in Appendix D for detailed results

4.2.3 High-risk behaviours

The following sections present the results for the high-risk behaviours investigated in this study..

4.2.3.1 Non-condom use at last sex

Table 4.4 presents the results of the analysis of non-condom use at last vaginal, oral and/or anal sex. Among all the respondents, 25% did not use a condom the last time they had sex (Panel A).

Table 4.4: Non-condom use at last (vaginal, oral or anal) sex

Variable		Frequency	Weighted Frequency	Weighted Percent
Panel A: Non-condom use at last sex (all respondents) stratified by type of sex				
Did you use a condom the last time you had sex? *(condom_use)*	No	109	114	25
	Yes	108	122	27
	Never had sex	228	211	47
	Total	445	448	100
Frequency missing		57		
Panel B: Non-condom use at last sex (only sexually active) stratefied by type of sex				
Did you use a condom the last time you had vaginal sex? *(newQ17)*	No	63	65	29
	Yes	145	163	71
	Total	208	228	100
Frequency missing		9		
Did you use a condom the last time you had oral sex? *(newQ23)*	No	80	83	74
	Yes	25	30	26
	Total	105	113	100
Frequency missing		112		
Did you use a condom the last time you had anal sex? *(newQ28)*	No	7	8	32
	Yes	12	17	68
	Total	19	25	100
Frequency missing		198		
Panel C: Non-condom use at last sex (only sexually active)				
Did you use a condom the last time you had sex? *(safe_sex)*	No	109	114	48
	Yes	108	122	52
	Total	217	236	100
Frequency missing		0		

Note: 1. Refer to Tables E1 to E3 in Appendix E

Almost 30% of the sexually active respondents indicated that they did not use a condom the last time they had vaginal sex. Seventy-four percent of the sexually active respondents indicated that they did not use a condom the last time they had oral sex while 32% of the

sexually active respondents did not use a condom the last time they had anal sex (see Table 4.4, Panel B). Overall, 48% of the sexually active respondents indicated that they did not use a condom the last time they have had sex (see Table 4.4, Panel C).

4.2.3.2 Number of sexual partners in the year prior to the survey

Forty-seven percent of all the respondents indicated having one or more sexual partners in the year prior to the survey (see Table 4.5, Panel A). Among the sexually active respondents, 60% had one sexual partner in the 12 months prior to the survey and 40% had more than one sexual partner in the same time frame (see Table 4.5, Panel B).

Table 4.5: Number of sexual partners in the year preceding the survey

Variable		Frequency	Weighted Frequency	Percent
Panel A: Number of sexual partners in the year preceding the survey (all respondents)				
How many sexual partners have you had in the last 12 months? *(mult)*	None, never had sex	262	247	51.1
	None in the last year	11	11	2.3
	1	131	136	28.2
	2	43	50	10.4
	3 or more	32	39	8.1
	Total	479	483	100
Frequency missing		23		
Panel B: Number of sexual partners in the year preceding the survey (only sexually active)				
How many sexual partners have you had in the last 12 months? *(newQ32)*	1 partner	131	136	60
	more than 1 partner	75	89	40
	Total	206	225	100
Frequency missing		11		

Note: 1. Refer to Tables E4 and E5 in Appendix E for detailed results

4.2.3.3 Young age at first sex

Table 4.6 illustrates the young age at first vaginal, oral and/or anal sex among all the respondents. Of all the respondents, 39% had their first vaginal sex, 27% had their first oral sex and 7% had their first anal sex when aged 15-19 years (see Table 4.6, Panel A). Of the sexually active respondents, 13% were aged 5-14 years (see Table 4.6, Panel B). The median age at first vaginal sex was 17 years (see Table 4.7). Eight percent of the sexually active respondents had their first oral sexual experience when they were aged 10-14 years (see Table 4.6, Panel B). The median age at first oral sex was 17 years (see Table

4.7). Ten percent of the sexually active respondents had their first anal sexual experience when aged 10-14 years (see Table 4.6, Panel B). The median age at first anal sex was 16 years (see Table 4.7). The minimum age of first oral sexual encounter was two years. This respondent was a Coloured male that was forced to have sex and did not report sexual activity. The minimum age at first vaginal and anal sex was twelve years. Of these five respondents, all were male and sexually active, three were Black/African, one has been forced to have sex and three did not use a condom the last time they had sex. The sample of respondents that had had anal sex was very small (n=21) and therefore no further detailed results are included.

Table 4.6: Young age at first (vaginal, oral or anal) sex

Variable		Frequency	Weighted Frequency	Percent
Panel A: Young age at first sex stratified by type of sex (all respondents)				
How old were you when you first had vaginal sex? *(first_vsex)*	10-14	22	30	6
	15-19	182	193	39
	20-24	5	6	1
	Never had vaginal sex	279	260	53
	Total	488	490	100
Frequency missing		14		
How old were you when you first had oral sex? *(first_osex)*	10-14	8	9	2
	15-19	95	101	27
	20-24	4	6	1
	Never had oral sex	279	260	69
	Total	386	376	100
Frequency missing		116		
How old were you when you first had anal sex? *(first_asex)*	10-14	2	2	1
	15-19	16	21	7
	20-24	1	2	1
	Never had anal sex	279	260	91
	Total	298	285	100
Frequency missing		204		
Panel B: Young age at first sex stratified by type of sex (only sexually active)				
How old were you when you first had vaginal sex? *(new_vsex)*	5-14	22	30	13
	15-24	187	199	87
	Total	209	230	100
Frequency missing		8		
How old were you when you first had oral sex? *(new_osex)*	10-14	8	9	8
	15-24	99	106	92
	Total	107	115	100
Frequency missing		110		
How old were you when you first had anal sex? *(new_asex)*	10-14	2	2	10
	15-24	17	22	90
	Total	19	25	100
Frequency missing		198		

Note: 1. Refer to Tables E6(i) to E7(iii) in Appendix E for detailed results

Table 4.7: Descriptive statistics of young age at first sex by type of sex

Variable	Type of sex	Frequency	Sum weights	Mean	Median	Min	Max
Young age at first sex	vaginal sex *(Q16)*	209	230	16.51	17.00	12	22
	oral sex *(Q20)*	108	116	16.69	17.00	2	22
	anal sex *(Q25)*	19	25	16.35	16.00	12	20

4.2.3.4 Sexual violence

Sexual violence includes not giving consent/permission at the first sex, ever forcing anyone to have sex and ever been forced to have sex.

Table 4.8: Sexual violence

Variable		Frequency	Weighted Frequency	Percent
Panel A: Sexual violence (all respondents)				
Think back to the first time you had sex. Was it with your consent/permission? (Q30)	Never had sex	246	228	49
	Not sure	26	32	7
	No	19	21	5
	Yes	169	179	39
	Total	460	461	100
Frequency missing		42		
Have you ever force anyone to have sex? (Q34)	No	474	474	98
	Yes	7	9	2
	Total	481	483	100
Frequency missing		21		
Have you ever been forced to have sex? (Q35)	No	443	440	90
	Yes	44	48	10
	Total	487	489	100
Frequency missing		15		
Panel B: Sexual violence (only sexually active)				
Think back to the first time you had sex. Was it with your consent/permission? *(newQ30)*	No	19	21	11
	Yes	169	179	89
	Total	188	201	100
Frequency missing		29		
Have you ever force anyone to have sex? *(newQ34)*	No	210	226	96
	Yes	6	9	4
	Total	216	235	100
Frequency missing		1		
Have you ever been forced to have sex? *(newQ35)*	No	186	199	85
	Yes	30	36	15
	Total	216	235	100
Frequency missing		1		

Note: 1. Refer to Tables E8(i) to E9(iii) in Appendix E for detailed results

Table 4.8 (Panel A) illustrates sexual violence among all the 502 respondents. Among the sexually active respondents, 11% did not give their consent/permission the first time they had sex, 4% indicated that they have forced someone to have sex and 15% of the sexually

active respondents indicated that they have been forced to have sex (see Table 4.8, Panel B).

4.2.3.5 Transactional sex

Only six of the 502 respondents indicated that they have received money or gifts in exchange for sex (see Table 4.9, Panel A). Of the sexually active respondents, 3% indicated that they have received money or gifts in exchange for sex (see Table 4.9, Panel B).

Table 4.9: Transactional sex

Variable		Frequency	Weighted Frequency	Weighted Percent
Panel A: Transactional sex (all respondents)				
Have you ever received money or gifts in exchange for sex (vaginal, oral or anal)? *(Q31)*	No	280	293	61
	Yes	5	6	1
	Never had sex	196	184	38
	Total	481	484	100
Frequency missing		21		
Panel B: Transactional sex (only sexually active)				
Have you ever received money or gifts in exchange for sex (vaginal, oral or anal)? *(newQ31)*	No	208	225	97
	Yes	5	6	3
	Total	213	232	100
Frequency missing		4		

Note: 1. Refer to Table E10 and E11 in Appendix E for detailed results

4.2.3.6 Current cigarette smoking

This section presents current cigarette smoking in the 30 days prior to the survey. Results show that of all the respondents, 20% indicated that they were currently smoking cigarettes (Table 4.10, Panel A). Among the cigarette smokers, 74% indicated that they were smoking daily and 26% indicated that they were smoking occasionally. Of the cigarette smokers, 74% indicated that they smoked on more than 30 days and 45% indicated that they smoked on average more than five cigarettes per day (see Table 4.10, Panel B).

The median days of smoking cigarettes were 30 days. The median cigarettes smoked were five per day (see Table 4.11). One of the missing respondents to the question 'Do you currently smoke?' (see Table 4.10) replied to the questions 'How many days did you

smoke?' and 'How many cigarettes on average did you smoke per day?' (see Table 4.11) his resulted in a higher frequency in Table 4.11 than that obtained in Table 4.10 (Panel B).

Table 4.10: Current cigarette smoking

Variable		Frequency	Weighted Frequency	Weighted Percent
Panel A: Current cigarette smoking (all respondents)				
Do you currently smoke? *(Q56)*	No	388	397	80
	Yes	108	99	20
	Total	496	496	100
Frequency missing		6		
Panel B: Current cigarette smoking (only cigarette smokers)				
How often do you smoke? *(newQ57)*	Daily	81	68	74
	Occasionally	22	24	26
	Total	103	92	100
Frequency missing		5		
During the past 30 days, on how many days did you smoke cigarettes? *(newday)*	Smoking < 30 days	21	23	26
	Smoking => 30 days	79	67	74
	Total	100	90	100
Frequency missing		8		
During the past 30 days, on the days you smoked, how many cigarettes on average did you smoke per day? *(newcig)*	On average <= 5 cigarettes per day	54	52	55
	On average > 5 per day	50	43	45
	Total	104	95	100
Frequency missing		4		

Note: 1. Refer to Tables E12 to E13(iii) in Appendix E for detailed results

Table 4.11: Descriptive statistics of current cigarette smoking (all respondents)

Variable	Frequency	Sum weights	Mean	Median	Min	Max
During the past 30 days, on how many days did you smoke cigarettes? *(Q58)*	101	91	25.46	30	1	30
During the past 30 days, on the days you smoked, how many cigarettes on average did you smoke per day? *(Q59)*	109	99	6.32	5	1	40

4.2.3.7 Current alcohol use

This section presents the proportion of respondents that were currently using alcohol within the 30 days prior to the survey. Table 4.12 illustrates that among the 44% alcohol users, 51% were drinking at least one drink of alcohol on more than four days and 57% had five or more alcohol drinks in a row, within a couple of hours, on more than two days (see Table 4.12).

Table 4.12: Current alcohol use (all respondents)

Variable		Frequency	Weighted Frequency	Weighted Percent
Panel A: Current alcohol use (all respondents)				
Do you currently use alcohol (including beer and wine)? *(Q60)*	No	261	271	56
	Yes	227	217	44
	Total	488	488	100
Frequency missing		14		
Panel B: Current alcohol use (only alcohol users)				
During the past 30 days, on how many days did you have at least one drink of alcohol (including beer and wine)? *(newhigh)*	Drinking on <= 4 days	100	98	49
	Drinking on > 4 days	109	102	51
	Total	209	200	100
Frequency missing		18		
During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is within a couple of hours? *(newrisk)*	Drinking on <= 2 days	68	67	43
	Drinking on > 2 days	94	89	57
	Total	162	156	100
Frequency missing		65		

Note: 1. Refer to Tables E14 to E15(ii) in Appendix E for detailed results

The median number of days the respondents were drinking at least one drink of alcohol was five. The median number of days the respondents were drinking five or more drinks of alcohol in a row, within a couple of hours, was three (see Table 4.13). One of the missing respondents to the question 'Do you currently use alcohol?' (see Table 4.12) replied to the questions 'How many days did you have 5 or more drinks of alcohol in a row, that is within a couple of hours?' (see Table 4.13) This resulted in a higher frequency in Table 4.13 than that obtained in Table 4.12 (Panel B).

Table 4.13: Descriptive statistics of current alcohol use

Variable	Frequency	Weighted sum	Mean	Median	Min	Max
During the past 30 days, on how many days did you have at least one drink of alcohol (including beer and wine)? *(Q61)*	209	200	6.58	5	1	30
During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is within a couple of hours? *(Q62)*	165	160	5.91	3	1	30

4.2.3.8 Current drug use

This section presents drug use and includes dagga, mandrax, cocaine, heroin, ecstasy, glue, petrol, thinners, tik and hallucinogens. One out of ten (11%), of all the respondents indicated that they were currently using drugs (see Table 4.14, Panel A). Most of the respondents used dagga on its own (10%), 2% reported that they have used tik, 1% of the respondents reported that they have used cocaine; heroin, and/or ecstasy (see Table 4.14, Panel B).

Table 4.14: Current drug use

Variable		Frequency	Weighted Frequency	Weighted Percent
Panel A: Current drug users (all respondents)				
Do you currently use drugs *(drugs)*	No	402	399	89
	Yes	53	49	11
	Total	455	448	100
Frequency missing		47		
Panel B: Current drug users stratified by drug type (all respondents)				
Are you currently using the following drugs?	Dagga on its own *(Q67_1)*	50	46	10.1
	Mandrax on its own *(Q67_2)*	1	1	0.2
	Dagga + Mandrax *(Q67_3)*	1	1	0.2
	Cocaine *(Q67_4)*	4	3	0.7
	Heroin *(Q67_5)*	4	4	0.9
	Glue, Petrol or thinners *(Q67_6)*	0	0	0
	Tik *(Q67_7)*	9	8	1.8
	Ecstasy *(Q67_8)*	8	6	1.4
	Hallucinogens *(Q67_10)*	1	2	0.4

Note: 1. Refer to Tables E16(i) to E17 in Appendix E for detailed results

4.2.3.9 Suicidal behaviour during the 12 months prior to the survey

Of all the respondents, 31% indicated that they have felt sad and hopeless almost every day for two weeks or more, which influenced their usual activities. Additionally, 18% of all the respondents indicated that they have seriously considered attempting suicide, 12% indicated that they have made a plan about how they would attempt suicide, and, 13% indicated that they have told someone that they intend putting an end to their life (see Table 4.15, Panel A). Overall, 5% of all the respondents indicated that they had

experienced suicidal ideation (thoughts or wishes to be dead or to kill one-self) during the year preceding the survey (see Table 4.15, Panel B).

Table 4.15: Suicidal behaviour within the year prior to the survey

Variable		Frequency	Weigthed Frequency	Weighted Percent
Panel A: Suicidal behaviour (all respondents)				
During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities? *(Q63)*	No	349	341	69
	Yes	144	152	31
	Total	493	493	100
Frequency missing		9		
During the past 12 months, did you ever seriously consider attempting suicide? *(Q64)*	No	402	398	82
	Yes	84	87	18
	Total	486	485	100
Frequency missing		16		
During the past 12 months, did you make a plan about how you would attempt suicide? *(Q65)*	No	424	423	88
	Yes	59	59	12
	Total	483	482	100
Frequency missing		19		
During the past 12 months, did you ever tell someone that you intend putting an end to your life? *(Q66)*	No	421	421	87
	Yes	62	61	13
	Total	483	482	100
Frequency missing				
Panel B: Suicidal ideation (all respondents)				
Did you have suicidal ideation during the past 12 months? *(suicidal)*	Yes	26	27	5
	No	466	464	95
	Total	492	491	100
Frequency missing		10		

Note: 1. Refer to Tables E18(i) to E19 in Appendix E for detailed results

4.3 Bivariate associations of gender

Table 4.16 illustrate the high-risk behaviours among males and females. For detailed results refer to Tables F1 to F7 in Appendix F.

Significantly more sexually active male respondents compared to sexually active female respondents had had more than one sexual partner the year prior to the survey (58% vs. 26%; χ^2 = 20.4167; p-value < 0.0001), had their first vaginal sexual encounter at 5-14 years age group (24% vs. 6%; χ^2 = 12.2265; p-value = 0.0005) and had their first oral

sexual experience at 10-14 years age group (14% vs. 3%; χ^2 = 5.8472; p-value = 0.0156). Note the sample sizes of respondents that had their first sexual experience in the less than 14 years age group ranged from 2 to 23 sexually active respondents.

Significantly more of the male respondents compared to the female respondents indicated that they were currently using drugs (16% vs. 8%; χ^2 = 6.4079; p-value = 0.0114). On the other hand, significantly more of the female respondents compared to the male respondents reported experiencing suicidal ideation during the 12 months prior to the survey (7% vs. 2%; χ^2 = 4.3801; p-value = 0.0364). Only four male respondents experienced suicidal ideation within the year prior to the survey.

4.4 Bivariate associations of racial group

Table 4.17 presents the high-risk behaviours among Black/African and Coloured respondents. Tables G1 to G7 in Appendix G refer to the detailed results.

Significantly more sexually active Black/African respondents compared to sexually active Coloured respondents indicated that they had more than one sexual partner a year prior to the survey (49% vs. 30%; χ^2 = 7.2047; p-value = 0.0073) and have forced someone to have sexual intercourse (6% vs. 1%; χ^2 = 5.1153; p-value = 0.0237). Sample sizes for those respondents that had forced someone to have sex were less than 10 for both Black/African and Coloured respondents. Significantly more of the sexually active Black/African respondents compared to the sexually active Coloured respondents reported that they had their first vaginal sexual encounter aged 5-14 years (20% vs. 3%; χ^2 = 14.1944; p-value = 0.0002). However, the sample sizes for Black/African respondents and Coloured respondents that reported having their first vaginal sex aged 5-14 years were small at 25 and 3 respectively.

Significantly more of the Coloured respondents compared to the Black/African respondents indicated that they were currently smoking cigarettes (25% vs. 12%; χ^2 = 9.2703; p-value = 0.0023) and were currently using alcohol (50% vs. 36%; χ^2 = 7.1439; p-value = 0.0075). However, sample size for current cigarette smoking among Black/Africans was small (n=22), similarly for current drug use (n=13).

Table 4.16: Bivariate associations of gender

Variables		Male		Female		Chi-square	p-value
		Weighted Frequency	Row Percent	Weighted Frequency	Row Percent		
Did you use a condom the last time you had sex? (only sexually active) *(safe_sex)*	**No**	47	46	67	50	0.3316	0.5647 (ns)
	Yes	55	54	67	50		
How many sexual partners have you had in the last 12 months? (only sexually active) *(newQ32)*	**1 partner**	40	42	96	74	20.4167	<0.0001 **
	more than 1 partners	56	58	33	26		
How old were you when you first had vaginal sex? (only sexually active) *(new_vsex)*	**(5-14)**	23	24	7	6	12.2265	0.0005 **
	(15-19)	74	76	125	94		
How old were you when you first had oral sex? (only sexually active) *(new_osex)*	**(10-14)**	7	14	2	3	5.8472	0.0156 *
	(15-19)	46	86	61	97		
Think back to the first time you had sex. Was it with your consent/permission? (only sexually active) *(otherQ30)*	**No**	5	6	17	14	2.6484	0.1037 (ns)
	Yes	76	94	103	86		
Have you ever forced anyone to have sex? (only sexually active) *(newQ34)*	**No**	97	76	129	96	0.0166	0.8975 (ns)
	Yes	4	24	5	4		
Have you ever been forced to have sex? (only sexually active) *(newQ35)*	**No**	92	90	107	81	2.9463	0.0861 (ns)
	Yes	10	10	25	19		
Have you ever received money or gifts in exchange for sex? (only sexually active) *(newQ31)*	**No**	97	95	129	99	1.7004	0.1922 (ns)
	Yes	5	5	2	1		
Do you currently smoke? *(Q56)*	**No**	134	76	261	82	2.7509	0.0972 (ns)
	Yes	42	24	56	18		
Do you currently use alcohol? (including beer and wine) *(Q60)*	**No**	84	49	185	59	3.8308	0.0503 (ns)
	Yes	87	51	130	41		
Do you currently use drugs? *(drugs)*	**No**	135	84	263	92	6.4079	0.0114 *
	Yes	26	16	23	8		
During the past 12 months, did you ever experience suicidal ideation? *(suicidal)*	**Yes**	4	2	21	7	4.3801	0.0364 *
	No	172	98	292	93		

Note: (1.) Refer to Tables F1 to F7 in Appendix F for detailed results (2.) (ns): Not significant (3.) *: p<0.905 (4.) **: p<0.001

Table 4.17: Bivariate associations of racial group

Variables		Black/African		Coloured		Chi-square	p-value
		Weighted Frequency	Row Percent	Weighted Frequency	Row Percent		
Did you use a condom the last time you had sex? (only sexually active) *(safe_sex)*	**No**	54	42.5	53	55	2.9560	0.0856 (ns)
	Yes	72	57.5	44	45		
How many sexual partners have you had in the last 12 months? (only sexually active) *(newQ32)*	**1 partner**	61	51	64	70	7.2047	0.0073 *
	more than 1 partners	60	49	28	30		
How old were you when you first had vaginal sex? (only sexually active) *(only_vsex)*	**(5-14)**	25	20	3	3	14.1944	0.0002 **
	(15-19)	101	80	89	97		
How old were you when you first had oral sex? (only sexually active) *(new_osex)*	**(10-14)**	5	8	3	7	0.0710	0.7899 (ns)
	(15-19)	54	92	44	93		
Think back to the first time you had sex. Was it with your consent/permission? (only sexually active) *(otherQ30)*	**No**	13	13	8	9	0.5656	0.4520 (ns)
	Yes	88	88	80	91		
Have you ever forced anyone to have sex? (only sexually active) *(newQ34)*	**No**	117	94	97	99	5.1153	0.0237 *
	Yes	8	6	1	1		
Have you ever been forced to have sex? (only sexually active) *(newQ35)*	**No**	101	81	86	89	2.3314	0.1268 (ns)
	Yes	24	19	11	11		
Have you ever received money or gifts in exchange for sex? (only sexually active) *(newQ31)*	**No**	118	96	94	98	0.9501	0.3297 (ns)
	Yes	5	4	2	2		
Do you currently smoke? *(Q56)*	**No**	168	88	193	75	9.2703	0.0023 *
	Yes	22	12	64	25		
Do you currently use alcohol? (including beer and wine) *(Q60)*	**No**	120	64	124	50	7.1439	0.0075 *
	Yes	68	36	127	50		
Do you currently use drugs? *(drugs)*	**No**	148	92	207	87	2.2616	0.1326 (ns)
	Yes	13	8	32	13		
During the past 12 months, did you ever experience suicidal ideation? *(suicidal)*	**Yes**	13	7	13	5	0.3559	0.5508 (ns)
	No	175	93	241	95		

Note: 1. Refer to Tables G1 to G7 in Appendix G for detailed results (2.) (ns): Not significant (3.) *: p<0.05 (4.) **: p<0.001

4.5 Bivariate associations of high-risk behaviours

This section presents the associations between the high-risk behaviours of the full time first year students who registered at UWC for the first time. Non-condom use at last sex, current cigarette smoking, current alcohol use and current drug use were tabled as the dependent variables.

4.5.1 Bivariate associations of non-condom use at last sex

Tables 4.18a and 4.18b illustrate the demographical variables and the high-risk behaviours among non-condom users and condom users at last sex respectively. Refer to Tables H1 to H10 in Appendix H for detailed results.

Significantly more non-condom users compared to condom users indicated that they were living off campus (80% vs. 66%; χ^2 = 3.9123; p-value = 0.0479). On the other hand, significantly more condom users compared to non-condom users were Christians (98% vs. 92%; χ^2 = 4.0849; p-value = 0.0433). However, sample sizes for non-condom users and condom users among the Moslem respondents were less than 30. Sample size for non-condom users that lived on campus/UWC hostel was 23.

Concerning the high-risk behaviours, significantly more of the non-condom users compared to the condom users pointed out that they did not give their permission/consent the first time they had sex (16% vs. 6%; χ^2 = 3.9360; p-value = 0.0473). However, the sample sizes for non-condom users and condom users that did not give their permission/consent the first time they had sex were 15 and 7 respectively.

Table 4.18a: Bivariate associations of non-condom use at last sex

Variable		Did you use a condom the last time you had sex?				Chi-square	p-value
		No		Yes			
		Weighted Frequency	Row Percent	Weighted Frequency	Row Percent		
Current age group *(age_group)*	**(15-19)**	83	73	92	75	0.1678	0.6821 (ns)
	(20-24)	31	27	30	25		
In which province did you matriculate? *(prov)*	**WC**	84	74	80	66	1.6178	0.2034 (ns)
	Other	29	26	42	34		
Where do you live when you are at university? *(res)*	**Off campus**	89	80	81	66	3.9123	0.0479 *
	On campus / UWC hostel	23	20	41	34		
Religion *(newQ13)*	**Christian**	97	92	113	98	4.0849	0.0433 *
	Moslem	8	8	3	2		

Note: 1. Refer to Tables H1 to H10 in Appendix H (2.) (ns): Not significant (3.) *: p<0.05 (4.)**: p<0.001

Table 4.18b: Bivariate associations of non-condom use at last sex

Variable		Did you use a condom the last time you had sex?				Chi-square	p-value
		No		Yes			
		Weighted Frequency	Row Percent	Weighted Frequency	Row Percent		
How many sexual partners have you had in the last 12 months? *(newQ32)*	**1 partner**	69	63	67	58	0.5522	0.4574 (ns)
	more than one partner	41	37	49	42		
How old were you when you first had vaginal sex? *(new_vsex)*	**(5-14)**	15	14	15	13	0.0456	0.8309 (ns)
	(15-19)	95	86	105	87		
How old were you when you first had oral sex? *(new_osex)*	**(10-14)**	5	5	4	15	2.2791	0.1311 (ns)
	(15-19)	83	95	23	85		
Think back to the first time you had sex. Was it with your consent/permission? *(otherQ30)*	**No**	15	16	7	6	3.9360	0.0473 *
	Yes	78	84	101	94		
Have you ever force anyone to have sex? *(new_Q34)*	**No**	107	94	119	99	2.5836	0.1080 (ns)
	Yes	7	6	2	1		
Have you ever been forced to have sex? *(new_Q35)*	**No**	90	80	109	89	2.7492	0.0973 (ns)
	Yes	22	20	13	11		
Have you ever received money or gifts in exchange for sex (vaginal, oral or anal)? *(new_Q31)*	**No**	109	97	116	98	0.3594	0.5489 (ns)
	Yes	4	3	2	2		
Do you currently smoke? *(Q56)*	**No**	78	69	86	73	0.4688	0.4935 (ns)
	Yes	35	31	32	27		
Do you currently use alcohol (including beer and wine)? *(Q60)*	**No**	39	35	45	39	0.3827	0.5362 (ns)
	Yes	73	65	69	61		
Do you currently use drugs? *(drugs)*	**No**	81	81	92	88	1.6780	0.1952 (ns)
	Yes	19	19	13	12		
Did you have suicidal ideation during the past 12 months? *(suicidal)*	**Yes**	9	8	8	7	0.1980	0.6564 (ns)
	No	103	92	111	93		

Note: 1. Refer to Tables H1 to H10 in Appendix H for detailed results (2.) (ns): Not significant (3.) *: p<0.05 (4.)**: p<0.001

4.5.2 Bivariate associations of current cigarette smoking

Table 4.19 illustrates detailed results of associations of high-risk behaviours between current cigarette smokers and non-smokers. Significantly more of the current cigarette smokers compared to the non-smokers indicated that they were currently using alcohol (77% vs. 37%; χ^2 = 51.1312; p-value < 0.0001) and were currently using drugs (33% vs. 6%; χ^2 = 56.8846; p-value < 0.0001). Refer to Tables I1 to I6 in Appendix I for detailed results.

4.5.3 Bivariate associations of current alcohol use

Table 4.20 illustrates the detailed results of associations of high-risk behaviours between current alcohol users and non-alcohol users. Significantly more of the current alcohol users compared to the non-alcohol users indicated that they were currently using drugs (20% vs. 3%; $\chi^2 = 31.9868$; p-value < 0.0001). Only eight non-alcohol users indicated that they were currently using drugs. Refer to Tables J1 to J6 in Appendix J for detailed results.

4.5.4 Bivariate associations of current drug use

Table 4.21 shows that high-risk behaviours between current drug users and non-drug users were not statistically significant. Refer to Tables K1 to K5 in Appendix K for detailed results.

Table 4.19: Bivariate associations of current cigarette smoking

Variables		Do you currently smoke?				Chi-square	p-value
		No		Yes			
		Weighted Frequency	Row Percent	Weighted Frequency	Row Percent		
How many sexual partners have you had in the last 12 months? (only sexually active) *(newQ32)*	**1 partner**	95	61	39	61	0.0003	0.9867 (ns)
	more than 1 partners	61	39	25	39		
How old were you when you first had vaginal sex? (only sexually active) *(new_vsex)*	**(5-14)**	17	11	12	19	1.8446	0.1744 (ns)
	(15-24)	142	89	53	81		
How old were you when you first had oral sex? (only sexually active) *(new_osex)*	**(10-14)**	4	5	5	13	1.7209	0.1896 (ns)
	(15-24)	71	95	33	87		
Think back to the first time you had sex. Was it with your consent/permission? (only sexually active) *(otherQ30)*	**No**	12	9	10	16	1.7477	0.1862 (ns)
	Yes	124	91	52	84		
Have you ever forced anyone to have sex? (only sexually active) *(newQ34)*	**No**	159	98	62	93	1.9396	0.1637 (ns)
	Yes	4	2	5	7		
Have you ever been forced to have sex? (only sexually active) *(newQ35)*	**No**	138	84	57	85	0.0025	0.9604 (ns)
	Yes	25	16	10	15		
Have you ever received money or gifts in exchange for sex? (only sexually active) *(newQ31)*	**No**	217	98	72	98	0.0000	0.9969 (ns)
	Yes	5	2	2	2		
Do you currently use alcohol? (including beer and wine) *(Q60)*	**No**	249	63	22	23	51.1312	< 0.0001 **
	Yes	144	37	72	77		
Do you currently use drugs? *(Q60)*	**No**	337	94	60	67	56.8846	< 0.0001 **
	Yes	20	6	29	33		
During the past 12 months, did you ever experience suicidal ideation? *(suicidal)*	**Yes**	19	5	8	8	1.4277	0.2321 (ns)
	No	371	95	90	92		

Note: 1. Refer to Tables I1 to I6 in Appendix I for detailed results (2.) (ns): Not significant (3.) *: p<0.05 (4.) **: p<0.001

Table 4.20: Bivariate associations of current alcohol use

Variables		Do you currently use alcohol?				Chi-square	p-value
		No		Yes			
		Weighted Frequency	Row Percent	Weighted Frequency	Row Percent		
How many sexual partners have you had in the last 12 months? (only sexually active) *(newQ32)*	**1 partner**	49	63	83	61	0.0636	0.8009 (ns)
	more than 1 partners	29	37	54	39		
How old were you when you first had vaginal sex? (only sexually active) *(new_vsex)*	**(5-14)**	10	12	18	13	0.0168	0.8967 (ns)
	(14-25)	73	88	119	87		
How old were you when you first had oral sex? (only sexually active) *(new_osex)*	**(10-14)**	4	11	5	6	0.5720	0.4495 (ns)
	(15-25)	33	89	68	94		
Think back to the first time you had sex. Was it with your consent/permission? (only sexually active) *(otherQ30)*	**No**	9	12	11	9	0.3881	0.5333 (ns)
	Yes	62	88	112	91		
Have you ever forced anyone to have sex? (only sexually active) *(newQ34)*	**No**	82	100	135	95	No valid statistics	
	Yes	0	0	7	5		
Have you ever been forced to have sex? (only sexually active) *(newQ35)*	**No**	69	82	121	86	0.4902	0.4838 (ns)
	Yes	15	18	20	14		
Have you ever received money or gifts in exchange for sex? (only sexually active) *(newQ31)*	**No**	128	99	155	97	2.3364	0.1264 (ns)
	Yes	1	1	5	3		
Do you currently use drugs? *(drugs)*	**No**	232	97	160	80	31.9868	< 0.0001 **
	Yes	8	3	39	20		
During the past 12 months, did you ever experience suicidal ideation? *(drugs)*	**Yes**	14	5	10	5	0.0922	0.7614 (ns)
	No	251	95	204	95		

Note: 1. Refer to Tables J1 to J6 in Appendix J for detailed results (2.) (ns): Not significant (3.) *: p<0.05 (4.) **: p<0.001

Table 4.21: Bivariate associations of current drug use

Variables		Do you currently use drugs				Chi-square	p-value
		No		Yes			
		Weighted Frequency	Row Percent	Weighted Frequency	Row Percent		
How many sexual partners have you had in the last 12 months? (only sexually active)	**1 partner**	103	62	16	50	1.4796	0.2238 (ns)
	more than 1 partner	63	38	16	50		
How old were you when you first had vaginal sex? (only sexually active)	**(5-14)**	19	12	7	23	2.0723	0.1500 (ns)
	(15-24)	148	88	24	77		
How old were you when you first had oral sex? (only sexually active)	**(10-14)**	9	10	0	0	No valid statistics	
	(15-24)	76	90	21	100		
Think back to the first time you had sex. Was it with your consent/permission? (only sexually active)	**No**	14	9	3	11	0.0876	0.7673 (ns)
	Yes	136	91	25	89		
Have you ever forced anyone to have sex? (only sexually active)	**No**	167	98	29	90	3.1196	0.0774 (ns)
	Yes	4	2	3	10		
Have you ever been forced to have sex? (only sexually active)	**No**	149	87	26	80	0.8355	0.3607 (ns)
	Yes	22	13	6	20		
Have you ever received money or gifts in exchange for sex? (only sexually active)	**Yes**	224	98	35	98	0.0024	0.9606 (ns)
	No	5	2	1	2		
During the past 12 months, did you ever experience suicidal ideation?	**No**	18	5	5	10	2.1386	0.1436 (ns)
	Yes	379	95	44	90		

Note: 1. Refer to Tables K1 to K5 in Appendix K for detailed results (2.) (ns): Not significant (3.) *: p<0.05 (4.) **: p<0.001

4.6 Multivariate logistic regression models

The multivariate logistic regression models examined the relationship between non-condom use at last sex and the predictor variables. The predictor variables were as follows: (1) gender; (2) racial group; (3) current age group; (4) number of sexual partners in the 12 months prior to the survey; (5) current cigarette smoking and (6) current alcohol use. The first model, i.e., the full model includes all the predictor variables. Model 2 and Model 3 calculate the influence by excluding gender and racial group respectively. Refer to Appendix L for the detailed results.

4.6.1 The full model

Of the 184 observations used, 96 respondents did not use a condom the last time they had sex and 88 respondents reported using a condom the last time they had sex. The model fit statistics include the Akaike's information criterion (AIC) and the Schwartz's criterion (SC), which assesses the overall fit of the model to the data. AIC and SC penalizes for the number of predictor variables in the model. The smallest AIC and SC are most desirable (Sharma, 1996). In the present case, the intercept has an AIC and SC of 282.208 and 285.423 respectively. After including the predictor variables the AIC and SC increased to 288.758 and 311.263 respectively. It can therefore be concluded that the full model has a weaker fit when the predictor variables are included into the model. Table 4.22 illustrates that R-square predicts for 2.92% of the variation in non-condom use at last sex, which is extremely low.

The analysis of maximum likelihood estimates and the odds ratio estimates determine the influence of each predictor variable on non-condom use at last sex respectively. The maximum likelihood estimates provide the logit response function:

$$ln[\text{odds of non-condom use at last sex}] = \ln\left[\frac{p}{1-p}\right]$$

= - 1.02 - 0.03(gender) + 0.51(racial group) + 0.30(current age group) - 0.26(number of sexual partners within the year prior to the survey) + 0.06(current cigarette smoking)+0.16(current alcohol use Equation 4.1

Equation 4.1 illustrates that the log odds of non-condom use at last sex among the sexually active respondents increased for Coloureds, respondents aged 20-24 years, current cigarette smokers and current alcohol users compared to Black/Africans, respondents aged 15-19 years, non-smokers and non-alcohol users respectively. On the other hand, the log odds decreased for sexually active females and for sexually active respondents with more than one sexual partner compared to the sexually active males and sexually active respondents with only one sexual partner.

Table 4.22: Multivariate logistic regression models of the effects of predictor variables on condom use at last sex among the sexually active respondents

Variable	Effect	Full model			
		Maximum Likelihood Estimate (p-values)	**odds ratio**	**95% Wald CI**	
Intercept		-1.0240 (0.4451) (ns)			
Gender (*genderc)*	**Male vs. Female**	-0.0315 (0.9282) (ns)	0.969	0.488	1.924
Racial group (*racial_gr)*	**Black/African vs. Coloured**	0.5109 (0.1401) (ns)	1.667	0.845	3.286
Age group: (*age_group)*	**(15-19) years vs (20-24) years**	0.2988 (0.4680) (ns)	1.348	0.602	3.021
How many sexual partners have you had in the last 12 months? (*newQ32)*	**One sexual partner vs. More than one sexual partner**	-0.2557 (0.4797) (ns)	0.774	0.381	1.574
Do you currently smoke? (*Q56)*	**No vs Yes**	0.0558 (0.8828) (ns)	1.057	0.504	2.220
Do you currently use alcohol (including beer and wine) other than a few sips? *(Q60)*	**No vs Yes**	0.1556 (0.6676) (ns)	1.168	0.574	2.377
Likelihood ratio: p-value					0.4875 (ns)
R^2					0.0292

Note: (1.) Refer to Appendix L for detailed results.
(2.) (ns) Not significant.
(3.) CI: Confidence interval

The largest odds ratio (OR) estimate was observed for racial group. Everything else being constant, the odds of not using a condom at last sex is almost two times higher for the sexually active Coloured respondents compared to the sexually active Black/African respondents (OR=1.7; 95% CI=0.8, 3.3).

The p-values of each predictor variable is greater than 0.05. Furthermore, the 95% Wald CI for respective predictor variable is wide and includes one. Both p-values and 95% CI conclude that each predictor variable is not statistically significant. In other words, each of the predictor variables has no influence in predicting non-condom use at last sex in the given model.

The association of the predicted probabilities and observed responses can be assessed by determining the number of concordant pairs. A concordant pair is defined as a pair formed by an event and a no-event such that the predicted probability of the event is higher than the predicted probability of a no-event. In multivariate logistic regression, an event is defined as an outcome whose response value is one and a no-event as an outcome whose response value is zero (Sharma, 1996). In the current sample, not using a condom at last sex is defined as an event whereas using a condom at last sex is defined as a no-event. The present sample has 8,448 pairs and a total of 4,782 pairs (56.6%) are concordant. Sharma (1996) stated that a high number of concordant pairs have a greater association between the predicted probabilities and the observed responses.

Finally, the classification table evaluates the predictive accuracy of the multivariate logistic regression model. Sensitivity is the percent of non-condom use at last sex that have been classified correctly by the model, and specificity is the percentage of correct classifications for using a condom at last sex. The false positive and false negative rates are, respectively, the percentage of incorrect classifications for non-condom use at last sex and using a condom at last sex (Sharma, 1996). The full model predicted that at a probability level of 0.500, 63.5% of non-condom users have been classified correctly.

4.6.2 Model 2 (exclude gender)

This model used 184 observations of which, 96 observations related to non-condom use at last sex and 88 observations related to condom use at last sex. In the present case, the intercept has an AIC and SC of 282.208 and 285.423 respectively. After including the predictor variables, the AIC and SC are 286.769 and 306.058 respectively. In conclusion, the model has a weaker fit when the predictor variables are included into the model. R-square predicts for 2.91% of the variation in non-condom use at last sex, which is extremely low (see Table 4.23).

The logit response function is:

ln[odds of non-condom use at last sex after excluding gender] = $\ln\left[\frac{p}{1-p}\right]$

= - 1.09 + 0.51(racial group) + 0.30(current age group) – 0.24(number of sexual partners within the year prior to the survey) + 0.06(current cigarette smoking) + 0.16(current alcohol use) Equation 4.2

Equation 4.2 demonstrates that the log odds of non-condom use at last sex among the sexually active respondents increase for Coloureds, respondents aged 20-24 years, current cigarette smokers and current alcohol users compared to Black/Africans, respondents aged 15-19 years, non-smokers and non-alcohol users.

Table 4.23: Multivariate logistic regression models of the effects of predictor variables on condom use at last sex among the sexually active respondents (exclude gender)

Variable	Effect	Model 2			
		Maximum Likelihood: p-values	**odds ratio**	**95% Wald CI**	
Intercept		-1.0944 (0.3288) (ns)			
Racial group (*racial_gr)*	**Black/African vs. Coloured**	0.5096 (0.1394) (ns)	1.665	0.847	3.272
Age group: (*age_group)*	**(15-19) years vs (20-24) years**	0.3004 (0.4645) (ns)	1.350	0.604	3.021
How many sexual partners have you had in the last 12 months? (*newQ32)*	**One sexual partner vs. More than one sexual partner**	-0.2449 (0.4757) (ns)	0.783	0.399	1.534
Do you currently smoke? (*Q56)*	**No vs Yes**	0.0551 (0.8839) (ns)	1.057	0.504	2.214
Do you currently use alcohol (including beer and wine) other than a few sips? *(Q60)*	**No vs Yes**	0.1592 (0.6580) (ns)	1.173	0.580	2.372
Likelihood ratio: p-value					0.3646 (ns)
R^2					0.0291

Note: (1.) Refer Appendix L for detailed results.
(2.) (ns) Not significant.
(3.) CI: Confidence interval

The log odds decreased for those sexually active respondents with more than one sexual partner compared to the sexually active respondents with only one sexual partner. For the sexually active respondents, racial group is associated with the greatest risk of non-condom use at last sex. Sexually active Coloured respondents are 1.7 times more likely to not use a condom at last sex compared to sexually active Black/African respondents (95% CI=0.8, 3.3). The p-values and the 95% Wald CI show that the predictor variables have no influence in predicting non-condom use at last sex (see Table 4.23).

The association of predicted probabilities and observed responses illustrates that 4,621 (54.7%) of the pairs are concordant. This is lower than the number of pairs observed in the full model. The current model predicted that at a probability level of 0.500, 63.5% of non-condom users have been classified correctly. This is equal to the sensitivity percentage determined in the previous model.

4.6.3 Model 3 (exclude racial group)

In total, 197 observations were used in this model, 103 respondents did not use a condom at last sex and 94 did use a condom at last sex. The model fit statistics, AIC and SC illustrates that the model has a weaker fit when the predictor variables are included into the model. The current sample has a total number of 9,682 pairs of which, 4,851 (50.1%) are concordant. This is higher than the number of pairs observed in the full model.

The log odds of non-condom use at last sex among the sexually active respondents increase for females, respondents aged 20-24 years, current cigarette smokers and current alcohol users compared to males, respondents aged 15-19 years, non-smokers and non-alcohol users. On the other hand, the log odds decreased for those sexually active respondents with more than one sexual partner compared to the sexually active respondents with only one sexual partner (see Equation 4.3).

The logit response function is:

ln[odds of non-condom use at last sex after excluding racial group]

$$\ln\left[\frac{p}{1-p}\right]$$

= - 0.81 + 0.18(gender) + 0.23(current age group) – 0.21(number of sexual partners within the year prior to the survey) + 0.13(current cigarette smoking) + 0.23(current alcohol use) Equation 4.3

Table 4.24: Odds Ratio estimates from multivariate logistic regression models of the effects of predictor variables on condom use at last sex among the sexually active respondents (exclude racial group)

Variable	Effect	Model 3			
		Maximum Likelihood: p-values	**odds ratio**	**95% Wald CI**	
Intercept		-0.8116 (0.4932) (ns)			
gender (*genderc)*	**Male vs. Female**	0.1757 (0.5910) (ns)	1.192	0.628	2.262
Age group: (*age_group)*	**(15-19) years vs (20-24) years**	0.2262 (0.5489) (ns)	1.254	0.599	2.626
How many sexual partners have you had in the last 12 months? (*newQ32)*	**One sexual partner vs. More than one sexual partner**	-0.2088 (0.5309) (ns)	0.812	0.422	1.559
Do you currently smoke? (*Q56)*	**No vs Yes**	0.1297 (0.7036) (ns)	1.138	0.584	2.220
Do you currently use alcohol (including beer and wine) other than a few sips? *(Q60)*	**No vs Yes**	0.2298 (0.5022) (ns)	1.258	0.643	2.462
Likelihood ratio: p-value					0.7906 (ns)
R^2					0.0121

Note: (1.) Refer to Appendix L for detailed results.
(2.) (ns) Not significant.
(3.) CI: Confidence interval

The largest odds ratio estimates were observed for current age group and current alcohol use. Everything else being constant, the odds of not using a condom at last sex is 1.3 times higher for the sexually active respondents aged 20-24 years compared to the sexually active respondents aged 15-19 years (95% CI=0.6, 2.6)). Similarly, sexually active respondents that were currently using alcohol were more likely not to use a condom at last

sex compared to non-alcohol users, everything else being constant (OR=1.3; 95% CI=0.6, 2.5). However, the p-values and 95% CI illustrates that none of the predictor variables has influence in predicting non-condom use at last sex in the given model. The current model predicted that at a probability level of 0.500, 45.6% of non-condom users have been classified correctly. This is lower than the sensitivity percentage calculated in the previous models. R-square predicts for a low 1.21% of the variation in non-condom use at last sex (see Table 4.24).

4.7 Summary

This chapter presented descriptive frequencies of the demographical characteristics and sexual activity of the full time first year students who registered at UWC for the first time. The results show that the majority of the respondents were female (64%), aged 15-19 years (85%), Coloured (51%) and Black/African (39%). The most common home language was English (40%), Xhosa (28%) and Afrikaans (23%). Nearly three in four respondents lived in Western Cape Province (73%). Most of the respondents registered at the Arts faculty (24%) and EMS faculty (22%). The majority of the respondents lived at home with relatives (70%), were Christians (80%) and 59% of the respondents pointed out that their religion was very important in influencing their sexual behaviour. Almost half of the respondents reported that they have had sex (48%) and 4% of the respondents had had vaginal, oral and anal sex.

Chapter 4 focused on presenting the high-risk behaviours and their bivariate associations. Concluding with the multivariate logistic regression analyse with non-condom use at last sex as the dependent variable. The next chapter discusses these results.

CHAPTER 5

Discussion

This chapter discusses the statistical significant results from the previous chapter, in light of the relevant literature. Firstly, this study assesses the high-risk behaviours of the full time first year students who registered at UWC for the first time. Following, is the significant bivariate relationship between each of the high-risk behaviours and gender. Similarly, follows the significant bivariate relationship between each of the high-risk behaviours and racial group. Then the study discusses the significant bivariate associations between non-condom use, current cigarette smoking, current alcohol use, current drug use and the other high-risk behaviours. The last objective of the study is to describe the influence of the predictor variables on non-condom use at last sex. Finally, this section discusses the relevance of the study, the limitations, and the recommendations for future research.

5.1 Assessing the high-risk behaviours

Approximately one of every two sexually active students (48%) indicated that they did not use a condom the last time they had sexual intercourse. This is higher than the 34% United States college students (Eisenberg, 2001) and 37% South African youth (KFF & SABC, 2007) who reported not using a condom the last time they had sex. In the present study, 60% of the sexually active students had one sexual partner within the year prior to the survey. This is higher than the 53% sexually active UWC first year students who had one sexual partner in 2005 (Vergnani *et al.* 2005). The results showed that both the median age at first vaginal sex and the median age at first oral sex were 17 years. On the other hand, the median age at first anal sex was 16 years. Previous research shows that persons who have their first sexual encounter aged 17 years or older are aware of the dangers of unsafe sex and more likely to use condoms (Reisen & Poppen, 1995). Prevalence rates for sexual violence among sexually active students were as follows: 11% did not give their

consent/permission the first time they had sex, 4% had forced someone to have sex and 15% had been forced to have sex. When the results were compared to a large sampled South African survey, not wanting to have their first sexual encounter was higher and ever being forced to have sexual intercourse was lower at 13% and 6% respectively (Pettifor *et al.* 2004). In the present sample, 3% of the sexually active students reported that they had exchanged sexual intercourse for money or gifts.

Rates of current cigarette smoking (20%), in the present sample, were similar to those found previously among United States students, which ranged between 16% to 26% (Di Pietro *et al.* 2007; Reed *et al.* 2007; Weitzman & Chen, 2005). The 44% of students reporting current alcohol use was similar to findings on alcohol use among a sample of Turkish medical students at 46% (Akvardar *et al.* 2003). However, alcohol use among the present sample of students was low. Results from a previous UWC study pointed out that 64% of the sexually active students have consumed alcohol (Rich, 2004) while 77% of Brazilian medical students reported alcohol use (Di Pietro *et al.* 2007). Eleven percent of students in present sample reported current drug use; this is comparable to the 11% reported by a large South African national youth sample (Pettifor *et al.* 2004). Experiencing suicidal ideation within the 12 months prior to the survey, at 5%, was low in the present case compared to results from a sample of Indian students (25%) (Parikh *et al.* 2007).

5.2 Bivariate associations of gender

Of the sexually active students, significantly more of the males compared to the females had more than one sexually partner in the year prior to the survey. This is consistent with results from a sample of UWC first year students that presented a significant association between number of sexual partners and gender (Vergnani *et al.* 2005). In the present sample of students, it was found that significantly more sexually active males compared to sexually active females have experienced their first vaginal sexual encounter when aged 5-14 years and experienced their first oral sexual encounter when aged 10-14 years.

The present study found that significantly more males compared to females were currently using drugs. On the other hand, significantly more of the females compared to the males have experienced suicidal ideation during the 12 months prior to the survey. However, recent studies presented no significant relationship between experiencing suicidal ideation and gender (Parikh *et al.* 2007).

5.3 Bivariate association of racial group

Of the sexually active first year students, significantly more of the Black/African students compared to Coloured students indicated that they had more than one sexual partner in the year prior to the survey and had forced someone to have sex. On the other hand, significantly more of the sexually active Coloured students compared to the sexually active Black/African students had their first vaginal sexual encounter when aged 5-14 years.

Significantly more of the Coloured students compared to the Black/African students indicated that they were currently smoking cigarettes. This finding is consistent with a recent large sampled national South African study indicating that significantly more Coloured learners compared to Black/African learners were current cigarette smokers (Reddy *et al.* 2003). Furthermore, significantly more of the Coloured students compared to the Black/African students were currently using alcohol.

5.4 Bivariate associations of high-risk behaviours

Previous research in the United States and South Africa found that high-risk behaviours are related to each other (Aitken, 2005; Basile *et al*. 2006). Substance use combined with suicidal behaviour may lead to impaired judgement which results in risky sexual behaviours such as non-condom use and multiple sexual partners (Aitken, 2005; Basile *et al.* 2006; Flisher *et al.* 1993c.; Kaufman & Stavrou, 2002; Shisana *et al.* 2005).

Results from the present study showed that current cigarette smokers were significantly associated with current alcohol use and current drug use. This is comparable to the results reported elsewhere (Easton & Kiss, 2005; Everett *et al.* 1998; Reed *et al.* 2007). However,

the results from the present study did not show a significant relationship between cigarette smokers and the number of sexual partners and suicidal behaviour as reported by Easton & Kiss (2005).

Present sample showed that significantly more current alcohol users compared to non-alcohol users indicated that they were currently using drugs. Previous studies found that alcohol use was significantly associated with non-condom use at last sex, number of sexual partners and suicidal behaviour (Maswanya *et al.* 1999); however, these findings were not confirmed in the present study.

The present study found no significant relationship between non-condom use at last sex and other high-risk behaviours. This supports previous research including CT high-school learners (Flisher & Chalton, 2001) and Tanzanian youth (Maswanya *et al.* 1999), which found no significant relationship between non-condom use, number of sexual partners, current cigarette smoking, current alcohol use, current drug use and suicidal ideation during the 12 months prior to the survey.

5.5 Multivariate logistic regression

The results from the multivariate logistic regression models failed to show any statistical significance. Consistent with other studies (Flisher & Chalton, 2001), data from present study suggests an insignificant association between non-condom use at last sex and the predictor variables. In conclusion, non-condom use at last sex was not influenced by gender, racial group, current age group, number of sexual partners within the year prior to the survey, current cigarette smoking and current alcohol use.

5.6 Implications of the present study

The present study confirms the risky sexual behaviour (i.e., unprotected sexual intercourse with more than one sexual partner) among the youth. Almost half of the sexually active students did not use a condom the last time they had sex. Risky sexual behaviour is especially evident among the male students who should be encouraged to have only one

sexual partner. Public health efforts should continue promoting condom use and monogamy for sexually active young people, as it decreases the risk of transmitting HIV and AIDS (Rich, 2004).

This study shows a significant relationship between cigarette smokers, alcohol users and drug users. Drug users are more likely to smoke cigarettes and consume alcohol compared to non-drug users. More attention should be given to this cycle of substance abuse.

By addressing above implications, an environment that promotes wise decision-making relating to high-risk behaviours will be created. This will consequently, result in winning the war against HIV and AIDS.

5.7 Limitations of the study

Only the full time first year students who registered at UWC for the first time that attended the orientation programme were included in the study. The data were not representative of all UWC students or other university student populations.

Being a cross-sectional survey, this study avoids making any definitive causal claims about the direction of the relationship between high-risk behaviours. This study found significant relationships between the number of sexual partners during the 12 months prior to the survey, young age at first sex, sexual violence, transactional sex, current cigarette smoking, current alcohol use, current drug use and suicidal ideation during the 12 months prior to the survey.

Considering the subject matter (high-risk behaviours e.g., sexual activity, drug use, etc.) and the methodological approach (self-report), the possibility of response 'dishonesty' remains. It is expected that the first year student will be tempted to provide the answers that he/she thinks is expected of him/her. However, the researcher must assume that the strict anonymity and confidentiality of the study encouraged the first year students to respond honestly.

Mostly first year students who lived in and around Cape Town attended the orientation programme that did not represent the racial profile of the population studied. To correct this, a weighting procedure was used to calculate the results.

Validity and the reliability of the questions on drugs were tested by including a fictitious drug (i.e., 'Do you currently use derbisol?') in the questionnaire. Only one first year student conveyed using this fictitious drug and was excluded from the study.

Finally, this study was conducted using a specific sample of the youth. Any attempt to generalise from these findings to other populations must be made with caution.

5.8 Recommendation

More studies should provide a clearer perspective on the risky sexual behaviour between male youth and female youth. Furthermore, more studies are needed to examine the relationship between cigarette smoking, alcohol consumption and drug use among the youth.

REFERENCES

Aitken L. 2005. The influence of HIV knowledge, beliefs, and religiosity on sexual risk behaviours of private school adolescents. Unpublished Masters Thesis. Bellville: University of the Western Cape.

Akvardar Y., Demiral Y., Ergör G., Ergör A., Bilici M. & Özer Ö.A. 2003. Substance use in a sample of Turkish medical students. *Drug and Alcohol Dependence 72:117-121.*

Barnett T. & Whiteside A. 2002. *˝AIDS in the twenty-first century: disease and globalization˝.* New York: Palgrave Macmillan.

Basile K.C., Black M.C., Simon T.R., Arias I., Brener N.D. & Saltzman L.E. 2006. The association between self-reported lifetime history of forced sex and recent health-risk behaviours: findings from the 2003 national youth risk behaviour survey. *Journal of Adolescent Health, 39:752.el-752.e7.*

Batter V., Matela B., Nsuami M., Manzila T., Kamenga M., Behets F., Ryder R.W., Heyward W.L., Karon J.M. & St Louis M.E. 1994. High HIV-1 incidence in young women masked by stable overall seroprevalence among childbearing women in Kinshasa, Zaire: estimating incidence from serial seroprevalence data. *Aids,* 8:811-817.

Brener N.D., Billy J.O.G., & Grady W.R. 2003. Assessment of factors affecting the validity of self-reported health-risk behavior among adolescents: evidence from the scientific literature. *J Adolesc Health 33:436–57.*

Brooks-Gunn J. & Furstenberg F.F. 1989. Adolescent sexual behaviour. *Am Psychol, 44:249-257.*

Brown J.L. & Vaniable P.A. 2007. Alcohol use, partner type, and risky sexual behaviour among College students: Findings from an event-level study. *Addictive Behaviours doi : 10.1016/j.addbeh.2007.06.011.*

Caldwell J., Caldwell P., Ankrah E.M., Anarfi J.K., Agyeman D.K., Awusabo-Asare K. & Orubuloye I.O. 1993. African families and AIDS: context reactions and potential interventions. *Health Transition Review, 3 (Suppl):1-6.*

Centres for Disease Control and Prevention (CDC). 2004. Methodology of the youth risk behavior surveillance system. *Morbidity and Mortality Weekly Report, 53(No. RR-12): 1-13.*

Champion H.L.O., Foley K.L., DuRant R.H., *et al.* 2004. Adolescent sexual victimization, use of alcohol and other substances, and other health risk behaviors. *Journal of Adolescent Health, 35:321-328.*

Chen P.C.Y., Lee L.K., Wong K.C. & Kaur J. 2005. Factors relating to adolescent suicidal behaviour: a cross-sectional Malaysian school survey. *Journal of Adolescent Health, 37:337.e11-337.e16.*

Department of Health (DoH) 2007. '*National HIV and syphilis antenatal sero-prevalence survey in South Africa, 2007*'. [online] Available: www.doh.gov.za [September 2007].

Department of Health (DoH) 2006. *'National HIV and syphilis antenatal sero-prevalence survey in South Africa 2005'.* [online]. Available: www.doh.gov.za. [January 2007].

Department of Health (DoH), 2000. *'Report on the 13th international AIDS conference. Durban, 9-14 July 2000. Summary report of major issues, conclusions and recommendations'*. [online]. Available: www.doh.gov.za. [October 2004].

Di Pietro M.C., Doering-Silveira E.B., Oliveira M.P.T., Rosa-Oliveira L.Q. & Da Silveira D.X. 2007. Factors associated with the use of solvents and cannibis by medical students. *Addictive Behaviours 32:1740-1744.*

Dorrington R.E., Johnson L., Bradshaw D. & Daniel T-J. 2006. *'The demographic impact of HIV/AIDS in South Africa. National and Provincial indicators for 2006'*. [online]. Available: www.mrc.ac.za/bod. [September 2007].

Dorrington R.E., Bradshaw D., Johnson L. & Budlender D. 2004. *˝The demographic impact of HIV and AIDS in South Africa. National indicators for 2004.* Cape Town˝: Centre for Actuarial Research, South African Medical Research Council (MRC) and Actuarial Society of South Africa (ASSA).

Easton A. & Kiss É. 2005. Covariates of current cigarette smoking among secondary school students in Budapest, Hungary, 1999. *Health Education Research 20(1):92-100.*

Eisenberg M. 2001. Differences in sexual risk behaviours between college students with same-sex and opposite-sex experience: results from a national survey. *Archives of Sexual Behaviour, 30(6):575-589.*

Everett S.A., Giovino G.A., Warren C.W., Crosset L. & Kann L. 1998. *Journal of Adolescent Health 23: 289-296.*

Flisher A.J. Reddy P., Muller M. & Lombard C. 2003. Sexual behaviour of Cape Town high-school students. *South African Medical Journal, 7:27-31*.

Flisher A.J. & Chalton O. 2001. Adolescent contraceptive non-use and covariation among risk behaviours. *Journal of Adolescent Health, 28:235-241*.

Flisher A.J., Ziervogel C.F., Chalton D.O. & Robertson B.A. 1993a. Risk-taking behaviour of Cape Peninsula high-school students Part I: introduction and methods. *South African Medical Journal, 83:469-473.*

Flisher A.J., Ziervogel C.F., Chalton D.O. & Robertson B.A. 1993b. Risk-taking behaviour of Cape Peninsula high-school students Part II: suicidal behaviour. *South African Medical Journal, 83:474-476.*

Flisher A.J., Ziervogel C.F., Chalton D.O., Leger P.H. & Robertson B.A. 1993c. Risk-taking behaviour of Cape Peninsula high-school students Part IV: alcohol use. *South African Medical Journal, 83:480-482.*

Golafshani N. 2003. '*Understanding reliability and validity in qualitative research. The Qualitative report*' 8(4):597-607. [online] Available: http://www.nova.edu/ssss/QR/QR-4/golafshani.pdf. [July 2006].

Gregson, S., Nyamukapa C.A., Garnett G.P., Mason P.R., Zhuwau T., Caraël M., Chandiwana S.K. & Anderson R.M. 2002. Sexual mixing patterns and sex-differentials in teenage exposure to HIV infection in rural Zimbabwe. *The Lancet, 359 :1896-1903.*

Kaiser Family Foundation (KFF) & South African Broadcasting Corporation (SABC). 2007. '*Young South Africans, broadcast media, and HIV and AIDS awareness: results of a national survey. March 2007'*. [online]. Available: www.kff.co.za. [April 2007].

Kaufman C.E. & Stavrou S.E. 2002. ''*Bus fare, please': the economics of sex and gifts among adolescents in urban South Africa'*. Policy Research Division Working Paper No. 166. New York: Population Council. [online]. Available: www.popcouncil.org/publication/wp/prd/rdwplist/html [April 2006].

Kebede D., Alem A., Mitike G., Enquselassie F., Berhane F., Abebe Y., Ayele R., Lemma W., Assefa T. & Gebremichael T. 2005. Khat and alcohol use and risky sex behaviour among in-school and out-of-school youth in Ethiopia. *BMC Public Health, 5:109.*

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 Science and Medicine, S2:1613-1627.*

Maharaj P. & Cleland J. 2006. Condoms become the norm in the sexual culture of college students in Durban, South Africa. *Reproductive Health Matters 14(28):104-112.*

Maswanya E.S.; Moji K., Horiguchi I., Nagata K., Aoyagi K., Honda S. & Takemoto T. 1999. Knowledge, risk perception of AIDS and reported sexual behaviour among students in secondary schools and colleges in Tanzania. *Health Education Research Theory & Practice, 14(2):185-196.*

Medical Research Council. 2006. *'Report to parliament 2006: alcohol and drug abuse research unit'*. [online] www.mrc.ac.za. [July 2006].

Meyer J.C. & Le Roux J.A. 1994. The attitude towards nature, and incidence of sexual intimacy among students at a South African university. *Journal of Sex Educational Therapy, 20(4):255-263.*

Nattrass N. 2004. *"The moral economy of AIDS in South Africa"*. United Kingdom: Cambridge University Press.

Nuko S., Chiduo B., Mwaluko G. & Urassa M. 2001. Pre-marital sexual behaviour among out of school adolescents: motives, patterns and meaning attributed to sexual partnership in rural Tanzania. *African Journal of Reproductive Health, 5:162-174.*

Parikh R.M., Sonawalla S.B., Fava M., Chakraborthy N., Mehra G. & Dracass S. 2007. "*Depression and suicidal ideation among college students in Bombay: A study of 1357 individuals"*. Jalok Hospital and Research Center, Psychiatry, Bombay, India; Massachusetts General Hospital, Harvard Medical School, Psychiatry, Boston, USA.

Pettifor A.E., Rees H.V., Steffenson A., Hlongwa-Madikisela L., MacPhail C., Vermaak K. & Kleinschmidt I. 2004. *"HIV and sexual behaviour among young South Africans: a national survey of 15-24 year olds"*. Johannesburg: Reproductive Health Research Unit, University of the Witwatersrand.

Reddy S.P., Panday S., Swart D., Jinabhai C.C., Amosun S.L., James S., Monyeki K.D., Stevens G., Morejele N., Kambaran N.S., Omardien R.G. & Van den Borne H.W. 2003. *"Umthenthe Uhlaba Usamila – The South African youth risk behaviour survey 2002"*. Cape Town: South African Medical Research Council.

Reed M.B., Wang R., Shillington A.M., Clapp J.D. & Lange J.E. 2007. The relationship between alcohol use and cigarette smoking in a sample of undergraduate college students. *Addictive Behaviours, 32:449-464.*

Reisen C.A. & Poppen P.J. 1995. College women and condom use: importance of partner relationship. *Journal of Applied Social Psychology, 25(1485-1498).*

Rich E.G. 2004. Alcohol use and unsafe sex practices among students (17-25 yeal olds) at the University of the Western Cape. Unpublished Masters' thesis. Bellville: University of the Western Cape.

Roberts S.T. & Kennedy B.L. 2006. Why are young college women not using condoms? Their perceived risk, drug use, and developmental vulnerability may provide important clues to sexual risk. *Archives of Psychiatric Nursing 20(1):32-40.*

Romito P. & Grassi M. 2007. Does violence affect one gender more than the others? The mental health impact of violence among male and female university students. *Social Science and Medicine,doi:10.1016/j.socscimed.2007.05.017.*

Sharma S. 1996. *Applied Multivariate Techniques*. Canada: John Wiley & Sons, Inc.

Shier L.A., Emans S.J., Woods E.R. & DuRant R.H. 1996. The association of sexual risk behaviours and problem drug behaviours in high-school students. *Journal of Adolescent Health, 20:377-383.*

Shisana O., Rehle T. Simbayi L.C., Parker W., Zuma K., Bhana A., Connolly C., Jooste S., Pillay V. *et al*. 2005. *"South African national HIV prevalence, HIV incidence, behaviour and communication survey, 2005"*. Cape Town: HSRC Press.

Umsobomvu Youth Fund (UYF) & Human Sciences Research Council (HSRC). 2005. *'The Status of Youth Report 2003'*. [online]. Available: www.hsrc.gov.za [August 2006].

UNAIDS. 2006a. *'AIDS epidemic update: special report on HIV/AIDS: December 2006'*. [online]. Available: www.unaids.org. [September 2007].

UNAIDS. 2006b. *'2006 report on the global AIDS epidemic: executive summary / UNAIDS'*. [online] Available: www.unaids.org. [January 2007].

UNAIDS. 2005. *'AIDS epidemic update. December 2005'* [online] Available: www.unaids.org. [November 2005].

Usdin S. 2003. *"The No-Nonsense guide to HIV and AIDS"*. United Kingdom: New Internationalist Publications Ltd.

Vergnani T., Blignaut R.J. & Jacobs J.J. 2005. "HIV and AIDS-related knowledge, attitudes and sexual behaviour of first time entering students at the University of the Western Cape". Bellville: University of the Western Cape.

Weitzman E.R. & Chen Y. 2005. The co-occurance of smoking and drinking among yound adults in college: National survey results from the United States. *Drug and Alcohol Dependence 82:377-386.*

Williams M., Tutty L.M. & Grinnel Jr. R.M. 1995. *"Research in social work: an introduction 2nd ed."* F.E. Peackock publishers, Inc. Illinois.

APPENDIX A

RESPONDENT INFORMATION SHEET

Project title: First year risk behaviour survey at UWC

Researcher: Vergnani, T., PhD.

Co-Researcher: Blignaut, R.J., Prof.

Doctor, H.V., PhD.

The purpose of the study is to research the risk behaviour of first time entering students at UWC in order to provide information that can inform the development of better targeted HIV prevention programmes for the first year students. The questionnaire completion is anonymous and participation is entirely voluntary. The questionnaire includes the following sections: background data, questions on students' sexual behaviour, knowledge about HIV and AIDS, drug, tobacco and alcohol use and a few questions relating to depression. Peer educators working for the HIV and AIDS programme are available during the completion to respond to any questions that arise. The information collected in this study will be used for the purpose of the study only. It will not be made available to any person or organization not involved in this study. All data will be kept secure in the Project Co-ordinator's office. Questionnaires will be destroyed on completion of the study.

Respondent statement

By signing and dating this document,

- I understand that any information obtained during this study will not be linked to my name.
- I understand that I will not be remunerated for participation in this study.
- I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

Respondent: **Witness:**

Signature: _____ Signature: _____

Date: _____ Date: _____

Principal researcher statement

The nature, purpose, procedures and possible risks of this project have been provided to the respondent as well as an information sheet (number 01) with telephone numbers on where to obtain further information and help on HIV and AIDS, alcohol and drug related problems and depression.

Principal Researcher: Dr. T. Vergnani (tel.: 021 959 2247)

Signature: _____

(This form is to be retained by the researcher. A copy of this form will be made available to the respondent on request).

APPENDIX B

Questionnaire number:	

University of the Western Cape
First year survey

Dear Student,

Thank you for participating in this research. ***Your answers to the questions in this questionnaire will be confidential and are completely anonymous. No-one will know who answered this questionnaire. You are not required to give your name or student number.***

Your participation in this research is entirely voluntary. If you do not feel comfortable answering any of the questions or do not want to participate in this research, then you are free not to answer the specific questions or to leave the whole questionnaire blank.

INSTRUCTIONS

Please respond to the following questions as truthfully as possible. Where there are options, select the appropriate response by putting a cross (x) in the box of your choice

1. Gender:

Female		1
Male		2

2. Age in years? | | |

3. Marital status.

Single		1
Married		2

4. Do you personally know anyone with HIV/AIDS?

Yes		1
No		2

5. My home language is:

Xhosa		1
English		2
Afrikaans		3
Zulu		4
Other		5

If OTHER:PLEASE fill in your home language in the space provided

_____

6. In which province did you matriculate?

Western Cape		1
Eastern Cape		2
Northern Cape		3
Gauteng		4
Other		5

If Other please fill in your matriculation province here _____

7. During apartheid, people were placed in different racial groups. In which group do you think you would have been placed?

Black/African		1
Coloured		2
White		3
Indian/Asian		4

8. Where do you live when you are at the university?

Home with relatives		1
UWC Hostel		2
Rented accommodation with friends		3
Rent a room alone		4

9. In what faculty are you registering in?

Science		1
Education		2
Economic and Management Science		3
Community and Health Sciences		4
Law		5
Dentistry		6
Arts		7

10. Do you feel that you know enough about HIV/AIDS?

Yes		1
No		2

11. Have you ever taken a voluntary HIV test?

Yes		1
No		2

12. Do you intend to go for an HIV test?

No		1
Yes		2

13. My religion is:

Christian		1
Moslem		2
Traditional		3
Other		4

If other: please fill in your religion here ……

14. How important is your religion in influencing your sexual behaviour:

Very important		1
Somewhat important		2
Slightly important		3
Not sure		4
Unimportant		5

15. Have you ever had vaginal sex?

No, never		1
Yes, occasionally		2
Yes, often		3

16. How old were you when you first had vaginal sex?

[ ][ ] years

(never had vaginal sex = leave blank)

17. Did you use a condom the last time you had vaginal sex?

Never had vaginal sex		1
No		2
Yes		3

18. How often do you use condoms when you have vaginal sex?

Never had vaginal sex		1
Never use condoms		2
Occasionally use condoms		3
Always use a condom		4

19. Have you ever had oral sex?

No		1
Yes		2

20. How old were you when you first had oral sex?

[ ][ ] years

(never had oral sex = leave blank)

21. Do you think you can contract HIV from oral sex?

No		1
Yes		2

22. How often do you use protection (condom/barrier) when you have oral sex?

Never had oral sex		1
Never		2
Sometimes		3
Always		4

23. Did you use a condom/barrier the last time you had oral sex?

Never had oral sex		1
No		2
Yes		3

24. Have you ever had anal sex?

No		1
Yes		2

25. How old were you when you first had anal sex?

[ ][ ] years

(never had anal sex = leave blank)

26. Do you think you can contract HIV from anal sex?

No		1
Yes		2

27. How often do you use a condom when you have anal sex?

Never had anal sex		1
Never		2
Sometimes		3
Every time		4

28. Did you use a condom the last time you had anal sex?

Never had anal sex		1
No		2
Yes		3

29. Did you drink alcohol or use drugs before you had sexual intercourse the **last time**?

No		1
Yes		2

30. Think back to the first time you had sex. Was it with your consent/permission?

Never had sex		1
Not sure		2
No		3
Yes		4

31. Have you ever received money or gifts in exchange for sex (vaginal, oral or anal)?

No		1
Yes		2

32. How many sexual partners have you had in the last 12 months?

None, never had sex		1
None in the last year		2
1		3
2		4
3 or more		5

33. Have you ever discussed condoms with a sexual partner?

Never had sex		1
Never		2
Occasionally		3

34. Have you ever forced anyone to have sex?

No		1
Yes		2

35. Have you ever been forced to have sex?

No		1
Yes		2

36. Have you ever talked about going for an HIV-test with your partner?

No		1
Yes		2
Never had sex		3

37. I know where to get condoms on campus

No		1
Yes		2

38. I know where to go for an HIV test(VCT) on campus

No		1
Yes		2

39. Have you ever had sex with a person of the same sex/gender as you?

No		1
Yes		2

40. Do you know your HIV status?

No		1
Yes, had a test		2
Not sexually active		3

To what extent do you agree or disagree with each of the following statements?

Statement	Strongly agree =1	Agree =2	Disagree =3	Strongly disagree =4
41. I am not personally at risk of contracting HIV/AIDS	□	□	□	□
42. I'm sick and tired of hearing about AIDS	□	□	□	□
43. . I would not feel comfortable using the same toilet as someone with HIV/AIDS	□	□	□	□
44. . I know exactly how to use a condom.	□	□	□	□
45. . I will be able to discuss condoms with my sexual partner.	□	□	□	□

	0% to 20% =1	21% to 40% =2	41% & 60% =3	61% & 80% =4	More than 80% =5
46. What percentage of first year **male** students at UWC do you think have had sex (vaginal, anal or oral)?	◻	◻	◻	◻	◻
47. What percentage of first year **female** students at UWC do you think have had sex (vaginal, anal or oral)?	◻	◻	◻	◻	◻
48. What percentage of students at UWC do you think are HIV+?	◻	◻	◻	◻	◻
49. How likely is it that a person can contract HIV from vaginal sex without a condom?	◻	◻	◻	◻	◻
50. How likely is it that a person can contract HIV from oral sex without a condom/barrier?	◻	◻	◻	◻	◻
51. How likely is it that a person can contract HIV from anal sex without a condom?	◻	◻	◻	◻	◻
52. What percentage of **male** students at UWC do you think have more than 1 sexual partner?	◻	◻	◻	◻	◻
53. What percentage of **female** students at UWC do you think have more than 1 sexual partner?	◻	◻	◻	◻	◻
54. What percentage of **male** students at UWC do you think will choose to not have sex (to abstain from sex)?	◻	◻	◻	◻	◻
55. What percentage of **female** students at UWC do you think will choose to not have sex (to abstain from sex) ?	◻	◻	◻	◻	◻

TOBACCO USE

56. Do you currently smoke?

No		1
Yes		2

57. How often do you smoke?

Daily		1
Occasionally		2
Not at all		3

58. During the past 30 days, on how many days did you smoke cigarettes?

☐☐ Days

(never smoked = leave blank)

59. During the past 30 days, on the days you smoked, how many cigarettes on average did you smoke **per day**?

☐☐ Cigarettes

(never smoked = leave blank)

ALCOHOL USE

60. Do you currently use alcohol (including beer and wine) other than a few sips?

No		1
Yes		2

61. During the past 30 days, on how many days did you have at least one drink of alcohol?

☐☐ Days

(never used alcohol = leave blank)

62. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?

		Days

(never used alcohol = leave blank)

DEPRESSION

63. During the past 12 months, did you ever feel so sad or hopeless almost every day for **two weeks or more in a row** that you stopped doing some usual activities?

No		1
Yes		2

64. During the past 12 months, did you ever **seriously** consider attempting suicide?

No		1
Yes		2

65. During the past 12 months, did you make a plan about how you would attempt suicide?

No		1
Yes		2

66. During the past 12 months, did you ever tell someone that you intend putting an end to your life?

No		1
Yes		2

DRUG USE

67. Complete the table below by answering "Yes" or "No" against each drug **and** indicating how often you use each of the drugs.

Drug	**Currently using this drug?**		**How often do you use the drug?**		
	Yes=1	*No=2*	*Daily =1*	*Occasionally =2*	*Not at all =3*
Dagga on its own					
Mandrax on its own					
Dagga + Mandrax (i.e., mixed "white pipes," "buttons"					
Cocaine					
Heroine					
Glue, petrol, or thinners					
Tik					
Derbisol					
Ecstasy					
Hallucinogens such as LCD, Nexus, MMDA					

Thank you for your cooperation and time. *Risk behaviour project team (Dr T Vergnani, 959-2247)*

APPENDIX C

Table of variable names

Variable name	Variable description	Variable created from	Response format
genderc	Gender	original	Male Female
age	Age	original	Ratio scale
age_group	Age	created from *age*	15-19 20-24
Q5	Home language	original	Xhosa English Afrikaans Zulu Other
Q6	Province	original	Western Cape Eastern Cape Northern Cape Gauteng Other
prov	Province	created from *Q6*	Western Cape Other
Q7	Racial group	original	Black/African Coloured White Indian/Asian
racial_gr	Racial groups	created from *Q7*	Black/African Coloured
Q8	Residence	original	Home with relatives UWC hostel Rented accommodation with friends Rent a room alone
res	Residence	created from *Q8*	Off campus On campus/UWC hostel
Q9	Faculty	original	Science Education EMS CHS Law Dentistry Arts

Note: Above variable names are those that were used in the results

Table of variable names (continued)

Variable name	Variable description	Variable created from	Response format
Q13	Religion	original	Christian Moslem Traditional Other
newQ13	Religion	created from *Q13*	Christian Moslem
Q14	Importance of religion in influencing sexual activity	original	Very important Somewhat important Slightly important Not sure Unimportant
sex_active	Are you sexually active?	created from *Q15*, *Q19* and *Q24*	Yes No
condom_use	Did you use a condom the last time you had sex?	created from *Q17*, *Q23* and *Q28*	No Yes Never had sex
safe_sex	Did you use a condom the last time you had sex? (only sexually active)	created from *Q17*, *Q23* and *Q28*	No Yes
Q15	Have you ever had vaginal sex	original	No, never Yes, occasionally Yes, often
newQ15	Have you ever had vaginal sex (only sexually active)	created from *Q15*	No, Never Yes, occasionally Yes, often
only_vsex	Only had vaginal sex	created from *Q15*	Yes
Q16	Age at first vaginal sex	original	Ratio scale
first_vsex	Age at first vaginal sex	created from *Q16*	5-9 10-14 15-19 20-24 Never had sex
fvsex	Age at first vaginal sex (only sexually active)	created from *Q16* and *sex_active*	5-9 10-14 15-19 20-24
new_vsex	Age at first vaginal sex (only sexually active)	created from *Q16* and *sex_active*	5-14 15-24
newQ17	Condom use at last vaginal sex (only sexually active)	created from *Q17* and *sex_active*	No Yes
Q19	Have you ever had oral sex	original	No Yes
newQ19	Have you ever had oral sex (only sexually active)	created from *Q19*	No Yes
only_osex	Only had oral sex	created from *Q19*	Yes
only_vosex	Only had vaginal and oral sex	created from *Q15* and *Q19*	Yes

Note: Above variable names are those that were used in the results

Table of variable names (continued)

Variable name	Variable description	Variable created from	Response format
Q20	Age at first oral sex	original	Ration scale
first_osex	Age at first oral sex	created from *Q20*	10-14 15-19 20-24
fosex	Age at first oral sex (only sexually active)	created from *Q20* and *sex_active*	10-14 15-19 20-24
new_osex	Age at first oral sex (only sexually active)	created from *Q20* and *sex_active*	5-14 15-24
newQ23	Condom use at last oral sex (only sexually active)	created from *Q17* and *sex_active*	No Yes
Q24	Have you ever had anal sex	original	No Yes
newQ24	Have you ever had anal sex (only sexually active)	created from *Q24*	No Yes
only_asex	Only had anal sex	created from *Q24*	Yes
only_vasex	Only had vaginal and anal sex	created from *Q15* and *Q24*	Yes
only_aosex	Only had anal and oral sex	created from *Q19* and *Q24*	Yes
voasex	Had vaginal, oral and anal sex	created from *Q15, Q19* and *Q24*	Yes
Q25	Age at first anal sex	original	Ratio scale
first_asex	Age at first anal sex	created from *Q25*	10-14 15-19 20-24
fasex	Age at first anal sex (only sexually active)	created from *Q25* and *sex_active*	10-14 15-19 20-24
newQ28	Condom use at last anal sex (only sexually active)	created from Q28 and *sex_active*	No Yes
Q30	Gave consent/permission at first sex	original	Never had sex Not sure No Yes
newQ30	Gave consent/permission at first sex (only sexually active)	created from *Q30* & *sex_active*	Not sure No Yes
otherQ30	Gave consent/permission at first sex (only sexually active)	created from *Q30* & *sex_active*	No Yes
Q31	Transactional sex	original	No Yes Never had sex
newQ31	Transactional sex (only sexually active)	created from *Q31* & *sex_active*	No Yes

Note: Above variable names are those that were used in the results

Table of variable names (continued)

Variable name	Variable description	Variable created from	Response format
Q32	Number of sexual partners	original	None, never had sex None in the last year 1 partner 2 partner 3 or more
activeQ32	Number of sexual partners (only sexually active)	created from *Q32* & *sex_active*	None in the last year 1 partner 2 partner 3 or more
newQ32	Number of sexual partners (only sexually active)	created from *Q32* & *sex_active*	1 partner more than 1 partner
Q34	Ever forced anyone to have sex	original	No Yes
newQ34	Ever forced anyone to have sex (only sexually active)	created from *Q34* & *sex_active*	No Yes
Q35	Ever been forced to have sex	original	No Yes
newQ35	Ever been forced to have sex (only sexually active)	created from *Q35* & *sex_active*	No Yes
Q56	Currently smoking cigarettes	original	No Yes
Q57	How often do you smoke?	original	Daily Occasionally Not at all
newQ57	How often do you smoke? (only cigarette smokers)	created from *Q56* & *Q57*	Daily Occasionally
Q58	During the past 30 days, on how many days did you smoke?	original	Ratio scale
newday	During the past 30 days, on how many days did you smoke? (only cigarette smokers)	created from *Q58* and *Q56*	Smoking < 30 days Smoking = 30 days
Q59	During the past 30 days, on the days you smoked, how many cigarettes on average did you smoke?	original	Ratio scale
newcig	During the past 30 days, on the days you smoked, how many cigarettes on average did you smoke? (only cigarette smokers)	created from *Q59* and *Q56*	On average <= 4 cigarettes per day On average > 4 cigarettes per day

Note: Above variable names are those that were used in the results

Table of variable names (continued)

Variable name	Variable description	Variable created from	Response format
Q60	Do you currently use alcohol (including beer and wine)?	original	No Yes
Q61	During the past 30 days, on how many days did you have at least one drink of alcohol?	original	Ratio scale
newhigh	During the past 30 days, on how many days did you have at least one drink of alcohol? (only alcohol users)	created from *Q61 & Q60*	Drinking on <= 4 days Drinking on > 4 days
Q62	During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is within a couple of hours?	original	Ratio scale
newrisk	During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is within a couple of hours? (only alcohol users)	created from *Q62 & Q60*	Drinking on <= 2 days Drinking on > 2 days
Q63-Q66	Suicidal behaviour	original	No Yes
suicidal	Suicidal behaviour	created from *Q63-Q66*	Yes No
Q67_1-Q67_10	Drug use	original	Yes No
drugs	Drug use	created from *Q67_1-Q67_10*	No Yes

Note: Above variable names are those that were used in the results

APPENDIX D

Descriptive frequencies of demographic characteristics and sexual activity

Table D1

Gender

genderc	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Male	174	179.53115	11.87845	35.8757	2.2755
Female	327	320.89469	12.03260	64.1243	2.2755
Total	501	500.42584	7.44573	100.000	

Frequency Missing = 1

Table D2

Age group

age_group	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
(15-19)	438	427.39442	9.89542	85.1383	1.7815
(20-24)	64	74.60558	9.22712	14.8617	1.7815
Total	502	502.00000	7.46791	100.000	

Table D3(i)

Racial group

Q7	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Black/African	123	193.62118	15.18452	38.5700	2.4635
Coloured	329	258.50670	8.37487	51.4954	2.3745
White	20	19.67274	4.31474	3.9189	0.8621
Indian/Asian	30	30.19938	5.35167	6.0158	1.0694
Total	502	502.00000	7.46791	100.000	

Table D3(ii)

Racial group

racial_gr	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Black/African	123	193.62118	14.91111	42.8244	2.5906
Coloured	329	258.50670	7.44283	57.1756	2.5906
Total	452	452.12788	7.46828	100.000	

Frequency Missing = 50

Table D4

My home language is:

Q5	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Xhosa	90	138.74126	13.31780	28.0900	2.3802
English	234	196.93187	9.60225	39.8715	2.2363
Afrikaans	142	115.52280	8.31719	23.3891	1.8255
Zulu	7	10.23067	3.91207	2.0713	0.7870
Other	21	32.48976	6.96664	6.5780	1.3789
Total	494	493.91637	7.40815	100.000	

Frequency Missing = 8

Table D5(i)

In which province did you matriculate?

Q6	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
WC	401	365.85573	9.72682	73.3392	2.2761
EC	50	74.02647	10.07910	14.8393	1.9164
NC	13	12.57981	3.64928	2.5217	0.7311
GP	6	5.72374	2.43043	1.1474	0.4873
Other	29	40.66862	7.49334	8.1524	1.4657
Total	499	498.85437	7.43962	100.000	

Frequency Missing = 3

Table D5(ii)

In which province did you matriculate?

prov	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
WC	401	365.85573	9.72682	73.3392	2.2761
Other	98	132.99865	12.49607	26.6608	2.2761
Total	499	498.85437	7.43962	100.000	

Frequency Missing = 3

Table D6

In what faculty are you registering in?

Q9	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Science	69	70.03332	8.35417	13.9947	1.6505
Education	12	11.22657	3.36105	2.2434	0.6721
EMS	111	109.33409	9.78184	21.8482	1.9363
CHS	81	81.43479	8.84262	16.2731	1.7469
Law	84	82.18895	8.74570	16.4238	1.7357
Dentistry	24	24.74830	5.04981	4.9454	1.0080
Arts	120	121.45982	10.38583	24.2713	2.0326
Total	501	500.42584	7.44573	100.000	

Frequency Missing = 1

Table D7(i)

Where do you live when you are at the university?

Q8	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Home with relatives	374	349.56613	10.62145	70.1045	2.2777
UWC Hostel	97	120.85888	11.63800	24.2379	2.1747
Rented accommodation with friends	15	15.35852	4.12428	3.0801	0.8253
Rent a room alone	12	12.85262	3.81786	2.5776	0.7639
Total	498	498.63615	7.45866	100.000	

Frequency Missing = 4

Table D7(ii)

Where do you live when you are at the university?

res	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Off campus	401	377.77727	10.19421	75.7621	2.1747
On campus/UWC hostel	97	120.85888	11.63800	24.2379	2.1747
Total	498	498.63615	7.45866	100.000	

Frequency Missing = 4

Table D8(i)

My religion is:

Q13	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Christian	388	399.33965	11.81807	80.4078	1.7652
Moslem	89	75.09102	7.30732	15.1197	1.5310
Traditional	6	8.65651	3.58920	1.7430	0.7189
Other	14	13.55600	3.65084	2.7295	0.7361
Total	497	496.64318	7.44270	100.000	

Frequency Missing = 5

Table D8(ii)

My religion is:

newQ13	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Christian	388	399.33965	11.23373	84.1724	1.5975
Moslem	89	75.09102	7.27494	15.8276	1.5975
Total	477	474.43067	7.28879	100.000	

Frequency Missing = 25

Table D9

How important is your religion in influencing your sexual behaviour:

Q14	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Very important	294	291.92999	12.30850	58.7056	2.3264
Somewhat important	117	108.65843	9.31449	21.8507	1.8920
Slightly important	35	38.24122	6.58603	7.6901	1.3102
Not sure	31	35.81449	6.59164	7.2021	1.3072
Unimportant	22	22.63341	4.98652	4.5515	0.9990
Total	499	497.27753	7.40090	100.000	

Frequency Missing = 3

Table D10

Are you sexually active?

sex_ active	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	217	236.28891	13.24513	47.5912	2.3762
No	279	260.20827	11.32247	52.4088	2.3762
Total	496	496.49717	7.43035	100.000	

Frequency Missing = 6

Table D11(i)

Have you ever had vaginal sex?

Q15	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No, Never	285	264.92267	11.23991	53.6132	2.3834
Yes, occasionally	152	169.42153	12.36620	34.2863	2.3165
Yes, often	57	59.79308	7.93838	12.1005	1.5847
Total	494	494.13728	7.40505	100.000	

Frequency Missing = 8

Table D11(ii)

Have you ever had oral sex?

Q19	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	369	361.52412	10.84088	75.8166	2.1262
Yes	107	115.31625	10.53007	24.1834	2.1262
Total	476	476.84037	7.27131	100.000	

Frequency Missing = 26

Table D11(iii)

Have you ever had anal sex?

Q24	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	451	445.96121	8.09925	94.7746	1.2080
Yes	19	24.58792	5.76123	5.2254	1.2080
Total	470	470.54912	7.21315	100.000	

Frequency Missing = 32

Table D12(i)

Only had vaginal sex (not oral and/or anal sex)

only_vsex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	106	114.67603	3.90239	100.000	0.0000
Total	106	114.67603	3.90239	100.000	

Frequency Missing = 396

Table D12(ii)

Only had oral sex (not vaginal and/or anal sex)

only_osex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	6	4.71441	2.86251E-8	100.000	0.0000
Total	6	4.71441	2.86251E-8	100.000	

Frequency Missing = 496

Table D12(iii)

Only had anal sex (not vaginal and/or oral sex)

only_asex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	1	1.57416	.	100.000	.
Total	1	1.57416	.	100.000	

Frequency Missing = 501

Table D12(iv)

Only had vaginal and oral sex (not anal sex)

only_vosex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	86	92.31055	3.38158	100.000	0.0000
Total	86	92.31055	3.38158	100.000	

Frequency Missing = 416

Table D12(v)

Only had vaginal and anal sex (not oral sex)

only_vasex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	3	4.72247	0	100.000	0.0000
Total	3	4.72247	0	100.000	

Frequency Missing = 499

Table D12(vi)

Only had anal and oral sex (not vaginal sex)

only_aosex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	1	0.78573	.	100.000	.
Total	1	0.78573	.	100.000	

Frequency Missing = 501

Table D12(vii)

Had vaginal, oral and anal sex

voasex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	14	17.50556	1.46366	100.000	0.0000
Total	14	17.50556	1.46366	100.000	

Frequency Missing = 488

Table D13(i)

Have you ever had vaginal sex? (only sexually active)

newQ15	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No, Never	7	5.50014	2.04965	2.3433	0.8830
Yes, occasionally	152	169.42153	8.84266	72.1819	3.1698
Yes, often	57	59.79308	7.33655	25.4748	3.1061
Total	216	234.71475	5.50057	100.000	

Frequency Missing = 1

Table D13(ii)

Have you ever had oral sex? (only sexually active)

new Q19	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	106	114.67603	8.81887	49.8608	3.6316
Yes	107	115.31625	8.74724	50.1392	3.6316
Total	213	229.99228	5.43432	100.000	

Frequency Missing = 4

Table D13(iii)

Have you ever had anal sex? (only sexually active)

new Q24	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	187	199.11580	6.70074	89.0087	2.4595
Yes	19	24.58792	5.62371	10.9913	2.4595
Total	206	223.70372	5.36300	100.000	

Frequency Missing = 11

APPENDIX E

Descriptive frequencies of high-risk behaviours

Table E1

Did you use a condom the last time you had (vaginal, oral or anal)sex?

condom_use	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	109	113.88273	10.20719	25.4384	2.2111
Yes	108	122.40617	11.00682	27.3423	2.3180
Never had sex	228	211.39095	10.61382	47.2192	2.4844
Total	445	447.67985	7.08522	100.000	

Frequency Missing = 57

Table E2(i)

Did you use a condom the last time you had vaginal sex? (only sexually active)

newQ17	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	63	65.46761	7.49138	28.6600	3.2736
Yes	145	162.96126	8.74438	71.3400	3.2736
Total	208	228.42887	5.43193	100.000	

Frequency Missing = 9

Table E2(ii)

Did you use a condom/barrier the last time you had oral sex? (only sexually active)

newQ23	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	80	83.21222	5.56204	73.6676	4.6910
Yes	25	29.74415	5.54714	26.3324	4.6910
Total	105	112.95636	3.75626	100.000	

Frequency Missing = 112

Table E2(iii)

Did you use a condom the last time you had anal sex? (only sexually active)

newQ28	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	7	7.86541	2.64890	31.9889	11.1247
Yes	12	16.72251	3.21398	68.0111	11.1247
Total	19	24.58792	1.65286	100.000	

Frequency Missing = 198

Table E3

Did you use a condom the last time you had (vaginal, oral or anal)sex? (only sexually active)

safe_sex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	109	113.88273	8.58314	48.1964	3.5898
Yes	108	122.40617	9.26804	51.8036	3.5898
Total	217	236.28891	5.52207	100.000	

Table E4

How many sexual partners have you had in the last 12 months?

mult	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
None, never had sex	262	246.62987	11.26215	51.0707	2.4150
None in the last year	11	11.00834	3.48501	2.2795	0.7208
1 partner	131	135.97164	10.91657	28.1562	2.1910
2 partners	43	49.97383	7.70814	10.3483	1.5643
3 or more	32	39.33509	7.07963	8.1453	1.4386
Total	479	482.91877	7.37877	100.000	

Frequency Missing = 23

Table E5

How many sexual partners have you had in the last 12 months? (only sexually active)

newQ32	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
1 partner	131	135.97164	8.25239	60.3566	3.6599
more than 1 partner	75	89.30892	8.91171	39.6434	3.6599
Total	206	225.28056	5.38958	100.000	

Frequency Missing = 11

Table E6(i)

How old were you when you first had vaginal sex?

first_vsex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
(10-14)	22	30.34273	6.50721	6.1925	1.3045
(15-19)	182	193.14545	12.38415	39.4182	2.3607
(20-24)	5	6.29394	2.93345	1.2845	0.5969
Never had sex	279	260.20827	11.22319	53.1048	2.3979
Total	488	489.99038	7.40826	100.000	

Frequency Missing = 14

Table E6(ii)

How old were you when you first had oral sex?

first_osex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
(10-14)	8	8.87205	3.27729	2.3626	0.8692
(15-19)	95	100.93600	9.66779	26.8787	2.4501
(20-24)	4	5.50820	2.82726	1.4668	0.7495
Never had sex	279	260.20827	9.44826	69.2920	2.5502
Total	386	375.52452	6.14811	100.000	

Frequency Missing = 116

Table E6(iii)

How old were you when you first had anal sex?

first_asex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
(10-14)	2	2.35989	1.75699	0.8286	0.6157
(15-19)	16	20.65387	5.24356	7.2522	1.8011
(20-24)	1	1.57416	1.57416	0.5527	0.5516
Never had sex	279	260.20827	6.11267	91.3665	1.9486
Total	298	284.79618	5.17381	100.000	

Frequency Missing = 204

Table E7(i)

How old were you when you first had vaginal sex? (only sexually active)

new_vsex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
(5-14)	22	30.34273	6.31898	13.2050	2.6681
(15-24)	187	199.43939	6.93400	86.7950	2.6681
Total	209	229.78212	5.46096	100.000	

Frequency Missing = 8

Table E7(ii)

How old were you when you first had oral sex? (only sexually active)

new_osex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
(10-14)	8	8.87205	3.20580	7.6937	2.7630
(15-24)	99	106.44420	4.68866	92.3063	2.7630
Total	107	115.31625	3.80029	100.000	

Frequency Missing = 110

Table E7(iii)

How old were you when you first had anal sex? (only sexually active)

new_asex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
(10-14)	2	2.35989	1.71986	9.5978	7.0145
(15-24)	17	22.22803	2.36695	90.4022	7.0145
Total	19	24.58792	1.65286	100.000	

Frequency Missing = 198

Table E8(i)

Think back to the first time you had sex. Was it with your consent/permission?

Q30	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Never had sex	246	228.34126	10.82646	49.4797	2.4571
Not sure	26	32.45332	6.48944	7.0324	1.3826
No	19	21.45724	5.10555	4.6496	1.0978
Yes	169	179.23272	11.96186	38.8383	2.4256
Total	460	461.48454	7.16764	100.000	

Frequency Missing = 42

Table E8(ii)

Have you ever forced anyone to have sex?

Q34	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	474	473.69206	7.68862	98.0456	0.7556
Yes	7	9.44225	3.66977	1.9544	0.7556
Total	481	483.13431	7.34478	100.000	

Frequency Missing = 21

Table E8(iii)

Have you ever been forced to have sex?

Q35	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	443	440.24284	9.34561	90.0961	1.4927
Yes	44	48.39430	7.40570	9.9039	1.4927
Total	487	488.63714	7.38301	100.000	

Frequency Missing = 15

Table E9(i)

Think back to the first time you had sex. Was it with your consent/permission? (only sexually active)

other Q30	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	19	21.45724	4.96923	10.6917	2.4463
Yes	169	179.23272	6.47762	89.3083	2.4463
Total	188	200.68996	5.05182	100.000	

Frequency Missing = 29

Table E9(ii)

Have you ever forced anyone to have sex? (only sexually active)

new Q34	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	210	226.05823	5.97834	96.3119	1.5059
Yes	6	8.65651	3.56640	3.6881	1.5059
Total	216	234.71475	5.50057	100.000	

Frequency Missing = 1

Table E9(iii)

Have you ever been forced to have sex? (only sexually active)

new Q35	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	186	199.11849	7.42196	84.8342	2.6720
Yes	30	35.59626	6.41128	15.1658	2.6720
Total	216	234.71475	5.50057	100.000	

Frequency Missing = 1

Table E10

Have you ever received money or gifts in exchange for sex (vaginal, oral or anal)?

Q31	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	280	293.22831	12.82864	60.6217	2.3212
Yes	5	6.29394	2.93329	1.3012	0.6046
Never had sex	196	184.17957	10.89219	38.0771	2.2992
Total	481	483.70182	7.36685	100.000	

Frequency Missing = 21

Table E11

Have you ever received money or gifts in exchange for sex? (only sexually active)

newQ31	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	208	225.27519	5.88990	97.2820	1.2549
Yes	5	6.29394	2.91936	2.7180	1.2549
Total	213	231.56912	5.46237	100.000	

Frequency Missing = 4

Table E12

Do you currently smoke?

Q56	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	388	396.85680	11.61811	80.0904	1.8132
Yes	108	98.65404	8.84189	19.9096	1.8132
Total	496	495.51085	7.41428	100.000	

Frequency Missing = 6

Table E13(i)

How often do you smoke (only cigarette smokers)

newQ57	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Daily	81	68.34776	3.81438	74.0014	4.8703
Occasionally	22	24.01235	4.88331	25.9986	4.8703
Total	103	92.36011	2.49319	100.000	

Frequency Missing = 5

Table E13(ii)

During the past 30 days, on how many days did you smoke cigarettes (only cigarette smokers)

newday	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Smoking < 30 days	21	23.22661	4.84101	25.8065	4.9486
Smoking = 30 days	79	66.77629	3.75195	74.1935	4.9486
Total	100	90.00290	2.48584	100.000	

Frequency Missing = 8

Table E13(iii)

During the past 30 days, on the days you smoked, how many cigarettes on average did you smoke per day (only cigarette smokers)

newcig	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
On ave <= 5 cigarettes per day	54	52.18385	5.46275	55.0912	5.0482
On ave > 5 cigarettes per day	50	42.53883	4.51342	44.9088	5.0482
Total	104	94.72268	2.66626	100.000	

Frequency Missing = 4

Table E14

Do you currently use alcohol (including beer and wine

Q60	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	261	270.80030	12.76608	55.5094	2.3610
Yes	227	217.04573	11.50647	44.4906	2.3610
Total	488	487.84603	7.34788	100.000	

Frequency Missing = 14

Table E15(i)

During the past 30 days, on how many days did you have at least one drink of alcohol (only alcohol users)

newhigh	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Drinking on <= 4 days	100	98.40542	7.84365	49.1250	3.6410
Drinking on > 4 days	109	101.91091	7.38769	50.8750	3.6410
Total	209	200.31633	4.43533	100.000	

Frequency Missing = 18

Table E15(ii)

During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours? (only alcohol users)

newrisk	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Drinking on <= 2 days	68	67.35034	6.77526	43.1548	4.1140
Drinking on > 2 days	94	88.71656	6.62867	56.8452	4.1140
Total	162	156.06691	3.95204	100.000	

Frequency Missing = 65

Table E16(i)

Are you currently using Dagga on its own

Q67_1	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	50	45.62030	6.39487	10.0748	1.4195
No	409	407.19429	9.41445	89.9252	1.4195
Total	459	452.81459	6.95750	100.000	

Frequency Missing = 43

Table E16(ii)

Are you currently using Mandrax on its own

Q67_2	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	1	0.78573	0.78573	0.1741	0.1741
No	458	450.64992	6.97710	99.8259	0.1741
Total	459	451.43565	6.91021	100.000	

Frequency Missing = 43

Table E16(iii)

Are you currently using Dagga + Mandrax (i.e. white pipes, buttons)

Q67_3	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	1	0.78573	0.78573	0.1737	0.1738
No	458	451.43834	6.99940	99.8263	0.1738
Total	459	452.22407	6.93253	100.000	

Frequency Missing = 43

Table E16(iv)

Are you currently using Cocaine

Q67_4	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	4	3.14294	1.56630	0.6974	0.3483
No	454	447.50698	7.17035	99.3026	0.3483
Total	458	450.64992	6.90738	100.000	

Frequency Missing = 44

Table E16(v)

Are you currently using Heroin

Q67_5	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	4	3.93136	2.07505	0.8693	0.4586
No	455	448.29271	7.17289	99.1307	0.4586
Total	459	452.22407	6.93253	100.000	

Frequency Missing = 43

Table E16(vi)

Are you currently using Glue, petrol, or thinners

Q67_6	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	458	450.64992	6.90738	100.000	0.0000
Total	458	450.64992	6.90738	100.000	

Frequency Missing = 44

Table E16(vii)

Are you currently using Tik

Q67_7	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	9	7.86003	2.70149	1.7411	0.5995
No	449	443.57831	7.48202	98.2589	0.5995
Total	458	451.43834	6.92967	100.000	

Frequency Missing = 44

Table E16(viii)

Are you currently using Ecstasy

Q67_9	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	8	6.28588	2.20534	1.3900	0.4899
No	451	445.93820	7.44561	98.6100	0.4899
Total	459	452.22407	6.93253	100.000	

Frequency Missing = 43

Table E16(ix)

Are you currently using Hallucinogens such as LSD, Nexus, MMDA

Q67_10	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	1	1.57416	1.57416	0.3536	0.3532
No	451	443.57293	6.91270	99.6464	0.3532
Total	452	445.14709	6.86782	100.000	

Frequency Missing = 50

Table E17

Do you currently use drugs?

drugs	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	402	399.32889	9.46036	89.1171	1.4847
Yes	53	48.76593	6.62738	10.8829	1.4847
Total	455	448.09481	6.90170	100.000	

Frequency Missing = 47

Table E18(i)

During the past 12 months, did you ever feel so sad or hopeless almost every day for two weeks or more in a row that you stopped doing some usual activities?

Q63	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	349	340.76595	11.51065	69.1026	2.2344
Yes	144	152.36469	11.54987	30.8974	2.2344
Total	493	493.13063	7.40506	100.000	

Frequency Missing = 9

Table E18(ii)

During the past 12 months, did you ever seriously consider attempting suicide?

Q64	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	402	398.25053	10.54805	82.0686	1.8667
Yes	84	87.01470	9.23584	17.9314	1.8667
Total	486	485.26523	7.32533	100.000	

Frequency Missing = 16

Table E18(iii)

During the past 12 months, did you make a plan about how you would attempt suicide?

Q65	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	424	422.85339	9.90490	87.7072	1.5820
Yes	59	59.26621	7.68885	12.2928	1.5820
Total	483	482.11960	7.29645	100.000	

Frequency Missing = 19

Table E18(iv)

During the past 12 months, did you ever tell someone that you intend putting an end to your life?

Q66	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
No	421	420.71710	10.01932	87.2999	1.5938
Yes	62	61.20460	7.72931	12.7001	1.5938
Total	483	481.92170	7.29953	100.000	

Frequency Missing = 19

Table E19

During the past 12 months, did you experience suicidal ideation?

suicidal	Frequency	Weighted Frequency	Std Dev of Wgt Freq	Percent	Std Err of Percent
Yes	26	26.95738	5.46958	5.4929	1.1084
No	466	463.81067	8.67354	94.5071	1.1084
Total	492	490.76806	7.36325	100.000	

Frequency Missing = 10

APPENDIX F

Gender comparisons

Table F1

Table of genderc by safe_sex

genderc	safe_sex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Male	No	43	46.82014	6.86864	33.28200	60.35829	19.8148	2.8689
	Yes	48	55.35366	7.53540	40.50133	70.20599	23.4263	3.0977
	Total	91	102.17380	8.94224	84.54858	119.79902	43.2410	3.5754
Female	No	66	67.06259	7.45419	52.37033	81.75486	28.3816	3.1756
	Yes	60	67.05251	7.96750	51.34851	82.75652	28.3773	3.2706
	Total	126	134.11510	8.79828	116.77362	151.45658	56.7590	3.5754
Total	No	109	113.88273	8.58314	96.96531	130.80016	48.1964	3.5898
	Yes	108	122.40617	9.26804	104.13879	140.67355	51.8036	3.5898
	Total	217	236.28891	5.52207	225.40486	247.17295	100.000	

Table of genderc by safe_sex

genderc	safe_sex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Male	No	14.1601	25.4695	45.8240	5.5129	34.9581	56.6900
	Yes	17.3206	29.5319	54.1760	5.5129	43.3100	65.0419
	Total	36.1938	50.2883	100.000			
Female	No	22.1224	34.6408	50.0038	4.7258	40.6891	59.3184
	Yes	21.9309	34.8238	49.9962	4.7258	40.6816	59.3109
	Total	49.7117	63.8062	100.000			
Total	No	41.1209	55.2719				
	Yes	44.7281	58.8791				
	Total						

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.3727
Design Correction	1.1238
Rao-Scott Chi-Square	0.3316
DF	1
Pr > ChiSq	0.5647
F Value	0.3316
Num DF	1
Den DF	216
Pr > F	0.5653

Sample Size = 217

Table F2

Table of genderc by newQ32

genderc	newQ32	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Male	1 partner	39	39.80731	6.12024	27.74063	51.87400	17.6701	2.7311
	more than 1 partner	46	56.07524	7.76780	40.76021	71.39026	24.8913	3.2962
	Total	85	95.88255	8.71886	78.69242	113.07268	42.5614	3.6628
Female	1 partner	92	96.16433	8.24569	79.90709	112.42156	42.6865	3.6320
	more than 1 partner	29	33.23368	6.10419	21.19864	45.26873	14.7521	2.6665
	Total	121	129.39801	8.60657	112.42926	146.36676	57.4386	3.6628
Total	1 partner	131	135.97164	8.25239	119.70120	152.24208	60.3566	3.6599
	more than 1 partner	75	89.30892	8.91171	71.73856	106.87928	39.6434	3.6599
	Total	206	225.28056	5.38958	214.65445	235.90667	100.000	

Frequency Missing = 11

Table of genderc by newQ32

genderc	newQ32	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Male	1 partner	12.2855	23.0547	41.5167	5.5677	30.5394	52.4941
	more than 1 partner	18.3924	31.3901	58.4833	5.5677	47.5059	69.4606
	Total	35.3398	49.7830	100.000			
Female	1 partner	35.5257	49.8472	74.3167	4.3039	65.8311	82.8023
	more than 1 partner	9.4948	20.0094	25.6833	4.3039	17.1977	34.1689
	Total	50.2170	64.6602	100.000			
Total	1 partner	53.1406	67.5725				
	more than 1 partner	32.4275	46.8594				
	Total						

Frequency Missing = 11

Rao-Scott Chi-Square Test

Pearson Chi-Square	22.6432
Design Correction	1.1091
Rao-Scott Chi-Square	20.4167
DF	1
Pr > ChiSq	<.0001
F Value	20.4167
Num DF	1
Den DF	205
Pr > F	<.0001

Sample Size = 206

Table F3(i)

Table of genderc by new_vsex

genderc	new_vsex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Male	(5-14)	16	23.04214	5.66346	11.87701	34.20728	10.0278	2.4048
	(15-24)	69	74.19634	7.94375	58.53575	89.85693	32.2899	3.4074
	Total	85	97.23848	8.87350	79.74495	114.73202	42.3177	3.6380
Female	(5-14)	6	7.30058	3.07771	1.23308	13.36809	3.1772	1.3340
	(15-24)	118	125.24305	8.62142	108.24648	142.23962	54.5051	3.6613
	Total	124	132.54363	8.66080	115.46944	149.61783	57.6823	3.6380
Total	(5-14)	22	30.34273	6.31898	17.88526	42.80019	13.2050	2.6681
	(15-24)	187	199.43939	6.93400	185.76945	213.10933	86.7950	2.6681
	Total	209	229.78212	5.46096	219.01618	240.54805	100.000	

Frequency Missing = 8

Table of genderc by new_vsex

genderc	new_vsex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Male	(5-14)	5.2869	14.7688	23.6965	5.1615	13.5209	33.8722
	(15-24)	25.5724	39.0073	76.3035	5.1615	66.1278	86.4791
	Total	35.1456	49.4898	100.000			
Female	(5-14)	0.5472	5.8072	5.5081	2.2810	1.0112	10.0049
	(15-24)	47.2871	61.7232	94.4919	2.2810	89.9951	98.9888
	Total	50.5102	64.8544	100.000			
Total	(5-14)	7.9449	18.4650				
	(15-24)	81.5350	92.0551				
	Total						

Frequency Missing = 8

Rao-Scott Chi-Square Test

Pearson Chi-Square	14.7255
Design Correction	1.2044
Rao-Scott Chi-Square	12.2265
DF	1
Pr > ChiSq	0.0005
F Value	12.2265
Num DF	1
Den DF	208
Pr > F	0.0006

Sample Size = 209

Table F3(ii)

Table of genderc by new_osex

genderc	new_osex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Male	(10-14)	6	7.30058	3.04475	1.26407	13.33710	6.3309	2.6155
	(15-24)	43	45.66212	5.90999	33.94499	57.37924	39.5973	5.0037
	Total	49	52.96270	6.15700	40.75585	65.16955	45.9282	5.1120
Female	(10-14)	2	1.57147	1.10594	0	3.76411	1.3627	0.9650
	(15-24)	56	60.78209	6.27872	48.33391	73.23026	52.7090	5.1187
	Total	58	62.35356	6.23243	49.99715	74.70996	54.0718	5.1120
Total	(10-14)	8	8.87205	3.20580	2.51624	15.22787	7.6937	2.7630
	(15-24)	99	106.44420	4.68866	97.14848	115.73992	92.3063	2.7630
	Total	107	115.31625	3.80029	107.78181	122.85070	100.000	

Frequency Missing = 110

Table of genderc by new_osex

genderc	new_osex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Male	(10-14)	1.1455	11.5163	13.7844	5.4403	2.9985	24.5703
	(15-24)	29.6770	49.5176	86.2156	5.4403	75.4297	97.0015
	Total	35.7931	56.0633	100.000			
Female	(10-14)	0.0000	3.2760	2.5203	1.7798	0.0000	6.0488
	(15-24)	42.5608	62.8573	97.4797	1.7798	93.9512	100.000
	Total	43.9367	64.2069	100.000			
Total	(10-14)	2.2157	13.1717				
	(15-24)	86.8283	97.7843				
	Total						

Frequency Missing = 110

Rao-Scott Chi-Square Test

Pearson Chi-Square	4.7475
Design Correction	0.8119
Rao-Scott Chi-Square	5.8472
DF	1
Pr > ChiSq	0.0156
F Value	5.8472
Num DF	1
Den DF	106
Pr > F	0.0173

Sample Size = 107

Table F4(i)

Table of genderc by otherQ30

genderc	other Q30	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Male	No	5	4.93801	2.28946	0.42152	9.45449	2.4605	1.1421
	Yes	69	75.99409	7.92934	60.35164	91.63654	37.8664	3.7716
	Total	74	80.93210	8.00641	65.13761	96.72659	40.3269	3.8064
Female	No	14	16.51923	4.50822	7.62574	25.41273	8.2312	2.2189
	Yes	100	103.23862	7.93691	87.58123	118.89602	51.4418	3.8690
	Total	114	119.75786	8.06714	103.84356	135.67216	59.6731	3.8064
Total	No	19	21.45724	4.96923	11.65429	31.26018	10.6917	2.4463
	Yes	169	179.23272	6.47762	166.45411	192.01133	89.3083	2.4463
	Total	188	200.68996	5.05182	190.72408	210.65583	100.000	

Frequency Missing = 29

Table of genderc by otherQ30

genderc	other Q30	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Male	No	0.2075	4.7135	6.1014	2.7864	0.6046	11.5983
	Yes	30.4260	45.3069	93.8986	2.7864	88.4017	99.3954
	Total	32.8180	47.8359	100.000			
Female	No	3.8540	12.6084	13.7939	3.5888	6.7142	20.8735
	Yes	43.8094	59.0743	86.2061	3.5888	79.1265	93.2858
	Total	52.1641	67.1820	100.000			
Total	No	5.8659	15.5176				
	Yes	84.4824	94.1341				
	Total						

Frequency Missing = 29

Rao-Scott Chi-Square Test

Pearson Chi-Square	2.8036
Design Correction	1.0586
Rao-Scott Chi-Square	2.6484
DF	1
Pr > ChiSq	0.1037
F Value	2.6484
Num DF	1
Den DF	187
Pr > F	0.1053

Sample Size = 188

Table F4(ii)

Table of genderc by newQ34

genderc	new Q34	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Male	No	87	96.66560	8.76054	79.39806	113.93314	41.1843	3.5592
	Yes	3	3.93405	2.35101	0	8.56803	1.6761	0.9984
	Total	90	100.59965	8.87337	83.10971	118.08958	42.8604	3.5797
Female	No	123	129.39264	8.68017	112.28351	146.50176	55.1276	3.5989
	Yes	3	4.72247	2.71381	0	10.07154	2.0120	1.1499
	Total	126	134.11510	8.77644	116.81622	151.41399	57.1396	3.5797
Total	No	210	226.05823	5.97834	214.27457	237.84190	96.3119	1.5059
	Yes	6	8.65651	3.56640	1.62694	15.68609	3.6881	1.5059
	Total	216	234.71475	5.50057	223.87280	245.55670	100.000	

Frequency Missing = 1

Table of genderc by newQ34

genderc	new Q34	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Male	No	34.1689	48.1996	96.0894	2.3000	91.5559	100.000
	Yes	0.0000	3.6441	3.9106	2.3000	0.0000	8.4441
	Total	35.8047	49.9161	100.000			
Female	No	48.0340	62.2212	96.4788	1.9926	92.5512	100.000
	Yes	0.0000	4.2784	3.5212	1.9926	0.0000	7.4488
	Total	50.0839	64.1953	100.000			
Total	No	93.3436	99.2802				
	Yes	0.7198	6.6564				
	Total						

Frequency Missing = 1

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.0226
Design Correction	1.3605
Rao-Scott Chi-Square	0.0166
DF	1
Pr > ChiSq	0.8975
F Value	0.0166
Num DF	1
Den DF	215
Pr > F	0.8976

Sample Size = 216

Table F4(iii)

Table of genderc by newQ35

genderc	new Q35	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Male	No	82	91.94850	8.71290	74.77485	109.12216	39.1746	3.5369
	Yes	9	10.22530	3.54583	3.23626	17.21434	4.3565	1.5042
	Total	91	102.17380	8.92981	84.57261	119.77499	43.5311	3.5871
Female	No	104	107.16998	8.41647	90.58062	123.75935	45.6597	3.5777
	Yes	21	25.37096	5.56281	14.40634	36.33559	10.8093	2.3316
	Total	125	132.54095	8.74579	115.30249	149.77941	56.4689	3.5871
Total	No	186	199.11849	7.42196	184.48937	213.74761	84.8342	2.6720
	Yes	30	35.59626	6.41128	22.95925	48.23327	15.1658	2.6720
	Total	216	234.71475	5.50057	223.87280	245.55670	100.000	

Frequency Missing = 1

Table of genderc by newQ35

genderc	new Q35	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Male	No	32.2032	46.1460	89.9923	3.3521	83.3851	96.5994
	Yes	1.3916	7.3214	10.0077	3.3521	3.4006	16.6149
	Total	36.4606	50.6015	100.000			
Female	No	38.6079	52.7115	80.8580	3.9017	73.1676	88.5484
	Yes	6.2136	15.4050	19.1420	3.9017	11.4516	26.8324
	Total	49.3985	63.5394	100.000			
Total	No	79.5676	90.1009				
	Yes	9.8991	20.4324				
	Total						

Frequency Missing = 1

Rao-Scott Chi-Square Test

Pearson Chi-Square	3.4433
Design Correction	1.1687
Rao-Scott Chi-Square	2.9463
DF	1
Pr > ChiSq	0.0861
F Value	2.9463
Num DF	1
Den DF	215
Pr > F	0.0875

Sample Size = 216

Table F5

Table of genderc by newQ31

genderc	new Q31	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Male	No	86	96.66829	8.79696	79.32757	114.00900	41.7449	3.5957
	Yes	4	4.71978	2.47282	0	9.59424	2.0382	1.0651
	Total	90	101.38807	8.89927	83.84567	118.93046	43.7831	3.6152
Female	No	122	128.60690	8.63651	111.58246	145.63134	55.5372	3.6213
	Yes	1	1.57416	1.57416	0	4.67716	0.6798	0.6785
	Total	123	130.18106	8.66934	113.09191	147.27021	56.2169	3.6152
Total	No	208	225.27519	5.88990	213.66492	236.88545	97.2820	1.2549
	Yes	5	6.29394	2.91936	0.53924	12.04864	2.7180	1.2549
	Total	213	231.56912	5.46237	220.80161	242.33663	100.000	

Frequency Missing = 4

Table of genderc by newQ31

genderc	new Q31	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Male	No	34.6569	48.8329	95.3448	2.3993	90.6153	100.000
	Yes	0.0000	4.1378	4.6552	2.3993	0.0000	9.3847
	Total	36.6568	50.9094	100.000			
Female	No	48.3989	62.6755	98.7908	1.2029	96.4197	100.000
	Yes	0.0000	2.0173	1.2092	1.2029	0.0000	3.5803
	Total	49.0906	63.3432	100.000			
Total	No	94.8083	99.7558				
	Yes	0.2442	5.1917				
	Total						

Frequency Missing = 4

Rao-Scott Chi-Square Test

Pearson Chi-Square	2.3545
Design Correction	1.3847
Rao-Scott Chi-Square	1.7004
DF	1
Pr > ChiSq	0.1922
F Value	1.7004
Num DF	1
Den DF	212
Pr > F	0.1937

Sample Size = 213

Table F6(i)

Table of genderc by Q56

genderc	Q56	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Male	No	126	133.81026	11.03063	112.13752	155.48299	27.0906	2.1484
	Yes	44	42.38006	6.41750	29.77110	54.98901	8.5801	1.2990
	Total	170	176.19031	11.82793	152.95105	199.42958	35.6706	2.2896
Female	No	261	261.47239	12.42398	237.06203	285.88275	52.9364	2.3655
	Yes	64	56.27399	6.82721	42.86004	69.68794	11.3930	1.4035
	Total	325	317.74638	11.89096	294.38329	341.10946	64.3294	2.2896
Total	No	387	395.28265	11.59222	372.50652	418.05878	80.0270	1.8180
	Yes	108	98.65404	8.83966	81.28607	116.02201	19.9730	1.8180
	Total	495	493.93669	7.39186	479.41332	508.46006	100.000	

Frequency Missing = 7

Table of genderc by Q56

genderc	Q56	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Male	No	22.8694	31.3118	75.9464	3.3572	69.3502	82.5426
	Yes	6.0279	11.1323	24.0536	3.3572	17.4574	30.6498
	Total	31.1721	40.1691	100.000			
Female	No	48.2888	57.5841	82.2897	2.1132	78.1377	86.4416
	Yes	8.6354	14.1506	17.7103	2.1132	13.5584	21.8623
	Total	59.8309	68.8279	100.000			
Total	No	76.4550	83.5990				
	Yes	16.4010	23.5450				
	Total						

Frequency Missing = 7

Rao-Scott Chi-Square Test

Pearson Chi-Square	2.8593
Design Correction	1.0394
Rao-Scott Chi-Square	2.7509
DF	1
Pr > ChiSq	0.0972
F Value	2.7509
Num DF	1
Den DF	494
Pr > F	0.0978

Sample Size = 495

Table F6(ii)

Table of genderc by Q60

genderc	Q60	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Male	No	80	84.23710	9.14258	66.27323	102.20098	17.3230	1.8437
	Yes	86	87.43133	9.10923	69.53300	105.32966	17.9799	1.8471
	Total	166	171.66844	11.67289	148.73287	194.60400	35.3030	2.3010
Female	No	180	184.98904	11.93611	161.53629	208.44180	38.0423	2.3365
	Yes	141	129.61439	9.79070	110.37706	148.85173	26.6547	2.0490
	Total	321	314.60344	11.81765	291.38344	337.82343	64.6970	2.3010
Total	No	260	269.22615	12.72518	244.22298	294.22931	55.3654	2.3646
	Yes	227	217.04573	11.49786	194.45408	239.63737	44.6346	2.3646
	Total	487	486.27187	7.32532	471.87868	500.66507	100.000	

Frequency Missing = 15

Table of genderc by Q60

genderc	Q60	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Male	No	13.7004	20.9457	49.0697	4.0874	41.0384	57.1009
	Yes	14.3506	21.6092	50.9303	4.0874	42.8991	58.9616
	Total	30.7818	39.8242	100.000			
Female	No	33.4514	42.6332	58.8007	2.8648	53.1718	64.4296
	Yes	22.6287	30.6807	41.1993	2.8648	35.5704	46.8282
	Total	60.1758	69.2182	100.000			
Total	No	50.7193	60.0114				
	Yes	39.9886	49.2807				
	Total						

Frequency Missing = 15

Rao-Scott Chi-Square Test

Pearson Chi-Square	4.2622
Design Correction	1.1126
Rao-Scott Chi-Square	3.8308
DF	1
Pr > ChiSq	0.0503
F Value	3.8308
Num DF	1
Den DF	486
Pr > F	0.0509

Sample Size = 487

Table F6(iii)

Table of genderc by drugs

genderc	drugs	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Male	No	132	135.07359	10.60598	114.23056	155.91662	30.2502	2.2942
	Yes	26	25.57844	5.15548	15.44682	35.71006	5.7284	1.1510
	Total	158	160.65203	11.12709	138.78492	182.51914	35.9786	2.3890
Female	No	269	262.68114	11.54015	240.00228	285.36000	58.8284	2.4356
	Yes	27	23.18748	4.46659	14.40968	31.96529	5.1929	1.0080
	Total	296	285.86862	11.23539	263.78868	307.94857	64.0214	2.3890
Total	No	401	397.75473	9.43459	379.21373	416.29573	89.0787	1.4895
	Yes	53	48.76593	6.62652	35.74338	61.78847	10.9213	1.4895
	Total	454	446.52066	6.87640	433.00705	460.03426	100.000	

Frequency Missing = 48

Table of genderc by drugs

genderc	drugs	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Male	No	25.7416	34.7589	84.0784	3.0292	78.1253	90.0314
	Yes	3.4665	7.9903	15.9216	3.0292	9.9686	21.8747
	Total	31.2838	40.6735	100.000			
Female	No	54.0420	63.6149	91.8888	1.5536	88.8355	94.9420
	Yes	3.2121	7.1738	8.1112	1.5536	5.0580	11.1645
	Total	59.3265	68.7162	100.000			
Total	No	86.1515	92.0059				
	Yes	7.9941	13.8485				
	Total						

Frequency Missing = 48

Rao-Scott Chi-Square Test

Pearson Chi-Square	6.5573
Design Correction	1.0233
Rao-Scott Chi-Square	6.4079
DF	1
Pr > ChiSq	0.0114
F Value	6.4079
Num DF	1
Den DF	453
Pr > F	0.0117

Sample Size = 454

Table F7

Table of genderc by suicidal

genderc	suicidal	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Male	Yes	4	3.93136	2.07543	0	8.00920	0.8036	0.4241
	No	166	171.66844	11.69393	148.69199	194.64488	35.0921	2.2899
	Total	170	175.59980	11.76014	152.49328	198.70631	35.8957	2.3004
Female	Yes	21	21.45187	4.86162	11.89967	31.00406	4.3851	0.9902
	No	300	292.14224	11.92856	268.70479	315.57969	59.7191	2.3475
	Total	321	313.59411	11.84679	290.31733	336.87088	64.1043	2.3004
Total	Yes	25	25.38323	5.25343	15.06120	35.70525	5.1888	1.0695
	No	466	463.81067	8.62197	446.87008	480.75127	94.8112	1.0695
	Total	491	489.19390	7.34055	474.77105	503.61675	100.000	

Frequency Missing = 11

Table of genderc by suicidal

genderc	suicidal	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Male	Yes	0.0000	1.6369	2.2388	1.1734	0.0000	4.5443
	No	30.5929	39.5913	97.7612	1.1734	95.4557	100.000
	Total	31.3759	40.4156	100.000			
Female	Yes	2.4397	6.3306	6.8406	1.5229	3.8484	9.8329
	No	55.1067	64.3315	93.1594	1.5229	90.1671	96.1516
	Total	59.5844	68.6241	100.000			
Total	Yes	3.0874	7.2902				
	No	92.7098	96.9126				
	Total						

Frequency Missing = 11

Rao-Scott Chi-Square Test

Pearson Chi-Square	4.8635
Design Correction	1.1104
Rao-Scott Chi-Square	4.3801
DF	1
Pr > ChiSq	0.0364
F Value	4.3801
Num DF	1
Den DF	490
Pr > F	0.0369

Sample Size = 491

APPENDIX G

Racial comparisons

Table G1

Table of racial_gr by safe_sex

racial_gr	safe_sex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Black/African	No	34	53.52130	8.39970	36.95946	70.08314	23.9615	3.4663
	Yes	46	72.41117	9.41905	53.83945	90.98289	32.4185	3.7270
	Total	80	125.93247	11.00413	104.23543	147.62951	56.3800	3.5354
Coloured	No	68	53.42996	5.30337	42.97321	63.88671	23.9206	2.7528
	Yes	56	44.00114	5.02057	34.10199	53.90029	19.6993	2.5235
	Total	124	97.43110	5.49267	86.60109	108.26110	43.6200	3.5354
Total	No	102	106.95126	8.39683	90.39506	123.50745	47.8821	3.7104
	Yes	102	116.41231	9.08481	98.49962	134.32500	52.1179	3.7104
	Total	204	223.36357	5.51145	212.49653	234.23061	100.000	

Frequency Missing = 13

Table of racial_gr by safe_sex

racial_gr	safe_sex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Black/African	No	17.1269	30.7961	42.5000	5.5405	31.5757	53.4243
	Yes	25.0700	39.7670	57.5000	5.5405	46.5757	68.4243
	Total	49.4093	63.3508	100.000			
Coloured	No	18.4930	29.3483	54.8387	4.4801	46.0053	63.6721
	Yes	14.7237	24.6750	45.1613	4.4801	36.3279	53.9947
	Total	36.6492	50.5907	100.000			
Total	No	40.5663	55.1980				
	Yes	44.8020	59.4337				
	Total						

Frequency Missing = 13

Rao-Scott Chi-Square Test

Pearson Chi-Square	3.0607
Design Correction	1.0354
Rao-Scott Chi-Square	2.9560
DF	1
Pr > ChiSq	0.0856
F Value	2.9560
Num DF	1
Den DF	203
Pr > F	0.0871

Sample Size = 204

Table G2

Table of racial_gr by newQ32

racial_gr	newQ32	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Black/African	1 partner	39	61.39208	8.80420	44.02671	78.75745	28.9101	3.7384
	more than 1 partner	38	59.81792	8.71876	42.62107	77.01478	28.1688	3.7157
	Total	77	121.21000	10.73672	100.03294	142.38707	57.0789	3.6106
Coloured	1 partner	81	63.64451	5.40103	52.99153	74.29749	29.9708	3.1177
	more than 1 partner	35	27.50071	4.21685	19.18342	35.81801	12.9503	2.1331
	Total	116	91.14522	5.35920	80.57476	101.71568	42.9211	3.6106
Total	1 partner	120	125.03659	8.12307	109.01466	141.05851	58.8809	3.8045
	more than 1 partner	73	87.31864	8.75573	70.04887	104.58841	41.1191	3.8045
	Total	193	212.35522	5.37752	201.74862	222.96183	100.000	

Frequency Missing = 24

Table of racial_gr by newQ32

racial_gr	newQ32	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Black/African	1 partner	21.5365	36.2837	50.6494	5.7124	39.3823	61.9164
	more than 1 partner	20.8400	35.4976	49.3506	5.7124	38.0836	60.6177
	Total	49.9574	64.2004	100.000			
Coloured	1 partner	23.8215	36.1200	69.8276	4.2728	61.3998	78.2553
	more than 1 partner	8.7430	17.1577	30.1724	4.2728	21.7447	38.6002
	Total	35.7996	50.0426	100.000			
Total	1 partner	51.3769	66.3848				
	more than 1 partner	33.6152	48.6231				
	Total						

Frequency Missing = 24

Rao-Scott Chi-Square Test

Pearson Chi-Square	7.1830
Design Correction	0.9970
Rao-Scott Chi-Square	7.2047
DF	1
Pr > ChiSq	0.0073
F Value	7.2047
Num DF	1
Den DF	192
Pr > F	0.0079

Sample Size = 193

Table G3(i)

Table of racial_gr by new_vsex

racial_gr	new_vsex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Black/African	(5-14)	16	25.18649	6.05089	13.25329	37.11970	11.5607	2.6870
	(15-24)	64	100.74598	10.37374	80.28749	121.20447	46.2427	3.8433
	Total	80	125.93247	10.87821	104.47910	147.38585	57.8034	3.5476
Coloured	(5-14)	4	3.14294	1.55940	0.06759	6.21829	1.4426	0.7210
	(15-24)	113	88.78802	5.46798	78.00439	99.57164	40.7540	3.4992
	Total	117	91.93096	5.42982	81.22257	102.63934	42.1966	3.5476
Total	(5-14)	20	28.32943	6.18362	16.13446	40.52441	13.0033	2.7509
	(15-24)	177	189.53399	6.79981	176.12380	202.94419	86.9967	2.7509
	Total	197	217.86343	5.44839	207.11843	228.60842	100.000	

Frequency Missing = 20

Table of racial_gr by new_vsex

racial_gr	new_vsex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Black/African	(5-14)	6.2615	16.8598	20.0000	4.4835	11.1578	28.8422
	(15-24)	38.6631	53.8223	80.0000	4.4835	71.1578	88.8422
	Total	50.8071	64.7997	100.000			
Coloured	(5-14)	0.0208	2.8644	3.4188	1.6842	0.0973	6.7403
	(15-24)	33.8530	47.6549	96.5812	1.6842	93.2597	99.9027
	Total	35.2003	49.1929	100.000			
Total	(5-14)	7.5781	18.4285				
	(15-24)	81.5715	92.4219				
	Total						

Frequency Missing = 20

Rao-Scott Chi-Square Test

Pearson Chi-Square	11.6781
Design Correction	0.8227
Rao-Scott Chi-Square	14.1944
DF	1
Pr > ChiSq	0.0002
F Value	14.1944
Num DF	1
Den DF	196
Pr > F	0.0002

Sample Size = 197

Table G3(ii)

Table of racial_gr by new_osex

racial_gr	new_osex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Black/African	(10-14)	3	4.72247	2.69797	0	10.07789	4.4810	2.5282
	(15-24)	34	53.52130	7.43570	38.76155	68.28105	50.7851	5.3852
	Total	37	58.24377	7.56987	43.21769	73.26985	55.2661	5.1946
Coloured	(10-14)	4	3.14294	1.54672	0.07272	6.21315	2.9823	1.4889
	(15-24)	56	44.00114	3.84261	36.37362	51.62866	41.7516	5.0600
	Total	60	47.14408	3.77848	39.64386	54.64430	44.7339	5.1946
Total	(10-14)	7	7.86541	3.05976	1.79182	13.93899	7.4633	2.8839
	(15-24)	90	97.52244	4.58179	88.42766	106.61723	92.5367	2.8839
	Total	97	105.38785	3.79140	97.86199	112.91371	100.000	

Frequency Missing = 120

Table of racial_gr by new_osex

racial_gr	new_osex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Black/African	(10-14)	0.0000	9.4996	8.1081	4.5107	0.0000	17.0619
	(15-24)	40.0955	61.4746	91.8919	4.5107	82.9381	100.000
	Total	44.9548	65.5774	100.000			
Coloured	(10-14)	0.0268	5.9377	6.6667	3.2370	0.2412	13.0921
	(15-24)	31.7077	51.7956	93.3333	3.2370	86.9079	99.7588
	Total	34.4226	55.0452	100.000			
Total	(10-14)	1.7387	13.1879				
	(15-24)	86.8121	98.2613				
	Total						

Frequency Missing = 120

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.0721
Design Correction	1.0160
Rao-Scott Chi-Square	0.0710
DF	1
Pr > ChiSq	0.7899
F Value	0.0710
Num DF	1
Den DF	96
Pr > F	0.7904

Sample Size = 97

Table G4(i)

Table of racial_gr by otherQ30

racial_gr	other Q30	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Black/African	No	8	12.59325	4.36243	3.98350	21.20299	6.6720	2.2662
	Yes	56	88.15273	9.75469	68.90076	107.40470	46.7039	4.0750
	Total	64	100.74598	10.07460	80.86263	120.62933	53.3758	3.9107
Coloured	No	10	7.85735	2.41998	3.08125	12.63344	4.1629	1.3073
	Yes	102	80.14494	5.16027	69.96055	90.32932	42.4613	3.7778
	Total	112	88.00228	5.02870	78.07757	97.92699	46.6242	3.9107
Total	No	18	20.45059	4.87403	10.83114	30.07005	10.8349	2.5502
	Yes	158	168.29767	6.40621	155.65428	180.94105	89.1651	2.5502
	Total	176	188.74826	5.04590	178.78962	198.70690	100.000	

Frequency Missing = 41

Table of racial_gr by otherQ30

racial_gr	other Q30	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Black/African	No	2.1994	11.1446	12.5000	4.1458	4.3178	20.6822
	Yes	38.6614	54.7463	87.5000	4.1458	79.3178	95.6822
	Total	45.6577	61.0940	100.000			
Coloured	No	1.5827	6.7431	8.9286	2.7022	3.5956	14.2616
	Yes	35.0054	49.9171	91.0714	2.7022	85.7384	96.4044
	Total	38.9060	54.3423	100.000			
Total	No	5.8018	15.8679				
	Yes	84.1321	94.1982				
	Total						

Frequency Missing = 41

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.5783
Design Correction	1.0225
Rao-Scott Chi-Square	0.5656
DF	1
Pr > ChiSq	0.4520
F Value	0.5656
Num DF	1
Den DF	175
Pr > F	0.4530

Sample Size = 176

Table G4(ii)

Table of racial_gr by newQ34

racial_gr	new Q34	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Black/African	No	74	116.48754	10.82138	95.15018	137.82490	52.5217	3.6684
	Yes	5	7.87078	3.48489	0.99934	14.74222	3.5488	1.5562
	Total	79	124.35832	10.96217	102.74336	145.97327	56.0704	3.5546
Coloured	No	123	96.64536	5.48400	85.83213	107.45860	43.5753	3.5436
	Yes	1	0.78573	0.78573	0	2.33503	0.3543	0.3549
	Total	124	97.43110	5.47173	86.64207	108.22013	43.9296	3.5546
Total	No	197	213.13290	5.97591	201.34974	224.91606	96.0970	1.5921
	Yes	6	8.65651	3.56380	1.62950	15.68353	3.9030	1.5921
	Total	203	221.78941	5.49044	210.96349	232.61534	100.000	

Frequency Missing = 14

Table of racial_gr by newQ34

racial_gr	new Q34	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Black/African	No	45.2884	59.7550	93.6709	2.7462	88.2560	99.0858
	Yes	0.4804	6.6172	6.3291	2.7462	0.9142	11.7440
	Total	49.0616	63.0793	100.000			
Coloured	No	36.5881	50.5625	99.1935	0.8052	97.6059	100.000
	Yes	0.0000	1.0540	0.8065	0.8052	0.0000	2.3941
	Total	36.9207	50.9384	100.000			
Total	No	92.9578	99.2362				
	Yes	0.7638	7.0422				
	Total						

Frequency Missing = 14

Rao-Scott Chi-Square Test

Pearson Chi-Square	4.0660
Design Correction	0.7949
Rao-Scott Chi-Square	5.1153
DF	1
Pr > ChiSq	0.0237
F Value	5.1153
Num DF	1
Den DF	202
Pr > F	0.0248

Sample Size = 203

Table G4(iii)

Table of racial_gr by newQ35

racial_gr	new Q35	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Black/African	No	64	100.74598	10.44647	80.14787	121.34409	45.4242	3.8006
	Yes	15	23.61234	5.88162	12.01510	35.20957	10.6463	2.5705
	Total	79	124.35832	10.96217	102.74336	145.97327	56.0704	3.5546
Coloured	No	110	86.43081	5.59163	75.40537	97.45625	38.9698	3.3926
	Yes	14	11.00029	2.84377	5.39300	16.60758	4.9598	1.3143
	Total	124	97.43110	5.47173	86.64207	108.22013	43.9296	3.5546
Total	No	174	187.17679	7.36081	172.66291	201.69067	84.3939	2.7916
	Yes	29	34.61262	6.33315	22.12507	47.10018	15.6061	2.7916
	Total	203	221.78941	5.49044	210.96349	232.61534	100.000	

Frequency Missing = 14

Table of racial_gr by newQ35

racial_gr	new Q35	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Black/African	No	37.9303	52.9180	81.0127	4.4235	72.2905	89.7348
	Yes	5.5779	15.7147	18.9873	4.4235	10.2652	27.7095
	Total	49.0616	63.0793	100.000			
Coloured	No	32.2804	45.6591	88.7097	2.8491	83.0920	94.3274
	Yes	2.3682	7.5514	11.2903	2.8491	5.6726	16.9080
	Total	36.9207	50.9384	100.000			
Total	No	78.8895	89.8984				
	Yes	10.1016	21.1105				
	Total						

Frequency Missing = 14

Rao-Scott Chi-Square Test

Pearson Chi-Square	2.2492
Design Correction	0.9647
Rao-Scott Chi-Square	2.3314
DF	1
Pr > ChiSq	0.1268
F Value	2.3314
Num DF	1
Den DF	202
Pr > F	0.1283

Sample Size = 203

Table G5

Table of racial_gr by newQ31

racial_gr	new Q31	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Black/African	No	75	118.06169	10.80455	96.75558	139.36780	53.9973	3.6526
	Yes	3	4.72247	2.71278	0	10.07196	2.1599	1.2336
	Total	78	122.78416	10.88550	101.31843	144.24990	56.1572	3.5783
Coloured	No	120	94.28816	5.45739	83.52642	105.04990	43.1241	3.5558
	Yes	2	1.57147	1.10840	0	3.75719	0.7187	0.5087
	Total	122	95.85963	5.43346	85.14508	106.57418	43.8428	3.5783
Total	No	195	212.34985	5.88591	200.74310	223.95661	97.1214	1.3283
	Yes	5	6.29394	2.91773	0.54030	12.04758	2.8786	1.3283
	Total	200	218.64379	5.45204	207.89260	229.39497	100.000	

Frequency Missing = 17

Table of racial_gr by newQ31

racial_gr	new Q31	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Black/African	No	46.7946	61.2000	96.1538	2.1829	91.8492	100.000
	Yes	0.0000	4.5924	3.8462	2.1829	0.0000	8.1508
	Total	49.1009	63.2135	100.000			
Coloured	No	36.1123	50.1359	98.3607	1.1525	96.0879	100.000
	Yes	0.0000	1.7219	1.6393	1.1525	0.0000	3.9121
	Total	36.7865	50.8991	100.000			
Total	No	94.5021	99.7407				
	Yes	0.2593	5.4979				
	Total						

Frequency Missing = 17

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.8578
Design Correction	0.9028
Rao-Scott Chi-Square	0.9501
DF	1
Pr > ChiSq	0.3297
F Value	0.9501
Num DF	1
Den DF	199
Pr > F	0.3309

Sample Size = 200

Table G6(i)

Table of racial_gr by Q56

racial_gr	Q56	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Black/African	No	107	168.43468	14.21712	140.49381	196.37555	37.7130	2.6181
	Yes	14	22.03818	5.80348	10.63263	33.44374	4.9344	1.2776
	Total	121	190.47286	14.80409	161.37842	219.56731	42.6474	2.6067
Coloured	No	245	192.50499	8.27689	176.23844	208.77154	43.1024	2.3929
	Yes	81	63.64451	6.40607	51.05468	76.23433	14.2502	1.5191
	Total	326	256.14950	7.38941	241.62711	270.67189	57.3526	2.6067
Total	No	352	360.93967	11.19071	338.94660	382.93275	80.8154	1.8840
	Yes	95	85.68269	8.27214	69.42547	101.93991	19.1846	1.8840
	Total	447	446.62236	7.41468	432.05031	461.19441	100.000	

Frequency Missing = 55

Table of racial_gr by Q56

racial_gr	Q56	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Black/African	No	32.5676	42.8584	88.4298	2.9111	82.7085	94.1510
	Yes	2.4235	7.4453	11.5702	2.9111	5.8490	17.2915
	Total	37.5245	47.7703	100.000			
Coloured	No	38.3996	47.8052	75.1534	2.3960	70.4445	79.8622
	Yes	11.2646	17.2358	24.8466	2.3960	20.1378	29.5555
	Total	52.2297	62.4755	100.000			
Total	No	77.1128	84.5180				
	Yes	15.4820	22.8872				
	Total						

Frequency Missing = 55

Rao-Scott Chi-Square Test

Pearson Chi-Square	12.4298
Design Correction	1.3408
Rao-Scott Chi-Square	9.2703
DF	1
Pr > ChiSq	0.0023
F Value	9.2703
Num DF	1
Den DF	446
Pr > F	0.0025

Sample Size = 447

Table G6(ii)

Table of racial_gr by Q60

racial_gr	Q60	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Black/African	No	76	119.63585	12.49016	95.08759	144.18411	27.3157	2.5262
	Yes	43	67.68870	9.81386	48.40047	86.97693	15.4550	2.1120
	Total	119	187.32455	14.67154	158.48899	216.16011	42.7707	2.6323
Coloured	No	158	124.14608	7.90574	108.60807	139.68408	28.3455	2.0669
	Yes	161	126.50328	7.93758	110.90271	142.10385	28.8837	2.0826
	Total	319	250.64936	7.32325	236.25618	265.04253	57.2293	2.6323
Total	No	234	243.78192	12.26911	219.66813	267.89571	55.6613	2.5041
	Yes	204	194.19198	10.96028	172.65057	215.73340	44.3387	2.5041
	Total	438	437.97391	7.34829	423.53152	452.41630	100.000	

Frequency Missing = 64

Table of racial_gr by Q60

racial_gr	Q60	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Black/African	No	22.3507	32.2808	63.8655	4.4088	55.2005	72.5306
	Yes	11.3041	19.6058	36.1345	4.4088	27.4694	44.7995
	Total	37.5972	47.9442	100.000			
Coloured	No	24.2832	32.4079	49.5298	2.8025	44.0216	55.0379
	Yes	24.7905	32.9770	50.4702	2.8025	44.9621	55.9784
	Total	52.0558	62.4028	100.000			
Total	No	50.7397	60.5829				
	Yes	39.4171	49.2603				
	Total						

Frequency Missing = 64

Rao-Scott Chi-Square Test

Pearson Chi-Square	8.9278
Design Correction	1.2497
Rao-Scott Chi-Square	7.1439
DF	1
Pr > ChiSq	0.0075
F Value	7.1439
Num DF	1
Den DF	437
Pr > F	0.0078

Sample Size = 438

Table G6(iii)

Table of racial_gr by drugs

racial_gr	drugs	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Black/African	No	94	147.97065	13.40049	121.62764	174.31367	36.9730	2.7517
	Yes	8	12.59325	4.41384	3.91642	21.27007	3.1466	1.0909
	Total	102	160.56390	13.77954	133.47575	187.65206	40.1196	2.7512
Coloured	No	264	207.43395	7.57675	192.53939	222.32851	51.8309	2.6537
	Yes	41	32.21512	4.77689	22.82459	41.60565	8.0495	1.2280
	Total	305	239.64907	6.87801	226.12811	253.17003	59.8804	2.7512
Total	No	358	355.40460	9.26163	337.19788	373.61133	88.8039	1.5932
	Yes	49	44.80837	6.34840	32.32854	57.28820	11.1961	1.5932
	Total	407	400.21297	6.90153	386.64578	413.78017	100.000	

Frequency Missing = 95

Table of racial_gr by drugs

racial_gr	drugs	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Black/African	No	31.5636	42.3823	92.1569	2.6653	86.9174	97.3963
	Yes	1.0022	5.2911	7.8431	2.6653	2.6037	13.0826
	Total	34.7112	45.5280	100.000			
Coloured	No	46.6142	57.0476	86.5574	1.9556	82.7130	90.4017
	Yes	5.6354	10.4636	13.4426	1.9556	9.5983	17.2870
	Total	54.4720	65.2888	100.000			
Total	No	85.6718	91.9359				
	Yes	8.0641	14.3282				
	Total						

Frequency Missing = 95

Rao-Scott Chi-Square Test

Pearson Chi-Square	3.0834
Design Correction	1.3634
Rao-Scott Chi-Square	2.2616
DF	1
Pr > ChiSq	0.1326
F Value	2.2616
Num DF	1
Den DF	406
Pr > F	0.1334

Sample Size = 407

Table G7

Table of racial_gr by suicidal

racial_gr	suicidal	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
Black/African	Yes	8	12.59325	4.41699	3.91234	21.27416	2.8498	0.9900
	No	111	174.73130	14.37365	146.48211	202.98050	39.5407	2.6314
	Total	119	187.32455	14.70221	158.42963	216.21947	42.3905	2.6207
Coloured	Yes	17	13.35749	3.18049	7.10673	19.60825	3.0227	0.7275
	No	307	241.22054	7.63666	226.21187	256.22922	54.5868	2.5839
	Total	324	254.57803	7.33856	240.15523	269.00083	57.6095	2.6207
Total	Yes	25	25.95074	5.37254	15.39185	36.50963	5.8725	1.2087
	No	418	415.95185	8.61406	399.02225	432.88145	94.1275	1.2087
	Total	443	441.90258	7.36365	427.43046	456.37470	100.000	

Frequency Missing = 59

Table of racial_gr by suicidal

racial_gr	suicidal	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
Black/African	Yes	0.9041	4.7955	6.7227	2.2981	2.2060	11.2393
	No	34.3690	44.7124	93.2773	2.2981	88.7607	97.7940
	Total	37.2400	47.5409	100.000			
Coloured	Yes	1.5928	4.4526	5.2469	1.2401	2.8096	7.6842
	No	49.5086	59.6650	94.7531	1.2401	92.3158	97.1904
	Total	52.4591	62.7600	100.000			
Total	Yes	3.4970	8.2480				
	No	91.7520	96.5030				
	Total						

Frequency Missing = 59

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.4263
Design Correction	1.1975
Rao-Scott Chi-Square	0.3559
DF	1
Pr > ChiSq	0.5508
F Value	0.3559
Num DF	1
Den DF	442
Pr > F	0.5511

Sample Size = 443

APPENDIX H

Non-condom use at last sex (or safe sex) comparisons

Table H1

Table of safe_sex by age_group

safe_sex	age_group	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	(15-19)	82	82.61314	7.86665	67.10792	98.11836	34.9628	3.3708
	(20-24)	27	31.26960	5.97540	19.49204	43.04715	13.2336	2.4910
	Total	109	113.88273	8.58314	96.96531	130.80016	48.1964	3.5898
Yes	(15-19)	85	92.06613	8.53950	75.23472	108.89755	38.9634	3.5060
	(20-24)	23	30.34004	6.23197	18.05679	42.62329	12.8402	2.5672
	Total	108	122.40617	9.26804	104.13879	140.67355	51.8036	3.5898
Total	(15-19)	167	174.67927	8.02387	158.86417	190.49437	73.9261	3.2651
	(20-24)	50	61.60964	8.10915	45.62644	77.59283	26.0739	3.2651
	Total	217	236.28891	5.52207	225.40486	247.17295	100.000	

Table of safe_sex by age_group

safe_sex	age_group	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	(15-19)	28.3189	41.6066	72.5423	4.6646	63.3483	81.7363
	(20-24)	8.3238	18.1434	27.4577	4.6646	18.2637	36.6517
	Total	41.1209	55.2719	100.000			
Yes	(15-19)	32.0530	45.8737	75.2136	4.5685	66.2090	84.2183
	(20-24)	7.7803	17.9001	24.7864	4.5685	15.7817	33.7910
	Total	44.7281	58.8791	100.000			
Total	(15-19)	67.4906	80.3617				
	(20-24)	19.6383	32.5094				
	Total						

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.2006
Design Correction	1.1953
Rao-Scott Chi-Square	0.1678
DF	1
Pr > ChiSq	0.6821
F Value	0.1678
Num DF	1
Den DF	216
Pr > F	0.6825

Sample Size = 217

Table H2

Table of safe_sex by prov

safe_sex	prov	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	WC	86	83.56571	7.62771	68.53104	98.60037	35.6031	3.3661
	Other	22	28.74287	6.05986	16.79853	40.68722	12.2459	2.5179
	Total	108	112.30858	8.51824	95.51862	129.09854	47.8490	3.5960
Yes	WC	79	80.25593	7.85265	64.77790	95.73397	34.1930	3.3672
	Other	29	42.15024	7.44186	27.48190	56.81857	17.9581	3.0134
	Total	108	122.40617	9.25080	104.17229	140.64005	52.1510	3.5960
Total	WC	165	163.82164	7.58015	148.88071	178.76256	69.7961	3.4976
	Other	51	70.89311	8.99073	53.17186	88.61437	30.2039	3.4976
	Total	216	234.71475	5.50057	223.87280	245.55670	100.000	

Frequency Missing = 1

Table of safe_sex by prov

safe_sex	prov	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	WC	28.9684	42.2378	74.4072	4.7448	65.0549	83.7596
	Other	7.2830	17.2087	25.5928	4.7448	16.2404	34.9451
	Total	40.7611	54.9369	100.000			
Yes	WC	27.5561	40.8299	65.5653	5.0508	55.6098	75.5208
	Other	12.0185	23.8976	34.4347	5.0508	24.4792	44.3902
	Total	45.0631	59.2389	100.000			
Total	WC	62.9020	76.6901				
	Other	23.3099	37.0980				
	Total						

Frequency Missing = 1

Rao-Scott Chi-Square Test

Pearson Chi-Square	1.9989
Design Correction	1.2355
Rao-Scott Chi-Square	1.6178
DF	1
Pr > ChiSq	0.2034
F Value	1.6178
Num DF	1
Den DF	215
Pr > F	0.2048

Sample Size = 216

Table H3

Table of safe_sex by res

safe_sex	res	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	Off campus	89	89.49541	7.95766	73.80997	105.18084	38.1290	3.4547
	On campus/UWC hostel	18	22.81586	5.41242	12.14737	33.48434	9.7206	2.2656
	Total	107	112.31127	8.57528	95.40844	129.21409	47.8496	3.6045
Yes	Off campus	77	81.27064	8.09477	65.31495	97.22633	34.6249	3.4120
	On campus/UWC hostel	31	41.13553	7.13959	27.06260	55.20846	17.5256	2.9233
	Total	108	122.40617	9.23336	104.20618	140.60616	52.1504	3.6045
Total	Off campus	166	170.76605	7.80221	155.38703	186.14506	72.7539	3.3707
	On campus/UWC hostel	49	63.95139	8.45557	47.28452	80.61826	27.2461	3.3707
	Total	215	234.71744	5.50529	223.86590	245.56897	100.000	

Frequency Missing = 2

Table of safe_sex by res

safe_sex	res	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	Off campus	31.3193	44.9387	79.6852	4.3895	71.0330	88.3373
	On campus/UWC hostel	5.2549	14.1862	20.3148	4.3895	11.6627	28.9670
	Total	40.7446	54.9545	100.000			
Yes	Off campus	27.8994	41.3503	66.3942	4.9587	56.6201	76.1683
	On campus/UWC hostel	11.7634	23.2877	33.6058	4.9587	23.8317	43.3799
	Total	45.0455	59.2554	100.000			
Total	Off campus	66.1098	79.3980				
	On campus/UWC hostel	20.6020	33.8902				
	Total						

Frequency Missing = 2

Rao-Scott Chi-Square Test

Pearson Chi-Square	4.7811
Design Correction	1.2221
Rao-Scott Chi-Square	3.9123
DF	1
Pr > ChiSq	0.0479
F Value	3.9123
Num DF	1
Den DF	214
Pr > F	0.0492

Sample Size = 215

Table H4

Table of safe_sex by newQ13

safe_sex	newQ13	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	Christian	92	96.73184	8.27557	80.41475	113.04892	43.9167	3.6771
	Moslem	10	8.07826	2.50612	3.13689	13.01962	3.6676	1.1555
	Total	102	104.81009	8.18944	88.66283	120.95736	47.5842	3.7023
Yes	Christian	99	112.87407	9.03511	95.05938	130.68876	51.2453	3.7089
	Moslem	3	2.57812	1.49212	0	5.52016	1.1705	0.6799
	Total	102	115.45219	8.99959	97.70753	133.19684	52.4158	3.7023
Total	Christian	191	209.60591	6.52277	196.74483	222.46698	95.1620	1.3338
	Moslem	13	10.65637	2.88130	4.97526	16.33748	4.8380	1.3338
	Total	204	220.26228	5.37049	209.67319	230.85137	100.000	

Frequency Missing = 13

Table of safe_sex by newQ13

safe_sex	newQ13	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	Christian	36.6665	51.1668	92.2925	2.3956	87.5690	97.0159
	Moslem	1.3892	5.9460	7.7075	2.3956	2.9841	12.4310
	Total	40.2844	54.8841	100.000			
Yes	Christian	43.9323	58.5583	97.7669	1.2939	95.2158	100.000
	Moslem	0.0000	2.5111	2.2331	1.2939	0.0000	4.7842
	Total	45.1159	59.7156	100.000			
Total	Christian	92.5321	97.7918				
	Moslem	2.2082	7.4679				
	Total						

Frequency Missing = 13

Rao-Scott Chi-Square Test

Pearson Chi-Square	3.3121
Design Correction	0.8108
Rao-Scott Chi-Square	4.0849
DF	1
Pr > ChiSq	0.0433
F Value	4.0849
Num DF	1
Den DF	203
Pr > F	0.0446

Sample Size = 204

Table H5

Table of safe_sex by newQ32

safe_sex	newQ32	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	1 partner	70	69.41711	7.31512	54.99459	83.83962	30.8136	3.3164
	more than 1 partner	35	40.53427	6.66058	27.40225	53.66628	17.9928	2.8933
	Total	105	109.95137	8.39183	93.40601	126.49674	48.8064	3.6867
Yes	1 partner	61	66.55453	7.72427	51.32533	81.78373	29.5430	3.3629
	more than 1 partner	40	48.77465	7.37181	34.24038	63.30893	21.6506	3.1500
	Total	101	115.32919	9.07402	97.43881	133.21956	51.1936	3.6867
Total	1 partner	131	135.97164	8.25239	119.70120	152.24208	60.3566	3.6599
	more than 1 partner	75	89.30892	8.91171	71.73856	106.87928	39.6434	3.6599
	Total	206	225.28056	5.38958	214.65445	235.90667	100.000	

Frequency Missing = 11

Table of safe_sex by newQ32

safe_sex	newQ32	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	1 partner	24.2751	37.3522	63.1344	5.0919	53.0951	73.1736
	more than 1 partner	12.2884	23.6972	36.8656	5.0919	26.8264	46.9049
	Total	41.5377	56.0752	100.000			
Yes	1 partner	22.9127	36.1732	57.7083	5.2384	47.3803	68.0364
	more than 1 partner	15.4401	27.8612	42.2917	5.2384	31.9636	52.6197
	Total	43.9248	58.4623	100.000			
Total	1 partner	53.1406	67.5725				
	more than 1 partner	32.4275	46.8594				
	Total						

Frequency Missing = 11

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.6333
Design Correction	1.1469
Rao-Scott Chi-Square	0.5522
DF	1
Pr > ChiSq	0.4574
F Value	0.5522
Num DF	1
Den DF	205
Pr > F	0.4583

Sample Size = 206

Table H6(i)

Table of safe_sex by new_vsex

safe_sex	new_vsex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	(5-14)	11	15.17136	4.59035	6.12178	24.22095	6.6025	1.9698
	(15-24)	93	94.78270	8.07874	78.85599	110.70941	41.2489	3.5688
	Total	104	109.95406	8.51532	93.16666	126.74146	47.8514	3.6558
Yes	(5-14)	11	15.17136	4.59035	6.12178	24.22095	6.6025	1.9698
	(15-24)	94	104.65669	8.84282	87.22364	122.08974	45.5461	3.6541
	Total	105	119.82806	9.16514	101.75959	137.89652	52.1486	3.6558
Total	(5-14)	22	30.34273	6.31898	17.88526	42.80019	13.2050	2.6681
	(15-24)	187	199.43939	6.93400	185.76945	213.10933	86.7950	2.6681
	Total	209	229.78212	5.46096	219.01618	240.54805	100.000	

Frequency Missing = 8

Table of safe_sex by new_vsex

safe_sex	new_vsex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	(5-14)	2.7193	10.4857	13.7979	3.9165	6.0768	21.5191
	(15-24)	34.2133	48.2846	86.2021	3.9165	78.4809	93.9232
	Total	40.6443	55.0586	100.000			
Yes	(5-14)	2.7193	10.4857	12.6609	3.6391	5.4867	19.8352
	(15-24)	38.3422	52.7499	87.3391	3.6391	80.1648	94.5133
	Total	44.9414	59.3557	100.000			
Total	(5-14)	7.9449	18.4650				
	(15-24)	81.5350	92.0551				
	Total						

Frequency Missing = 8

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.0588
Design Correction	1.2907
Rao-Scott Chi-Square	0.0456
DF	1
Pr > ChiSq	0.8309
F Value	0.0456
Num DF	1
Den DF	208
Pr > F	0.8312

Sample Size = 209

Table H6(ii)

Table of safe_sex by new_osex

safe_sex	new_osex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	(10-14)	5	4.71709	2.18729	0.38058	9.05361	4.0906	1.9038
	(15-24)	79	83.21490	5.78150	71.75252	94.67729	72.1623	4.6760
	Total	84	87.93200	5.55011	76.92837	98.93563	76.2529	4.4950
Yes	(10-14)	3	4.15496	2.42131	0	8.95543	3.6031	2.0836
	(15-24)	20	23.22930	5.00299	13.31038	33.14821	20.1440	4.2183
	Total	23	27.38426	5.39181	16.69448	38.07404	23.7471	4.4950
Total	(10-14)	8	8.87205	3.20580	2.51624	15.22787	7.6937	2.7630
	(15-24)	99	106.44420	4.68866	97.14848	115.73992	92.3063	2.7630
	Total	107	115.31625	3.80029	107.78181	122.85070	100.000	

Frequency Missing = 110

Table of safe_sex by new_osex

safe_sex	new_osex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	(10-14)	0.3161	7.8650	5.3645	2.4804	0.4469	10.2820
	(15-24)	62.8916	81.4330	94.6355	2.4804	89.7180	99.5531
	Total	67.3412	85.1646	100.000			
Yes	(10-14)	0.0000	7.7340	15.1728	8.1893	0.0000	31.4090
	(15-24)	11.7808	28.5072	84.8272	8.1893	68.5910	100.000
	Total	14.8354	32.6588	100.000			
Total	(10-14)	2.2157	13.1717				
	(15-24)	86.8283	97.7843				
	Total						

Frequency Missing = 110

Rao-Scott Chi-Square Test

Pearson Chi-Square	2.6247
Design Correction	1.1516
Rao-Scott Chi-Square	2.2791
DF	1
Pr > ChiSq	0.1311
F Value	2.2791
Num DF	1
Den DF	106
Pr > F	0.1341

Sample Size = 107

Table H7(i)

Table of safe_sex by otherQ30

safe_sex	otherQ30	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	14	14.94239	4.10466	6.84500	23.03978	7.4455	2.0357
	Yes	78	78.28916	7.43315	63.62556	92.95276	39.0100	3.7291
	Total	92	93.23155	7.71935	78.00335	108.45976	46.4555	3.8438
Yes	No	5	6.51485	2.98096	0.63422	12.39548	3.2462	1.4761
	Yes	91	100.94356	8.43977	84.29416	117.59295	50.2983	3.8660
	Total	96	107.45841	8.54882	90.59388	124.32293	53.5445	3.8438
Total	No	19	21.45724	4.96923	11.65429	31.26018	10.6917	2.4463
	Yes	169	179.23272	6.47762	166.45411	192.01133	89.3083	2.4463
	Total	188	200.68996	5.05182	190.72408	210.65583	100.000	

Frequency Missing = 29

Table of safe_sex by otherQ30

safe_sex	otherQ30	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	3.4296	11.4614	16.0272	4.1519	7.8367	24.2177
	Yes	31.6535	46.3665	83.9728	4.1519	75.7823	92.1633
	Total	38.8726	54.0384	100.000			
Yes	No	0.3343	6.1581	6.0627	2.7137	0.7093	11.4161
	Yes	42.6717	57.9248	93.9373	2.7137	88.5839	99.2907
	Total	45.9616	61.1274	100.000			
Total	No	5.8659	15.5176				
	Yes	84.4824	94.1341				
	Total						

Frequency Missing = 29

Rao-Scott Chi-Square Test

Pearson Chi-Square	4.8628
Design Correction	1.2355
Rao-Scott Chi-Square	3.9360
DF	1
Pr > ChiSq	0.0473
F Value	3.9360
Num DF	1
Den DF	187
Pr > F	0.0487

Sample Size = 188

Table H7(ii)

Table of safe_sex by newQ34

safe_sex	new Q34	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	104	106.80038	8.37169	90.29928	123.30147	45.5022	3.5746
	Yes	5	7.08236	3.21635	0.74274	13.42198	3.0174	1.3607
	Total	109	113.88273	8.56702	96.99663	130.76884	48.5196	3.6002
Yes	No	106	119.25786	9.17263	101.17807	137.33765	50.8097	3.6033
	Yes	1	1.57416	1.57416	0	4.67691	0.6707	0.6695
	Total	107	120.83201	9.21242	102.67378	138.99024	51.4804	3.6002
Total	No	210	226.05823	5.97834	214.27457	237.84190	96.3119	1.5059
	Yes	6	8.65651	3.56640	1.62694	15.68609	3.6881	1.5059
	Total	216	234.71475	5.50057	223.87280	245.55670	100.000	

Frequency Missing = 1

Table of safe_sex by newQ34

safe_sex	new Q34	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	38.4565	52.5480	93.7810	2.7460	88.3684	99.1936
	Yes	0.3353	5.6995	6.2190	2.7460	0.8064	11.6316
	Total	41.4235	55.6157	100.000			
Yes	No	43.7074	57.9120	98.6972	1.2955	96.1437	100.000
	Yes	0.0000	1.9902	1.3028	1.2955	0.0000	3.8563
	Total	44.3843	58.5765	100.000			
Total	No	93.3436	99.2802				
	Yes	0.7198	6.6564				
	Total						

Frequency Missing = 1

Rao-Scott Chi-Square Test

Pearson Chi-Square	3.6711
Design Correction	1.4209
Rao-Scott Chi-Square	2.5836
DF	1
Pr > ChiSq	0.1080
F Value	2.5836
Num DF	1
Den DF	215
Pr > F	0.1094

Sample Size = 216

Table H7(iii)

Table of safe_sex by newQ35

safe_sex	new Q35	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	89	90.08593	8.03246	74.25347	105.91839	38.3810	3.4604
	Yes	19	22.22265	5.16360	12.04489	32.40041	9.4679	2.1743
	Total	108	112.30858	8.51824	95.51862	129.09854	47.8490	3.5960
Yes	No	97	109.03256	9.05181	91.19091	126.87421	46.4532	3.6040
	Yes	11	13.37361	4.14805	5.19755	21.54966	5.6978	1.7521
	Total	108	122.40617	9.25080	104.17229	140.64005	52.1510	3.5960
Total	No	186	199.11849	7.42196	184.48937	213.74761	84.8342	2.6720
	Yes	30	35.59626	6.41128	22.95925	48.23327	15.1658	2.6720
	Total	216	234.71475	5.50057	223.87280	245.55670	100.000	

Frequency Missing = 1

Table of safe_sex by newQ35

safe_sex	new Q35	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	31.5604	45.2017	80.2129	4.2364	71.8627	88.5631
	Yes	5.1823	13.7536	19.7871	4.2364	11.4369	28.1373
	Total	40.7611	54.9369	100.000			
Yes	No	39.3495	53.5569	89.0744	3.2627	82.6434	95.5054
	Yes	2.2443	9.1514	10.9256	3.2627	4.4946	17.3566
	Total	45.0631	59.2389	100.000			
Total	No	79.5676	90.1009				
	Yes	9.8991	20.4324				
	Total						

Frequency Missing = 1

Rao-Scott Chi-Square Test

Pearson Chi-Square	3.2898
Design Correction	1.1967
Rao-Scott Chi-Square	2.7492
DF	1
Pr > ChiSq	0.0973
F Value	2.7492
Num DF	1
Den DF	215
Pr > F	0.0988

Sample Size = 216

Table H8

Table of safe_sex by newQ31

safe_sex	new Q31	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	105	109.16295	8.44362	92.51874	125.80717	47.1405	3.6164
	Yes	3	3.93405	2.35087	0	8.56813	1.6989	1.0119
	Total	108	113.09700	8.53053	96.28147	129.91253	48.8394	3.6269
Yes	No	103	116.11223	9.10895	98.15651	134.06795	50.1415	3.6305
	Yes	2	2.35989	1.75604	0	5.82143	1.0191	0.7574
	Total	105	118.47212	9.13628	100.46253	136.48172	51.1606	3.6269
Total	No	208	225.27519	5.88990	213.66492	236.88545	97.2820	1.2549
	Yes	5	6.29394	2.91936	0.53924	12.04864	2.7180	1.2549
	Total	213	231.56912	5.46237	220.80161	242.33663	100.000	

Frequency Missing = 4

Table of safe_sex by newQ31

safe_sex	new Q31	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	40.0118	54.2693	96.5215	2.0492	92.4821	100.000
	Yes	0.0000	3.6936	3.4785	2.0492	0.0000	7.5179
	Total	41.6899	55.9889	100.000			
Yes	No	42.9849	57.2981	98.0081	1.4730	95.1044	100.000
	Yes	0.0000	2.5120	1.9919	1.4730	0.0000	4.8956
	Total	44.0111	58.3101	100.000			
Total	No	94.8083	99.7558				
	Yes	0.2442	5.1917				
	Total						

Frequency Missing = 4

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.4448
Design Correction	1.2377
Rao-Scott Chi-Square	0.3594
DF	1
Pr > ChiSq	0.5489
F Value	0.3594
Num DF	1
Den DF	212
Pr > F	0.5495

Sample Size = 213

Table H9(i)

Table of safe_sex by Q56

safe_sex	Q56	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	72	78.47699	8.19665	62.31961	94.63436	33.8892	3.4408
	Yes	37	35.40575	5.61930	24.32889	46.48261	15.2895	2.4670
	Total	109	113.88273	8.51757	97.09276	130.67271	49.1787	3.6282
Yes	No	71	86.16598	8.98914	68.44644	103.88552	37.2096	3.5814
	Yes	33	31.52041	5.34271	20.98876	42.05206	13.6117	2.3424
	Total	104	117.68639	9.15023	99.64931	135.72347	50.8213	3.6282
Total	No	143	164.64297	9.17588	146.55532	182.73061	71.0988	3.1575
	Yes	70	66.92616	7.04221	53.04442	80.80789	28.9012	3.1575
	Total	213	231.56912	5.46237	220.80161	242.33663	100.000	

Frequency Missing = 4

Table of safe_sex by Q56

safe_sex	Q56	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	27.1067	40.6717	68.9103	4.5715	59.8989	77.9218
	Yes	10.4265	20.1525	31.0897	4.5715	22.0782	40.1011
	Total	42.0268	56.3306	100.000			
Yes	No	30.1498	44.2694	73.2166	4.3429	64.6557	81.7775
	Yes	8.9942	18.2291	26.7834	4.3429	18.2225	35.3443
	Total	43.6694	57.9732	100.000			
Total	No	64.8747	77.3230				
	Yes	22.6770	35.1253				
	Total						

Frequency Missing = 4

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.4804
Design Correction	1.0247
Rao-Scott Chi-Square	0.4688
DF	1
Pr > ChiSq	0.4935
F Value	0.4688
Num DF	1
Den DF	212
Pr > F	0.4943

Sample Size = 213

Table H9(ii)

Table of safe_sex by Q60

safe_sex	Q60	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	36	38.93173	6.32606	26.45995	51.40350	17.2216	2.7703
	Yes	71	72.59112	7.60474	57.59844	87.58379	32.1109	3.3763
	Total	107	111.52284	8.39916	94.96398	128.08171	49.3325	3.6720
Yes	No	34	45.06958	7.39443	30.49154	59.64762	19.9367	3.1199
	Yes	67	69.47119	7.58537	54.51670	84.42567	30.7308	3.3462
	Total	101	114.54076	9.05339	96.69210	132.38943	50.6675	3.6720
Total	No	70	84.00131	8.81723	66.61822	101.38440	37.1583	3.6161
	Yes	138	142.06230	8.16367	125.96771	158.15689	62.8417	3.6161
	Total	208	226.06361	5.39354	215.43029	236.69693	100.000	

Frequency Missing = 9

Table of safe_sex by Q60

safe_sex	Q60	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	11.7600	22.6832	34.9092	4.9283	25.1932	44.6252
	Yes	25.4547	38.7672	65.0908	4.9283	55.3748	74.8068
	Total	42.0932	56.5718	100.000			
Yes	No	13.7858	26.0876	39.3481	5.2559	28.9861	49.7100
	Yes	24.1338	37.3278	60.6519	5.2559	50.2900	71.0139
	Total	43.4282	57.9068	100.000			
Total	No	30.0291	44.2874				
	Yes	55.7126	69.9709				
	Total						

Frequency Missing = 9

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.4387
Design Correction	1.1463
Rao-Scott Chi-Square	0.3827
DF	1
Pr > ChiSq	0.5362
F Value	0.3827
Num DF	1
Den DF	207
Pr > F	0.5368

Sample Size = 208

Table H9(iii)

Table of safe_sex by drugs

safe_sex	drugs	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	79	81.24226	7.70333	66.04772	96.43679	39.6653	3.7198
	Yes	20	19.26418	4.31909	10.74494	27.78343	9.4055	2.1223
	Total	99	100.50644	7.84906	85.02446	115.98842	49.0708	3.8214
Yes	No	80	91.51206	8.55355	74.64051	108.38360	44.6794	3.8281
	Yes	13	12.80073	3.63580	5.62924	19.97221	6.2498	1.7790
	Total	93	104.31278	8.60907	87.33172	121.29384	50.9292	3.8214
Total	No	159	172.75431	7.39289	158.17211	187.33651	84.3448	2.6669
	Yes	33	32.06491	5.41216	21.38963	42.74019	15.6552	2.6669
	Total	192	204.81922	5.09339	194.77270	214.86574	100.000	

Frequency Missing = 25

Table of safe_sex by drugs

safe_sex	drugs	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	32.3282	47.0025	80.8329	4.0912	72.7631	88.9026
	Yes	5.2193	13.5916	19.1671	4.0912	11.0974	27.2369
	Total	41.5332	56.6084	100.000			
Yes	No	37.1287	52.2301	87.7285	3.4024	81.0175	94.4395
	Yes	2.7408	9.7588	12.2715	3.4024	5.5605	18.9825
	Total	43.3916	58.4668	100.000			
Total	No	79.0844	89.6051				
	Yes	10.3949	20.9156				
	Total						

Frequency Missing = 25

Rao-Scott Chi-Square Test

Pearson Chi-Square	1.7279
Design Correction	1.0297
Rao-Scott Chi-Square	1.6780
DF	1
Pr > ChiSq	0.1952
F Value	1.6780
Num DF	1
Den DF	191
Pr > F	0.1968

Sample Size = 192

Table H10

Table of safe_sex by suicidal

safe_sex	suicidal	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	Yes	9	9.43688	3.28160	2.96795	15.90580	4.0891	1.4205
	No	99	102.87170	8.36019	86.39152	119.35189	44.5750	3.6017
	Total	108	112.30858	8.45339	95.64466	128.97250	48.6641	3.6338
Yes	Yes	6	7.86809	3.30243	1.35811	14.37808	3.4093	1.4216
	No	98	110.60672	9.04158	92.78331	128.43012	47.9266	3.6410
	Total	104	118.47481	9.18734	100.36407	136.58555	51.3359	3.6338
Total	Yes	15	17.30497	4.57943	8.27768	26.33226	7.4984	1.9676
	No	197	213.47842	6.61753	200.43348	226.52336	92.5016	1.9676
	Total	212	230.78339	5.45402	220.03203	241.53475	100.000	

Frequency Missing = 5

Table of safe_sex by suicidal

safe_sex	suicidal	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	Yes	1.2888	6.8893	8.4026	2.8489	2.7868	14.0185
	No	37.4752	51.6749	91.5974	2.8489	85.9815	97.2132
	Total	41.5008	55.8273	100.000			
Yes	Yes	0.6069	6.2117	6.6412	2.7191	1.2811	12.0012
	No	40.7493	55.1040	93.3588	2.7191	87.9988	98.7189
	Total	44.1727	58.4992	100.000			
Total	Yes	3.6197	11.3770				
	No	88.6230	96.3803				
	Total						

Frequency Missing = 5

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.2369
Design Correction	1.1967
Rao-Scott Chi-Square	0.1980
DF	1
Pr > ChiSq	0.6564
F Value	0.1980
Num DF	1
Den DF	211
Pr > F	0.6568

Sample Size = 212

APPENDIX I

Current cigarette smoking comparisons

Table I1

Table of Q56 by newQ32

Q56	newQ32	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	1 partner	87	94.99353	8.47888	78.27457	111.71250	43.0691	3.6931
	more than 1 partner	48	60.99829	8.13914	44.94925	77.04734	27.6560	3.4695
	Total	135	155.99183	8.97111	138.30226	173.68139	70.7251	3.2608
Yes	1 partner	43	39.40395	5.59493	28.37167	50.43623	17.8653	2.6326
	more than 1 partner	24	25.16500	5.16710	14.97632	35.35368	11.4096	2.3365
	Total	67	64.56895	6.93797	50.88841	78.24950	29.2749	3.2608
Total	1 partner	130	134.39748	8.12094	118.38432	150.41064	60.9344	3.6926
	more than 1 partner	72	86.16330	8.81309	68.78531	103.54128	39.0656	3.6926
	Total	202	220.56078	5.32870	210.05345	231.06811	100.000	

Frequency Missing = 300

Table of Q56 by newQ32

Q56	newQ32	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	1 partner	35.7869	50.3513	60.8965	4.5006	52.0220	69.7710
	more than 1 partner	20.8147	34.4973	39.1035	4.5006	30.2290	47.9780
	Total	64.2953	77.1549	100.000			
Yes	1 partner	12.6744	23.0563	61.0262	6.3940	48.4183	73.6340
	more than 1 partner	6.8023	16.0168	38.9738	6.3940	26.3660	51.5817
	Total	22.8451	35.7047	100.000			
Total	1 partner	53.6532	68.2157				
	more than 1 partner	31.7843	46.3468				
	Total						

Frequency Missing = 300

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.0003
Design Correction	1.0693
Rao-Scott Chi-Square	0.0003
DF	1
Pr > ChiSq	0.9867
F Value	0.0003
Num DF	1
Den DF	201
Pr > F	0.9868

Sample Size = 202

Table I2(i)

Table of Q56 by new_vsex

Q56	new_vsex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	(5-14)	11	17.31571	5.09131	7.27737	27.35406	7.6937	2.2135
	(15-24)	126	142.39193	9.01107	124.62516	160.15870	63.2678	3.5308
	Total	137	159.70765	9.10758	141.75058	177.66471	70.9615	3.2204
Yes	(5-14)	10	12.24128	3.95143	4.45039	20.03217	5.4391	1.7431
	(15-24)	58	53.11341	6.27024	40.75063	65.47620	23.5994	2.9310
	Total	68	65.35469	6.96817	51.61581	79.09356	29.0385	3.2204
Total	(5-14)	21	29.55699	6.28150	17.17201	41.94197	13.1328	2.7040
	(15-24)	184	195.50534	6.80947	182.07937	208.93132	86.8672	2.7040
	Total	205	225.06234	5.40127	214.41287	235.71181	100.000	

Frequency Missing = 297

Table of Q56 by new_vsex

Q56	new_vsex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	(5-14)	3.3294	12.0581	10.8421	3.0608	4.8072	16.8771
	(15-24)	56.3062	70.2293	89.1579	3.0608	83.1229	95.1928
	Total	64.6121	77.3110	100.000			
Yes	(5-14)	2.0022	8.8759	18.7305	5.4447	7.9953	29.4657
	(15-24)	17.8205	29.3783	81.2695	5.4447	70.5343	92.0047
	Total	22.6890	35.3879	100.000			
Total	(5-14)	7.8013	18.4643				
	(15-24)	81.5357	92.1987				
	Total						

Frequency Missing = 297

Rao-Scott Chi-Square Test

Pearson Chi-Square	2.3042
Design Correction	1.2492
Rao-Scott Chi-Square	1.8446
DF	1
Pr > ChiSq	0.1744
F Value	1.8446
Num DF	1
Den DF	204
Pr > F	0.1759

Sample Size = 205

Table I2(ii)

Table of Q56 by new_osex

Q56	new_osex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	(10-14)	3	3.93405	2.34053	0	8.57541	3.4828	2.0574
	(15-24)	63	71.40537	6.48601	58.54336	84.26738	63.2150	4.8963
	Total	66	75.33942	6.49186	62.46581	88.21303	66.6978	4.7306
Yes	(10-14)	5	4.93801	2.27164	0.43325	9.44276	4.3716	2.0158
	(15-24)	34	32.67894	4.94053	22.88168	42.47620	28.9306	4.5195
	Total	39	37.61694	5.14451	27.41519	47.81869	33.3022	4.7306
Total	(10-14)	8	8.87205	3.20388	2.51863	15.22547	7.8544	2.8183
	(15-24)	97	104.08431	4.64792	94.86732	113.30131	92.1456	2.8183
	Total	105	112.95636	3.75626	105.50755	120.40517	100.000	

Frequency Missing = 397

Table of Q56 by new_osex

Q56	new_osex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	(10-14)	0.0000	7.5627	5.2218	3.0566	0.0000	11.2831
	(15-24)	53.5055	72.9245	94.7782	3.0566	88.7169	100.000
	Total	57.3168	76.0788	100.000			
Yes	(10-14)	0.3742	8.3690	13.1271	5.7442	1.7362	24.5180
	(15-24)	19.9682	37.8930	86.8729	5.7442	75.4820	98.2638
	Total	23.9212	42.6832	100.000			
Total	(10-14)	2.2656	13.4432				
	(15-24)	86.5568	97.7344				
	Total						

Frequency Missing = 397

Rao-Scott Chi-Square Test

Pearson Chi-Square	2.0138
Design Correction	1.1702
Rao-Scott Chi-Square	1.7209
DF	1
Pr > ChiSq	0.1896
F Value	1.7209
Num DF	1
Den DF	104
Pr > F	0.1925

Sample Size = 105

Table I3(i)

Table of Q56 by otherQ30

Q56	other Q30	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	10	11.79945	3.84762	4.20833	19.39058	5.9970	1.9381
	Yes	110	123.53582	8.53771	106.69142	140.38022	62.7863	3.6971
	Total	120	135.33527	8.47659	118.61145	152.05909	68.7833	3.4824
Yes	No	9	9.65779	3.33015	3.08760	16.22798	4.9085	1.6876
	Yes	56	51.76285	6.14552	39.63811	63.88760	26.3082	3.2576
	Total	65	61.42064	6.58965	48.41966	74.42162	31.2167	3.4824
Total	No	19	21.45724	4.96542	11.66076	31.25372	10.9055	2.4916
	Yes	166	175.29867	6.41512	162.64202	187.95533	89.0945	2.4916
	Total	185	196.75591	4.99241	186.90619	206.60564	100.000	

Frequency Missing = 317

Table of Q56 by otherQ30

Q56	other Q30	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	2.1733	9.8207	8.7187	2.7795	3.2348	14.2025
	Yes	55.4921	70.0805	91.2813	2.7795	85.7975	96.7652
	Total	61.9128	75.6538	100.000			
Yes	No	1.5790	8.2380	15.7240	5.0262	5.8076	25.6404
	Yes	19.8811	32.7353	84.2760	5.0262	74.3596	94.1924
	Total	24.3462	38.0872	100.000			
Total	No	5.9898	15.8213				
	Yes	84.1787	94.0102				
	Total						

Frequency Missing = 317

Rao-Scott Chi-Square Test

Pearson Chi-Square	2.0063
Design Correction	1.1480
Rao-Scott Chi-Square	1.7477
DF	1
Pr > ChiSq	0.1862
F Value	1.7477
Num DF	1
Den DF	184
Pr > F	0.1878

Sample Size = 185

Table I3(ii)

Table of Q56 by newQ34

Q56	new Q34	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	139	159.13476	9.16288	141.07225	177.19728	69.1905	3.2508
	Yes	3	3.93405	2.35082	0	8.56816	1.7105	1.0188
	Total	142	163.06881	9.14060	145.05021	181.08741	70.9010	3.1742
Yes	No	67	62.20369	6.70188	48.99247	75.41491	27.0457	3.0603
	Yes	3	4.72247	2.71357	0	10.07164	2.0533	1.1732
	Total	70	66.92616	7.03521	53.05785	80.79447	29.0990	3.1742
Total	No	206	221.33845	5.91999	209.66854	233.00836	96.2362	1.5361
	Yes	6	8.65651	3.56563	1.62769	15.68534	3.7638	1.5361
	Total	212	229.99497	5.44047	219.27033	240.71961	100.000	

Frequency Missing = 290

Table of Q56 by newQ34

Q56	new Q34	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	62.7824	75.5987	97.5875	1.4318	94.7650	100.000
	Yes	0.0000	3.7188	2.4125	1.4318	0.0000	5.2350
	Total	64.6438	77.1583	100.000			
Yes	No	21.0130	33.0784	92.9438	3.8869	85.2815	100.000
	Yes	0.0000	4.3659	7.0562	3.8869	0.0000	14.7185
	Total	22.8417	35.3562	100.000			
Total	No	93.2081	99.2643				
	Yes	0.7357	6.7919				
	Total						

Frequency Missing = 290

Rao-Scott Chi-Square Test

Pearson Chi-Square	2.6040
Design Correction	1.3426
Rao-Scott Chi-Square	1.9396
DF	1
Pr > ChiSq	0.1637
F Value	1.9396
Num DF	1
Den DF	211
Pr > F	0.1652

Sample Size = 212

Table I3(iii)

Table of Q56 by newQ35

Q56	new Q35	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	122	137.69516	9.19391	119.57147	155.81885	59.8688	3.5335
	Yes	20	25.37365	5.66917	14.19818	36.54912	11.0323	2.4145
	Total	142	163.06881	9.14060	145.05021	181.08741	70.9010	3.1742
Yes	No	60	56.70355	6.60853	43.67635	69.73074	24.6543	2.9776
	Yes	10	10.22261	3.36393	3.59140	16.85382	4.4447	1.4625
	Total	70	66.92616	7.03521	53.05785	80.79447	29.0990	3.1742
Total	No	182	194.39871	7.36159	179.88702	208.91039	84.5230	2.7211
	Yes	30	35.59626	6.40288	22.97445	48.21807	15.4770	2.7211
	Total	212	229.99497	5.44047	219.27033	240.71961	100.000	

Frequency Missing = 290

Table of Q56 by newQ35

Q56	new Q35	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	52.9032	66.8343	84.4399	3.3202	77.8949	90.9849
	Yes	6.2727	15.7918	15.5601	3.3202	9.0151	22.1051
	Total	64.6438	77.1583	100.000			
Yes	No	18.7846	30.5240	84.7255	4.6902	75.4799	93.9712
	Yes	1.5616	7.3278	15.2745	4.6902	6.0288	24.5201
	Total	22.8417	35.3562	100.000			
Total	No	79.1590	89.8870				
	Yes	10.1130	20.8410				
	Total						

Frequency Missing = 290

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.0027
Design Correction	1.1045
Rao-Scott Chi-Square	0.0025
DF	1
Pr > ChiSq	0.9604
F Value	0.0025
Num DF	1
Den DF	211
Pr > F	0.9604

Sample Size = 212

Table I4

Table of Q56 by newQ31

Q56	new Q31	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	200	216.67006	9.77904	197.42030	235.91983	73.4967	2.7041
	Yes	3	4.72247	2.71676	0	10.07034	1.6019	0.9171
	Total	203	221.39253	9.78272	202.13551	240.64956	75.0986	2.6192
Yes	No	76	71.83847	7.50184	57.07130	86.60564	24.3683	2.6030
	Yes	2	1.57147	1.10921	0	3.75492	0.5331	0.3771
	Total	78	73.40994	7.53005	58.58724	88.23263	24.9014	2.6192
Total	No	276	288.50853	6.38176	275.94620	301.07086	97.8650	0.9882
	Yes	5	6.29394	2.92543	0.53531	12.05257	2.1350	0.9882
	Total	281	294.80247	6.02616	282.94013	306.66481	100.000	

Frequency Missing = 221

Table of Q56 by newQ31

Q56	new Q31	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	68.1737	78.8197	97.8669	1.2175	95.4703	100.000
	Yes	0.0000	3.4073	2.1331	1.2175	0.0000	4.5297
	Total	69.9427	80.2545	100.000			
Yes	No	19.2444	29.4923	97.8593	1.5052	94.8964	100.000
	Yes	0.0000	1.2753	2.1407	1.5052	0.0000	5.1036
	Total	19.7455	30.0573	100.000			
Total	No	95.9199	99.8102				
	Yes	0.1898	4.0801				
	Total						

Frequency Missing = 221

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.0000
Design Correction	0.9386
Rao-Scott Chi-Square	0.0000
DF	1
Pr > ChiSq	0.9969
F Value	0.0000
Num DF	1
Den DF	280
Pr > F	0.9969

Sample Size = 281

Table I5(i)

Table of Q56 by Q60

Q56	Q60	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	236	248.91736	12.87167	223.62637	274.20836	51.1268	2.3865
	Yes	147	144.01077	10.68804	123.01030	165.01124	29.5794	2.1687
	Total	383	392.92813	11.50637	370.31976	415.53650	80.7062	1.7958
Yes	No	25	21.88294	4.40455	13.22863	30.53726	4.4947	0.9104
	Yes	79	72.05132	7.78292	56.75899	87.34365	14.7991	1.6177
	Total	104	93.93426	8.57237	77.09079	110.77774	19.2938	1.7958
Total	No	261	270.80030	12.75399	245.74054	295.86007	55.6215	2.3629
	Yes	226	216.06209	11.49381	193.47839	238.64579	44.3785	2.3629
	Total	487	486.86239	7.34788	472.42486	501.29993	100.000	

Frequency Missing = 15

Table of Q56 by Q60

Q56	Q60	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	46.4378	55.8159	63.3493	2.5747	58.2904	68.4083
	Yes	25.3182	33.8405	36.6507	2.5747	31.5917	41.7096
	Total	77.1776	84.2348	100.000			
Yes	No	2.7058	6.2835	23.2960	4.2397	14.9655	31.6265
	Yes	11.6206	17.9776	76.7040	4.2397	68.3735	85.0345
	Total	15.7652	22.8224	100.000			
Total	No	50.9788	60.2642				
	Yes	39.7358	49.0212				
	Total						

Frequency Missing = 15

Rao-Scott Chi-Square Test

Pearson Chi-Square	49.2851
Design Correction	0.9639
Rao-Scott Chi-Square	51.1312
DF	1
Pr > ChiSq	<.0001
F Value	51.1312
Num DF	1
Den DF	486
Pr > F	<.0001

Sample Size = 487

Table I5(ii)

Table of Q56 by drugs

Q56	drugs	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	333	337.25626	11.36552	314.92045	359.59206	75.6966	2.0451
	Yes	23	19.84664	4.17613	11.63961	28.05368	4.4545	0.9428
	Total	356	357.10290	10.81657	335.84590	378.35990	80.1511	1.9022
Yes	No	67	59.51484	6.97413	45.80910	73.22057	13.3580	1.5882
	Yes	30	28.91928	5.38507	18.33640	39.50217	6.4909	1.2065
	Total	97	88.43412	8.36791	71.98929	104.87895	19.8489	1.9022
Total	No	400	396.77109	9.43400	378.23115	415.31103	89.0546	1.4927
	Yes	53	48.76593	6.62567	35.74499	61.78686	10.9454	1.4927
	Total	453	445.53702	6.87642	432.02330	459.05074	100.000	

Frequency Missing = 49

Table of Q56 by drugs

Q56	drugs	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	71.6775	79.7156	94.4423	1.1718	92.1396	96.7451
	Yes	2.6017	6.3074	5.5577	1.1718	3.2549	7.8604
	Total	76.4129	83.8893	100.000			
Yes	No	10.2369	16.4791	67.2985	5.0584	57.3575	77.2395
	Yes	4.1199	8.8619	32.7015	5.0584	22.7605	42.6425
	Total	16.1107	23.5871	100.000			
Total	No	86.1212	91.9880				
	Yes	8.0120	13.8788				
	Total						

Frequency Missing = 49

Rao-Scott Chi-Square Test

Pearson Chi-Square	54.4749
Design Correction	0.9576
Rao-Scott Chi-Square	56.8846
DF	1
Pr > ChiSq	<.0001
F Value	56.8846
Num DF	1
Den DF	452
Pr > F	<.0001

Sample Size = 453

Table I6

Table of Q56 by suicidal

Q56	suicidal	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	Yes	17	19.09735	4.81857	9.62970	28.56500	3.9117	0.9806
	No	366	371.24461	11.75886	348.14048	394.34873	76.0420	1.9879
	Total	383	390.34196	11.51053	367.72575	412.95816	79.9537	1.8320
Yes	Yes	9	7.86003	2.70293	2.54924	13.17082	1.6100	0.5547
	No	98	90.00828	8.55716	73.19493	106.82162	18.4364	1.7749
	Total	107	97.86831	8.81121	80.55581	115.18080	20.0463	1.8320
Total	Yes	26	26.95738	5.46905	16.21165	37.70312	5.5217	1.1140
	No	464	461.25288	8.65037	444.25641	478.24935	94.4783	1.1140
	Total	490	488.21026	7.34056	473.78733	502.63319	100.000	

Frequency Missing = 12

Table of Q56 by suicidal

Q56	suicidal	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	Yes	1.9850	5.8384	4.8925	1.2201	2.4952	7.2898
	No	72.1361	79.9478	95.1075	1.2201	92.7102	97.5048
	Total	76.3540	83.5533	100.000			
Yes	Yes	0.5201	2.6998	8.0312	2.6773	2.7708	13.2916
	No	14.9491	21.9237	91.9688	2.6773	86.7084	97.2292
	Total	16.4467	23.6460	100.000			
Total	Yes	3.3328	7.7105				
	No	92.2895	96.6672				
	Total						

Frequency Missing = 12

Rao-Scott Chi-Square Test

Pearson Chi-Square	1.4831
Design Correction	1.0388
Rao-Scott Chi-Square	1.4277
DF	1
Pr > ChiSq	0.2321
F Value	1.4277
Num DF	1
Den DF	489
Pr > F	0.2327

Sample Size = 490

APPENDIX J

Current alcohol use comparisons

Table J1

Table of Q60 by newQ32

Q60	newQ32	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	1 partner	42	49.18809	7.20205	34.98463	63.39155	22.8723	3.2427
	more than 1 partner	22	29.31038	6.13772	17.20593	41.41484	13.6292	2.7701
	Total	64	78.49848	8.65042	61.43863	95.55832	36.5015	3.7145
Yes	1 partner	86	82.84950	7.31354	68.42616	97.27284	38.5247	3.5849
	more than 1 partner	47	53.70729	7.35648	39.19926	68.21531	24.9737	3.3173
	Total	133	136.55679	7.88679	121.00293	152.11065	63.4985	3.7145
Total	1 partner	128	132.03759	7.98584	116.28839	147.78680	61.3971	3.7362
	more than 1 partner	69	83.01767	8.70209	65.85592	100.17942	38.6029	3.7362
	Total	197	215.05526	5.25818	204.68538	225.42514	100.000	

Frequency Missing = 305

Table of Q60 by newQ32

Q60	newQ32	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	1 partner	16.4773	29.2673	62.6612	6.4285	49.9832	75.3392
	more than 1 partner	8.1663	19.0922	37.3388	6.4285	24.6608	50.0168
	Total	29.1760	43.8271	100.000			
Yes	1 partner	31.4548	45.5947	60.6704	4.5748	51.6482	69.6926
	more than 1 partner	18.4315	31.5159	39.3296	4.5748	30.3074	48.3518
	Total	56.1729	70.8240	100.000			
Total	1 partner	54.0288	68.7654				
	more than 1 partner	31.2346	45.9712				
	Total						

Frequency Missing = 305

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.0764
Design Correction	1.2009
Rao-Scott Chi-Square	0.0636
DF	1
Pr > ChiSq	0.8009
F Value	0.0636
Num DF	1
Den DF	196
Pr > F	0.8012

Sample Size = 197

Table J2(i)

Table of Q60 by new_vsex

Q60	new_vsex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	(5-14)	7	10.23067	3.87776	2.58389	17.87745	4.6597	1.7463
	(15-24)	62	72.98490	8.30072	56.61624	89.35356	33.2419	3.5856
	Total	69	83.21557	8.74269	65.97537	100.45577	37.9016	3.6945
Yes	(5-14)	13	17.75216	4.90999	8.06988	27.43445	8.0855	2.1988
	(15-24)	118	118.58908	7.94167	102.92845	134.24972	54.0129	3.7622
	Total	131	136.34125	8.12528	120.31854	152.36395	62.0984	3.6945
Total	(5-14)	20	27.98283	6.10899	15.93618	40.02949	12.7451	2.6998
	(15-24)	180	191.57398	6.70709	178.34790	204.80007	87.2549	2.6998
	Total	200	219.55682	5.33175	209.04284	230.07080	100.000	

Frequency Missing = 302

Table of Q60 by new_vsex

Q60	new_vsex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	(5-14)	1.2161	8.1033	12.2942	4.4018	3.6140	20.9744
	(15-24)	26.1713	40.3125	87.7058	4.4018	79.0256	96.3860
	Total	30.6162	45.1870	100.000			
Yes	(5-14)	3.7495	12.4214	13.0204	3.4170	6.2822	19.7586
	(15-24)	46.5941	61.4318	86.9796	3.4170	80.2414	93.7178
	Total	54.8130	69.3838	100.000			
Total	(5-14)	7.4213	18.0690				
	(15-24)	81.9310	92.5787				
	Total						

Frequency Missing = 302

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.0223
Design Correction	1.3251
Rao-Scott Chi-Square	0.0168
DF	1
Pr > ChiSq	0.8967
F Value	0.0168
Num DF	1
Den DF	199
Pr > F	0.8969

Sample Size = 200

Table J2(ii)

Table of Q60 by new_osex

Q60	new_osex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	(10-14)	3	4.15496	2.42044	0	8.95589	3.7569	2.1707
	(15-24)	31	33.42621	5.45405	22.60813	44.24429	30.2236	4.8110
	Total	34	37.58117	5.73428	26.20725	48.95509	33.9804	4.9861
Yes	(10-14)	5	4.71709	2.18583	0.38152	9.05267	4.2651	1.9837
	(15-24)	64	68.29821	6.01973	56.35811	80.23831	61.7544	5.0921
	Total	69	73.01530	5.89049	61.33154	84.69907	66.0196	4.9861
Total	(10-14)	8	8.87205	3.20189	2.52112	15.22298	8.0220	2.8758
	(15-24)	95	101.72442	4.60652	92.58741	110.86143	91.9780	2.8758
	Total	103	110.59647	3.71160	103.23454	117.95841	100.000	

Frequency Missing = 399

Table of Q60 by new_osex

Q60	new_osex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	(10-14)	0.0000	8.0625	11.0560	6.1063	0.0000	23.1677
	(15-24)	20.6810	39.7661	88.9440	6.1063	76.8323	100.000
	Total	24.0906	43.8703	100.000			
Yes	(10-14)	0.3306	8.1997	6.4604	2.9734	0.5627	12.3582
	(15-24)	51.6543	71.8545	93.5396	2.9734	87.6418	99.4373
	Total	56.1297	75.9094	100.000			
Total	(10-14)	2.3180	13.7260				
	(15-24)	86.2740	97.6820				
	Total						

Frequency Missing = 399

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.6614
Design Correction	1.1562
Rao-Scott Chi-Square	0.5720
DF	1
Pr > ChiSq	0.4495
F Value	0.5720
Num DF	1
Den DF	102
Pr > F	0.4512

Sample Size = 103

Table J3(i)

Table of Q60 by otherQ30

Q60	other Q30	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	7	8.65383	3.37865	1.98723	15.32043	4.4697	1.7312
	Yes	52	61.77597	7.78393	46.41706	77.13488	31.9074	3.7649
	Total	59	70.42980	8.13004	54.38795	86.47165	36.3771	3.8694
Yes	No	11	11.22926	3.48465	4.35350	18.10501	5.7999	1.7988
	Yes	112	111.95123	7.48480	97.18254	126.71993	57.8230	3.9281
	Total	123	123.18049	7.36710	108.64405	137.71693	63.6229	3.8694
Total	No	18	19.88308	4.74176	10.52685	29.23931	10.2696	2.4250
	Yes	164	173.72720	6.33980	161.21778	186.23662	89.7304	2.4250
	Total	182	193.61029	4.95066	183.84187	203.37871	100.000	

Frequency Missing = 320

Table of Q60 by otherQ30

Q60	other Q30	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	1.0538	7.8856	12.2872	4.5643	3.2811	21.2932
	Yes	24.4786	39.3362	87.7128	4.5643	78.7068	96.7189
	Total	28.7421	44.0121	100.000			
Yes	No	2.2506	9.3493	9.1161	2.7705	3.6496	14.5826
	Yes	50.0722	65.5737	90.8839	2.7705	85.4174	96.3504
	Total	55.9879	71.2579	100.000			
Total	No	5.4846	15.0546				
	Yes	84.9454	94.5154				
	Total						

Frequency Missing = 320

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.4597
Design Correction	1.1845
Rao-Scott Chi-Square	0.3881
DF	1
Pr > ChiSq	0.5333
F Value	0.3881
Num DF	1
Den DF	181
Pr > F	0.5341

Sample Size = 182

Table J3(ii)

Table of Q60 by newQ34

Q60	new Q34	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	69	82.42715	8.73856	65.19866	99.65564	36.7176	3.6167
	Yes	0	.	.	.	.	.	.
	Total	69	82.42715	8.73856	65.19866	99.65564	36.7176	3.6167
Yes	No	133	134.97994	8.06972	119.07011	150.88978	60.1275	3.6671
	Yes	5	7.08236	3.21510	0.74364	13.42108	3.1549	1.4216
	Total	138	142.06230	8.13486	126.02404	158.10056	63.2824	3.6167
Total	No	202	217.40709	5.78476	206.00218	228.81201	96.8451	1.4216
	Yes	5	7.08236	3.21510	0.74364	13.42108	3.1549	1.4216
	Total	207	224.48945	5.37133	213.89962	235.07928	100.000	

Frequency Missing = 295

Table of Q60 by newQ34

Q60	new Q34	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	29.5872	43.8480	100.000	0.0000	100.000	100.000
	Yes	.	.	.	.	.	.
	Total	29.5872	43.8480	100.000			
Yes	No	52.8976	67.3574	95.0146	2.2186	90.6406	99.3886
	Yes	0.3521	5.9577	4.9854	2.2186	0.6114	9.3594
	Total	56.1520	70.4128	100.000			
Total	No	94.0423	99.6479				
	Yes	0.3521	5.9577				
	Total						

Frequency Missing = 295

Table J3(iii)

Table of Q60 by newQ35

Q60	new Q35	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	59	68.85295	8.16627	52.75276	84.95314	30.6709	3.4621
	Yes	11	15.14835	4.58465	6.10950	24.18720	6.7479	2.0115
	Total	70	84.00131	8.80799	66.63594	101.36668	37.4188	3.6308
Yes	No	119	120.82597	8.15676	104.74454	136.90741	53.8226	3.6928
	Yes	18	19.66217	4.73048	10.33582	28.98853	8.7586	2.0943
	Total	137	140.48815	8.11450	124.49003	156.48626	62.5812	3.6308
Total	No	178	189.67893	7.24235	175.40030	203.95755	84.4935	2.7667
	Yes	29	34.81053	6.36433	22.26296	47.35810	15.5065	2.7667
	Total	207	224.48945	5.37133	213.89962	235.07928	100.000	

Frequency Missing = 295

Table of Q60 by newQ35

Q60	new Q35	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	23.8452	37.4966	81.9665	5.0207	72.0679	91.8651
	Yes	2.7821	10.7137	18.0335	5.0207	8.1349	27.9321
	Total	30.2606	44.5770	100.000			
Yes	No	46.5421	61.1030	86.0044	3.2332	79.6301	92.3787
	Yes	4.6296	12.8876	13.9956	3.2332	7.6213	20.3699
	Total	55.4230	69.7394	100.000			
Total	No	79.0387	89.9482				
	Yes	10.0518	20.9613				
	Total						

Frequency Missing = 295

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.6032
Design Correction	1.2306
Rao-Scott Chi-Square	0.4902
DF	1
Pr > ChiSq	0.4838
F Value	0.4902
Num DF	1
Den DF	206
Pr > F	0.4846

Sample Size = 207

Table J4

Table of Q60 by newQ31

Q60	new Q31	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	114	127.76030	10.02020	108.03395	147.48666	44.2826	3.1922
	Yes	1	0.78573	0.78573	0	2.33258	0.2723	0.2726
	Total	115	128.54604	10.01444	108.83102	148.26106	44.5550	3.1926
Yes	No	157	155.24271	9.12483	137.27904	173.20639	53.8082	3.1991
	Yes	3	4.72247	2.71655	0	10.07043	1.6368	0.9370
	Total	160	159.96518	9.23530	141.78402	178.14634	55.4450	3.1926
Total	No	271	283.00302	6.23651	270.72544	295.28059	98.0908	0.9739
	Yes	4	5.50820	2.82311	0	11.06594	1.9092	0.9739
	Total	275	288.51122	5.95698	276.78394	300.23849	100.000	

Frequency Missing = 227

Table of Q60 by newQ31

Q60	new Q31	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	37.9982	50.5670	99.3888	0.6116	98.1848	100.000
	Yes	0.0000	0.8091	0.6112	0.6116	0.0000	1.8152
	Total	38.2699	50.8400	100.000			
Yes	No	47.5102	60.1062	97.0478	1.6746	93.7510	100.000
	Yes	0.0000	3.4814	2.9522	1.6746	0.0000	6.2490
	Total	49.1600	61.7301	100.000			
Total	No	96.1735	100.000				
	Yes	0.0000	3.8265				
	Total						

Frequency Missing = 227

Rao-Scott Chi-Square Test

Pearson Chi-Square	1.9879
Design Correction	0.8508
Rao-Scott Chi-Square	2.3364
DF	1
Pr > ChiSq	0.1264
F Value	2.3364
Num DF	1
Den DF	274
Pr > F	0.1275

Sample Size = 275

Table J5

Table of Q60 by drugs

Q60	drugs	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	227	231.84019	11.97246	208.31074	255.36964	52.7577	2.4811
	Yes	9	7.86003	2.70095	2.55187	13.16819	1.7886	0.6157
	Total	236	239.70023	11.93580	216.24283	263.15763	54.5463	2.4715
Yes	No	168	160.41171	10.54258	139.69241	181.13101	36.5034	2.3807
	Yes	43	39.33174	5.98134	27.57662	51.08686	8.9503	1.3665
	Total	211	199.74344	10.89173	178.33796	221.14893	45.4537	2.4715
Total	No	395	392.25190	9.36563	373.84564	410.65816	89.2610	1.4779
	Yes	52	47.19177	6.45641	34.50300	59.88054	10.7390	1.4779
	Total	447	439.44367	6.81110	426.05782	452.82952	100.000	

Frequency Missing = 55

Table of Q60 by drugs

Q60	drugs	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	47.8816	57.6337	96.7209	1.1224	94.5151	98.9267
	Yes	0.5786	2.9987	3.2791	1.1224	1.0733	5.4849
	Total	49.6890	59.4036	100.000			
Yes	No	31.8245	41.1822	80.3089	2.8258	74.7554	85.8623
	Yes	6.2648	11.6359	19.6911	2.8258	14.1377	25.2446
	Total	40.5964	50.3110	100.000			
Total	No	86.3564	92.1656				
	Yes	7.8344	13.6436				
	Total						

Frequency Missing = 55

Rao-Scott Chi-Square Test

Pearson Chi-Square	31.1416
Design Correction	0.9736
Rao-Scott Chi-Square	31.9868
DF	1
Pr > ChiSq	<.0001
F Value	31.9868
Num DF	1
Den DF	446
Pr > F	<.0001

Sample Size = 447

Table J6

Table of Q60 by suicidal

Q60	suicidal	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	Yes	13	14.37757	4.16316	6.19734	22.55780	2.9919	0.8624
	No	244	251.48204	12.55853	226.80569	276.15840	52.3326	2.3952
	Total	257	265.85961	12.64968	241.00415	290.71507	55.3246	2.3768
Yes	Yes	11	10.21992	3.21202	3.90861	16.53124	2.1267	0.6687
	No	214	204.46591	11.33958	182.18468	226.74714	42.5487	2.3599
	Total	225	214.68583	11.41115	192.26397	237.10770	44.6754	2.3768
Total	Yes	24	24.59749	5.19981	14.38035	34.81464	5.1187	1.0772
	No	458	455.94795	8.51470	439.21735	472.67856	94.8813	1.0772
	Total	482	480.54545	7.27361	466.25348	494.83741	100.000	

Frequency Missing = 20

Table of Q60 by suicidal

Q60	suicidal	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	Yes	1.2973	4.6865	5.4080	1.5389	2.3842	8.4317
	No	47.6263	57.0390	94.5920	1.5389	91.5683	97.6158
	Total	50.6544	59.9947	100.000			
Yes	Yes	0.8127	3.4407	4.7604	1.4762	1.8599	7.6610
	No	37.9117	47.1858	95.2396	1.4762	92.3390	98.1401
	Total	40.0053	49.3456	100.000			
Total	Yes	3.0021	7.2353				
	No	92.7647	96.9979				
	Total						

Frequency Missing = 20

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.1029
Design Correction	1.1155
Rao-Scott Chi-Square	0.0922
DF	1
Pr > ChiSq	0.7614
F Value	0.0922
Num DF	1
Den DF	481
Pr > F	0.7615

Sample Size = 482

APPENDIX K

Current drug use comparisons

Table K1

Table of drugs by newQ32

drugs	newQ32	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	1 partner	101	103.11025	7.74475	87.82977	118.39073	52.1431	3.9128
	more than 1 partner	51	63.35550	8.04528	47.48207	79.22893	32.0390	3.7722
	Total	152	166.46575	7.30158	152.05965	180.87185	84.1821	2.7355
Yes	1 partner	18	15.54836	3.58127	8.48246	22.61426	7.8628	1.8511
	more than 1 partner	14	15.73081	4.30846	7.23017	24.23146	7.9551	2.1608
	Total	32	31.27917	5.35866	20.70647	41.85188	15.8179	2.7355
Total	1 partner	119	118.65861	7.43541	103.98845	133.32877	60.0059	3.9016
	more than 1 partner	65	79.08631	8.50865	62.29864	95.87398	39.9941	3.9016
	Total	184	197.74492	5.01220	187.85579	207.63406	100.000	

Frequency Missing = 318

Table of drugs by newQ32

drugs	newQ32	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	1 partner	44.4231	59.8630	61.9408	4.2627	53.5305	70.3512
	more than 1 partner	24.5963	39.4817	38.0592	4.2627	29.6488	46.4695
	Total	78.7849	89.5793	100.000			
Yes	1 partner	4.2107	11.5150	49.7083	9.3202	31.3195	68.0972
	more than 1 partner	3.6918	12.2184	50.2917	9.3202	31.9028	68.6805
	Total	10.4207	21.2151	100.000			
Total	1 partner	52.3080	67.7038				
	more than 1 partner	32.2962	47.6920				
	Total						

Frequency Missing = 318

Rao-Scott Chi-Square Test

Pearson Chi-Square	1.5277
Design Correction	1.0325
Rao-Scott Chi-Square	1.4796
DF	1
Pr > ChiSq	0.2238
F Value	1.4796
Num DF	1
Den DF	183
Pr > F	0.2254

Sample Size = 184

Table K2(i)

Table of drugs by new_vsex

drugs	new_vsex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	(5-14)	14	19.32632	5.11503	9.23466	29.41798	9.7069	2.5108
	(15-24)	139	148.49267	7.66778	133.36460	163.62074	74.5826	3.4128
	Total	153	167.81899	7.33244	153.35251	182.28547	84.2896	2.7189
Yes	(5-14)	5	7.08236	3.21152	0.74622	13.41850	3.5572	1.5992
	(15-24)	27	24.19682	4.50468	15.30934	33.08429	12.1532	2.3195
	Total	32	31.27917	5.36128	20.70169	41.85666	15.7104	2.7189
Total	(5-14)	19	26.40868	5.91520	14.73833	38.07903	13.2641	2.8735
	(15-24)	166	172.68949	6.32709	160.20651	185.17247	86.7359	2.8735
	Total	185	199.09817	5.04491	189.14486	209.05147	100.000	

Frequency Missing = 317

Table of drugs by new_vsex

drugs	new_vsex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	(5-14)	4.7532	14.6606	11.5162	2.9460	5.7039	17.3285
	(15-24)	67.8494	81.3159	88.4838	2.9460	82.6715	94.2961
	Total	78.9253	89.6538	100.000			
Yes	(5-14)	0.4020	6.7124	22.6424	8.7779	5.3241	39.9607
	(15-24)	7.5770	16.7294	77.3576	8.7779	60.0393	94.6759
	Total	10.3462	21.0747	100.000			
Total	(5-14)	7.5949	18.9334				
	(15-24)	81.0666	92.4051				
	Total						

Frequency Missing = 317

Rao-Scott Chi-Square Test

Pearson Chi-Square	2.6360
Design Correction	1.2720
Rao-Scott Chi-Square	2.0723
DF	1
Pr > ChiSq	0.1500
F Value	2.0723
Num DF	1
Den DF	184
Pr > F	0.1517

Sample Size = 185

Table K2(ii)

Table of drugs by new_osex

drugs	new_osex	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	(10-14)	8	8.87205	3.19653	2.52782	15.21628	8.3794	2.9993
	(15-24)	69	76.16899	5.89203	64.47494	87.86304	71.9394	4.7375
	Total	77	85.04104	5.56779	73.99051	96.09157	80.3188	4.1232
Yes	(10-14)	0	.	.	.	.	.	.
	(15-24)	21	20.83834	4.32763	12.24920	29.42748	19.6812	4.1232
	Total	21	20.83834	4.32763	12.24920	29.42748	19.6812	4.1232
Total	(10-14)	8	8.87205	3.19653	2.52782	15.21628	8.3794	2.9993
	(15-24)	90	97.00733	4.55169	87.97348	106.04117	91.6206	2.9993
	Total	98	105.87938	3.63184	98.67118	113.08757	100.000	

Frequency Missing = 404

Table of drugs by new_osex

drugs	new_osex	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	(10-14)	2.4265	14.3323	10.4327	3.6956	3.0980	17.7674
	(15-24)	62.5368	81.3420	89.5673	3.6956	82.2326	96.9020
	Total	72.1354	88.5022	100.000			
Yes	(10-14)	.	.	.	.	.	.
	(15-24)	11.4978	27.8646	100.000	0.0000	100.000	100.000
	Total	11.4978	27.8646	100.000			
Total	(10-14)	2.4265	14.3323				
	(15-24)	85.6677	97.5735				
	Total						

Frequency Missing = 404

Table K3(i)

Table of drugs by otherQ30

drugs	other Q30	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	14	13.58646	3.69069	6.30098	20.87195	7.6384	2.0789
	Yes	127	136.15409	7.42773	121.49163	150.81655	76.5464	3.3116
	Total	141	149.74055	6.85780	136.20315	163.27795	84.1847	2.8162
Yes	No	2	3.14831	2.21964	0	7.52991	1.7700	1.2412
	Yes	28	24.98255	4.52043	16.05915	33.90595	14.0453	2.6031
	Total	30	28.13086	4.94325	18.37280	37.88892	15.8153	2.8162
Total	No	16	16.73477	4.24791	8.34932	25.12022	9.4084	2.3738
	Yes	155	161.13664	5.96557	149.36050	172.91278	90.5916	2.3738
	Total	171	177.87141	4.68063	168.63178	187.11105	100.000	

Frequency Missing = 331

Table of drugs by otherQ30

drugs	other Q30	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	3.5345	11.7422	9.0733	2.4548	4.2276	13.9191
	Yes	70.0093	83.0834	90.9267	2.4548	86.0809	95.7724
	Total	78.6255	89.7439	100.000			
Yes	No	0.0000	4.2201	11.1917	7.3143	0.0000	25.6302
	Yes	8.9068	19.1838	88.8083	7.3143	74.3698	100.000
	Total	10.2561	21.3745	100.000			
Total	No	4.7224	14.0943				
	Yes	85.9057	95.2776				
	Total						

Frequency Missing = 331

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.1199
Design Correction	1.3686
Rao-Scott Chi-Square	0.0876
DF	1
Pr > ChiSq	0.7673
F Value	0.0876
Num DF	1
Den DF	170
Pr > F	0.7676

Sample Size = 171

Table K3(ii)

Table of drugs by newQ34

drugs	new Q34	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	155	167.24611	7.45663	152.53769	181.95453	82.2879	2.8535
	Yes	3	3.93405	2.34972	0	8.56894	1.9356	1.1514
	Total	158	171.18016	7.36184	156.65871	185.70160	84.2235	2.6852
Yes	No	31	28.91660	5.02917	18.99642	38.83677	14.2275	2.5168
	Yes	2	3.14831	2.22033	0	7.52797	1.5490	1.0876
	Total	33	32.06491	5.40963	21.39426	42.73555	15.7765	2.6852
Total	No	186	196.16271	5.47601	185.36112	206.96429	96.5154	1.5669
	Yes	5	7.08236	3.21258	0.74546	13.41926	3.4846	1.5669
	Total	191	203.24506	5.06786	193.24857	213.24156	100.000	

Frequency Missing = 311

Table of drugs by newQ34

drugs	new Q34	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	76.6592	87.9166	97.7018	1.3644	95.0104	100.000
	Yes	0.0000	4.2069	2.2982	1.3644	0.0000	4.9896
	Total	78.9269	89.5202	100.000			
Yes	No	9.2631	19.1918	90.1814	6.4955	77.3689	100.000
	Yes	0.0000	3.6943	9.8186	6.4955	0.0000	22.6311
	Total	10.4798	21.0731	100.000			
Total	No	93.4246	99.6061				
	Yes	0.3939	6.5754				
	Total						

Frequency Missing = 311

Rao-Scott Chi-Square Test

Pearson Chi-Square	4.2678
Design Correction	1.3681
Rao-Scott Chi-Square	3.1196
DF	1
Pr > ChiSq	0.0774
F Value	3.1196
Num DF	1
Den DF	190
Pr > F	0.0790

Sample Size = 191

Table K3(iii)

Table of drugs by newQ35

drugs	new Q35	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	139	148.95750	7.91600	133.34296	164.57204	73.2896	3.3728
	Yes	19	22.22265	5.13597	12.09181	32.35350	10.9339	2.4868
	Total	158	171.18016	7.36184	156.65871	185.70160	84.2235	2.6852
Yes	No	27	25.77366	4.86977	16.16789	35.37943	12.6811	2.4213
	Yes	6	6.29125	2.69374	0.97778	11.60472	3.0954	1.3235
	Total	33	32.06491	5.40963	21.39426	42.73555	15.7765	2.6852
Total	No	166	174.73116	6.77978	161.35786	188.10446	85.9707	2.7395
	Yes	25	28.51390	5.67122	17.32726	39.70054	14.0293	2.7395
	Total	191	203.24506	5.06786	193.24857	213.24156	100.000	

Frequency Missing = 311

Table of drugs by newQ35

drugs	new Q35	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	66.6366	79.9426	87.0180	2.9189	81.2603	92.7756
	Yes	6.0285	15.8393	12.9820	2.9189	7.2244	18.7397
	Total	78.9269	89.5202	100.000			
Yes	No	7.9049	17.4572	80.3796	7.5561	65.4750	95.2843
	Yes	0.4848	5.7060	19.6204	7.5561	4.7157	34.5250
	Total	10.4798	21.0731	100.000			
Total	No	80.5669	91.3744				
	Yes	8.6256	19.4331				
	Total						

Frequency Missing = 311

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.9273
Design Correction	1.1099
Rao-Scott Chi-Square	0.8355
DF	1
Pr > ChiSq	0.3607
F Value	0.8355
Num DF	1
Den DF	190
Pr > F	0.3619

Sample Size = 191

Table K4

Table of drugs by newQ31

drugs	new Q31	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	No	216	224.19089	8.01674	208.40373	239.97805	84.6301	2.3430
	Yes	3	4.72247	2.71585	0	10.07071	1.7827	1.0195
	Total	219	228.91336	7.96069	213.23658	244.59014	86.4127	2.1725
Yes	No	37	35.20785	5.68029	24.02181	46.39389	13.2906	2.1568
	Yes	1	0.78573	0.78573	0	2.33306	0.2966	0.2969
	Total	38	35.99358	5.71550	24.73820	47.24896	13.5873	2.1725
Total	No	253	259.39874	5.90487	247.77042	271.02705	97.9207	1.0596
	Yes	4	5.50820	2.82209	0	11.06568	2.0793	1.0596
	Total	257	264.90694	5.62753	253.82479	275.98909	100.000	

Frequency Missing = 245

Table of drugs by newQ31

drugs	new Q31	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	No	80.0161	89.2440	97.9370	1.1778	95.6176	100.000
	Yes	0.0000	3.7904	2.0630	1.1778	0.0000	4.3824
	Total	82.1345	90.6910	100.000			
Yes	No	9.0432	17.5381	97.8170	2.1712	93.5414	100.000
	Yes	0.0000	0.8814	2.1830	2.1712	0.0000	6.4586
	Total	9.3090	17.8655	100.000			
Total	No	95.8341	100.000				
	Yes	0.0000	4.1659				
	Total						

Frequency Missing = 245

Rao-Scott Chi-Square Test

Pearson Chi-Square	0.0021
Design Correction	0.8751
Rao-Scott Chi-Square	0.0024
DF	1
Pr > ChiSq	0.9606
F Value	0.0024
Num DF	1
Den DF	256
Pr > F	0.9607

Sample Size = 257

Table K5

Table of drugs by suicidal

drugs	suicidal	Frequency	Weighted Frequency	Std Dev of Wgt Freq	95% Confidence Limits for Wgt Freq		Percent	Std Err of Percent
No	Yes	18	18.30624	4.48513	9.49196	27.12053	4.1070	1.0025
	No	382	378.66275	9.97795	359.05383	398.27168	84.9525	1.7373
	Total	400	396.96900	9.43418	378.42870	415.50929	89.0594	1.4921
Yes	Yes	5	4.71709	2.21567	0.36280	9.07139	1.0583	0.4970
	No	48	44.04883	6.31741	31.63370	56.46396	9.8823	1.4228
	Total	53	48.76593	6.62567	35.74499	61.78686	10.9406	1.4921
Total	Yes	23	23.02334	4.96422	13.26752	32.77915	5.1653	1.1093
	No	430	422.71158	8.10342	406.78654	438.63663	94.8347	1.1093
	Total	453	445.73492	6.87356	432.22682	459.24302	100.000	

Frequency Missing = 49

Table of drugs by suicidal

drugs	suicidal	95% Confidence Limits for Percent		Row Percent	Std Err of Row Percent	95% Confidence Limits for Row Percent	
No	Yes	2.1369	6.0770	4.6115	1.1228	2.4050	6.8180
	No	81.5382	88.3667	95.3885	1.1228	93.1820	97.5950
	Total	86.1272	91.9917	100.000			
Yes	Yes	0.0815	2.0350	9.6729	4.3302	1.1631	18.1828
	No	7.0862	12.6784	90.3271	4.3302	81.8172	98.8369
	Total	8.0083	13.8728	100.000			
Total	Yes	2.9852	7.3453				
	No	92.6547	97.0148				
	Total						

Frequency Missing = 49

Rao-Scott Chi-Square Test

Pearson Chi-Square	2.3084
Design Correction	1.0794
Rao-Scott Chi-Square	2.1386
DF	1
Pr > ChiSq	0.1436
F Value	2.1386
Num DF	1
Den DF	452
Pr > F	0.1443

Sample Size = 453

APPENDIX L

Multivariate logistic regression

Full model

Model Information

Data Set	WORK.SEXACT
Response Variable	safe_sex
Number of Response Levels	2
Weight Variable	SamplingWeight
Model	Binary Logit
Optimization Technique	Fisher's Scoring
Variance Adjustment	Degrees of Freedom (DF)

Model Information

Did you use a condom the last time you had (vaginal, oral or anal)sex? (only sexually active)

Number of Observations Read	221
Number of Observations Used	184
Sum of Weights Read	236.2889
Sum of Weights Used	202.1299

Response Profile

Ordered Value	safe_sex	Total Frequency	Total Weight
1	No	96	100.66001
2	Yes	88	101.46992

Probability modeled is safe_sex='No'.

NOTE: 37 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	282.208	288.758
SC	285.423	311.263
-2 Log L	280.208	274.758

R-Square 0.0292 Max-rescaled R-Square 0.0373

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	5.4500	6	0.4875
Score	5.4022	6	0.4934
Wald	4.3931	6	0.6236

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq	Standardized Estimate
Intercept	1	-1.0240	1.3410	0.5831	0.4451	
genderc	1	-0.0315	0.3499	0.0081	0.9282	-0.00898
racial_gr	1	0.5109	0.3463	2.1764	0.1401	0.1466
age_group	1	0.2988	0.4117	0.5268	0.4680	0.0737
newQ32	1	-0.2557	0.3618	0.4997	0.4797	-0.0726
Q56	1	0.0558	0.3783	0.0217	0.8828	0.0142
Q60	1	0.1556	0.3623	0.1845	0.6676	0.0436

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
genderc	0.969	0.488	1.924
racial_gr	1.667	0.845	3.286
age_group	1.348	0.602	3.021
newQ32	0.774	0.381	1.574
Q56	1.057	0.504	2.220
Q60	1.168	0.574	2.377

Association of Predicted Probabilities and Observed Responses

Percent Concordant	56.6	Somers' D	0.170
Percent Discordant	39.7	Gamma	0.176
Percent Tied	3.7	Tau-a	0.085
Pairs	8448	c	0.585

Wald Confidence Interval for Adjusted Odds Ratios

Effect	Unit	Estimate	95% Confidence Limits	
genderc	1.0000	0.969	0.488	1.924
racial_gr	1.0000	1.667	0.845	3.286
age_group	1.0000	1.348	0.602	3.021
newQ32	1.0000	0.774	0.381	1.574
Q56	1.0000	1.057	0.504	2.220
Q60	1.0000	1.168	0.574	2.377

Classification Table

Prob Level	Correct Event	Correct Non-Event	Incorrect Event	Incorrect Non-Event	Percentages Correct	Sensi-tivity	Speci-ficity	False POS	False NEG
0.300	96	0	88	0	52.2	100.0	0.0	47.8	.
0.320	95	0	88	1	51.6	99.0	0.0	48.1	100.0
0.340	93	0	88	3	50.5	96.9	0.0	48.6	100.0
0.360	90	0	88	6	48.9	93.8	0.0	49.4	100.0
0.380	87	0	88	9	47.3	90.6	0.0	50.3	100.0
0.400	82	7	81	14	48.4	85.4	8.0	49.7	66.7
0.420	81	7	81	15	47.8	84.4	8.0	50.0	68.2
0.440	68	12	76	28	43.5	70.8	13.6	52.8	70.0
0.460	65	24	64	31	48.4	67.7	27.3	49.6	56.4
0.480	62	28	60	34	48.9	64.6	31.8	49.2	54.8
0.500	61	30	58	35	49.5	63.5	34.1	48.7	53.8
0.520	52	35	53	44	47.3	54.2	39.8	50.5	55.7
0.540	40	40	48	56	43.5	41.7	45.5	54.5	58.3
0.560	36	49	39	60	46.2	37.5	55.7	52.0	55.0
0.580	27	55	33	69	44.6	28.1	62.5	55.0	55.6
0.600	7	68	20	89	40.8	7.3	77.3	74.1	56.7
0.620	5	81	7	91	46.7	5.2	92.0	58.3	52.9
0.640	5	83	5	91	47.8	5.2	94.3	50.0	52.3
0.660	0	84	4	96	45.7	0.0	95.5	100.0	53.3
0.680	0	84	4	96	45.7	0.0	95.5	100.0	53.3
0.700	0	87	1	96	47.3	0.0	98.9	100.0	52.5
0.720	0	88	0	96	47.8	0.0	100.0	.	52.2

Multivariate logistic regression

Model 2: exclude gender *(genderc)*

Model Information

Data Set	WORK.SEXACT
Response Variable	safe_sex
Number of Response Levels	2
Weight Variable	SamplingWeight
Model	Binary Logit
Optimization Technique	Fisher's Scoring
Variance Adjustment	Degrees of Freedom (DF)

Model Information

Did you use a condom the last time you had (vaginal, oral or anal)sex? (only sexually active)

Number of Observations Read	221
Number of Observations Used	184
Sum of Weights Read	236.2889
Sum of Weights Used	202.1299

Response Profile

Ordered Value	safe_sex	Total Frequency	Total Weight
1	No	96	100.66001
2	Yes	88	101.46992

Probability modeled is safe_sex='No'.

NOTE: 37 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	282.208	286.769
SC	285.423	306.058
-2 Log L	280.208	274.769

R-Square 0.0291 Max-rescaled R-Square 0.0373

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	5.4398	5	0.3646
Score	5.3922	5	0.3699
Wald	4.4153	5	0.4913

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq	Standardized Estimate
Intercept	1	-1.0944	1.1207	0.9537	0.3288	
racial_gr	1	0.5096	0.3448	2.1846	0.1394	0.1462
age_group	1	0.3004	0.4108	0.5349	0.4645	0.0741
newQ32	1	-0.2449	0.3434	0.5088	0.4757	-0.0696
Q56	1	0.0551	0.3773	0.0213	0.8839	0.0140
Q60	1	0.1592	0.3596	0.1960	0.6580	0.0446

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
racial_gr	1.665	0.847	3.272
age_group	1.350	0.604	3.021
newQ32	0.783	0.399	1.534
Q56	1.057	0.504	2.214
Q60	1.173	0.580	2.372

Association of Predicted Probabilities and Observed Responses

Percent Concordant	54.7	Somers' D	0.164
Percent Discordant	38.3	Gamma	0.176
Percent Tied	7.0	Tau-a	0.082
Pairs	8448	c	0.582

Wald Confidence Interval for Adjusted Odds Ratios

Effect	Unit	Estimate	95% Confidence Limits	
racial_gr	1.0000	1.665	0.847	3.272
age_group	1.0000	1.350	0.604	3.021
newQ32	1.0000	0.783	0.399	1.534
Q56	1.0000	1.057	0.504	2.214
Q60	1.0000	1.173	0.580	2.372

Classification Table

Prob Level	Correct Event	Correct Non-Event	Incorrect Event	Incorrect Non-Event	Percentages Correct	Sensi-tivity	Speci-ficity	False POS	False NEG
0.320	96	0	88	0	52.2	100.0	0.0	47.8	.
0.340	93	0	88	3	50.5	96.9	0.0	48.6	100.0
0.360	93	0	88	3	50.5	96.9	0.0	48.6	100.0
0.380	87	0	88	9	47.3	90.6	0.0	50.3	100.0
0.400	82	7	81	14	48.4	85.4	8.0	49.7	66.7
0.420	82	7	81	14	48.4	85.4	8.0	49.7	66.7
0.440	68	12	76	28	43.5	70.8	13.6	52.8	70.0
0.460	65	24	64	31	48.4	67.7	27.3	49.6	56.4
0.480	62	28	60	34	48.9	64.6	31.8	49.2	54.8
0.500	61	33	55	35	51.1	63.5	37.5	47.4	51.5
0.520	57	35	53	39	50.0	59.4	39.8	48.2	52.7
0.540	40	41	47	56	44.0	41.7	46.6	54.0	57.7
0.560	36	52	36	60	47.8	37.5	59.1	50.0	53.6
0.580	36	55	33	60	49.5	37.5	62.5	47.8	52.2
0.600	7	72	16	89	42.9	7.3	81.8	69.6	55.3
0.620	5	83	5	91	47.8	5.2	94.3	50.0	52.3
0.640	5	83	5	91	47.8	5.2	94.3	50.0	52.3
0.660	0	84	4	96	45.7	0.0	95.5	100.0	53.3
0.680	0	84	4	96	45.7	0.0	95.5	100.0	53.3
0.700	0	86	2	96	46.7	0.0	97.7	100.0	52.7
0.720	0	88	0	96	47.8	0.0	100.0	.	52.2

Multivariate logistic regression

Model 3: exclude racial groups *(racial_gr)*

Model Information

Data Set	WORK.SEXACT
Response Variable	safe_sex
Number of Response Levels	2
Weight Variable	SamplingWeight
Model	Binary Logit
Optimization Technique	Fisher's Scoring
Variance Adjustment	Degrees of Freedom (DF)

Model Information

Did you use a condom the last time you had (vaginal, oral or anal)sex? (only sexually active)

Number of Observations Read	221
Number of Observations Used	197
Sum of Weights Read	236.2889
Sum of Weights Used	215.0553

Response Profile

Ordered Value	safe_sex	Total Frequency	Total Weight
1	No	103	107.59148
2	Yes	94	107.46378

Probability modeled is safe_sex='No'.

NOTE: 21 observations were deleted due to missing values for the response or explanatory variables.

NOTE: 3 observations having nonpositive frequencies or weights were excluded since they do not contribute to the analysis.

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	300.130	307.724
SC	303.413	327.423
-2 Log L	298.130	295.724

R-Square	0.0121	Max-rescaled R-Square	0.0156

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	2.4057	5	0.7906
Score	2.3932	5	0.7925
Wald	1.8874	5	0.8645

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq	Standardized Estimate
Intercept	1	-0.8116	1.1844	0.4696	0.4932	
genderc	1	0.1757	0.3268	0.2889	0.5910	0.0500
age_group	1	0.2262	0.3773	0.3593	0.5489	0.0563
newQ32	1	-0.2088	0.3332	0.3926	0.5309	-0.0587
Q56	1	0.1297	0.3408	0.1448	0.7036	0.0337
Q60	1	0.2298	0.3424	0.4503	0.5022	0.0639

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
genderc	1.192	0.628	2.262
age_group	1.254	0.599	2.626
newQ32	0.812	0.422	1.559
Q56	1.138	0.584	2.220
Q60	1.258	0.643	2.462

Association of Predicted Probabilities and Observed Responses

Percent Concordant	50.1	Somers' D	0.066
Percent Discordant	43.6	Gamma	0.070
Percent Tied	6.3	Tau-a	0.033
Pairs	9682	c	0.533

Wald Confidence Interval for Adjusted Odds Ratios

Effect	Unit	Estimate	95% Confidence Limits	
genderc	1.0000	1.192	0.628	2.262
age_group	1.0000	1.254	0.599	2.626
newQ32	1.0000	0.812	0.422	1.559
Q56	1.0000	1.138	0.584	2.220
Q60	1.0000	1.258	0.643	2.462

Classification Table

Prob Level	Correct Event	Correct Non-Event	Incorrect Event	Incorrect Non-Event	Percentages Correct	Sensi-tivity	Speci-ficity	False POS	False NEG
0.340	103	0	94	0	52.3	100.0	0.0	47.7	.
0.360	101	0	94	2	51.3	98.1	0.0	48.2	100.0
0.380	99	0	94	4	50.3	96.1	0.0	48.7	100.0
0.400	96	2	92	7	49.7	93.2	2.1	48.9	77.8
0.420	91	7	87	12	49.7	88.3	7.4	48.9	63.2
0.440	88	8	86	15	48.7	85.4	8.5	49.4	65.2
0.460	77	13	81	26	45.7	74.8	13.8	51.3	66.7
0.480	56	19	75	47	38.1	54.4	20.2	57.3	71.2
0.500	47	38	56	56	43.1	45.6	40.4	54.4	59.6
0.520	30	47	47	73	39.1	29.1	50.0	61.0	60.8
0.540	16	54	40	87	35.5	15.5	57.4	71.4	61.7
0.560	12	71	23	91	42.1	11.7	75.5	65.7	56.2
0.580	1	85	9	102	43.7	1.0	90.4	90.0	54.5
0.600	1	86	8	102	44.2	1.0	91.5	88.9	54.3
0.620	0	91	3	103	46.2	0.0	96.8	100.0	53.1
0.640	0	93	1	103	47.2	0.0	98.9	100.0	52.6
0.660	0	94	0	103	47.7	0.0	100.0	.	52.3