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HIV/AIDS PROGRAMME

# National Student Sexual Health HIV Knowledge, Attitude and Behaviour Survey:

Focusing on Student Men who have Sex with Men at 14  
Higher Education Institutions in South Africa



NOVEMBER 2014

Supported by:



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HEAIDS, an initiative of the Department of Higher Education and Training, is a dedicated national facility designed to develop and support the higher education sector through the oversight and implementation of HIV and related healthcare support interventions. Its key focus is to ensure that young people passing through the higher education sector, at more than 400 campuses countrywide, are healthy and competent. HEAIDS is implemented by Higher Education South Africa (HESA), the representative body of all public higher education institutions in South Africa, in partnership with the South African College Principals' Association (SACPO), which represents all technical and vocational education and training colleges.

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## Foreword by the Deputy Minister of Higher Education and Training, the Honourable Mduzuzi Manana

The rich tapestry of South Africa is woven between our oceans, across mountains and plains, urban settlements and rural expanses. It incorporates traditional beliefs that originated hundreds of years ago and these beliefs live alongside the internet generation. Human and natural diversity are the essence of South Africa.

Scattered across this landscape are 25 universities and 50 technical and vocational education and training colleges (TVETs) with close to 427 campuses. These institutions are critical to national progress in the fields of research, engineering, agriculture, teaching, the arts, sporting endeavour, artisan and building trades, mining and telecommunications. They are also the operational sites of the Higher Education and Training HIV/AIDS Programme (HEAIDS).

We appreciate that the youth population is diverse. In the context of the HIV, TB and STI epidemics, it is important to recognise and pay attention to the multiplicity of sexual orientations among students and the behaviours associated with various sexual orientations. This report provides a glimpse of the diverse ways in which young people experience sex, relationships and intimacy – and it explores the implications of this diversity for sexual health.

The report contains the findings of the first South African higher education sector survey on knowledge, attitudes, perceptions and behaviours relating to sex, HIV, and alcohol and substance use among men who have sex with men (MSM) and young people who are lesbian, gay, bisexual, transgender, queer and intersex (LGBTQI).

This study is the first of its kind to address issues related to LGBTQI youth, who are identified as a “key population” in the South African National Strategic Plan for HIV, STIs and TB, 2012–2016.

Its findings provide a foundation for further research and the development and implementation of programmes to protect our students and youth from HIV infection in an inclusive way that caters for all sexual orientations.

Essentially the findings tell us that young MSM are marginalised in the South African higher education environment. They are well informed about HIV/AIDS. Many have been tested for HIV and intend to do so in future. Yet they frequently engage in intimate relationships that increase their risk of acquiring STIs, including HIV.

Many MSM have sex only with men, but some also have sex with women. These relationships are often regarded as clandestine and this makes it all the more important to provide health services to this population. A substantial percentage of MSM have multiple partners while the use of condoms and lubricants to reduce the risk of HIV transmission and STIs is often inconsistent.

On a daily basis, MSM are faced with homophobia and stigma which inhibit access to sexual health services, and also leave them with little confidence that the higher education sector can constructively deal with their marginalisation and experiences of violence.

This picture stands in contrast to the inclusive, non-sexist, non-racist human rights enshrined in the South African Constitution and in many other laws, policies and programmes that have helped transform South Africa during the last 20 years.

It demands a bold and integrated response from our political, academic and student leadership. It also requires stakeholder engagement in order to achieve social change that brings MSM and LGBTQI populations into the fold of protection and risk-reduction in relation to their sexual health and psychological and overall wellness.

I commit to working with colleagues and friends from across the higher education and training sector to embrace and use the findings from this report so that we can continue to build a caring, healthy and prosperous South Africa.

The Department of Higher Education and Training is grateful to NACOSA and to the Global Fund for providing financial support that enabled the department, through HEAIDS, to undertake this research. I trust that interventions that will be built to address the related issues will yield positive results in mitigating the impact of HIV, TB and STIs and facilitate the protection of human rights in the higher education sector in South Africa.

**Mduzuzi Manana**

Deputy Minister of Higher Education and Training

## Statement by HEAIDS Programme Director Dr Ramneek Ahluwalia

The key focus of the HEAIDS Programme is to ensure that young people passing through our sector on all 400 campuses countrywide are healthy and competent to take their rightful places in contributing to the development of our country. The HEAIDS Programme, with the support of its partners, has assisted in increasing life expectancy for many thousands of vulnerable young people, who are now accessing proper care in terms of treatment, psychological support and social wellbeing.

It has been proven that early detection and treatment can now prolong life expectancy for people living with HIV by more than 30 years. This eventually provides a return on our investment in health care, allowing young people to contribute to the welfare of their own families, to our sector and to the economy of the nation as a whole.

The HEAIDS Programme has extended its services in the areas of health promotion, prevention of diseases of lifestyle, cancer screening and contraception through our award-winning First Things First initiative. HEAIDS focuses on men's health through its partnership with Brother's for Life and on women's health through the Zazi intervention. It has a dedicated LGBTQI programme and addresses alcohol and drug abuse through Balance Your Life.

Previous studies have shown that higher education institutions (HEIs) are enabling and empowering spaces for young South Africans, and benefit their health and wellness. The current HEAIDS model, which facilitates the implantation of healthcare programmes in the sector, is designed to promote student attendance and retention, boost throughput rates, and increase graduate competencies.

The National Student Sexual Health HIV Knowledge, Attitude and Behaviour Survey: Focusing on Student Men who have Sex with Men at 14 Higher Education Institutions in South Africa is first the first of its kind in South Africa and it helps build evidence for effective intervention.

The study confirms that gender and sexual orientation and associated risk factors put certain student populations – namely, MSM and LGBTQI individuals – at increased risk of becoming infected with HIV and other STIs. This finding has implications for managing the HEAIDS programme as targeted, evidence-based interventions are needed to reduce risk factors and address associated issues of stigma and discrimination that impact on MSM and LGBTQI.

We will only be able to achieve the national HIV, TB and STI goals, as set out in the National Strategic Plan 2012-2016, if we address the totality of risk factors that contribute to these epidemics.

We also need to maximise the window of opportunity afforded to us by the research so that we can protect all students and ensure that no one is left behind. Narrow-minded views which fuel homophobia and obstruct holistic and equitable provision of health information, education and services need to be tackled head-on.

For this we need bold leadership from students, staff and management and key stakeholders from across the higher education and training sector to act decisively to strengthen the response to stigma and discrimination challenges.

We also need to heed the researchers' recommendations that we should expand research and promote interventions which improve self-esteem, encourage responsible use of alcohol and other substances, tackle harmful sexual behaviour trends and nurture the principles of social justice, equality and non-discrimination within the higher education and training sector.

**Dr Ramneek Ahluwalia**  
Programme Director

## Statement by Dr Maureen van Wyk, Executive Director, NACOSA

Over the past 12 years, NACOSA has learned that when people come together to tackle community challenges they have a stronger voice and are more effective at finding solutions. Our role as a network of over 1 400 civil society organisations is not just to take services to people but to bring people and their ideas into the development of health and social services. Only if we work together, can we start to turn the tide of HIV, AIDS and TB in South Africa.

The NACOSA Men who have Sex with Men (MSM) Programme started in 2008 when a need for sensitivity training on the topic of MSM was identified by the Department of Health in the Western Cape. Our current MSM/LGBTQI Higher Education Programme is one of three Global Fund-supported programmes we are undertaking that focus on key populations. The others deal with gender-based violence and sex work.

The South African National AIDS Council Policy Brief is very clear: “National efforts to reach zero new HIV infections, zero stigma and zero AIDS-related deaths will only be achieved through explicit commitment to addressing the HIV epidemics among key populations.” The aim of this research into student sexual health, HIV knowledge, attitudes and behaviour was to shed light on some of the challenges faced by MSM and highlight areas where we need to focus our efforts in the future.

This report, in agreement with other studies, shows that MSM behaviours are similar to those of other students. It calls for a more nuanced approach to understanding sexuality, where MSM are not seen as a distinct, easily identifiable group but rather as members of complex and overlapping networks with an array of sub-cultures. A key recommendation is to conduct further research to understand the various contexts within which students engage in sexual behaviour, including factors such as gender and peer norms, sexual experimentation, patriarchy, hetero-normativity, cultural practices and sexual orientation.

MSM cannot be seen as a homogenous group and same sex behaviour should not be equated with sexual orientation. In our efforts to create an enabling environment for MSM and LGBTQI students to access healthcare freely – without discrimination or judgment – it is vital to develop a targeted approach to HIV programming that takes into consideration the complex challenges facing this key population. Ideally, such an approach should not only be driven by HIV units but also by management and student leadership at higher education institutions (HEIs). We need to reach the broader student community with messaging which promotes understanding and tolerance for sexual minorities.

The role of the internet and social media as places to focus prevention work must be better understood. We must significantly improve student development and psychological support services in order to address alcohol and drug use among key populations and the mental health issues many MSM/LGBTQI students face.

It is becoming clear that if we invest in the specific health needs of key populations and reduce their vulnerability, we can have a huge impact on the number of new HIV infections and help achieve our goal of reaching zero.

NACOSA, in partnership with HEAIDS, looks forward to further expanding its MSM/LGBTQI-focused work at HEIs and other training institutions in order to create a truly enabling environment on campuses, free from fear, stigma and discrimination.



**Dr Maureen van Wyk**  
Executive Director

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## Executive summary

The Higher Education and Training HIV/AIDS Programme (HEAIDS), in partnership with Networking HIV/AIDS Community of South Africa (NACOSA) and funded by the Global Fund to Fight AIDS, TB and Malaria, undertook research among students at higher education institutions (HEIs) in South Africa to explore their knowledge, attitudes and behaviour in relation to sexual health and HIV. The sample comprised both male and female students, and specifically included male students who have sex with men. The study was intended to inform a comprehensive package of care for men who have sex with men (MSM) and lesbian, gay, bisexual, transgender, queer and intersex (LGBTQI) members of campus communities.

The background to the study was that HEAIDS had identified 14 HEIs where more support was needed in order to provide an appropriate package of services for MSM and LGBTQI populations. NACOSA was a principal recipient of the Global Fund Round 9 grant to South Africa. Principal recipients are responsible for the disbursement of the grant to implementation partners and monitoring and evaluation of implementation to ensure achievement of grant objectives.

NACOSA therefore had a dual role in relation to the 14 HEIs prioritised by HEAIDS for interventions to strengthen services to LGBTQI and MSM: providing funding and co-ordinating or managing these programmes with the assistance of HEAIDS.

To better inform future interventions with LGBTQI and MSM, a student sexual health survey was designed, centring on the following research questions:

- What is the extent of risky sexual behaviour and knowledge about HIV in a sample of university students, and particularly among student MSM?
- What is the extent of alcohol and drug use among these students?
- What is the level of self-esteem in the sample of students?
- What does student feedback indicate about access to sexual health services for LGBTQI students, and about the discrimination, successes and challenges they experience?

The research was cross-sectional in design and registered university students at the following HEIs were invited to participate: Central University of Technology, Durban University of Technology, Mangosuthu University of Technology, Nelson Mandela Metropolitan University, Stellenbosch University, Tshwane University of Technology, University of Cape Town, University of the Free State, University of KwaZulu-Natal, University of Limpopo, University of South Africa, University of Venda, University of the Western Cape, and Walter Sisulu University.

Ethics approval for the study was granted by the Research Ethics Committee (Human Research, Non-medical) at Stellenbosch University. The study was conducted in accordance with the ethical guidelines and principles of the International Declaration of Helsinki, South African Guidelines for Good Clinical Practice, and the Medical Research Council Ethical Guidelines for Research. All participants included in the analysis gave their informed consent.

Students responded voluntarily to an invitation to participate in the study. In most cases the survey was self-administered and completed online. However, some HEIs used a paper-based survey which was subsequently entered into the online system. The questionnaires contained questions on demographic, socio-economic, attitudinal and behavioural variables.

A total of 8 869 students participated in the survey. Of these 896 were MSM and 7 973 constituted the non-MSM sample. Two-thirds of the non-MSM sample were female, nearly one-third were male and less than one percent were intersex.

Of the total sample, 69% identified themselves as heterosexual, 16% as homosexual, 6% as bisexual and 9% as “other” forms of sexual orientation.

The MSM group within the sample spanned several categories of sexual orientation. Almost three-quarters of MSM students identified themselves as homosexual. However, one-fifth of MSM reported being bisexual, fewer than 10% of MSM considered themselves heterosexual, and fewer than 2% said another form of sexual orientation applied to them.

This indicates that many forms of same and opposite sex behaviours exist among students. Fully a quarter of MSM did not describe themselves as homosexual, suggesting that many male students choose sexual partners on grounds other than the sexual orientation they identify with.

Half of student MSM reported having had at least one female sex partner in the past year, while half also reported having had at least one male sex partner in the same period. About one-third of student MSM indicated that they had had penetrative vaginal sex with female sex partners.

Anal sex was practised by both MSM and non-MSM study participants. While almost 40% of MSM in the sample said they had had anal sex, almost one in 10 non-MSM students had also had penetrative anal sex.

Both MSM and non-MSM groups within the sample achieved high HIV knowledge scores which showed no statistically significant difference. Although possessing sound knowledge of HIV makes it possible for appropriate action to be taken with regard to prevention, treatment and care (Shisana et al, 2009), studies have also indicated that students who have a good understanding of HIV do not necessarily enact safer sexual behaviour (Hightow et al, 2005).

Alcohol and drug use scores for student MSM were statistically significantly higher than those for other students in the sample. A quarter of MSM reported using alcohol or other drugs before or during their last sexual intercourse. Substance use has been associated with risky sexual behaviour and both these factors are linked to an increase in acquiring HIV (Brown and Venable, 2007; So et al, 2005).

Self-esteem scores for the MSM survey participants were high, but still significantly lower than for the non-MSM student group. High levels of self-esteem can be associated with enhanced initiative and pleasant feelings (Baumeister, RF, Campbell, JD, Krueger, JI, and Vohs, KD, 2003) but this construct is heterogeneous and may not lead to improved behavioural outcomes specifically in relation to HIV prevention.

Previous sexually transmitted infections (other than HIV) were reported by 14.2% of the MSM sample. However, 19.8% reported having had genital sores, 9% indicated having previously had a discharge from the genitals and/or anus, and 26.5% reported having experienced pain and/or burning while urinating.

Three-quarters of MSM participants said they had been tested for HIV in their lifetime and two-thirds said they had had their last HIV test less than a year before the survey. Most (more than 80%) said they planned to get tested for HIV again. More than half of student MSM had chosen to take an HIV test on campus and three-quarters said they would use campus testing facilities in future. One-third of student MSM said they had tested for HIV more than five times in the past.

Three-quarters of student MSM indicated they were comfortable using sexual health services on campus but only one-third reported having actually used these services in the preceding 12 months. More than 40% had used off-campus sexual health services in the past year.

More than one in 10 students in the MSM group reported that they had been forced to have sexual intercourse against their will, while 3% indicated that they had threatened to use force to get someone to have sex against his or her will. Just over 10% of student MSM reported being subjected to some form of abuse and/or violence at an HEI because of their sexual orientation. Fewer than 10% reported having been hit by a current or previous sex partner.

Students' perceptions suggest there is scope for improvement in the role played by university management and student leadership in addressing LGBTQI issues. Although moderate levels of confidence were expressed (around 50% for both MSM and non-MSM participants) that cases of discrimination based on gender, sexuality and race would be well investigated by the HEI staff, many students were unsure how issues relating to the broader experiences of LGBTQI students would be managed.

The data shows perceptual differences between MSM students and non-MSM students about the safety of HEIs for LGBTQI students (7.5% of MSM felt HEIs were unsafe compared to 2.8% of non-MSM) and whether they were enabling environments for this group (9% of MSM felt they were not enabling compared to 4.1% for non-MSM).

The research indicated that the behaviours of MSM and non-MSM students were similar in many respects. This suggests that HEIs should locate future work for MSM and LGBTQI within a broader understanding of the emerging patterns of sexuality and sexual culture of young people.

It is important to understand the various contexts within which students engage in sexual behaviour, including gender norms, sexual orientation, sexual experimentation, patriarchal systems, cultural practices and group or peer pressure. HIV harm-reduction programmes should avoid defining MSM as a homogenous group and confusing same sex behaviour with sexual orientation.

The survey indicated that belonging to the group of student MSM was statistically associated with a number of variables. There was a:

- Very strong association with ever having found a sex partner through the internet.
- Moderate association with use of alcohol and/or drugs during the most recent sexual experience.
- Beneficial, but weak, association with currently being in a relationship with a primary partner.
- Strong association with having offered transactional sex to someone.
- Strong association with having threatened someone with force in order to have sex.

These findings may assist NACOSA and HEIs in formulating policy and in developing evidence-based interventions to enhance the sexual health of MSM students and promote non-discrimination. Potentially risky sexual behaviours identified in the current study included:

- Unprotected anal and/or vaginal sex.
- Low rates of lubricant use during penetrative anal sex.
- Multiple sexual partners.
- Multiple concurrent sexual partners.
- The presence of STIs.
- Early sexual debut.
- Unknown HIV status.
- Complacency about risk of infection.
- Forced sex and sexual violence.
- Meeting sex partners through the internet.
- Transactional sex.
- Substance use before or during sexual encounters.

Some social factors impacting on the health of MSM and LGBTQI were also reported. These included:

- An unaccepting campus environment for MSM and LGBTQI.
- Discrimination based on sexual preference.
- Threats of abuse or violence.
- Lower levels of self-esteem (relative to their non-MSM peers).
- Higher levels of alcohol and drug use.

Students' mental health, their social environment, their behavioural vulnerabilities and limitations in access to health care can combine to increase the risk of HIV transmission. It is therefore critically important to find innovative ways of reaching the diverse male students who engage in sex with men.

Higher education institutions should guard against complacency about the inclusivity of their HIV responses. Programmes need to go beyond a mechanistic and reductionist approach to sex, especially in same-sex encounters and relationships, to recognise multiple worlds of love, desire, pleasure, mutuality and concern. Sex is relational and infused with meaning; focusing exclusively on practice (and "health-seeking behaviour") could result in failure to understand the real significance of actions such as using (or not using) condoms (Kippax, 2013).

Interventions must be designed for those most at risk, such as student MSM, and appropriate services must be provided (HEAIDS, 2010) within higher education sector structures. Such services must be initiated at institutional level by the relevant HIV units or other appropriate structures within HEIs. The results of this research – specifically in relation to alcohol and drug use, self-esteem, perceived HEI leadership on LGBTQI issues, non-discrimination and sexual risk behaviour among student MSM – need to be integrated into the current *Policy and Strategic Framework on HIV and AIDS for Higher Education (HEAIDS, 2012)* with a view to creating an enabling environment free from new HIV infections and characterised by zero discrimination against sexual minorities.

The survey revealed differences between and within institutions and showed a need for nuanced, flexible and context-driven interventions which acknowledge the particularities and commonalities in youth sexuality. Embracing these realities may serve to better inform programme developers and implementers about the contexts and the variety of ways in which student men engage sexually with other men. Failure to do so may make sexual health messaging to these groups clumsy, too generic and overly simplistic – and, in the end, incapable of achieving a reduction in HIV transmission rates or even creating enabling environments at HEIs.

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## Abbreviations and acronyms

AIDS	Acquired immune deficiency syndrome
ACCTIW	AIDS Co-ordinating Committee of Tertiary Institutions in Western Cape
ART	Antiretroviral therapy
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HCT	HIV counselling and testing
HEAIDS	Higher Education and Training HIV/AIDS Programme
HEI	Higher education institution
HIV	Human immunodeficiency virus
IDU	Injecting drug use
IEC	Information, education and communication
KAPB	Knowledge, attitude, behaviour and prevalence
LGBTQI	Lesbian, gay, bisexual, transgender, queer, intersex
MARP	Most at risk population
MCP	Multiple concurrent partners (or partnerships)
MSM	Men who have sex with men
MSMGF	Global Forum on Men who Have Sex with Men and HIV
NACOSA	Networking HIV/AIDS Community of South Africa
PR	Principal Recipient
SANAC	South African National AIDS Council
SPSS	(IBM) Statistical Package for the Social Sciences
SR	Sub-recipients
STI	Sexually transmitted infection
TB	Tuberculosis
TVET	Technical and vocational education and training
UN	United Nations
UNGASS	United Nations General Assembly Special Session
UNAIDS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organization

## Section 1: Introduction and overview

### Partner organisations: the Global Fund and NACOSA

The Networking HIV/AIDS Community of South Africa (NACOSA) is a national civil society network of organisations working in the HIV, AIDS and TB fields and related areas of social development. With more than 1 200 members – more than 900 community-based organisations as well as other non-profit organisations and individuals – NACOSA works to turn the tide of HIV/AIDS and TB through capacity building, networking and promoting dialogue. As a principal recipient (PR) for the Round 9 grants made by the Global Fund to Fight HIV, TB and Malaria, NACOSA channels funding to various civil society organisations in South Africa and oversees the appropriate use of this funding.

During the second phase of the Global Fund grant, NACOSA's MSM/LGBTI Higher Education Programme, focuses on students and staff at higher education institutions (HEIs). Through the Higher Education and Training HIV/AIDS Programme (HEAIDS), 14 HEIs have been prioritised for support in order to strengthen their responses to the needs of MSM and LGBTQI students and staff.

Some tertiary institutions, mainly in metro areas of South Africa, have LGBTQI organisations on campus that offer a variety of services to students. However, these services are not necessarily linked to comprehensive health services for students. The majority of tertiary institutions, especially those in rural areas, provide very few or no services specifically for LGBTQI students. Negative attitudes to LGBTQI students prevail in many university communities despite efforts by the South African Government to acknowledge and uphold their human rights. Members of the LGBTQI community within universities often find it difficult to “come out” and access HIV and other health-related services.

Higher education institutions should serve as transformation incubators where discriminatory tendencies are dealt with openly, sensitively and with respect for human rights. There is a need to have programmes specifically aimed at addressing challenges experienced by LGBTQIs on campus. In most cases these programmes should be integrated with diversity initiatives that address issues of stigma and discrimination. They should include campus dialogues and sensitisation training for university staff, including health staff, and the promotion of an enabling environment on and around campus – for example, through the establishment of networks, support structures and client-friendly services. All of these would contribute to greater access to health care by LGBTQI students.

Many LGBTQI/MSM students who attend tertiary institutions are from rural and conservative backgrounds and lack adequate exposure to information on safer sex and access to condoms and water-based lubricants. A comprehensive campus-based prevention package would ensure that this vulnerable group was empowered with appropriate knowledge to remain HIV negative, and provide LGBTQI/MSM-specific care and support to students who are HIV-positive.

Studies have found that a high proportion of MSM have multiple concurrent partnerships (MCPs) and 25% to 86% also engage in heterosexual sex. Practice of unprotected anal intercourse has been reported at lower than 50%. Problems in relation to the availability of condoms and lubricants have been noted, with student MSM often using unsafe lubricants such as Vaseline (petroleum jelly). As is the case in the general population, a high proportion of MSM do not know their HIV status and are reluctant to be tested for HIV.

Several studies have also shown that stigma, discrimination against MSM and LGBTQI individuals by health workers, and hetero-normative attitudes (treating all patients/clients as if they were heterosexual) serve as major deterrents to MSM and LGBTQI seeking health care, including HCT and STI treatment. Fear of stigma and discrimination also prevents MSM and LGBTQI from disclosing their sexuality to health workers and discussing risk behaviours. This is particularly true of tertiary campuses in rural areas or smaller towns. Health workers are not skilled in working with this population. They do not understand MSM and LGBTQI sexual behaviour and often their own values and beliefs act as barriers in providing non-judgmental care.

In summary, risk factors and gaps in terms of HIV prevention and health service delivery to MSM and LGBTQI are:

- Unprotected anal sex (which carries a higher risk of HIV transmission than vaginal sex).
- Other high-risk sexual behaviour (including multiple partners or sex work).
- Social discrimination, stigma and homophobia, which make it less likely that LGBTQI and MSM will access health services.
- Limited knowledge about the link between substance abuse and HIV transmission.



- Low access to condoms and condom-compatible lubricants in the health sector and on campuses.
- The absence of a national health programme targeted at LGBTQI and MSM.
- Limited LGBTQI/MSM-friendly health services.

There is a clear need for a specific focus on MSM and LGBTQI in all aspects of HIV prevention, treatment and care. Fundamentally, this focus is necessary to ensure that the rights of all individuals to an adequate standard of health care are met.

After reviewing MSM/LGBTQI programmes in South Africa and analysing possible gaps, NACOSA designed a programme to respond to the above situation. Campuses were identified as environments requiring support in order to provide a comprehensive package of care to LGBTQI/MSM students and staff. NACOSA was able to channel funding to selected HEIs to establish LGBTQI/MSM-friendly health services and it co-ordinated and managed these interventions with programmes with the assistance HEAIDS.

NACOSA and HEAIDS both recognised the need for more specific information on MSM in the South African student population in order to ensure their interventions at 14 HEIs were evidence-based and appropriate. The present study was commissioned in order to provide such information.

### The research institution

The Institutional HIV Office at Stellenbosch University (SU) was selected in a tender process as the principal research partner for this project. The researcher at the Institutional HIV Office has demonstrable knowledge and experience in the following areas:

- HIV/AIDS in the context of the MSM/LGBTQI population.
- The role of key populations in relation to the HIV/AIDS response.
- Working with tertiary institutions and/or government stakeholders.
- Conducting quantitative research and undertaking statistical/data analysis.
- Epidemiology of HIV.
- Monitoring and evaluation, including programme evaluation.
- Research ethics.

SU is well established within the higher education HIV/AIDS sector in South Africa and is a robust partner of HEAIDS and the AIDS Co-ordinating Committee of Tertiary Institutions in the Western Cape (ACCTIW). The research institution has academic and programmatic experience of the MSM and LGBTQI populations at HEIs, as well as an understanding of other key populations in South Africa. The principal investigator's details appear in Table 1.

TABLE 1: DETAILS OF THE PRINCIPAL INVESTIGATOR

<b>Name</b>	Jaco Greeff Brink
<b>Qualification</b>	MA Psychology
<b>Organisation</b>	Institutional HIV Office Stellenbosch University
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### Objectives

The objectives of the survey are to:

- Gather information on the sexual behaviour and sexual health of students with a specific emphasis on student MSM.
- Contribute to available quantitative data on students' lives, including behaviours, challenges, risks, knowledge and strengths, with specific emphasis on student MSM.
- Gather information on how students (and MSM in particular) experience accessing health care on campus and off campus.
- Gather information on the use of drugs and/or alcohol by student MSM and how this may influence risky sexual behaviour.

- Provide data for possible use in informing a programme evaluation survey at a later date.
- Contribute towards a body of evidence of effective practice which can be shared with the public health community and can inform MSM/LGBTQI programme development.

### Outline of the global impact of HIV/AIDS

UNAIDS estimated that there were about 33 million people worldwide living with HIV in 2009, as one of the most severe retro-viral diseases in recorded history continued to exact a heavy toll on many nations (UNAIDS, 2009). Global HIV prevalence was estimated to be 0.8% in 2008 (Kilmarx, 2009). According to UNAIDS (2009), the impact of HIV has been more severe than expected: more than 20 million people around the world have died of AIDS-related diseases since the start of the epidemic. The highest incidence levels and mortality rates have been among people living in developing and resource-limited countries (Beyrer, 2007; CDC, 2007; Mayer, Mimiaga and Safren, 2010).

Early epidemiological studies suggested that “the epidemic in the developed world was partially potentiated by sex among MSM, as well as injecting drug use (IDU), but to a lesser extent by heterosexual intercourse” (Mayer et al, 2010, p205; Van Dyk, 2008). In contrast, epidemiological research from the early 1990s revealed that HIV in developing countries was predominantly spread through heterosexual transmission, with associated peri-natal transmission (Karim and Karim, 2008; Van Dyk, 2008).

The current pandemic is characterised by individual-level risks that are powerfully influenced by diverse risk environments (Beyrer, 2007). The circumstances within which HIV is acquired and transmitted are shaped by social, structural and population-level risks (Beyrer, 2007).

In recent years, HIV incidence rates (or new infection rates) have reached a state of stability in many countries and there have been significant declines in some countries (Kilmarx, 2009; UNAIDS, 2009). The number of people in developing countries receiving antiretroviral treatment (ART) increased between 2002 and 2007 from 300 000 to 3 million (WHO, 2004). The latter number represented 31% of those who needed ART (UNAIDS, 2009). HIV continues to affect young people more than any other group. Infected individuals in the 15 to 24 year age-group represent 45% of all people living with HIV (UNAIDS, 2009).

An emerging epidemic among MSM in developing countries and injecting drug use epidemics across Eastern Europe and central Asia are examples of increasing HIV incidence in specific sub-populations (Beyrer, 2007). More needs to be done – at the individual, policy and structural levels – to curtail the spread of HIV in most-at-risk populations.

### The HIV epidemic in sub-Saharan Africa

Of the estimated 33 million people living with HIV in 2009, 65% were from sub-Saharan Africa. This region also accounted for 75% of global AIDS-related deaths although it constituted only 10% of the world's population (UNAIDS, 2009).

The HIV epidemic has a relentless impact on households, the health sector, the education sector, the workplace and the world of business. It reduces life expectancy and constrains economic development. HIV prevalence tends to affect urban dwellers more than their rural counterparts (UNAIDS, 2009).

South Africa has the largest population living with HIV in the world (UNAIDS, 2009) and is experiencing a maturing generalised HIV epidemic.

In 2008 ART in the sub-Saharan region covered about 44% of those who needed treatment (Kilmarx, 2009, UNAIDS, 2009). This represented a major increase in comparison with 2002 and widespread access to ART has been accompanied by a gradual decline in the rate of infection. In 2008 the number of new infections was approximately 25% lower than it was at the peak of the epidemic in 2005 (UNAIDS, 2009). The average survival rate of untreated people living with HIV in sub-Saharan Africa is similar to that in high-income countries.

The socio-economic context of the epidemic varies greatly among countries and within countries of the sub-Saharan region. Most HIV transmission occurs during heterosexual sex in the general population and a substantial proportion takes place among stable sero-discordant couples (Van Dyk, 2008). Evidence suggests that concurrent sexual partnerships may play a significant role in the transmission of HIV (Pisani, 2008; UNAIDS, 2009). HIV transmission also occurs among people who have sex with sex workers, although this has a relatively small impact on national incidence (Kilmarx, 2009).

Since 2006 data have suggested the presence of a hidden, neglected, concentrated and high-prevalence HIV epidemic among MSM in developing countries (Baral, Sifakis, Cleghorn and Beyrer, 2007; Elford and Hart, 2003; Kilmarx, 2009; Mayer et al, 2010, UNAIDS, 2008; Van Griensven, 2007). There has been an increase in research about MSM since about 2007. However, minimal funding has been provided for interventions to benefit this extremely vulnerable population (UNAIDS, 2009).

Four successive South African household surveys found similar national HIV prevalence levels among the general population (aged two years and older): 11.4% in 2002, 10.8% in 2005, 10.9% in 2008 and 12.2% in 2012 (Shisana et al, 2014). This prevalence translates to more than four million South Africans currently living with HIV. There is evidence that HIV incidence is declining in certain cohorts, notably among young women (Rehle et al, 2010) and those aged 15 to 20 years (Shisana et al, 2014). This has been attributed, in part, to the effects of expanded uptake of ART and increased condom use among young people (Rehle et al, 2010; Shisana et al, 2009).

### HIV at higher education institutions in South Africa

Young people between 15 and 24 years of age represent half of all new HIV infections worldwide (UNAIDS, 2009). They have also been found to engage in sexual behaviour that puts them at risk of infection, including: inconsistent condom use, use of alcohol or drugs during sexual encounters, and multiple sexual partners (Macdonald et al, 1990; Peltzer, 2000).

HEIs in South Africa are in a position to respond effectively to the HIV epidemic since they have considerable human and intellectual capital which can enhance the national HIV response. Failure to use their considerable resources to combat the HIV epidemic could leave many students vulnerable to HIV transmission and undermine the core functions of HEIs in developing the leadership of tomorrow.

Data have suggested that there is a lower HIV risk among the most educated sections of society (Hargreaves, 2008). There is, however, a paucity of knowledge about the HIV epidemic in the higher education sector. The first study on HIV prevalence and knowledge, attitudes, behaviour and practice (KABP) was commissioned at 22 HEIs in South Africa in 2008 and 2009. This study revealed that HIV prevalence was substantially lower in HEI communities than among the general population in South Africa (HEAIDS, 2010).

The HEAIDS 2010 study observed: "While the distribution of HIV follows national patterns in terms of sex, race, age group and education, HIV prevalence is lower in the higher education population within all these demographic categories." (HEAIDS, 2010 pxviii) Academic staff had the lowest overall HIV prevalence (1.5%), followed by students (3.4%) and administrative staff (4.4%). The highest level of infection was among service staff (12.2%) (HEAIDS, 2010). MSM students at HEIs were found to have higher HIV prevalence (4.1%) than other male students (1.7%), and female students were found to be three times more likely to be living with HIV than male students (HEAIDS, 2010).

HEIs in the Western Cape had the lowest HIV prevalence among students (1.1%), while the highest prevalence among students was found in the Eastern Cape (6.4%). Knowledge about HIV and its transmission was high among all students (HEAIDS, 2010).

### MSM: global, African and South African contexts

The term "men who have sex with men" (MSM) is used to include all men who engage in male-male sexual behaviour. MSM include gay men, bisexual men, men who do not identify as gay or bisexual, male sex workers, transgendered people and a range of culture- and country-specific populations of MSM (MSMGF, 2008). MSM describes male-male sexual practices but is not intended to suggest the existence of a group who are uniform in other respects. The population of MSM comprises diverse individuals, distributed across the social spectrum with various ways of thinking about and experiencing their sexuality (Beyrer et al, 2010).

Boellstorf suggests the complexity of the concept:

*Clearly, it would be foolhardy to predict the futures of 'MSM', given that the category has been characterised by transformations which have radically altered its meaning. But this history does indicate that a vulnerability to reconfiguration will continue to shape emergent characteristics of the category. It is neither possible nor desirable to put the MSM genie back into the bottle of epidemiological categorisation. The question is how to foster notions of 'MSM' not predicated on the implicit injunction 'do not identify as gay', notions that move beyond the logic of enumeration and a quixotic goal of segregating identity from behaviour. At stake is nothing less than an emerging global vision of sexual selfhood and social belonging.*  
(Boellstorf, 2011, p306)

It has been well documented that MSM face a significantly higher risk of HIV infection than the general population in most regions of the world and that agencies have largely failed to address HIV infection among MSM (Baral et al, 2007; CDC, 2007; Elford and Hart, 2003; Smith, Tapsoba, Peshu, Sanders and Jaffe, 2009; Van Griensven, 2007; Van Kesteren, Hospers, Van Empelen, Van Breukelen and Kok, 2007).

Studies indicate an increase in rates of high-risk sexual behaviour is occurring among MSM globally (Elford and Hart, 2003), in low and middle income countries (Baral et al, 2007), and in developing countries in the southern hemisphere (UNAIDS, 2008). A meta-analysis found HIV prevalence among MSM to be 3.8 times that of other male populations in Africa, 33.3 times that of non-MSM male populations in the Americas, and 18.7 times in Asia (Beyrer et al, 2010; Kilmarx, 2009).

Michel Sidibé, Executive Director of UNAIDS, stated:

*The failure to respond effectively has allowed HIV to reach crisis levels in many communities of men who have sex with men and transgender people. Efforts to reverse this crisis must be evidence-informed, grounded in human rights and underpinned by the decriminalisation of homosexuality. . . . We must work together to end homophobia and ensure the barriers that stop access to HIV services are removed.* (UNAIDS, 2010, p1)

The potential impact of the concentrated HIV epidemic among MSM on the generalised HIV epidemic globally is a cause for concern. The crossover between these two epidemics has been associated with MSM often also being in sexual relationships with women (Lane, McIntyre and Morin, 2004).

People who practise unprotected anal sex are at greater risk of contracting HIV due to the more rigid physiology of the anal canal compared to the vaginal canal, a much thinner cell layer in the anal canal, and therefore heightened potential for anal tearing which leads to easier transmission of HIV (Van Dyk, 2008).

In addition to the increased physiological risk of HIV exposure which MSM face (due unprotected anal intercourse) there are also contextual factors to consider in the MSM population globally and in South Africa. These contextual factors include hetero-dominant social norms, homophobia, homo-prejudice, a hostile social environment, and the “othering” of bisexual men by straight as well as gay men.

The vulnerability of MSM is partly defined by a set of interrelated human rights violations, stigma and forms of social inequality that increase the risk of HIV transmission. Prejudice, stigma and discrimination may have consequences in terms of mental health, social support, behavioural outcomes, and accessing the health care system (Figure 1). Stigma can drive MSM away from prevention programmes and inhibit early intervention for MSM living with HIV (MSMGF, 2008). Research by Comstock (1991) suggested that gay and lesbian university students experience four times more victimisation than other students.

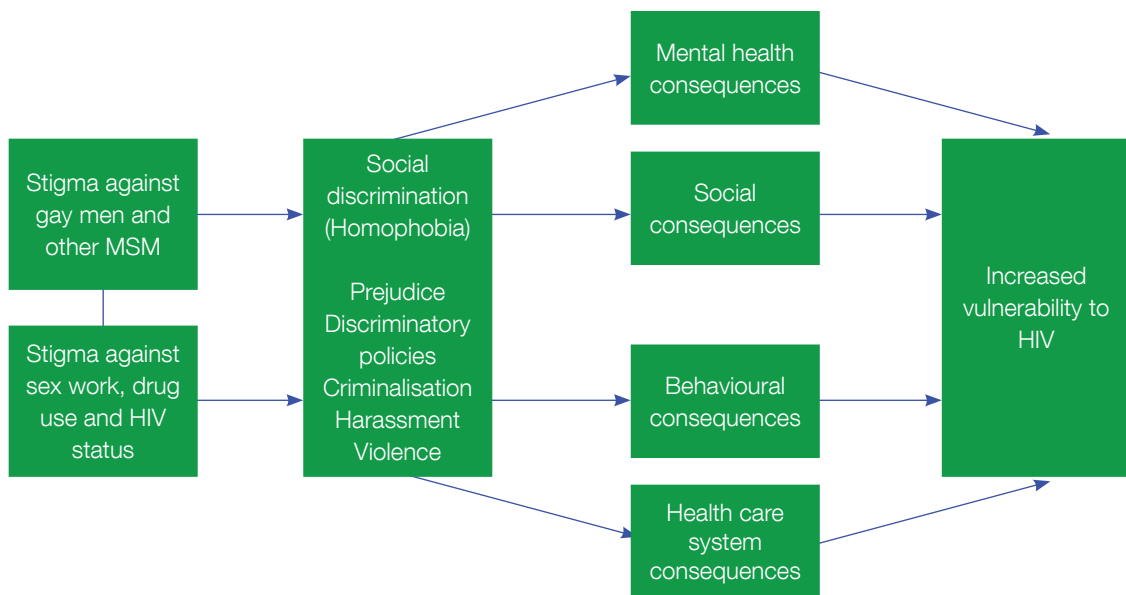


FIGURE 1: LINKAGES BETWEEN HOMOPHOBIA AND HIV RISK (MSMGF, 2008)

## Motivation for the study

The higher education sector in South Africa has been identified as a key focus area for HIV/AIDS-related interventions as it plays a critical role in developing the knowledge and skills base of the country and it serves large numbers of students in the age group most vulnerable to HIV infection (HEAIDS, 2008). Global and national statistics indicate that HIV is taking a toll particularly on young people (Shisana, 2005).

Most students are in their late teens or early adulthood, a phase of development when intimate interpersonal relationships are formed and sexual experimentation takes place.

Alcohol consumption is high among students and part of their social environment. Although students are of legal age to drink, alcohol use increases their susceptibility to risky sexual behaviour. There is a need for deeper understanding of the dynamics and peculiarities of HIV transmission within the student population in South Africa and the implications of the epidemic for HEIs (HEAIDS, 2008).

Current data on sexual risk and HIV knowledge among student MSM and LGBTQI is inadequate. There is no substantial sexual risk data specifically for South Africa.

There is a strong LGBTQI movement at some tertiary institutions in South Africa, as evidenced by student organisations and support groups on various campuses. Although many students are open and/or public about their sexual orientation, many others are still “in the closet” due to fear of victimisation and discrimination (Graziano, 2005; Van Griensven, 2007).

Van Griensven has attempted to estimate the role played by MSM in the transmission of HIV. “If we tentatively assume that male-to-male sex occurs in 3% of adult males, a high HIV prevalence in MSM may contribute between 10% and 20% of all prevalent HIV infections in the general population.” (Van Griensven, 2007, p.1361)

Elford and Hart (2003) highlight the need to be “alert to the changing risk environment in which men have sex with other men”, as well as sensitive to the nature of sexual relationships and networks among university students in South Africa. Van Griensven (2007) underscores this:

*MSM have long been overlooked in HIV research and prevention on the African continent. There are strong local convictions that MSM behaviour is non-compatible with traditional African culture. The studies from Kenya, Senegal and Sudan show otherwise and indicate that male-to-male sex is an integral part of activities of at least some African men. These studies also show that when respectful and considerate approaches are used to ensure their safety, dignity and anonymity, MSM will come forward to work with public health authorities and others to help improve their sexual health. Now that HIV epidemics in several African countries have shown encouraging signs of decline, the willingness of MSM populations to be engaged in HIV research and prevention provides a unique window of opportunity to research and stop the HIV epidemic as it diversifies into smaller populations at risk. If this opportunity is not taken, the proportional contribution of MSM to the HIV epidemic in Africa will continue to grow.*  
(Van Griensven, 2007, p1396)

The following section reviews the literature on MSM, including students at HEIs, in the global context and in sub-Saharan Africa.

## Section 2: Literature review on MSM

Not all men who have sex with men think about their behaviours as explicitly sexual. It may be counter-productive to impose a sexual definition onto acts which may be understood in different ways by these men (WHO, 2004). MSM represent a wide array of behaviours, worldviews and ways of engaging with their sexuality and a limiting definition of MSM may fail to recognise their understandings of themselves (WHO, 2004) and may exacerbate social discrimination and constrain access to HIV services.

Homophobia is a form of social discrimination, which can be defined as “mean, unfair or unequal treatment intended to marginalise or subordinate individuals or communities based on their real or perceived affiliation with socially constructed stigmatised attributes” (Ayala, Beck, Lauer, Reynolds and Sundararaj, 2010, p2). Research on stress has shown that the expectation of discrimination and the actual experience of discrimination contribute independently and collectively to sub-optimal mental health (Meyer, 1995). In the United States, MSM and other sexual minorities who lived in states with discriminatory laws against same-sex couples showed signs of hopelessness, chronic worry and hyper vigilance (MSMGF, 2008). A study among gay, bisexual and transgender high school learners revealed elevated signs of self-harm, suicidal ideation, excessive substance use and risky sexual behaviours (McDermott, Roen and Scourfield, 2008).

Many societies place a social premium on the traditional heterosexual family and the resulting expectations of marriage and producing children place great pressure on MSM (Adimora, Schoenbach and Doherty, 2007). Often when MSM succumb to heterosexual marriage, they maintain secret sexual relationships with men, resulting in multiple opportunities for HIV transmission (Adimora et al, 2007).

### MSM in the global context

There have been key improvements in the health and well-being of MSM living with HIV in high income countries in the northern hemisphere (Hart and Elford, 2010). This is not the case in most parts of the world. There are currently nearly 80 countries which criminalise same-sex practices between consenting adults (MSMGF, 2008). Additionally, there has been a recent resurgence of interest in the criminalisation of same-sex sexual relations. Examples include Uganda where there were recent attempts to amend existing legislation to impose more severe punishment for such behaviour (New York Times, 2011).

Due to demographic and cultural differences, it is necessary to design HIV prevention interventions for MSM that are suited to the specific context and culture. The appreciation of differences in behaviour among MSM is essential to the success of HIV prevention interventions (CDC, 2007).

Alternative HIV prevention behaviours have emerged among MSM, including sero-sorting of sexual partners and strategic positioning (Hart and Elford, 2010). Sero-sorting refers to a HIV prevention practice whereby some MSM limit unprotected anal intercourse to partners of the same HIV status as their own (CDC, 2007).

MSM continue to have high and accelerating levels of HIV worldwide. HIV incidence rates were more than 44 times those of other men in the United States and 63% of new HIV infections in the US were among MSM (Beyrer, 2007; MSMGF, 2008). A study in the United Kingdom estimated that MSM contribute one-third of new HIV infections every year (National AIDS Trust, as cited in MSMGF, 2008).

During 2005 and 2006 a systematic review of the risk of HIV infection in low and middle income countries revealed the emergence of a new concentrated HIV epidemic among MSM in developing countries. Baral et al (2007) found exceptionally high HIV prevalence estimates among MSM in various low and middle income countries. Thailand had an HIV prevalence rate of 24.6% among MSM. In Columbia this figure was 19.4%, in Uruguay 18.9% and Honduras 13.0% (Baral et al, 2007).

The literature identifies specific risk factors which increase the possible exposure of MSM to HIV. The major risks have psychological, social and behavioural components which include: having anal sex without a condom, high partner turnover, the presence of sexually transmitted infections (STIs), lack of knowledge of HIV sero-status, complacency about risk, use of the internet to find partners, social discrimination, the presence of female sexual partners, and substance abuse (CDC, 2007; Kalichman et al, 1994; Lane et al, 2009; Pisani, 2008; Straub, 2002; Van Griensven, 2007).

Studies have found that MSM who use the internet to find sex partners have an increased risk of exposure to HIV (Benotsch, Kalichman and Cage, 2001). When MSM also have female sexual partners in their sexual network, a crossover of HIV transmission may occur (Baral et al, 2007; Lane et al, 2009; Van Griensven, 2007). About half of MSM in low and middle income countries indicated they had used a condom the last time they had anal sex with another man and less than one-third had been for an HIV test in the preceding 12 months (Baral et al, 2007).

Straub found that “some individuals engage in risky sexual behaviour because the risk makes the behaviour more exciting and pleasurable” (Straub, 2002, p489). In addition, a survey among HIV-negative gay and bisexual men found that the subjective reinforcement value of unprotected anal intercourse predicted condom use more strongly than the person’s perceived vulnerability to infection (Kelley and Kalichman, cited in Straub, 2002). Straub noted that sexual fantasies and trust in one’s partner may also influence sexual behaviours. It is often the number of risk factors experienced that shapes perceptions of vulnerability to HIV infection (Shobo, 2007).

### MSM in sub-Saharan Africa

Civil society organisations and some governments have made remarkable progress towards equality for all people, but violence and discrimination targeting MSM persist (MSMGF, 2008). Social homophobia has been legitimised in numerous African countries and this has led to fear of victimisation and discrimination against MSM populations. In turn, the necessity for MSM to live out their sex lives covertly often results in unsafe sexual behaviour.

In recent years, there has been a surge in research activity and international advocacy relating to MSM populations (Smith et al, 2009).

Inequitable health practices in many African countries often marginalise MSM. This is even true of South Africa, where same-sex relationships are protected by the South African Constitution. The fact that 35 of 52 African countries were unable to report any data against indicators on MSM to the United Nations General Assembly Special Session (UNGASS) in 2007 bears testimony to this (UNGASS, 2007). It is often difficult for MSM, especially those who are “closeted” or do not identify themselves as gay, to obtain necessary health care services. In addition, access to prevention initiatives is often limited.

Hostile social environments, high levels of stigma and national regulations have been complicit in making MSM behaviour even more risky and unseen (Berger, 2004). The recent intensification of discriminatory rhetoric against same-sex activity by some African leaders is alarming. This discourse of entrenched social homophobia serves to further drive MSM away from health and HIV services. Social hostility towards MSM may unintentionally increase if there is an absence of African political commitment to promoting understanding of the burden of HIV among MSM and its contribution to national epidemics (Smith et al, 2009). However, when respectful and sensitive approaches have been employed to reach them, more MSM have made use of available health services (Van Griensven, 2007).

In the generalised epidemics of sub-Saharan Africa, MSM were found to be nearly four times more likely to be infected with HIV than the general population (Beyrer et al, 2010). Van Griensven (2007) noted that the size of the MSM population and the percentage of men practising male-to-male sex in African countries were not well established. There is information available about African MSM populations from Malawi, Botswana, Namibia, Nigeria, South Africa (Burrell, Baral, Beyrer, Wood and Bekker, 2009) and Kenya (Sanders et al, 2007). Two smaller South African studies in Gauteng (Lane, McIntyre and Morin, 2006) and Cape Town (Baral et al, 2007), also provided data about MSM populations.

Baral et al (2007) found HIV prevalence among MSM in many African countries to be higher than in the general population. South Africa had an HIV prevalence rate of 15.3% among MSM. In Zambia the rate was 32.9%, while Kenya had a rate of 15.6% and Malawi 21.4%. High HIV prevalence was also found in cities in Senegal (21.5%) and Sudan (9.3%). These last two figures are especially significant since the estimated adult HIV prevalence rates in these countries were 0.9% and 1.6% respectively (Van Griensven, 2007).

The above studies found high-risk behaviour to be prevalent in MSM populations and suggested that additional behavioural research is needed. They also indicated the need for targeted risk reduction and HIV prevention strategies among MSM. Africa was found to be the most under-researched region (Baral et al, 2007; Smith et al, 2009).

Despite these findings of significant HIV prevalence among MSM, studies also found that fewer than 5% of men with male partners had access to HIV-related health care (MSMGF, 2008). Additionally, most African countries did not include MSM measures in their national HIV infection surveillance (Beyrer, 2007).

There are also very limited data about HIV incidence rates among MSM in Africa. Engaging these hidden MSM populations for purposes of research is often very difficult (Smith et al, 2009). A study among MSM sex workers in Mombasa, Kenya, found that the lifetime incidence of HIV was 20.4 per 100-person years for participants engaging in both receptive and insertive anal sex (Sanders et al, 2007).

Smaller studies in African countries found that bisexuality is common among African MSM, with more than two-thirds of MSM reporting sex with both men and women (Smith et al, 2009; Van Griensven, 2007). Lane et al (2006) suggested that the most sexually active MSM may avoid testing for HIV.

It is clear that the findings mentioned above have major implications for South Africa in the light of its extraordinary adult HIV prevalence rate of 10.9% (Shisana et al, 2009). Only recently has attention been given to HIV risk behaviours among MSM in South Africa and research has indicated a high prevalence (Shisana et al, 2009). Data on HIV prevalence rates among MSM ranged from 12.6% to 47.2% among diverse sub-populations (Burrell et al, 2009; Lane et al, 2009; Rispel et al, 2009). South African national household surveys on HIV conducted in 2002 and 2005 did not explore risk factors or HIV prevalence specifically in MSM populations. However, household surveys from 2008 onward incorporated specific measurement of MSM responses (Shisana et al, 2009).

In a recent study on MSM in Pretoria, it was found that only 56.5% of MSM regularly accessed services at public health facilities (Tun et al, 2010; Vu, Tun, Sheehy and Nel, 2010). Of the MSM surveyed, two-thirds had been for a recent HIV test. However, more than half (53.0%) did not disclose to their health service provider that they had sex with men (Tun et al, 2010). In this study, 17.7% of the sample reported having had an STI in the preceding year. Internalised homophobia was common among participants with lower education levels, who were bisexual and showed a high degree of HIV misinformation (Tun et al, 2010). High levels of internalised homophobia among MSM who identify themselves as heterosexual or bisexual point to a need to develop dedicated HIV prevention strategies (distinct from those for gay men) for this group of men.

### Sexual risk behaviour of MSM among university students

Various studies have explored sexual risk behaviour among MSM who are young (Bolding, Davis, Hart, Sherr and Elford, 2007; Dudley, Rostosky, Korfhage, and Zimmerman, 2004; MacKellar, Valleroy, Karon, Lemp and Janssen, 1996; Salomon et al, 2009; Warren et al, 2008), attending high school (Berten and Van Rossem, 2009; Faulkner and Cranston, 1998), and attending college or university (Brown and Vanable, 2007; Cong et al, 2008; Eisenberg, 2001; Lindley, Nicholson, Kerby and Lu, 2003; So, Wong and DeLeon, 2005; Tung, Ding and Farmer, 2008).

Findings suggest that risky sexual behaviour places many of these young MSM at elevated risk of contracting HIV. Factors contributing to this greater risk are: unprotected anal intercourse, high partner turnover, the presence of STIs, unknown HIV status in a context of high HIV prevalence, complacency about risk, use of the internet in identifying partners, social discrimination, the presence of female sexual partners, alcohol use before sex, and the use of drugs for recreational purposes (Benotsch et al, 2001; Brown and Vanable, 2007; Eisenberg, 2001; Lindley et al, 2003; So et al, 2005).

Research has indicated that there is often a culture of secrecy in Africa where the distinction between heterosexuality and same-sex behaviour is often less clear than in the West (Murray and Roscoe, 1998). These authors suggest that social expectations in Africa do not require an individual to suppress same-sex desires or behaviour but these desires should not surpass or displace procreation. It is important, therefore, to better understand the scope of male same-sex behaviours among students specifically in an African context. A key question is whether African social expectations about same-sex behaviours predispose student MSM to sexual risk-taking in an environment of high HIV prevalence.

### MSM among university students in South Africa

According to Sandfort, Nel, Rich, Reddy and Yi (2008) there is a paucity of research on the structural, cultural, interpersonal and individual factors that mediate sexual risk behaviour among South African MSM. Elford and Hart (2003) noted the need to be attentive to the shifting risk environment in which men have sex with other men and sensitive to the nature of sexual relationships and networks among higher education students.



According to recent studies, school and student MSM populations worldwide reported multiple recent sexual partners and low use of condoms on a consistent basis. In schools and universities, MSM tended to be older than their non-MSM male counterparts (Brooks, Lee, Newman and Leibowitz, 2008; Eisenberg, 2001; Pisani, 2008). Some studies found that students who resided off campus were less likely to practise consistent condom use (Eisenberg, 2001). This may have implications for health promotion interventions at HEIs.

A literature review on MSM at tertiary institutions in South Africa yielded very limited information about this potentially at-risk group and their sexual behaviours. The first national knowledge, attitude, behaviour and prevalence (KAPB) study at HEIs found that 6% of male students reported same-sex practices and that HIV prevalence among student MSM (4.1%) was more than twice the rate for heterosexual male students (HEAIDS, 2010). The study lacked detailed data on MSM behaviour, HIV knowledge, attitudes to sex and experiences of social homophobia at HEIs. HEAIDS (2010) recommended that HEI management and other institutional structures should be proactive in ensuring that the rights of MSM are protected.

As mentioned earlier, a strong lesbian, gay and bisexual (LGB) movement thrives at some tertiary institutions in South Africa, but there is still a large number of students living “in the closet” due to fear of victimisation and discrimination (Graziano, 2005; Van Griensven, 2007).

There are indications that health promotion programmes created with a heterosexual audience in mind may be misdirected, awkward, inappropriate and even harmful for male students who engage in same-sex sexual behaviours (Eisenberg, 2001). Studies reflect the inadequacy of promotion of safer-sex practices to university students (Bouldrey, cited in Eisenberg, 2001).

The limited evidence on the risks that MSM at HEIs face globally, in sub-Saharan Africa and in South Africa, makes it clear that this population needs to be better understood and that the evidence must be used to inform health interventions to reduce HIV transmission among young MSM.

## Section 3: Research methodology

### Ethical considerations

All aspects of the study were conducted in accordance with Stellenbosch University (SU) guidelines on research ethics as well as the ethical guidelines and principles of the International Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research. The study was approved by the Research Ethics Committee (Human Research, Non-medical) at SU.

Most participating HEIs also applied for approval from the ethics committees at their institutions.

Informed consent was obtained from each participant before the commencement of data gathering. Because the possibility existed that answering questions about sexual behaviour and HIV testing experiences might be distressing for some participants, information on psychological and support services for each HEI was displayed on the consent form. Contact details of the AIDS Helpline, Alcoholics Anonymous and Narcotics Anonymous were provided to participants upon completion of the survey.

Researchers signed confidentiality documents and all information obtained during the study that could be attributed to an identifiable participant was kept confidential by ensuring that the online survey data could not be linked to participant data. All records of the survey data are kept in a locked cabinet at SU and a password-secured online database.

### Methodology

#### Research questions

The questions that the study sought to answer were as follows:

- What is the extent of risky sexual behaviour and knowledge of HIV in a sample of student MSM at South African universities?
- What is the extent of alcohol and drug use among these students?
- What is the level of self-esteem among this sample of students?
- What does information provided by students indicate about access to health services, discrimination, and successes and challenges faced by LGBTQI communities at universities?

#### Research design

The research was cross-sectional in design and registered university students from the 14 selected HEIs were invited to participate in the study through their institutions. The questionnaire was self-administered via an online survey in most cases. However some HEIs undertook a paper-based survey, and the responses were subsequently entered into the online tool. The questionnaires contained questions relating to demographic and socio-economic factors as well as relevant knowledge, experience and behaviours.

#### Participants

Participants comprised registered undergraduate and post-graduate students at 14 selected public HEIs in South Africa (Table 2). They were mostly in the age range of 17 to 26 years, though some were slightly older. Participants were included in the study after voluntarily requesting to participate and each was asked formally to give consent.

The invitation to students to participate in the study was usually made through a priority e-mail from the chairperson of HIV Coordinating Committee (HICC) at each HEI. The chairperson is usually a vice-rector or dean. This e-mail specifically encouraged MSM and LGBTQI participation. Interested students simply clicked on a link in the e-mail to indicate their interest in taking part.

A parallel poster and flyer recruitment campaign was conducted by NACOSA on the relevant campuses. One set of recruitment materials focused on the generic student sexual health aspect of the survey, while another specifically requested the participation of MSM and/or LGBTQI students.

TABLE 2: PARTICIPATING HEIS BY PROVINCE

Higher education institution	Province
Nelson Mandela Metropolitan University	Eastern Cape
Walter Sisulu University	Eastern Cape
Central University of Technology	Free State
University of the Free State	Free State
Tshwane University of Technology	Gauteng
University of South Africa	Gauteng
Durban University of Technology	KwaZulu-Natal
Mangosuthu University of Technology	KwaZulu-Natal
University of KwaZulu-Natal	KwaZulu-Natal
University of Limpopo	Limpopo
University of Venda	Limpopo
Stellenbosch University	Western Cape
University of Cape Town	Western Cape
University of the Western Cape	Western Cape

The survey commenced at different times at various universities, once contracts had been signed and ethical approval had been obtained. The survey went live online on 16 August 2013 at the first participating HEIs and final data gathering was done on 15 April 2014.

### Limitations

Cross-sectional studies are relatively easy to implement but they do have problems with regard to causality. Such studies measure a range of distinct variables at the same point in time. These variables can be related to each other, but it is only possible to determine whether a correlation exists. Causality cannot be established.

Cross-sectional studies also do not assist in dealing with confounding variables. Additional variables may affect the relationship between the variables of interest but not affect those variables themselves. The Neyman bias, which increases or minimises the effect of certain variables, is important to consider, especially in relation to the measurement of prevalence and incidence. Even if a completely objective questionnaire is used, the participant cannot answer questions involving past events with perfect accuracy.

The sample was a non-probability sample, which means that there is no statistical basis on which to make generalisations to the wider population. Any “generalisations” that are made are derived from the knowledge and experience of experts and researchers in the field. When it comes to institution-level data, limited sample size is important to consider when weighing the broader applicability of findings.

This study and the resulting institutional reports therefore only provide a snapshot of sexual risk behaviour, demographic characteristics, attitudes, levels of self-esteem and HIV knowledge for the sample of students who volunteered to participate in this once-off online English-only survey, which focused on the experiences of MSM and the LGBTQI community at selected HEIs.

### Instruments

The survey instrument consisted of a set of questionnaires which were all completed at the same time by participants. The questionnaires comprised:

- An HIV knowledge questionnaire: This was a simplified five-item version of an HIV knowledge questionnaire derived from UNGASS indicators. Participants read five statements about HIV and indicated whether they thought the statements were true or false, or whether they did not know. A single summary score was obtained by adding the number of items correctly answered. Higher scores indicated greater knowledge.
- A sexual behaviour history questionnaire (SBHQ): This questionnaire allowed for self-reporting on sexual behaviour. It was developed by Bryan, Kagee and Broaddus (2006) and adapted by the researcher at SU (Brink, 2013).

- Alcohol and other drug abuse questionnaire (AODQ): Alcohol and drug use often has a direct and indirect impact on the risk of contracting HIV. The sharing of needles during the use of injectable drugs is directly associated with the risk of acquiring HIV. In addition, individuals may be more likely to engage in HIV risk behaviours while under the influence of alcohol or other drugs. The self-administered AODQ questionnaire was developed by the Center for Substance Abuse Treatment (Winters and Zenilman, 1994). It creates a scale that can be used to determine if an individual has problems with alcohol and/or drug use.
- Campus environment and services questionnaire (CESQ): This questionnaire was developed by the researcher at SU (Brink, 2013) and it allowed students to provide feedback on their experiences of accessing HIV testing and sexual health services and on incidents of discrimination.
- Rosenberg Self-esteem Scale (RSES): This was based on the Likert scale and allowed participants to reflect their attitudes by answering various statements presented by selecting a score on a four-point scale, ranging from “strongly agree” to “strongly disagree”. The scale was originally developed by Rosenberg (1965) and has been extensively used in cross-cultural studies.

### **Institutional datasets and reports**

In addition to the preparation of a national report on the findings, institution-level data were provided to NACOSA, HEAIDS and institutional HIV units at the selected HEIs. It is understood that the institutional data only provide a snapshot of sexual risk behaviour, demographic characteristics, attitudes, levels of self-esteem and HIV knowledge for the specific group of students participating in the study.

The data and the results of the survey belong to NACOSA and SU (as the principal investigator). The contract between participating organisations specifies that SU will not present or publish data on individual HEIs apart from indicating the number of MSM and non-MSM participants from each HEI.

The provision to each HEI of their institutional data is intended to assist with institutional planning. HEIs may also disseminate and publish their own data, as they see fit.

## Section 4: Results

### Introduction

The results of the study are presented in a manner that allows for comparison between the student MSM sample and the non-MSM sample. There are brief summaries on notable similarities and differences between these two groups of students and the odds ratios and correlations between some variables are highlighted and interpreted.

Data was checked for missing values and data cleaning was done to eliminate invalid data entries. The total number of participants who had given informed consent and completed the sexual health survey by 15 April 2014 was 8 869 (Table 3).

While the focus of this report is student MSM, the research includes a variety of data on the sexuality and sexual behaviour of a wider group of students. Participating HEIs were encouraged to explore with the researcher variables which could be further analysed in order to improve responses to HIV and the sexual health of student communities.

TABLE 3: TOTAL SAMPLE SIZE AND COMPOSITION

	Number of participants		
	MSM	Non-MSM	Total
Students who gave informed consent and completed the survey	896	7 973	8 869

### Demographic characteristics

The initial aim was to recruit about 1 000 students from each selected HEI, an estimated 5% to 10% of whom would represent the student MSM population. Due to the limited timeframe for the survey and delays experienced in contracting parties, only four HEIs reached the target of 1 000 students, namely:

- University of Cape Town.
- University of South Africa.
- University of the Western Cape.
- Stellenbosch University.

The distribution of participants by HEI is summarised in Table 4.

The number of MSM who volunteered for the survey, as a proportion of the total sample, varied by HEI, from 4.7% at the lower end to 19.7% at the upper end (Table 4).

The much larger non-MSM sample was constituted as follows: 32.2% were male students, 67.1% female students and 0.7% intersex. Where findings for MSM participants are compared to those for non-MSM students the comparison is to a predominantly female group.

Of the total group of 869 MSM participants, 61% were black students, 20% were white, 12% coloured and 2.7% of Indian origin. In addition, 1.3% said they belonged to "other" groups and 3.7% chose not to answer this question.

More than a third (37.7%) were aged 18 to 20 years, and another third (33.7%) were 21 to 23 years of age. isiZulu, English, Afrikaans were the most common mother-tongue languages among student MSM, followed by isiXhosa (Figure 3).

Almost nine out of 10 participants in the MSM sample (84.5%) were undergraduate students, with 34.3% in their first academic year and 23.1% in their second academic year. Of the student MSM, 4.6% indicated that they had children and 4.6% were married.

Less than half (42.1%) of the student MSM sample reported living in a university residence, while a third (30.7%) lived in accommodation other than the family home or a university residence. Just over half student MSM were full-time students (53.5%) and 23.9% reported that they had some form of employment. Asked about the income level of their families, 13.4% of MSM participants described their combined household income as more than R300 000 a year and 15.3% as less than R10 000 a year, while the remainder gave estimates between these two figures.

Self-selected sexual orientations for the combined MSM and non-MSM sample were as follows (Figure 2):

- Heterosexual: 6 087 students (68.6%).
- Homosexual: 1 470 (16.6%).
- Other: 778 (8.8%).
- Bisexual: 533 (6.0%).

In the student MSM sample, 71.2% self-identified as homosexual, 20% reported being bisexual, 7.4% heterosexual and 1.5% identified themselves with another sexual orientation (Figure 4).

One-third of MSM reported not knowing any person living with HIV, while 30.2% reported knowing one or two people living with the virus, while a further 18.6% said they knew between three and five people with HIV (Table 5). One in 10 student MSM (10.2%) had missed university classes to attend a funeral of someone who had died from AIDS-related causes.

More than 90% of student MSM reported using social media (Facebook, Twitter, Google+, Instagram etc) on a weekly basis. These results are summarised in Table 5.

TABLE 4: PARTICIPATION IN SURVEY PER HEI

Name of institution	MSM		Non-MSM		All participants
	Number	%	Number	%	Number (100%)
Central University of Technology	41	19.7%	167	80.3%	208
Durban University of Technology	81	10.2%	716	89.8%	797
Mangosuthu University of Technology	118	18.4%	522	81.6%	640
Nelson Mandela Metropolitan University	84	10.1%	747	89.9%	831
Stellenbosch University	116	11.4%	898	88.6%	1 014
Tshwane University of Technology	4	8.5%	43	91.5%	47
University of Cape Town	137	8.9%	1 406	91.1%	1 543
University of KwaZulu-Natal	33	10.6%	278	89.4%	311
University of Limpopo	46	16.1%	239	83.9%	285
University of South Africa	109	9.5%	1 042	90.5%	1 151
University of the Free State	23	4.7%	468	95.3%	491
University of the Western Cape	63	5.7%	1 037	94.3%	1 100
University of Venda	5	26.3%	14	73.7%	19
Walter Sisulu University	36	8.3%	396	91.7%	432

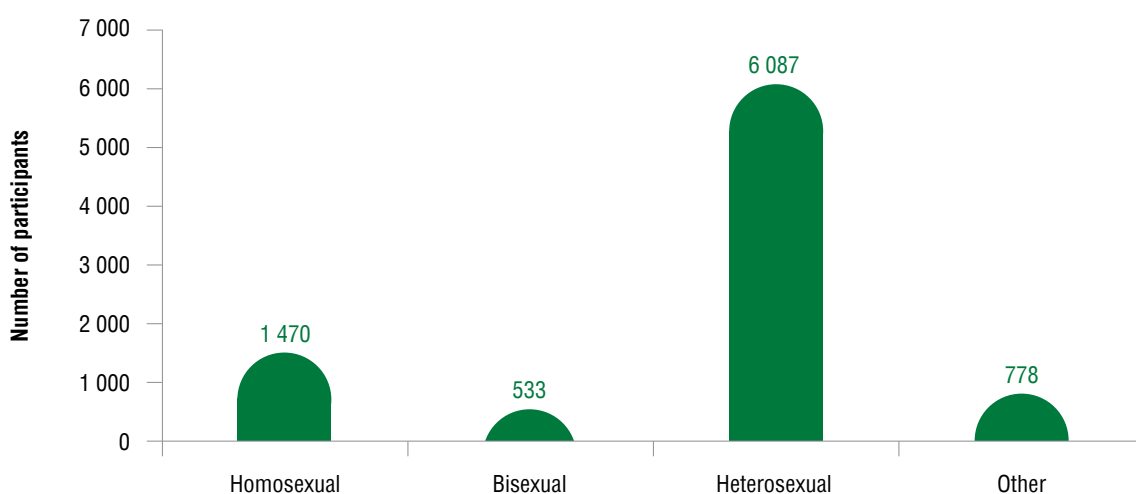


FIGURE 2: SEXUAL ORIENTATION OF ALL PARTICIPANTS IN SURVEY

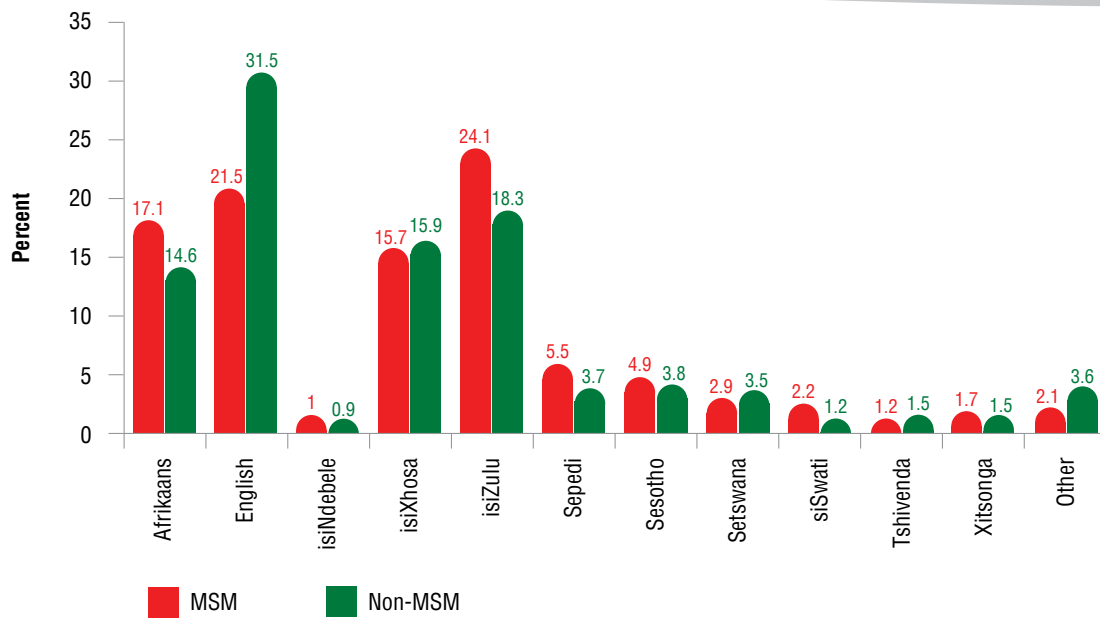


FIGURE 3: LANGUAGE SPOKEN AT HOME BY PARTICIPANTS

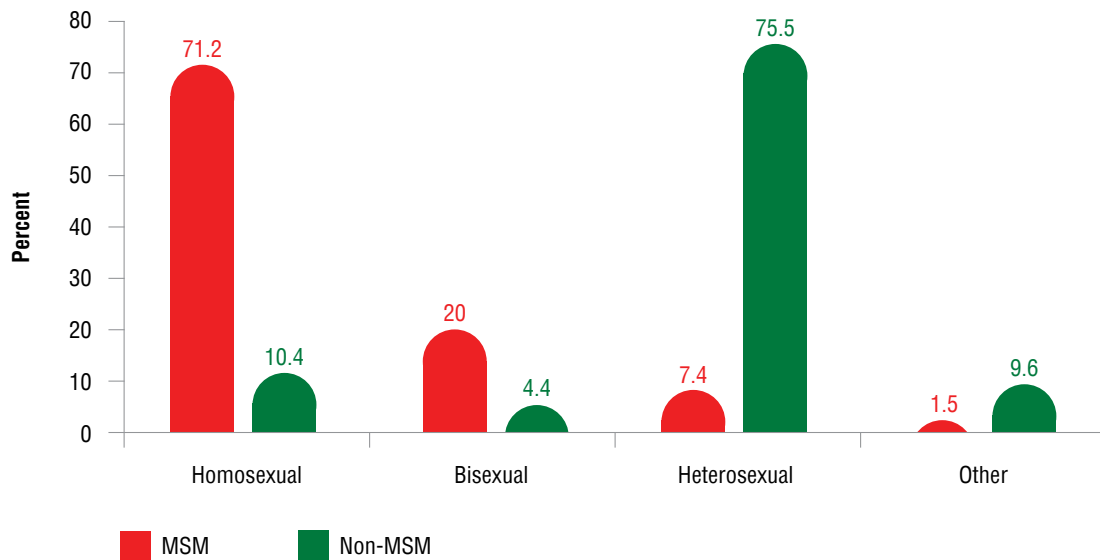


FIGURE 4: PREFERRED SEXUAL ORIENTATION OF PARTICIPANTS

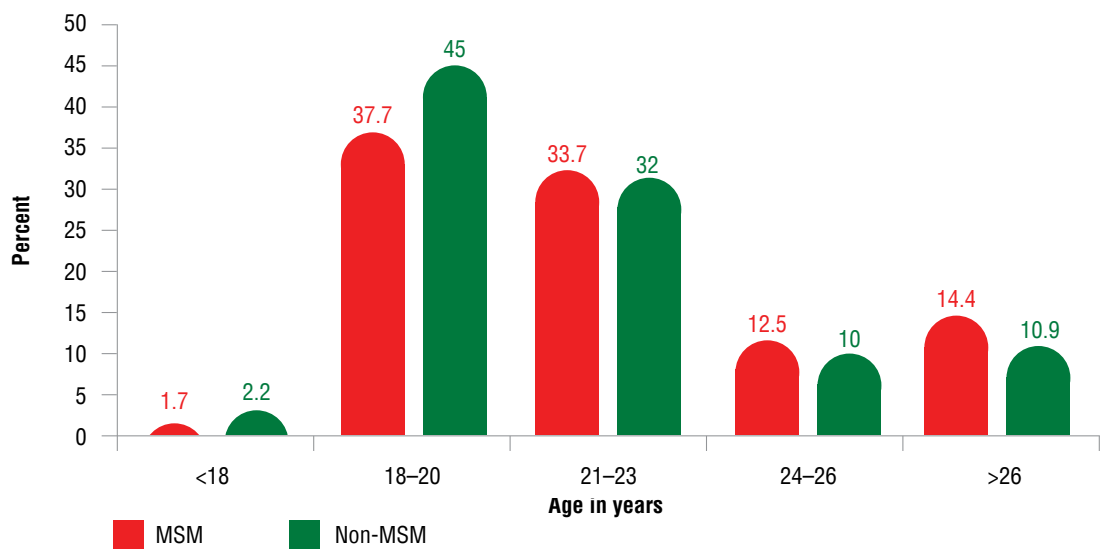


FIGURE 5: AGE DISTRIBUTION OF PARTICIPANTS

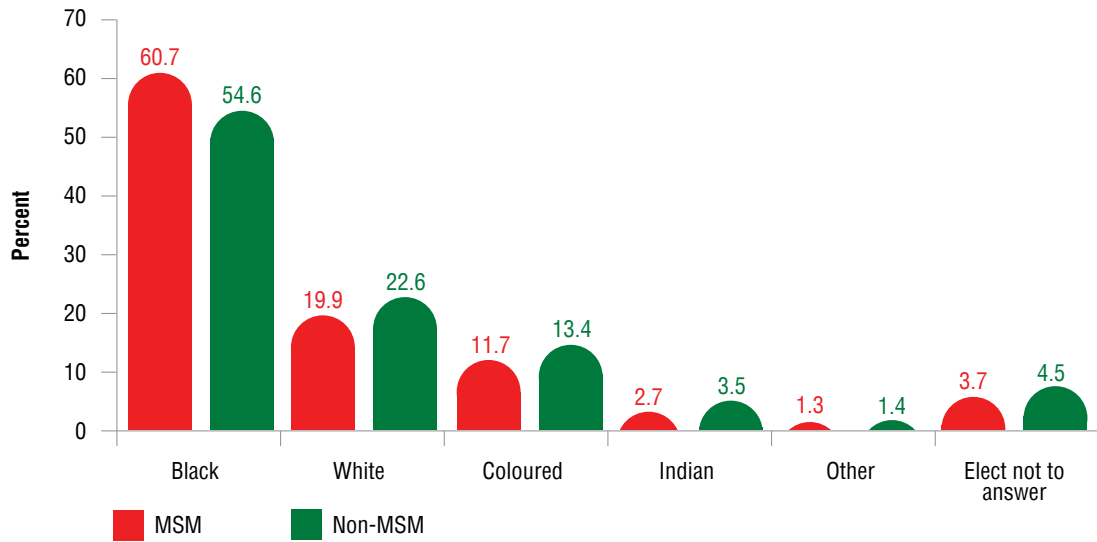


FIGURE 6: RACIAL SELF-IDENTIFICATION OF PARTICIPANTS

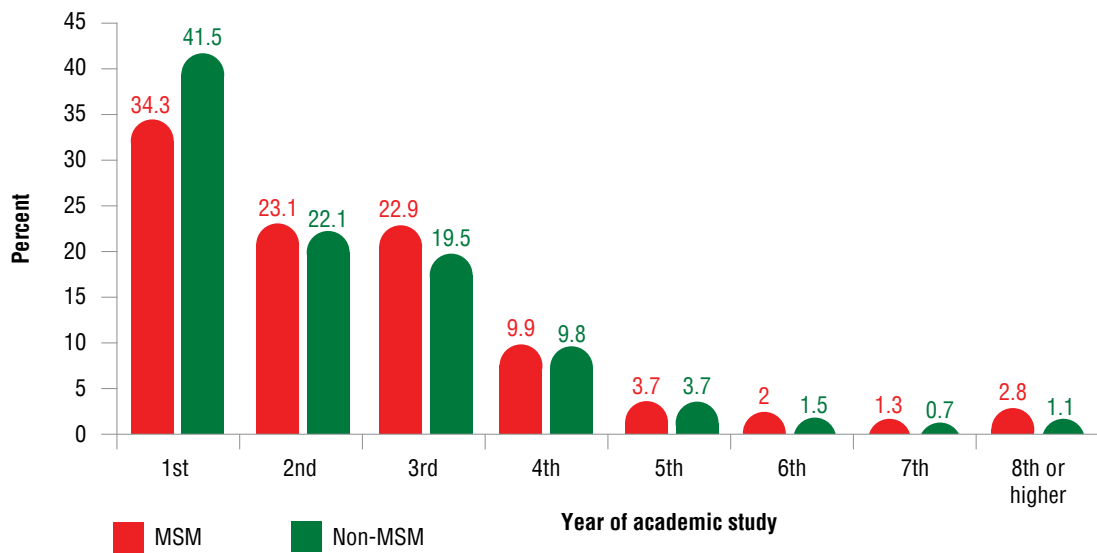


FIGURE 7: DISTRIBUTION OF PARTICIPANTS BY YEAR OF STUDY



TABLE 5: DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS

Questions	Possible answers	MSM participants		Non-MSM participants		All participants
		Number	%	Number	%	Number (100%)
Are you a South African citizen?	Yes	845	94.3	7 355	92.3	8 200
	No	51	5.7	617	7.7	668
What is your biological sex?	Female	0	0.0	5 348	67.1	5 348
	Intersex	0	0.0	57	0.7	57
	Male	896	100.0	2 567	32.2	3 463
Are you currently employed	Yes	214	23.9	1 918	24.1	2 132
	No	682	76.1	6 054	75.9	6 736
If yes, part-time or full-time?	Part-time	106	46.5	1 018	49.9	1 124
	Full-time	122	53.5	1 023	50.1	1 145
Do you have any children?	Yes	95	10.6	969	12.2	1 064
	No	801	89.4	7 003	87.8	7 804
Are you married?	Yes	41	4.6	406	5.1	447
	No	855	95.4	7 566	94.9	8 421
Are you undergraduate or post-graduate?	Undergraduate	757	84.5	6 989	87.7	7 746
	Post-graduate	139	15.5	983	12.3	1 122
Where do you live while at university?	University residence	377	42.1	3 028	38.0	3 405
	With my family	244	27.2	2 896	36.3	3 140
	Other accommodation	275	30.7	2 048	25.7	2 323
What is the highest level of education in your family?	Did not finish high school	52	5.8	282	3.5	334
	Finished high school	265	29.6	1 621	20.3	1 886
	Some university education	127	14.2	1 229	15.4	1 356
	Undergraduate university degree	135	15.1	1 166	14.6	1 301
	Some post-graduate education	55	6.1	644	8.1	699
	Post-graduate degree	213	23.8	2 535	31.8	2 748
	I don't know	49	5.5	495	6.2	544
What do you think your household income is per year?	Under R10 000	137	15.3	767	9.6	904
	R10 001 – R20 000	92	10.3	638	8.0	730
	R20 001 – R30 000	49	5.5	377	4.7	426
	R30 001 – R50 000	50	5.6	408	5.1	458
	R50 001 – R75 000	40	4.5	335	4.2	375
	R75 001 – R100 000	41	4.6	457	5.7	498
	R100 001 – R200 000	104	11.6	888	11.1	992
	R200 001 – R300 000	75	8.4	669	8.4	744
	More than R300 000	120	13.4	1 351	16.9	1 471
	I don't know	188	21.0	2 082	26.1	2 270
How many people with HIV/AIDS have you ever known?	None	296	33.0	2 675	33.6	2 971
	1–2	271	30.2	2 563	32.2	2 834
	3–5	167	18.6	1 608	20.2	1 775
	6–10	67	7.5	506	6.3	573
	11 or more	95	10.6	620	7.8	715
Have you missed classes to attend a funeral of a person who died of AIDS-related diseases?	Yes	91	10.2	655	8.2	746
	No	805	89.8	7 317	91.8	8 122
Do you use social media on a weekly basis?	Yes	833	93.0	7 396	92.8	8 229
	No	63	7.0	576	7.2	639

### Levels of HIV knowledge

On average, all participating students scored highly on HIV knowledge, which was tested using a questionnaire with five basic items. The average score was 4.60 ( $SD = 0.79$ ) against a maximum score of five. Only 9.1% of the sample recorded HIV knowledge scores of three or below.

HIV knowledge scores were similar among the sample of MSM students (mean = 4.57;  $SD = 0.86$ ) and non-MSM (mean = 4.6;  $SD = 0.78$ ). More than 70% of the sample achieved the maximum score of five (MSM = 71.5%; non-MSM = 72.4%). These results are summarised in Table 6 and Figure 8.

TABLE 6: HIV KNOWLEDGE SCORES ON FIVE-POINT SCALE

Score	MSM		Non-MSM		Total sample
	Number	%	Number	%	Number
0	9	1.0	58	0.7	67
1	6	0.7	26	0.3	32
2	12	1.3	97	1.2	109
3	55	6.1	460	5.8	515
4	173	19.3	1 560	19.6	1 733
5	641	71.5	5 772	72.4	6 413

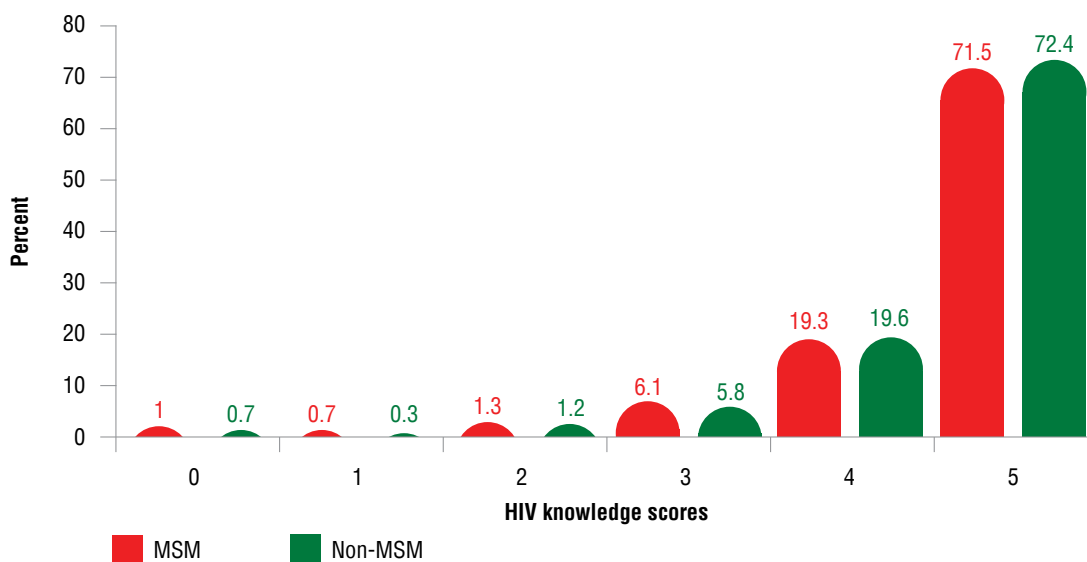


FIGURE 8: HIV KNOWLEDGE SCORES OF PARTICIPANTS

Analysis of scores reveals no statistically significant difference in knowledge scores between the MSM and non-MSM groups ( $U = 1.68$ ,  $p = 0.58$ ) (Figure 9).

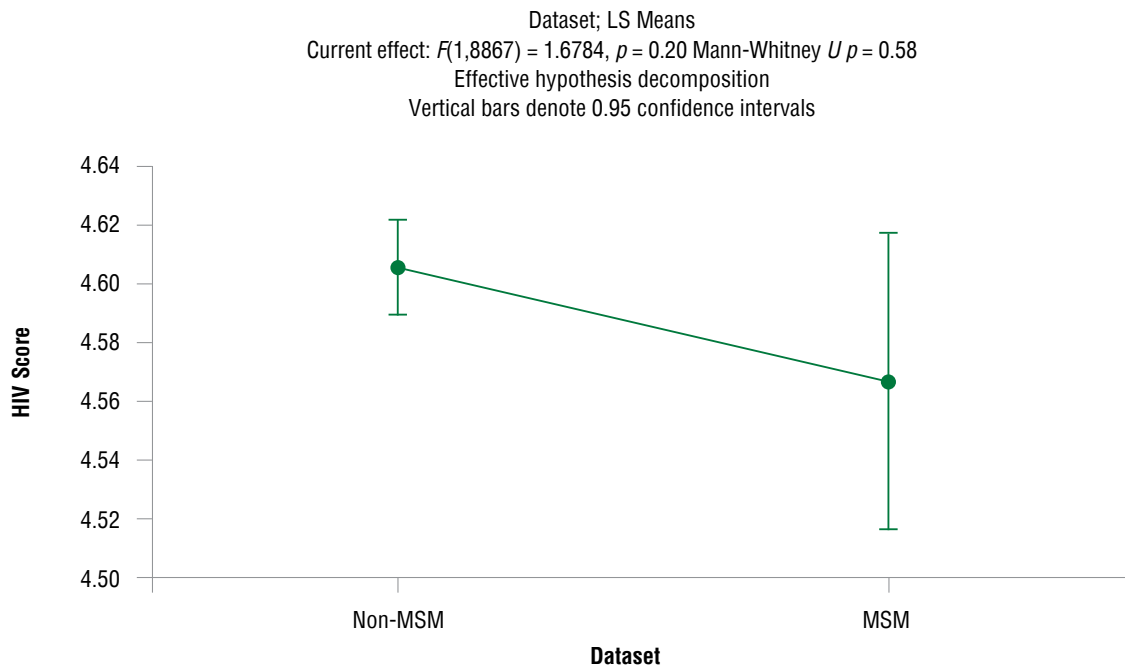


FIGURE 9: MANN-WHITNEY TEST FOR HIV KNOWLEDGE SCORES

### Lifetime sexual behaviour

The vast majority of student MSM (85%) reported at least one penetrative sexual encounter prior to taking part in the survey. Asked to indicate what types of sex they had engaged in – anal, oral or vaginal – many of the 760 sexually active MSM reported experience of more than one type.

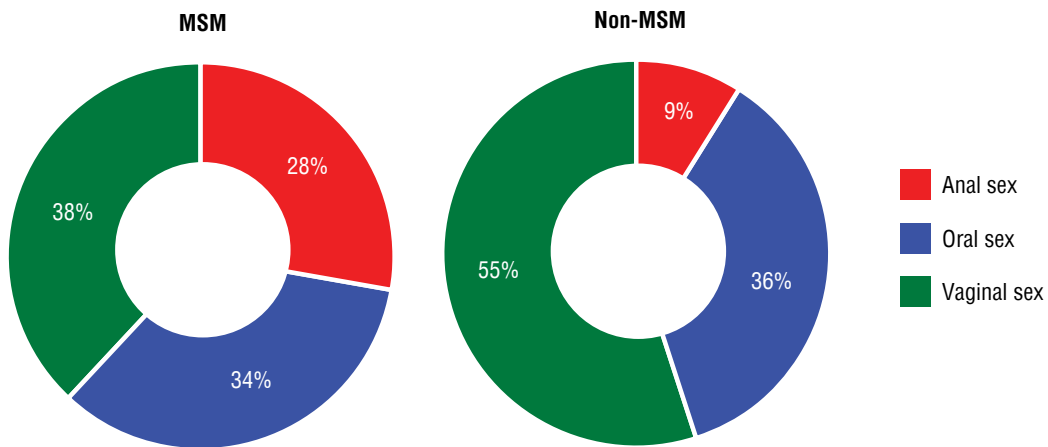


FIGURE 10: SHARE OF VARIOUS TYPES OF SEX EXPERIENCED: MSM AND NON-MSM

Of the total number of positive responses by MSM to all three types of sex, penetrative anal sex accounted for 38%, oral sex for 34% and penetrative vaginal sex for 28% (Figure 10). The pattern for non-MSM was markedly different. Penetrative anal sex accounted for 9% of non-MSM responses, oral sex for 36% and penetrative vaginal sex for 55% (Figure 10).

Among students who had had sexual intercourse, non-MSM participants were more likely to be in a relationship with a primary partner (67.3%) than MSM participants (56.6%) and also more likely to have sex with their primary partner (64.8% compared to 54.5% for MSM). Among MSM, sex with a steady non-primary partner or with a non-steady partner was more common than in the non-MSM group (Table 7).

One in five student MSM reported using alcohol and/or drugs the last time they had sex while 52% indicated that they had at some point used alcohol and/or drugs when having sex. Only 1.3% said they always used alcohol and/or drugs when having sex, while 5.1% said they did so “most of the time” and 18.0% said “sometimes”. The remaining 27.2% of those who had combined sex and alcohol/drugs had done so rarely (Table 7).

A total of 24.4% of the MSM sample and 15.9% of the non-MSM sample had their first sexual experience before the age of 16 years. A high proportion (42.4% of MSM and 48.1% of non-MSM) were in the 16-18 year age group when they first had sex, and 21.3% of MSM (24.0% of non-MSM) first had sex when they were 19 or 20 years of age (Figure 11).

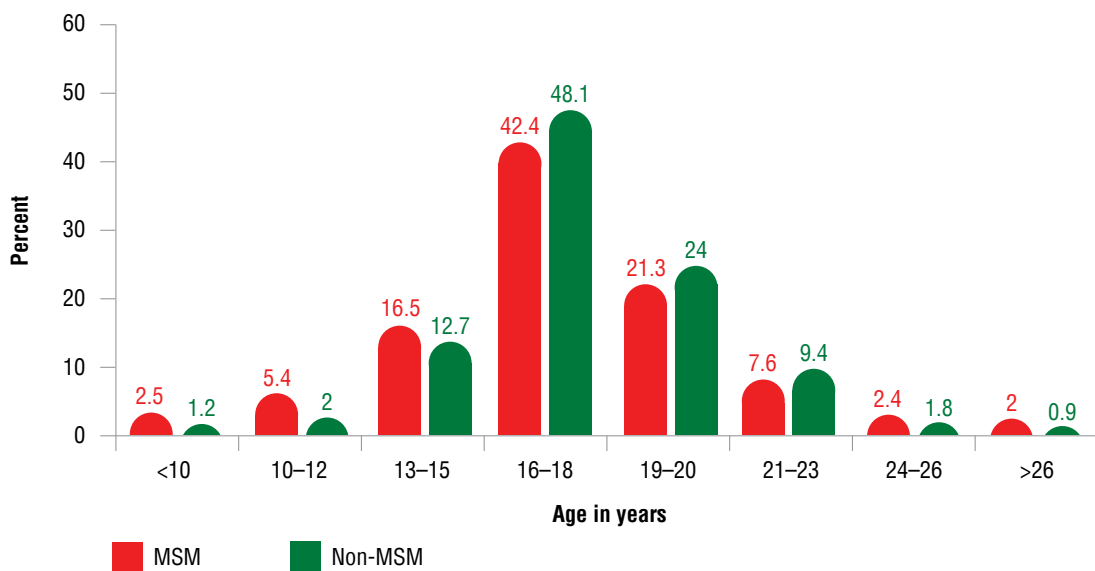


FIGURE 11: AGE OF SEXUAL DEBUT OF PARTICIPANTS

TABLE 7: REPORTED SEXUAL BEHAVIOURS OF MSM AND NON-MSM STUDENTS

Questions	Possible answers	MSM participants		Non-MSM participants	
		Number	%	Number	%
Have you ever had sexual intercourse?	Yes	760	85.0	5 417	68.1
	No	134	15.0	2 534	31.9
Are you currently in a relationship with a primary partner?	Yes	431	56.6	3 656	67.3
	No	331	43.4	1 773	32.7
Do you have sex with your primary partner?	Yes	415	54.5	3 519	64.8
	No	99	13.0	572	10.5
	Does not apply	248	32.5	1 338	24.7
Do you have a steady non-primary partner you have sex with?	Yes	270	35.4	1 209	22.3
	No	399	52.4	3 480	64.1
	Does not apply	93	12.2	740	13.6
Do you have a non-steady partner you have sex with?	Yes	278	36.5	1 238	22.8
	No	386	50.7	3 428	63.1
	Does not apply	98	12.9	763	14.1
What form of sex have you had – anal sex?	Yes	358	40.0	811	10.2
	No	538	60.0	162	89.8
What form of sex have you had – oral sex?	Yes	444	49.6	3 301	41.4
	No	452	50.4	4 672	58.6
What form of sex have you had – vaginal sex?	Yes	495	55.2	5 107	64.1
	No	401	44.8	2 866	35.9
Did you use alcohol and/or drugs the last time you had sex?	Yes	152	19.9	727	13.4
	No	610	80.1	4 702	86.6
How often do you use alcohol and/or drugs when you are having sex	All of the time	10	1.3	41	0.8
	Most of the time	39	5.1	118	2.2
	Sometimes	137	18.0	844	15.5
	Rarely	210	27.6	1 722	31.7
	Never	366	48.0	2 704	49.8

### Sexual behaviour in past year

Among student MSM, 54.5% reported having had at least one female sex partner in the past year and 47.9% reported having had at least one male sex partner in the same period (Figures 12 and 13). One out of five sexually active MSM in the study (21.3%) reported having had only one male sex partner in the past year, while 13.9% had between two and three sex partners and 12.7% reported having four or more sex partners (Figure 12). Almost 5% of sexually active student MSM (4.1%,  $n = 31$ ) reported more than nine male sex partners in the preceding year.

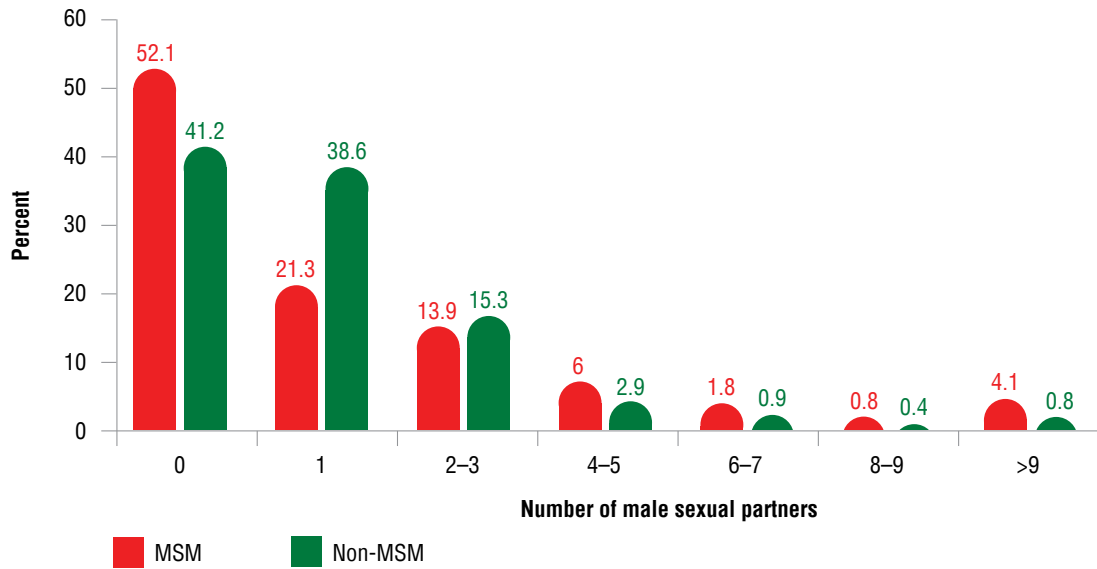


FIGURE 12: REPORTED NUMBER OF MALE SEXUAL PARTNERS IN PAST YEAR

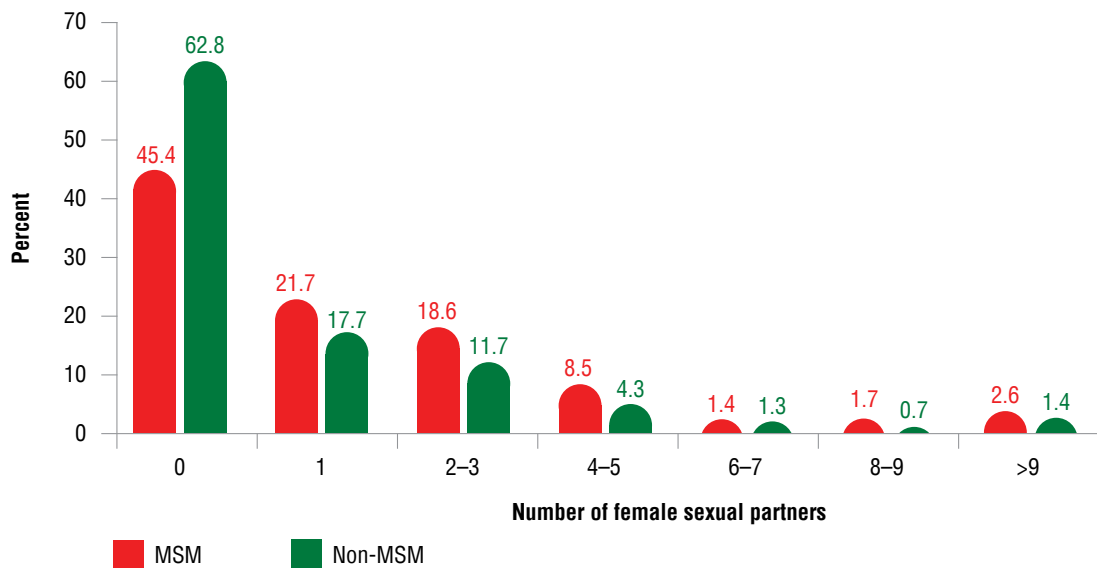


FIGURE 13: REPORTED NUMBER OF FEMALE SEXUAL PARTNERS IN PAST YEAR

While the majority of MSM and non-MSM participants had not had concurrent partners in the year preceding the survey, about a quarter of the MSM group reported having had one concurrent partner in this period while 17.1% reported more than one concurrent partner (Figure 14).

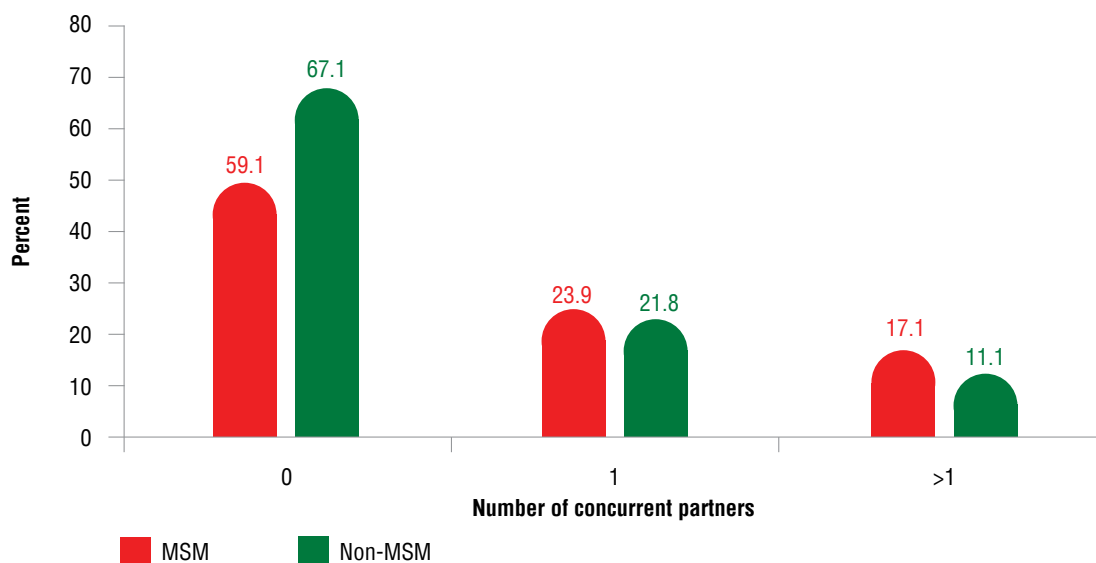


FIGURE 14: NUMBER OF CONCURRENT SEXUAL PARTNERS IN PAST YEAR

One-third (32.4%) of student MSM reported having had penetrative anal sex without the use of condoms at least once in the past 12 months (Figure 15) and 37.9% of MSM reported having had penetrative vaginal sex without the use of condoms during the past year. One-third of MSM (31.1%) reported having had oral sex with semen in their mouths and 44.5% had had oral sex without semen in their mouths in the last year. These results are summarised in Table 8, with comparative data for non-MSM.

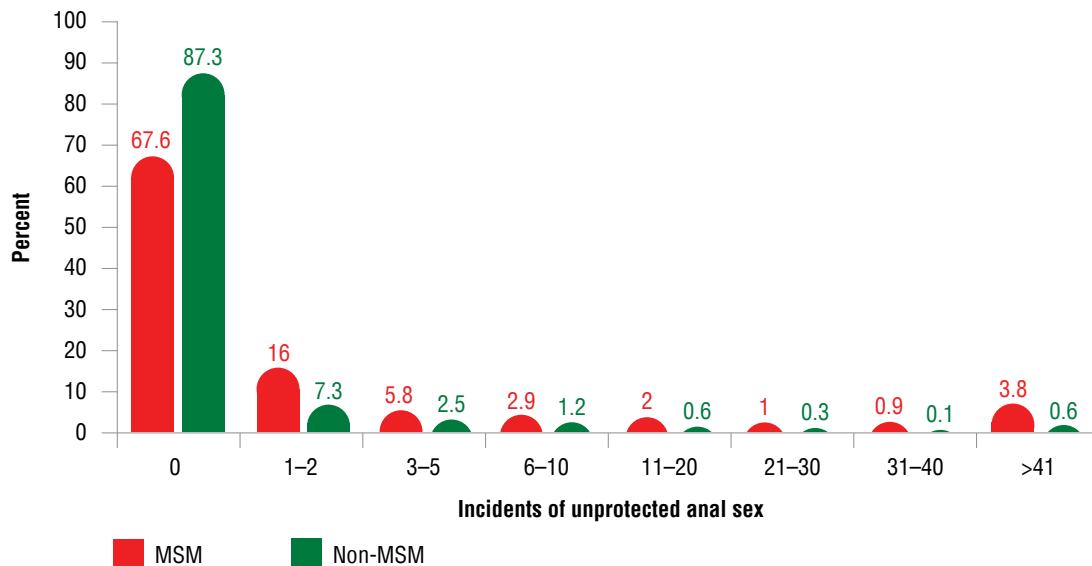


FIGURE 15: REPORTED INCIDENTS OF UNPROTECTED ANAL SEX IN PAST YEAR

TABLE 8: REPORTED CONDOM USE AND EXPOSURE TO RISK OF HIV INFECTION

Questions	Possible answers	MSM participants		Non-MSM participants	
		Number	%	Number	%
How many times have you had anal sex with use of condoms in the past 12 months?	0	479	62.9	4 907	90.4
	1–2	92	12.1	239	4.4
	3–5	65	8.5	126	2.3
	6–10	45	5.9	66	1.2
	11–20	33	4.3	40	0.7
	21–30	16	2.1	15	0.3
	31–40	7	0.9	7	0.1
	>40	25	3.3	27	0.5
How many times have you had vaginal sex without use of condoms in the past 12 months?	0	473	62.1	1 888	34.8
	1–2	103	13.5	947	17.4
	3–5	70	9.2	648	11.9
	6–10	34	4.5	445	8.2
	11–20	20	2.6	369	6.8
	21–30	16	2.1	255	4.7
	31–40	7	0.9	156	2.9
	>40	39	5.1	719	13.2
How many times have you had vaginal sex with the use of condoms in the past 12 months?	0	404	53	1 556	28.7
	1–2	102	13.4	801	14.8
	3–5	70	9.2	814	15.0
	6–10	68	8.9	722	13.3
	11–20	50	6.6	547	10.1
	21–30	21	2.8	329	6.1
	31–40	7	0.9	179	3.3
	>40	40	5.2	479	8.8
How many times have you had sex with blood present in the past 12 months?	0	611	80.2	3 959	73.0
	1–2	108	14.2	993	18.3
	3–5	21	2.8	274	5.0
	6–10	14	1.8	99	1.8
	11–20	6	0.8	62	1.1
	21–30	0	0.0	15	0.3
	31–40	0	0.0	4	0.1
	>40	2	0.3	21	0.4
How many times have you had oral sex with semen in your mouth in the past 12 months?	0	525	68.9	4 124	76.0
	1–2	105	13.8	579	10.7
	3–5	50	6.6	264	4.9
	6–10	24	3.1	191	3.5
	11–20	28	3.7	111	2.0
	21–30	13	1.7	70	1.3
	31–40	5	0.7	23	0.4
	>40	12	1.6	65	1.2
How many times have you had oral sex without semen in your mouth in the past 12 months?	0	423	55.5	3 334	61.4
	1–2	116	15.2	618	11.4
	3–5	67	8.8	455	8.4
	6–10	59	7.7	353	6.5
	11–20	33	4.3	238	4.4
	21–30	19	2.5	147	2.7
	31–40	15	2.0	65	1.2
	>40	30	3.9	217	4.0



### Condom and lubricant use

Two-thirds (63.4%) of the MSM participants reported having used condoms the last time they had penetrative sex. More than a third (36.6%) reported they had not used condoms during their last sexual encounter (Figure 16), implying that they use condoms inconsistently or not at all. Four out of 10 reported using lubricant the last time they had penetrative sex (Figure 17). Only a third of MSM (28.9%) reported that free lubricant sachets were available at their HEI, whereas free condoms were much more freely available (87.9%). MSM preference for brand of condom was closely divided among:

- Durex: 28.5%.
- Lovers Plus: 25.4%.
- Choice: 23%.
- Other condom brands: 22.2%.

Only 1.9% reported using a female condom the last time they had sex. One-third of MSM (34.3%) stated that they used condoms “all of the time” when having sex while another third (31.9%) said they used condoms “most of the time”. These findings are detailed in Table 9, along with comparative data from non-MSM participants.

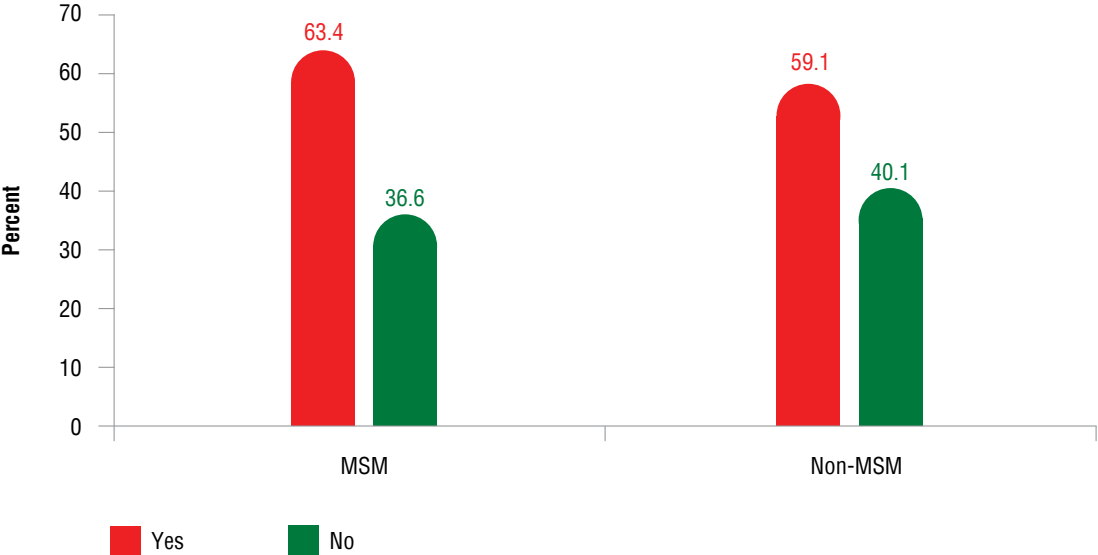


FIGURE 16: CONDOM USE BY PARTICIPANTS DURING LAST SEX ACT

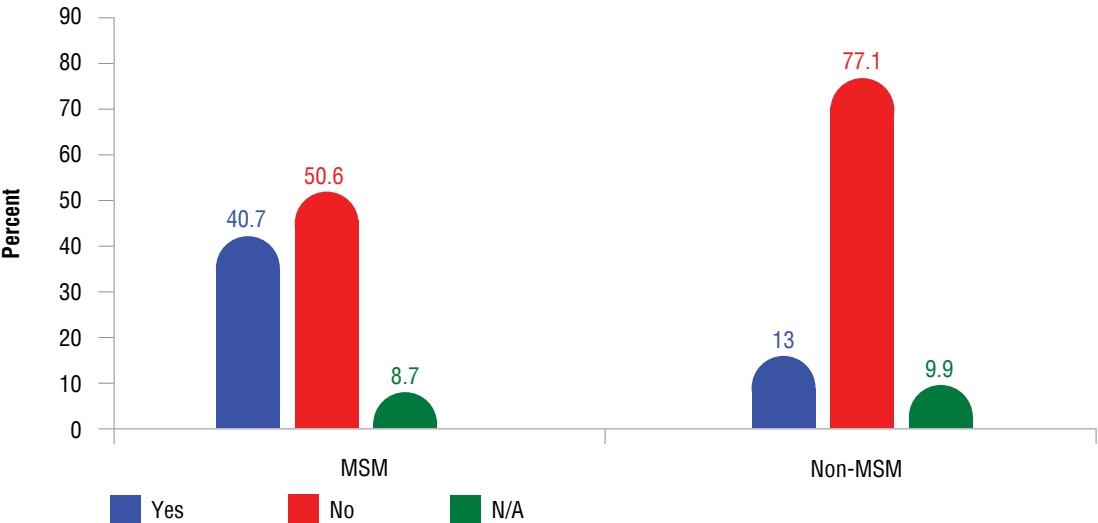


FIGURE 17: REPORTED USE OF LUBRICANT DURING LAST PENETRATIVE SEX ACT

TABLE 9: ACCESS TO AND USE OF CONDOMS AND LUBRICANT

Questions	Possible answers	MSM participants		Non-MSM participants	
		Number	%	Number	%
If you used a condom the last time you had sex was it a male or female condom?	Male condom	513	98.1	3 448	98.0
	Female condom	10	1.9	71	2.0
... and what brand of condom do you use most of the time?	Choice	129	23.0	689	17.9
	Durex	160	28.5	1 346	35.0
	Lovers Plus	143	25.4	1 033	26.9
	Trojan	5	0.9	43	1.1
	Other	125	22.2	732	19.0
Did you also use lubricant (the last time you had sex)?	Yes	290	40.7	652	13.0
	No	360	50.6	3 860	77.1
	Not applicable	62	8.7	496	9.9
Are free condoms available on campus?	Yes	788	87.9	6 908	86.7
	No	108	12.1	1 064	13.3
Is free lubricant available on campus?	Yes	259	28.9	1 672	21.0
	No	637	71.1	6 300	79.0
How often do you use condoms when you have sex?	All of the time	254	34.3	1 607	30.6
	Most of the time	236	31.9	1 555	29.6
	Sometimes	119	16.1	950	18.1
	Rarely	64	8.6	612	11.7
	Never	67	9.1	525	10.0

### Injecting drug use and history of STIs other than HIV

The responses to questions on STIs and injecting drug use are summarised in Table 10 and Table 11 respectively. In the MSM sample, 14.2% of participants reported having had STIs (other than HIV). However, 19.8% of MSM reported having had genital sores, 9% had experienced a discharge (or unexplained fluid) from the genitals and/or anus, while 26.5% reported the past experience of burning while urinating.

TABLE 10: HISTORY OF SEXUALLY TRANSMITTED INFECTIONS

Questions	Possible answers	MSM participants		Non-MSM participants	
		Number	%	Number	%
Have you had a sexually transmitted infection (STI)?	Yes	108	14.2	540	9.9
	No	654	85.8	4 889	90.1
Have you ever had a sore on your penis, testicles, anus or vagina?	Yes	151	19.8	989	18.2
	No	611	80.2	4 440	81.8
Have you ever had a discharge or unexplained fluid from the genitals or anus?	Yes	88	11.5	999	18.4
	No	674	88.5	4 430	81.6
Have you ever had burning or pain when you urinated?	Yes	202	26.5	1 807	33.3
	No	560	73.5	3 622	66.7

About 2% of MSM participants reported that they or a sex partner had used needles to inject drugs at some point in the past (Table 11).

TABLE 11: INJECTING DRUG USE

Questions	Possible answers	MSM participants		Non-MSM participants	
		Number	%	Number	%
Have you or your sex partner used needles to inject drugs?	Yes	16	2.1	67	1.2
	No	746	97.9	5 362	98.8

**Sexual coercion, violence and use of force**

In the MSM sample, 11.8% of participants reported having been forced to have sexual intercourse against their will and 8.9% said they had been hit by a sex partner. In addition, 14.3% of student MSM said they had had sex with someone “who really did not want (to have sex)” (Table 11) and 3.4% indicated that they had threatened to use force to coerce someone to have sex.

A total of 10.6% of the MSM sample had experienced abuse and/or violence on campus due to their sexual preference (7.6% abuse only; 1% some form of violence; and 2% both abuse and violence). The experiences of MSM and non-MSM students in relation to abuse and violence due to their sexual orientation are summarised in Figure 18.

On the subject of transactional sex, 5.6% of student MSM reported having accepted material benefits in exchange for sex and 10.1% said they had offered some benefit in exchange for sex. More than a third (36.4%) indicated that they had met a sex partner through the internet. The corresponding figure for the non-MSM samples was much lower, at 8.5% (Table 12).

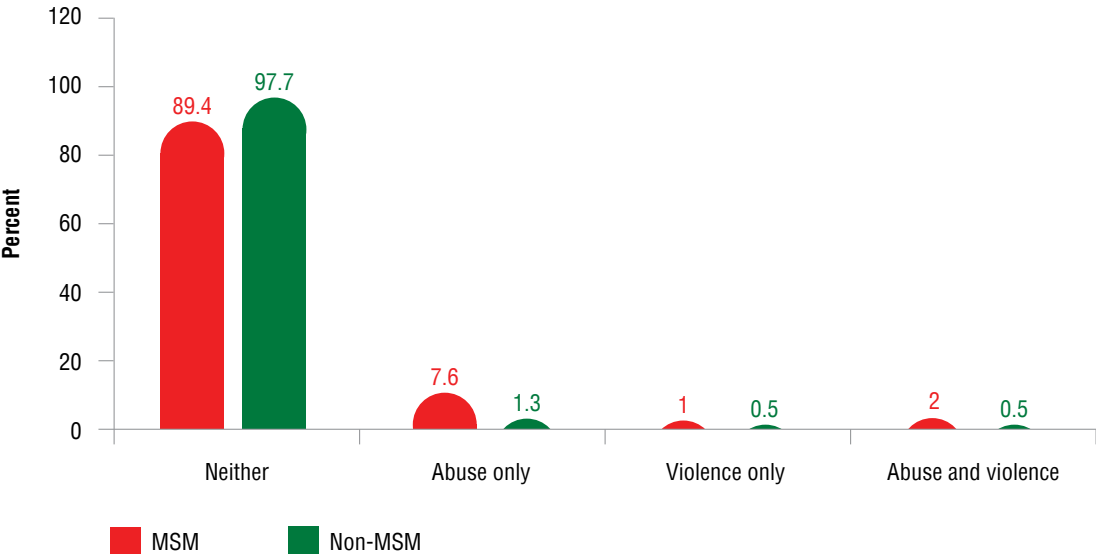


FIGURE 18: EXPERIENCE OF ABUSE/VIOLENCE ON CAMPUS DUE TO SEXUAL ORIENTATION

TABLE 12: TRANSACTIONAL AND COERCIVE SEX AND VIOLENCE BETWEEN PARTNERS

Questions	Possible answers	MSM participants		Non-MSM participants	
		Number	%	Number	%
Has someone ever given you money, drugs or a place to stay in exchange for sex?	Yes	43	5.6	183	3.4
	No	719	94.4	5 246	96.6
Have you ever given someone money, drugs or a place to stay in exchange for having sex with you?	Yes	77	10.1	230	4.2
	No	685	89.9	5 199	95.8
Have you ever found a sex partner through the internet?	Yes	277	36.4	461	8.5
	No	485	63.6	4 968	91.5
Has a sex partner ever hit you?	Yes	68	8.9	533	9.8
	No	694	91.1	4 894	90.2
Has someone ever forced you to have sex when you did not want to?	Yes	90	11.2	803	14.8
	No	672	88.2	4 624	85.2
Would you be afraid to ask a partner to use condoms because they might hit you?	Yes	17	2.2	97	1.8
	No	745	97.8	5 330	98.2
Have you ever had sex with someone when they really did not want to?	Yes	109	14.3	498	9.2
	No	653	85.7	4 929	90.8
Have you ever threatened to use force to get someone to have sex when they did not want to?	Yes	26	3.4	82	1.5
	No	736	96.6	5 345	98.5

### HIV testing behaviour and sexual health service uptake

Most MSM participants (73%) had been tested for HIV at least once in their lifetime and 4% of those who had undergone testing reported that they were HIV positive. Eight respondents who had been tested declined to answer the question on their HIV status, and seven said they were not sure of their HIV status (Table 13 and Figure 19).

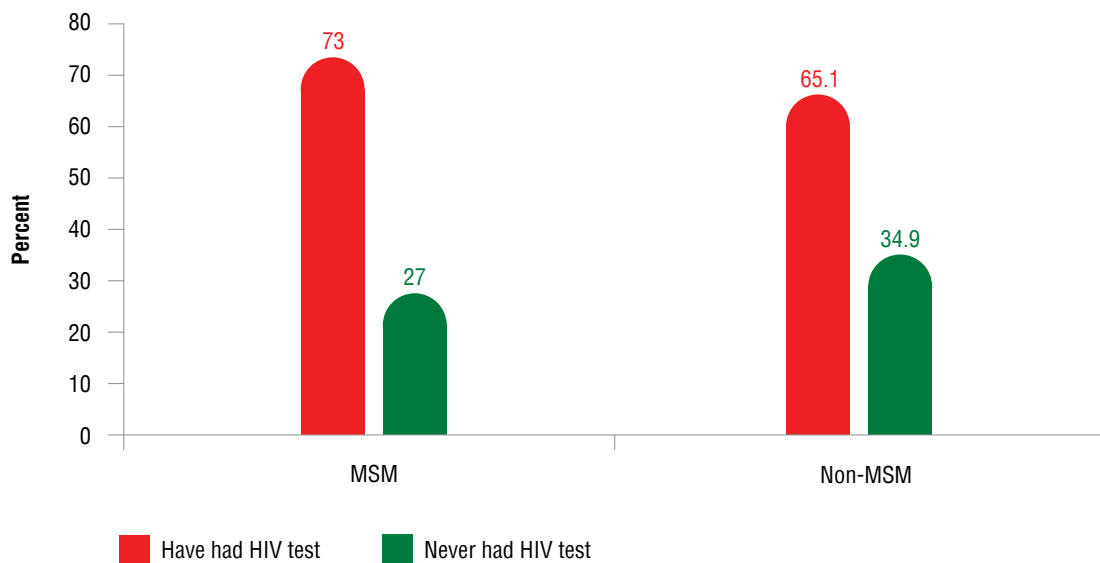


FIGURE 19: HIV TESTING HISTORY OF PARTICIPANTS

Nearly two-thirds (60%) of the student MSM had undergone their most recent HIV test less than a year before the survey and 85.6% planned to get tested again. More than half of MSM who had tested (56.6%) had done so on campus and 77.9% of MSM who had tested said they would get tested on campus. A third of those who had tested for HIV (31.8%) had done so more than five times.

Three-quarters of student MSM indicated that they were comfortable using sexual health services on campus. But only one-third said they had actually used these services in the preceding year and more than 40% had used off-campus sexual health services during this time. Students in the non-MSM groups also tended to use off-campus sexual health services more than on-campus options.

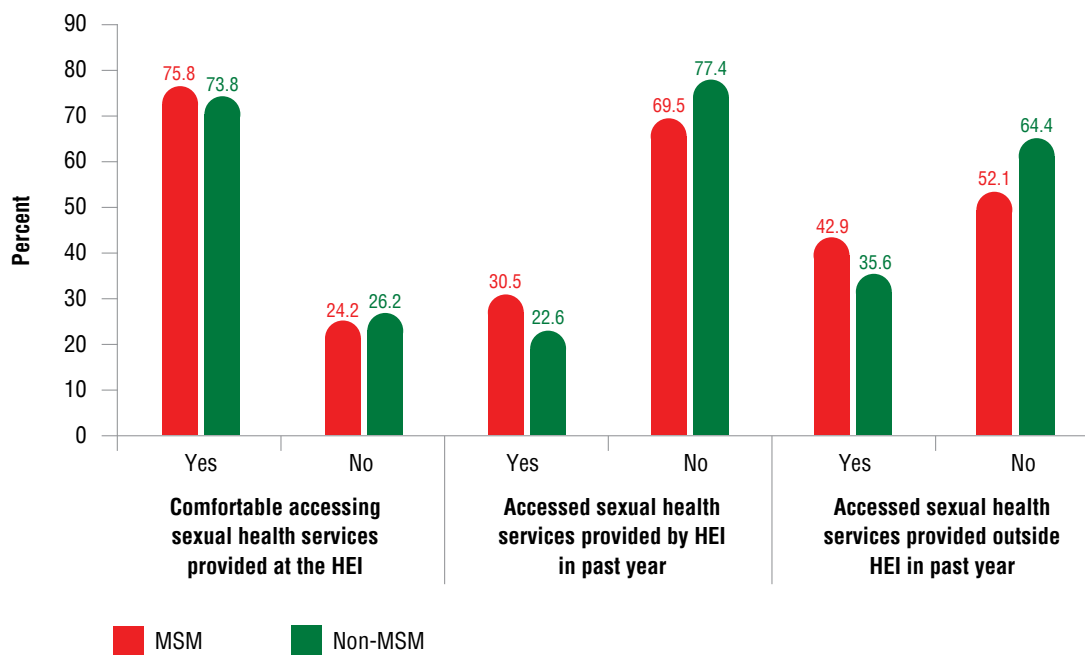


FIGURE 20: ACCEPTABILITY AND UTILISATION OF HEI SEXUAL HEALTH SERVICES

TABLE 13: HIV-TESTING BEHAVIOUR AND UPTAKE OF SEXUAL HEALTH SERVICES

Questions	Possible answers	MSM participants		Non-MSM participants	
		Number	%	Number	%
If you have had an HIV test, what were the results of your most recent HIV test?	HIV-positive	26	4.0	132	2.6
	HIV-negative	610	93.7	4 868	94.3
	Don't know	7	1.1	40	0.8
	Refuse to answer	8	1.2	124	2.4
How many times have you been tested for HIV?	1	130	19.8	1 306	25.1
	2	119	18.2	1 085	20.9
	3	120	18.3	885	17.0
	4	78	11.9	488	9.4
	5 and more	208	31.8	1 429	27.5
Was your last HIV test less than one year ago?	Yes	393	60.0	2 954	56.9
	No	262	40.0	2 239	43.1
Do you plan to get tested again?	Yes	561	85.6	4 489	86.4
	No	94	14.4	704	13.6
Have you been tested for HIV on campus?	Yes	371	56.6	2 704	52.1
	No	284	43.4	2 489	47.9
Have you been tested for HIV on campus?	Yes	510	77.9	4 069	78.4
	No	145	22.1	1 124	21.6
Is free HIV testing available to you on campus?	Yes	819	91.6	7 067	88.7
	No	75	8.4	904	11.3

### Perceptions of leadership and responses related to HIV and LGBTQI issues

Only 15.6% of student MSM belonged to an LGBTQI organisation on campus and even fewer were members of an HIV/AIDS organisation at their HEI. However, 39.1% of student MSM said they had received information at the HEI on LGBTQI issues and 72.1% on HIV/AIDS. About a quarter (26.8%) said they had attended meetings or functions dealing with LGBTQI issues and 36.3% had gone to HIV/AIDS-related events (Table 14).

Students' perceptions of HEI management and student leadership are reflected in Figure 21. There are many similarities in the responses of non-MSM and MSM students. Both groups expressed low levels of confidence (around 30%) in management and student leadership taking the matter of discrimination against members of the LGBTQI community seriously. These data seem at odds with the higher levels of confidence (around 50% for both groups) that actual cases of discrimination (based on gender, sexuality, and race) would be well investigated by HEI staff. The data also indicate that many students are uncertain about how broader issues relating to the experiences of LGBTQI students would be managed (Figure 21).

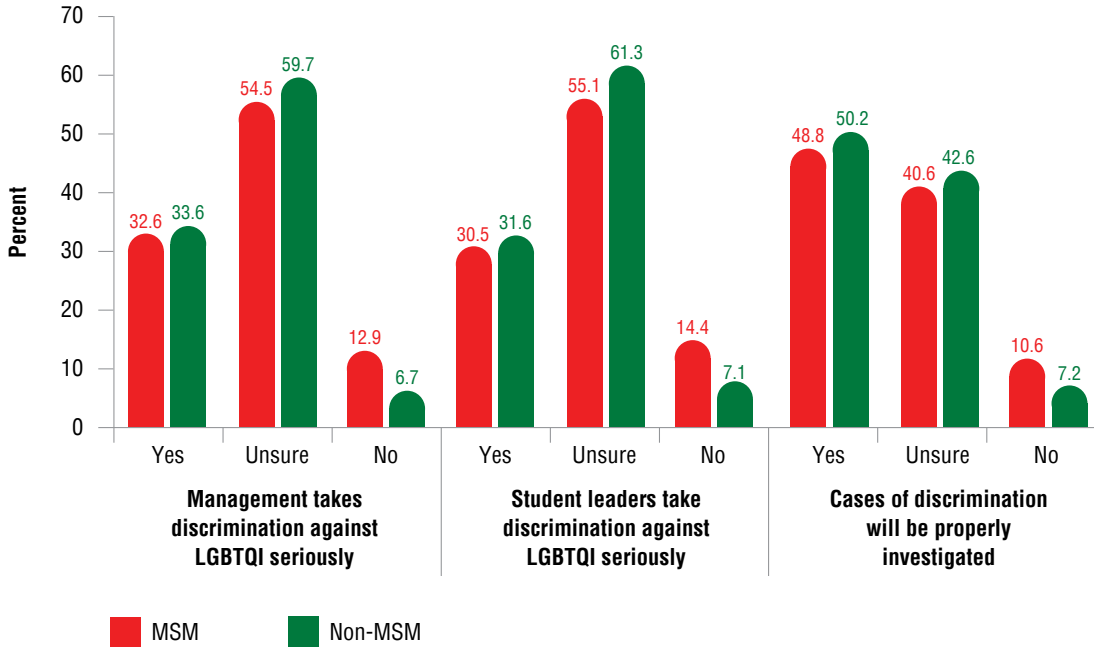


FIGURE 21: PERCEPTIONS OF HEI LEADERSHIP RESPONSES TO LGBTQI ISSUES

Participants were also asked whether they perceived their university to be a safe and enabling environment for LGBTQI students (Figure 22). Fewer than 50% of MSM and non-MSM participants gave affirmative answers in relation to both these variables. MSM participants were more likely to definitely reject the notion that HEIs were safe environments for LGBTQI students (7.5% compared to 2.8% for non-MSM) or enabling environments for this group of students (9% compared to 4.1% for non-MSM).

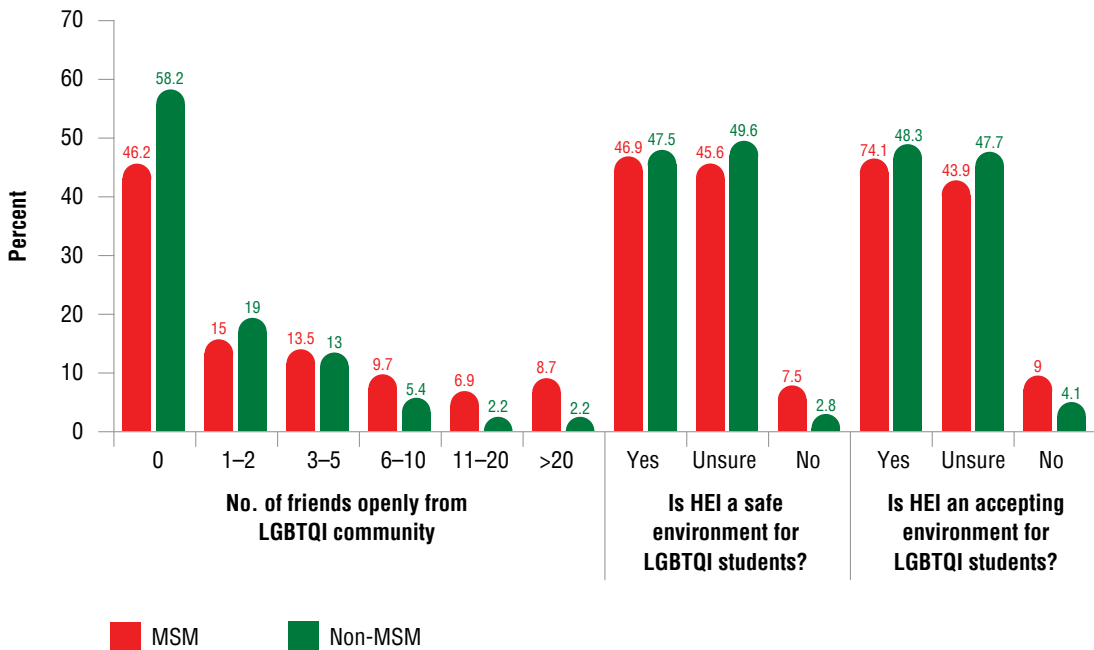


FIGURE 22: PERCEPTIONS OF CAMPUS ENVIRONMENT FOR LGBTQI

TABLE 14: PERCEPTIONS OF LEADERSHIP AND RESPONSES TO HIV AND LGBTQI ISSUES

Questions	Possible answers	MSM participants		Non-MSM participants	
		Number	%	Number	%
I feel safe from physical harm on campus	Yes	629	70.2	5 412	67.9
	Not sure	219	24.4	2 034	25.5
	No	48	5.4	526	6.6
Female students are safe from sexual harassment on campus	Yes	372	41.5	3 104	38.9
	Not sure	425	47.4	3 911	49.1
	No	99	11.0	957	12.0
I attended a meeting or function about HIV/AIDS on campus	Yes	325	36.3	2 835	35.6
	No	571	63.7	5 137	64.4
I attended a meeting or function about LGBTQI issues on campus	Yes	240	26.8	1 283	16.1
	No	656	73.2	6 689	83.9
I have received information about HIV/AIDS on campus	Yes	646	72.1	5 515	69.2
	No	250	27.9	2 457	30.8
I have received information about LGBTQI issues on campus	Yes	350	39.1	2 264	28.4
	No	546	60.9	5 708	71.6
I wore a T-shirt, cap, red ribbon or other item of clothing with an HIV/AIDS message on campus	Yes	204	22.8	1 633	20.5
	No	692	77.2	6 339	79.5
I am a member of an HIV/AIDS club or organisation on campus	Yes	71	7.9	415	5.2
	No	825	92.1	7 557	94.8
I am a member of an LGBTQI club or organisation on campus	Yes	140	15.6	295	3.7
	No	756	84.4	7 677	96.3

**Alcohol and drug use**

Forty-three percent of the sample of student MSM had moderate to high scores on a multi-item measure of alcohol and drug use compared to 32.5% in the non-MSM sample. Just over one-third of student MSM had a minimal use score and 19.5% fell into the category no use to low use. The mean score for MSM was 4.72 (*SD* = 3.84) on a scale ranging from 0 to >4, while non-MSM participants had a mean score of 3.83 (*SD* = 3.25). Details of the scores are shown in Figure 23 and Table 15.

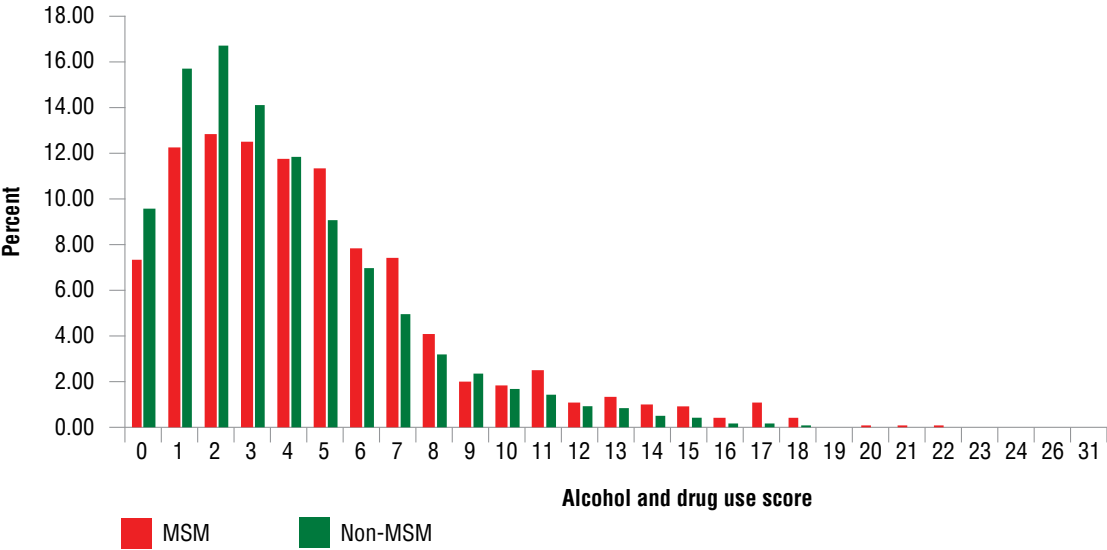


FIGURE 23: ALCOHOL AND DRUG USE SCORES OF PARTICIPANTS

TABLE 15: SUMMARY OF ALCOHOL AND DRUG USE SCORES OF STUDENTS

	MSM %	Non-MSM %
No use to low use	15.5	25.1
Minimal use	37.0	42.3
Moderate to high use	43.4	32.5

The analysis depicted in Figure 24 confirms that alcohol and drug use scores among student MSM were statistically significantly higher than for the non-MSM student group ( $U = 58.81, p < 0.01$ ).

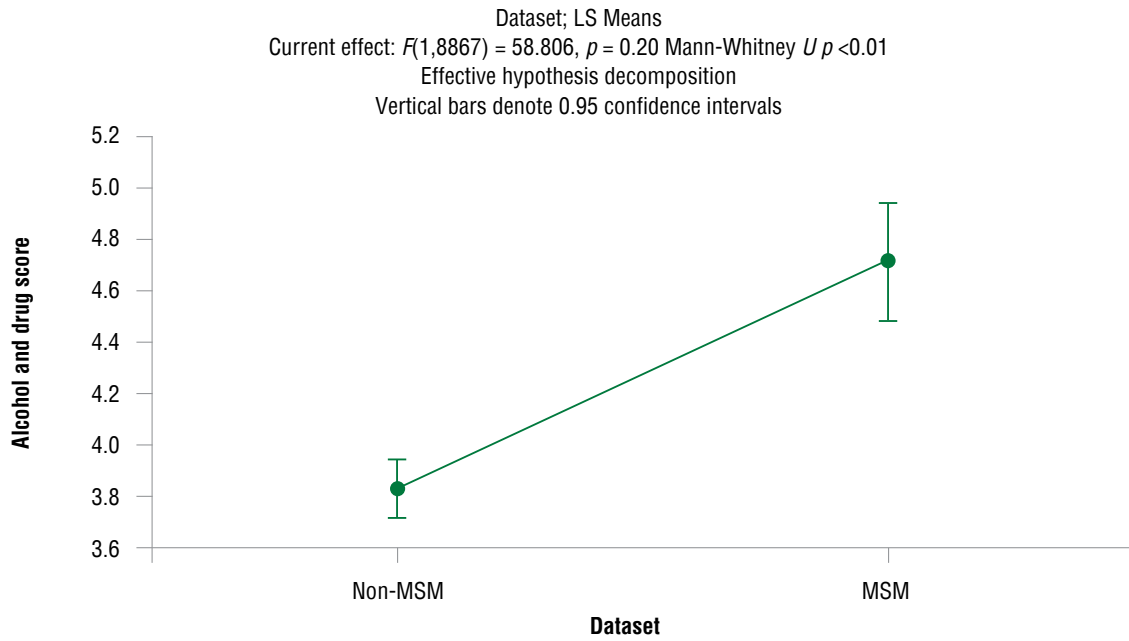


FIGURE 24: MANN-WHITNEY TEST FOR ALCOHOL AND DRUG USE SCORES

### Levels of self-esteem

The self-esteem scores measured on the Rosenberg Scale are presented in Figure 25. Overall, the scores for the sample of MSM indicated high levels of self-esteem. The mean score for MSM was 49.15 ( $SD = 5.59$ ) which was close to the mean of 49.57 ( $SD = 5.37$ ) for non-MSM participants. However, analysis reveals that self-esteem scores for student MSM were statistically significantly lower than for the non-MSM group ( $U = 5.02, p = 0.05$ ).

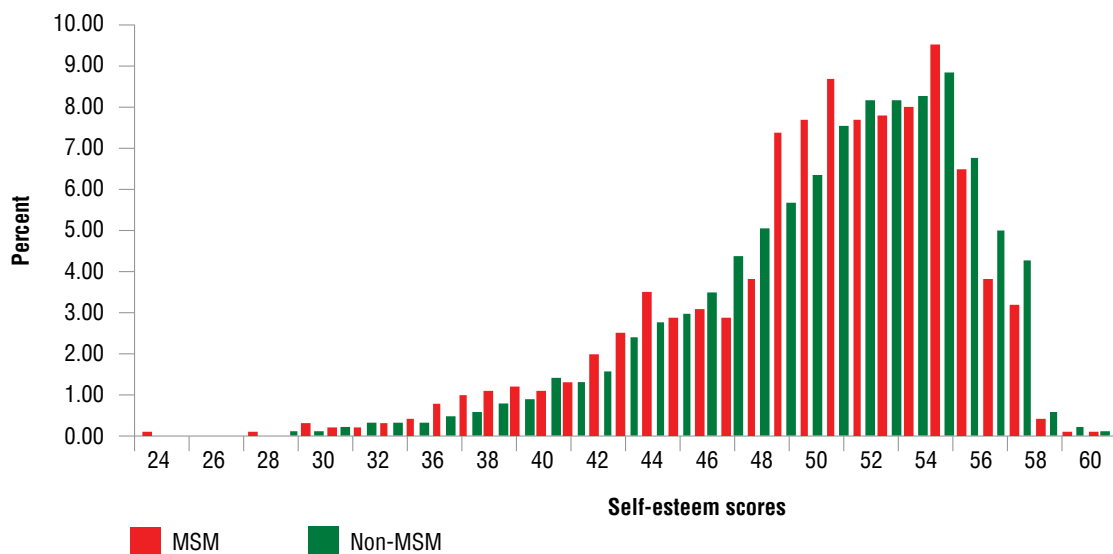


FIGURE 25: SELF-ESTEEM SCORES OF PARTICIPANTS



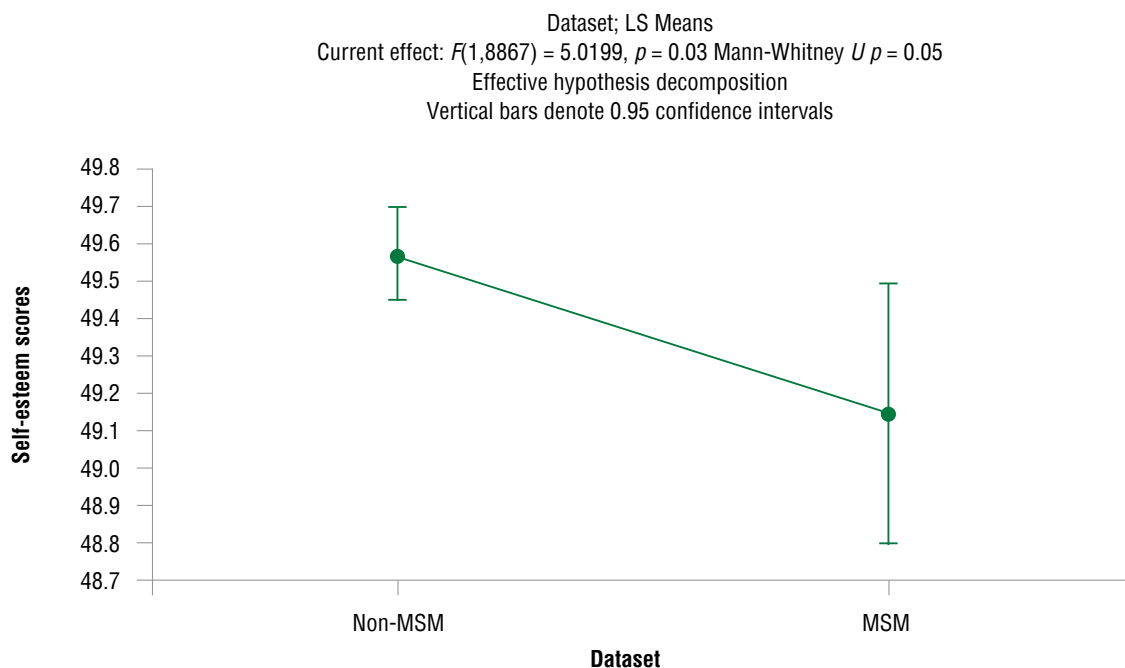


FIGURE 26: MANN-WHITNEY TEST FOR SELF-ESTEEM SCORES

### Odds ratios and correlations between variables

Analysis of odds ratios between the MSM and non-MSM samples for certain variables is summarised in Table 16. It revealed the following associations:

- The odds of ever having undergone an HIV test are 1.45 times greater for MSM compared to non-MSM. This indicates a weak association between HIV testing and membership of the MSM population.
- The odds of ever having found a sex partner through the internet are 6.15 times greater for MSM compared to non-MSM. This indicates a very strong association between MSM and the risky behaviour of using the internet to search for sex partners.
- The odds of ever having had an STI are 1.50 times greater for MSM compared to non-MSM, indicating that the association is weak.
- The odds of alcohol and/or drug use at last sex act are 1.61 times greater for MSM than for non-MSM. This suggests a weak to moderate increase in risk for MSM.
- The odds of currently being in a relationship with a primary partner are 0.63 times greater for MSM compared to non-MSM.
- The odds of having been forced to have sex are 0.77 times greater for MSM compared to non-MSM, pointing to a weak association.
- The odds of initiating transactional sex are 2.54 times greater for MSM compared to non-MSM. This is a strong association, suggesting increased risk for MSM.
- The likelihood of having threatened to use force against someone in order to obtain sex are 2.30 times greater for MSM. This indicates a moderate to strong association between MSM and coercive sexual behaviour.

TABLE 16: ODDS RATIOS FOR VARIABLES: MSM AND NON-MSM

Variable	Odds ratio for dataset (MSM : Non-MSM)	95% confidence interval	
		Lower	Upper
Ever been for an HIV test	1.455	1.247	1.699
Met a sex partner through the internet	6.155	5.163	7.338
Ever had an STI	1.495	1.197	1.867
Alcohol and/or drug use at last sex	1.612	1.327	1.957
Current relationship with a primary partner	0.631	.541	.737
Someone ever forced you to have sex	0.771	.611	.973
Ever given someone money, drugs or a place to stay in exchange for having sex with you	2.541	1.940	3.329
Ever threatened to use force to get someone to have sex when they did not want to	2.303	1.471	3.603

The strength of possible relationships between certain variables was analysed. Moderate to strong relationships are highlighted and presented in a correlation matrix (Table 17).

TABLE 17: CORRELATIONS BETWEEN VARIABLES

		Did you use alcohol and/or drugs the last time you had sex?	How often do you use alcohol and/or drugs when you are having sex?	Do you have a steady, non-primary partner you have sex with?	Do you have a non-steady partner you have sex with?	How often do you use condoms when you are having sex?	Alcohol and drug use score	I feel safe from physical harm on campus.	I have received information about LGBTQIQ issues on campus.	Did you use a condom the last time you had sex?	How old are you?	What is your year of study?	Are you currently employed?	Do you have any children?	Are you married?	Graduate level
Did you use alcohol and/or drugs the last time you had sex?	Pearson Correlation	1	.505**	.087**	.109**	-.002	-.368**	-.011	.022	-.010	.004	-.028**	.021	-.058**	-.040	-.006
	Sig. (2-tailed)		0.000	.000	.000	.894	.000	.379	.090	.443	.727	.030	.098	.000	.001	.626
	N	6191	6191	6191	6191	5989	6191	6190	6190	6191	6190	6190	6190	6190	6190	6190
How often do you use alcohol and/or drugs when you are having sex?	Pearson Correlation	.505**	1	.132**	.135**	-.025	-.524**	.008	.028*	-.026*	-.017	-.075**	.064**	-.070**	-.049**	-.045**
	Sig. (2-tailed)	0.000		.000	.000	.051	0.000	.526	.025	.042	.179	.000	.000	.000	.000	.000
	N	6191	6191	6191	6191	5989	6191	6190	6190	6191	6190	6190	6190	6190	6190	6190
Do you have a steady, non-primary partner you have sex with?	Pearson Correlation	.087**	.132**	1	.501**	.048**	-.112**	.026*	.008	.026*	-.012	.016	-.018	.024	-.056**	.012
	Sig. (2-tailed)	.000	.000		0.000	.000	.000	.041	.533	.045	.343	.195	.147	.055	.000	.336
	N	6191	6191	6191	6191	5989	6191	6190	6190	6191	6190	6190	6190	6190	6190	6190
Do you have a non-steady partner you have sex with?	Pearson Correlation	.109**	.135**	.501**	1	.064**	-.152**	.038**	.004	.042**	.006	.009	-.011	-.004	-.067**	.017
	Sig. (2-tailed)	.000	.000	0.000		.000	.000	.003	.755	.001	.640	.499	.369	.761	.000	.172
	N	6191	6191	6191	6191	5989	6191	6190	6190	6191	6190	6190	6190	6190	6190	6190
How often do you use condom when you are having sex?	Pearson Correlation	-.002	-.025	.048**	.064**	1	.029*	-.009	.046**	.664**	.154**	.078**	-.085**	-.160**	-.245**	.057**
	Sig. (2-tailed)	.894	.051	.000	.000		.024	.505	.000	0.000	.000	.000	.000	.000	.000	.000
	N	5989	5989	5989	5989	5989	5989	5988	5988	5989	5988	5988	5988	5988	5988	5988
Alcohol and drug use score	Pearson Correlation	-.368**	-.524**	-.112**	-.152**	.029*	1	-.017	-.030**	.042**	.011	.076**	-.081**	.055**	.048**	.011
	Sig. (2-tailed)	.000	0.000	.000	.000	.024		.105	.004	.001	.301	.000	.000	.000	.000	.296
	N	6191	6191	6191	6191	5989	8869	8868	8868	6191	8868	8868	8868	8868	8868	8868
I have received information about HIV/AIDS on campus	Pearson Correlation	.022	.019	.011	.035**	.077**	-.063**	.100**	.315**	.077**	.099**	-.084**	-.110**	-.091**	-.135**	.000
	Sig. (2-tailed)	.086	.130	.376	.006	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.974
	N	6190	6190	6190	6190	5988	8868	8868	8868	6190	8867	8867	8867	8867	8867	8867
Did you use a condom the last time you had sex?	Pearson Correlation	-.010	-.026*	.026*	.042**	.644**	.042**	-.034**	.072**	1	.129**	.067**	-.072**	-.109**	-.181**	.039**
	Sig. (2-tailed)	.443	.042	.045	.001	0.000	.001	.008	.000		.000	.000	.000	.000	.000	.002
	N	6191	6191	6191	6191	5989	6191	6190	6190	6191	6190	6190	6190	6190	6190	6190
How old are you?	Pearson Correlation	.004	-.017	-.012	.006	.154**	.011	-.024*	.066**	.129**	1	.512**	-.438**	-.422**	-.400**	.373**
	Sig. (2-tailed)	.727	.179	.343	.640	.000	.301	.026	.000	.000		0.000	0.000	0.000	0.000	.000
	N	6190	6190	6190	6190	5988	8868	8867	8867	6190	8868	8868	8868	8868	8868	8868
What is your year of study?	Pearson Correlation	-.028*	-.075**	.016	.009	.078**	.076**	-.007	-.025*	.067**	.512**	1	-.258**	-.119**	-.134**	.500**
	Sig. (2-tailed)	.030	.000	.195	.499	.000	.000	.493	.019	.000	0.000		.000	.000	.000	0.000
	N	6190	6190	6190	6190	5988	8868	8867	8867	6190	8868	8868	8868	8868	8868	8868
Are you currently employed?	Pearson Correlation	.021	.064**	-.018	-.011	-.085**	-.081**	.018	-.064**	-.072**	-.438**	-.258**	1	.215**	.273**	-.243**
	Sig. (2-tailed)	.098	.000	.147	.369	.000	.000	.086	.000	.000	0.000	.000		.000	.000	.000
	N	6190	6190	6190	6190	5988	8868	8867	8867	6190	8868	8868	8868	8868	8868	8868
Do you have any children?	Pearson Correlation	-.058**	-.070**	.024	-.004	-.160**	.055**	.008	-.050**	-.109**	-.422**	-.119**	.215**	1	.426**	-.106**
	Sig. (2-tailed)	.000	.000	.055	.761	.000	.000	.479	.000	.000	.000	.000	.000		0.000	.000
	N	6190	6190	6190	6190	5988	8868	8867	8867	6190	8868	8868	8868	8868	8868	8868
Are you married?	Pearson Correlation	-.040**	-.049**	-.056**	-.067**	-.245**	.048**	-.022*	-.075**	-.181**	-.400**	-.134**	.273**	.426**	1	.153**
	Sig. (2-tailed)	.001	.000	.000	.000	.000	.000	.040	.000	.000	0.000	.000	.000	.000		.000
	N	6190	6190	6190	6190	5988	8868	8867	8867	6190	8868	8868	8868	8868	8868	8868
Graduate level	Pearson Correlation	-.006	-.045**	.012	.017	.057**	.011	-.007	.000	.039**	.373**	.500**	-.243**	-.106**	-.153**	1
	Sig. (2-tailed)	.626	.000	.336	.172	.000	.296	.481	.987	.002	.000	0.000	.000	.000	.000	
	N	6190	6190	6190	6190	5988	8868	8867	8867	6190	8868	8868	8868	8868	8868	8868

## Section 5: Discussion and recommendations

The discussion section of this document focuses firmly on the student MSM population as this constitutes the subject of the study. Although the survey also cast light on the sexuality, sexual preferences and sexual behaviour of the non-MSM student population at 14 HEIs – and on the interplay between these factors – this group is not central to the study. Therefore findings relating to non-MSM participants are only discussed to the extent that they assist in understanding the MSM group of students.

### Limitations of the study

The fact that the participants were mostly required to complete questionnaires online and that only some were supplied with paper-based questionnaires might have limited participation by student MSM. There may have been student MSM who did not have access to private online facilities, including tablets and smart phones, and completing the questionnaire in a public computer area might have raised concerns about privacy and confidentiality.

Recruiting a sufficiently large sample from a hidden and hard to reach population, such as MSM, was a challenge. Several months were devoted to this aspect of the study at selected HEIs but most institutions were unable to achieve the numbers originally planned. This may have been due to HEIs receiving too small a financial incentive to recruit more extensively or due to concerns of student MSM about privacy. Delays in finalising contracts between the funder and HEIs, variations in recruitment strategies, time constraints and staff competencies at some HEI HIV units might all have impacted on the outcome of the recruitment process.

The survey was, ultimately, conducted among a self-selected sample of students, including MSM, at 14 HEIs. These participants constituted only a small portion of the total number of student MSM on campuses across South Africa. The findings of this study should be viewed as a reflection of the views and practices of the participating students at the relevant HEIs.

The study was also limited in the scope of personal characteristics it investigated. It would have been ideal to incorporate personality traits, affective reactions, inter-personal calculations, emotional aspects of decision-making, unconscious motives and psychographic factors. In short, the study focused almost exclusively on rational decision-making and therefore excluded important influences on behaviour (Ogden, 2003). Future large-scale studies should consider including variables that explore non-rational aspects of decision-making.

The use of Likert-type scales may also have limited understanding of behaviours, presenting a somewhat one-dimensional interpretation of sexual behaviour. In addition, the use of self-reporting questionnaires may have altered the way participants thought – and potentially have influenced their subsequent behaviour (Ogden, 2003).

Despite these limitations, the findings afforded insight into basic HIV knowledge and perceptions, self-esteem levels and patterns of drug and alcohol use, as well highlighting some risky sexual behaviour among a sample of student MSM and non-MSM. Expanding research to track sexual behaviour trends and developing interventions to improve self-esteem, encourage responsible use of alcohol and drugs, and strengthen HEIs' commitment to social justice and non-discrimination could enhance health outcomes among student MSM in South Africa.

### Sexual behaviour among student MSM

The extent of risky sexual behaviour among the sample of student MSM was consistent with findings of various similar studies involving MSM studying at colleges and universities (Brown and Vanable, 2007; Eisenberg, 2001; Lindley et al, 2003; So et al, 2005). High turnover of sexual partners and concurrent sexual relationships, which were reflected in this study and in others, have been shown to be behavioural patterns that place young MSM at greater risk of contracting HIV (Baral et al, 2007; Van Griensven, 2007; UNAIDS, 2009).

The MSM in the current study showed some variety in terms of sexual orientation. While almost three-quarters of MSM identified as homosexual, one out of five said he was bisexual, fewer than one in 10 said he was heterosexual and fewer than 2% selected another sexual orientation. This indicates the diversity of identities or sexual orientations among men who engage in same-sex behaviour. It also suggests that male students do not necessarily confine their sexual engagements to the dominant pattern for their self-perceived sexual orientation.

Data from this study also showed that about one-third of student MSM engaged in (penetrative vaginal) sex with female sex partners. Half of the MSM participants reported having had at least one female sex partner in the past year – while half reported having had at least one male sex partner in the same period.

Experience of anal sex was not confined to the MSM group, but was substantially more common in this sample than among non-MSM. About 40% of the MSM sample had had anal sex, while the rate among non-MSM was about one in 10.

The proportion reporting that they had had oral sex was about the same in MSM and non-MSM samples.

These results indicate that there is a possibility of HIV spreading from the student MSM population, where the epidemic may be more concentrated, to the broader heterosexual population on campus (Baral et al, 2007; Pisani, 2008). Other studies have shown that when individuals participate only in closed sexual networks within a high-risk population (such as MSM), HIV remains largely contained within this population and develops into a concentrated epidemic. However, when MSM also have female sexual partners they participate in additional sexual networks and HIV may be transmitted across networks, more widely (Lane et al, 2006; Van Griensven, 2007). This may increase the spread of HIV in the broader heterosexual population (Baral et al, 2007).

Data collected in the present study strongly suggested a tendency for student MSM to engage in multiple concurrent sexual partnerships.

Most of the MSM sample (85%) had had sexual intercourse. More than half of this sexually experienced group said that they were in a relationship with a primary partner and nearly all of these were having sex with their primary partner. However, in addition to this, 35% of sexually experienced MSM said they were having sex with a “steady” (but not primary) partner and 36% with a “non-steady” partner. Some participants, therefore, were engaging in sex with different kinds of partners.

Direct questions on the number of recent sex partners showed that 73.4% of MSM had not had a male sexual partner or had only had one male partner in the last year. The remaining 26.6% had had at least two male sex partners. In addition, two-thirds of the MSM sample said they had not had a female sex partner or had only had one female partner in the past year. The remaining one-third had had at least two female sex partners in the past year. Furthermore, about a quarter of the sample reported having had one concurrent partner in the past year, while 17.1% reported more than one concurrent partner.

The study therefore provides strong evidence for MCP occurring among MSM students and this suggests that more needs to be done to address the HIV transmission risk associated with this behaviour.

There is new thinking on the impact of MCPs on the spread of HIV which argues that early simulation models showing the network effect of concurrency failed to take into account the coital dilution effect (Sawers and Stillwaggon, 2010). Allais and Venter (2012) have argued that there is no single “concurrency hypothesis” and that the term “concurrency” is imprecise. The suggestion is that risk lies not so much in the number of partners, but in the nature of the sex act, the relationship and the sexual network. The logical conclusion of such a proposition is that solutions lie not in asking MSM to limit their partners (an approach that may prove ineffective) but in finding ways to make sex safer even within multiple-partner arrangements. An advantage of this alternative approach is that it avoids stigmatising practices that are normal and acceptable within social sub-cultures.

About one in three MSM participants reported having had penetrative anal sex without using a condom at least once in the previous year while 40% said they had had penetrative vaginal sex without using a condom at least once in the same period. More than one third indicated that they used condoms inconsistently. This is despite the fact that almost all students reported that condoms were freely available on campuses. Only 2% of MSM reported having used the female condom. About a quarter of those using male condoms relied on the more freely available complimentary Choice condoms, while many used various commercial brands that generally need to be purchased at stores.

About half the MSM group said they used lubricant the last time they had penetrative sex but only a third said that free sachets of lubricant were available on campus.

The findings suggest that there is a need to expand lubricant distribution at HEIs and to promote and supply an appropriate version of the female condom for both anal and vaginal sex.

The findings on condom use in this study are in line with findings of other relevant research. In a study in low and middle income countries, Baral et al (2007) found that about half MSM reported using a condom the last time they had anal sex with another man. The HEAIDS national survey of students at HEIs found relatively high condom use among students: 65% of male students aged 18 to 24 years and 60% of those aged 25 years and older reported using a condom the last time they had sex (HEAIDS, 2010). An international study of the MSM population at schools and HEIs in many countries showed inconsistent condom use in a context of multiple recent sex partners (Brooks et al, 2008).

Early sexual debut is a risk factor for HIV acquisition (Shisana et al, 2009) and this study showed that a higher proportion of MSM students (25%) than non-MSM students (16%) first experienced sex at the age of 15 years or younger. Among the MSM participants, 2.5% reported that their first penetrative sexual experience occurred before the age of 12 years. The HEAIDS 2010 study found that 73% of South African students at HEIs had had sex before matriculation.

Transactional sex is also associated with increased risk of HIV transmission. More than 5% of student MSM said they had accepted money, drugs or a place to stay in exchange for sex and 10% reported that they had offered a benefit in exchange for sex.

There was a difference of about 25 percentage points between MSM and non-MSM survey participants in terms of the use of the internet to meet a sex partner. There is need for additional research to understand how and why so many MSM meet sexual partners online. With the popularity of social applications for men to meet men – such as *Badoo*, *Grindr*, *Manhunt* and *Gaydar* – this trend is likely to be sustained or even grow. It would be important to explore the risks associated with meeting sex partners on the internet as well as the opportunities that applications might offer to enhance support for young MSM and facilitate their access to health services.

The findings of this study on the sexual behaviour of a sample of student MSM indicate clearly that these young men are at risk of contracting HIV and are in agreement with studies cited in Section 2 that showed a rise in global rates of high-risk sexual behaviour among MSM.

Potentially risky sexual behaviours identified in the current study include: unprotected anal and/or vaginal sex; low rates of lubricant use during penetrative anal sex; multiple sexual partners and multiple concurrent sexual partners; early sexual debut; meeting partners through the internet; and transactional sex. These findings are similar to relevant findings in previous studies on HIV risk behaviour among young MSM (Benotsch et al, 2001; Brown and Vanable, 2007; Eisenberg, 2001; Lidley et al, 2003; So et al, 2005).

### HIV knowledge, alcohol and drug use and self-esteem among student MSM

This study found basic HIV knowledge to be high among the sample of student MSM. The finding is consistent with those of the national HEI survey of 2010 (HEAIDS, 2010). The scores of MSM and non-MSM participants in this study were not significantly different ( $U = 1.68, p = 0.58$ ). Sound HIV knowledge can facilitate appropriate action in terms of prevention, treatment and care (Shisana et al, 2009) but it does not always result in safer sexual behaviour calculated to prevent infection (Hightow et al, 2005). As indicated above, there was noteworthy engagement in risky sexual behaviour by MSM participants in this study, despite their understanding of HIV and its transmission.

Student MSM in this study were more likely to indulge in moderate to heavy consumption of alcohol and drugs than their non-MSM counterparts. In the MSM sample, 43% registered moderate to heavy use on a multi-item measure of alcohol and drug use, while 32.5% of the non-MSM sample showed similar scores.

In addition to scoring themselves on the alcohol and drug-use scale, participants reported whether they had used alcohol and/or drugs the last time they had sex. Eighty percent of student MSM said they had not – and 20% reported that they had. Reporting on the frequency of their use of alcohol and/drugs when having sex 75.6% responded “rarely” or “not at all”, while 18% said “sometimes”, 6.4% replied “most of the time”, and 1.3% said “always”.

Alcohol and drug use in combination with risky sexual behaviour has been linked to an increase in HIV acquisition (Brown and Vanable, 2007; So et al, 2005). In a study by Purcell, Parsons, Halkitis, Mizuno and Woods (2001), it was shown that MSM who drank frequently before or during sex were significantly more likely to engage in unprotected sex with casual partners than MSM who did not drink frequently.

A culture of alcohol consumption at universities may expose student MSM to sexual risk-taking behaviour. Alcohol reduces the mediating effect that inhibition has on casual sexual encounters (Brown and Vanable, 2007). In contrast, the national HEAIDS survey found that students at HEIs who consumed alcohol were significantly less likely to be living with HIV than those who abstained from alcohol (HEAIDS, 2010). This same study found that students who reported having been drunk in the previous month were also less likely to have HIV than those who stated they had not been drunk. These findings are counter-intuitive and have not been further researched. However, it is possible that students who are aware they are HIV-positive strive to live healthily and avoid alcohol. It is also possible that students who take alcohol and engage in sex have a heightened awareness of the disease risks they are exposed to and take suitable precautions. The findings warrant further exploration, including their implications for student MSM at HEIs.

Overall the self-esteem scores for student MSM were high – but they were still statistically significantly lower than for the non-MSM sample.

### **STIs and injecting drug use among MSM**

While 14.2% of the MSM sample reported having had an STI, responses to questions about some of the signs and symptoms of STIs suggest that a somewhat larger percentage might have been infected. For example, 19.8% said they had had genital sores, 9% an unexplained discharge from the genitals or anus, and 26.5% reported pain or burning when urinating.

The presence of STIs other than HIV may increase the risk of acquiring HIV as much as tenfold (Sandfort, 2008; Van Dyk, 2008). The presence of an STI can create entry points for the HI virus and the immune system response to the STI, involving the direction of large numbers of lymphocytes to the site of infection, creates attachment opportunities for the HI virus (Van Dyk, 2008).

Three focus groups of student MSM and nine in-depth interviews with gay and lesbian students revealed that these students often avoided STI screening and treatment services offered by campus health clinics. They tended to be more concerned about visible STIs while ignoring the less obvious ones (HEAIDS, 2010).

### **HIV testing and uptake of sexual health services by MSM**

Among the student MSM sample, 4% said they had been diagnosed with HIV, while a further 2.3% did not disclose their status or said they did not know their latest HIV test result. This finding was consistent with the national HEI survey conducted by HEAIDS in 2010 which found an HIV prevalence of 4.1% among MSM – a rate more than twice the prevalence of 1.7% measured among other male students.

Three-quarters of MSM participants in the present study had undergone HIV testing at some point. Two-thirds said their most recent test had been within the past year and one out of three said they had taken five or more tests in total. The MSM sample in the present study reported considerably higher rates of HIV testing than the 46% reported nationally in the general student population (HEAIDS, 2010) and the 27.2% recorded for the South African MSM population (Shisana et al, 2009).

A large majority of MSM in this study indicated that they planned to get tested again and about three-quarters stated they would be happy to do this on campus. More than half had already undergone testing on campus.

Only one-third of the MSM in this study said they had used campus sexual health services in the past year, while more than 40% had used off-campus sexual health services. However, three out of four indicated that they were comfortable about using campus sexual health services.

### **Sexual coercion, violence and use of force**

More than one in 10 of the MSM sample reported they had been forced to have sexual intercourse against their will, while 3.4% stated that they had threatened to use force to coerce someone to have sex with them. Fewer than 10% said they had been assaulted by a sexual partner.

The finding of early sexual debut for a section of the MSM sample could indicate a history of sexual abuse in some cases. There is research that has established an association between childhood sexual abuse among MSM and early sexual debut, multiple sex partners and low social support (Bartholow et al, 1994; O'Leary, Purcell,

Reimin and Gomez, 2003). Sexual abuse of male children often causes trauma to the lining of the anal canal and increases susceptibility to HIV infection (Van Dyk, 2008).

Slightly more than 10% reported experiencing some form of abuse and/or violence at an HEI based on their sexual orientation.

Abuse and violence directed at MSM are based on homophobia, a form of social discrimination featuring “mean, unfair or unequal treatment intended to marginalise or subordinate individuals or communities based on their real or perceived affiliation with socially constructed stigmatised attributes” (Ayala et al, 2010, p2). Homophobia is often tolerated in communities and this contributes to fear of victimisation and discrimination among MSM populations (UNGASS, 2007). Homophobia and discrimination have been shown to be associated with sub-optimal mental health among those groups on the receiving end (Meyer, 1995) and may lead to increased self-harm, suicidal thoughts, excessive substance use and risky sexual behaviours among MSM (McDermott et al, 2008; Salomon et al, 2009). In an effort to live their sexual lives covertly, MSM may make unsafe decisions about sex and engage in high risk sexual behaviours. The combination of entrenched homophobia and a history of individual risk-taking may further drive MSM away from health and HIV services (MSMGF, 2008).

### Perceptions of HEI management and student leadership

Students’ perceptions suggest that there may be room for improvement in the response of university management and student leadership to LGBTQI issues. Although both MSM and non-MSM participants both expressed moderate confidence (around 50%) that individual cases of discrimination would be well investigated by the HEI, many remained uncertain about the more general management of issues affecting LGBTQI students.

MSM participants were somewhat more likely to consider that the HEI environment was not safe for LGBTQI students (7.5% compared to 2.8% for non-MSM) and that it failed to support or enable LGBTQI students (9.0% compared to 4.1% for non-MSM).

The findings suggest that the more active participation of student MSM in LGBTQI and HIV/AIDS-related activities on campus would be fruitful. Slightly more than a quarter of MSM participants had gone to a campus meeting or event dealing with LGBTQI issues and just over one-third had attended activities related to HIV/AIDS.

### Odds ratios for MSM and non-MSM students

The odds ratios help select the variables that sexual health programmes for MSM and LGBTQI should focus on when designing evidence-based approaches to intervention. They highlight some of the special features – elevated risks and special opportunities – related to this vulnerable population.

In the current study, when comparing MSM and non-MSM samples, odds ratios revealed statistically significant associations between certain variables and belonging to the MSM sample. Some of these associations were strong, while others were less pronounced. Being a male student who engaged in same-sex activities was:

- Strongly associated with having found a sex partner on the internet.
- Moderately associated with using alcohol and/or drugs at the last sexual act.
- Weakly associated with currently being in a relationship with a primary partner.
- Strongly associated with having offered transactional sex to someone.
- Strongly associated with threatening to use force to coerce someone to have sex.

These associations suggest a number of features should be incorporated into sexual health programmes specifically intended for MSM, including:

- Messaging to increase awareness of the health risks posed by meeting sex partners on the internet.
- Messaging on the effects of substance use on sexual risk-taking and possible consequences.
- Leveraging the protective influence of a stable relationship with a primary partner.
- Interventions designed to reduce transactional sex among MSM.



## Overall implications of the study

Student MSM at South African HEIs engage in sexual behaviours that place them at increased risk of contracting HIV and other STIs. Understanding the sexual risk behaviours of MSM identified in this study could lead to the development and implementation of evidence-based HIV prevention interventions designed to cater specifically to the sexual health needs of this at-risk group in the student community. Such interventions would also contribute to minimising possible routes for HIV and STI transmission in the wider student population. Most immediately, the findings may assist NACOSA, HEAIDS and HEIs in the implementation of their joint programme for MSM and LGBTQI students.

The data also suggest that there is scope to improve HEIs as enabling places for all students. The social determinants of the health of MSM and LGBTQI need to be understood more deeply in order to inform prevention programmes. HEI management and student leadership should be driving this process.

## Recommendations for future research

More research is needed to track and understand many aspects of sexual risk behaviour in high HIV prevalence countries, such as South Africa. Some specific questions for further research are the links between HIV knowledge, substance use, the presence of STIs, and the role of the internet in the sexual behaviour of MSM. The last topic may be especially relevant to HEIs because student MSM tend to have easy access to the internet.

Future research should avoid some of the methodological limitations of the present study. Specifically, larger sample sizes are necessary and must be achieved (despite the fact that many MSM hide their sexual preferences) in order to yield robust data. It may be possible to use respondent-driven sampling techniques to enhance sample size and reach student MSM who were not recruited for this study. In addition, future studies should consider alternative methods to self-selection of participants and data-gathering methods besides online questionnaires.

It might be valuable to undertake longitudinal studies with student MSM – for example, a one-year follow-up study. Adding qualitative components to the research design may afford researchers greater depth of understanding of complex patterns of sexual behaviour among student MSM. These components could include semi-structured interviews and focus group discussions.

Research and programme development on most-at-risk populations at HEIs (such as student MSM, injecting drug users, students engaging in commercial sex and transgendered students) should be expanded to include additional HEIs in South Africa – and possibly other countries in Africa which experience high HIV prevalence and strong social homophobia.

There is a lack of information about at-risk students attending institutions in the technical and vocational education and training (TVET) sector. Institutions in this sector should also be included in future research and programme roll out. HEAIDS has been better positioned to lead the above developments since it extended its scope in 2013 to include these institutions. However, it remains important to allow institutions scope to take initiatives that suit their specific situations.

Focus areas for future research should include understanding the role of the internet, and indeed social media in general, at HEIs and among all emerging sexualities. This technology represents potential for prevention, and should not only be seen as an instrument that facilitates HIV risk behaviours. It is clear that a “hook-up” culture among MSM exists and will not simply disappear. There is a need for research to explore and understand it better. Questions need to be asked about the relationship between this culture and the decline of social spaces such as clubs and bars – and if the shift represents a disbanding of community or simply a new form of community.

There is a tendency to adopt a “deficit” approach when investigating same-sex sexualities and sub-cultures. In a sense this study does so by focusing on ways in which gay and other MSM fail to achieve certain public health outcomes and behaviours. The study considered when men fail to use condoms, when they might have low self-esteem, when they fail to stick to one partner, when they do not go to a clinic and when they do not join an LGBTQI organisation on campus.

Perhaps there is a need to invert this negative narrative, asking when MSM do things that contribute to their health and wellbeing. When do they feel attached to a community? When do MSM feel heard and understood? When and how do they cope with social and other challenges? How do MSM find intimacy and love in the face of homophobia? How have they found support, connection, services and care? What strengths and survival strategies do they exemplify and bring to their lives? This could be seen as an “asset” approach.

Part of this way of thinking about gay and other MSM is to see them not just as individuals or groups of individuals, but as members of complex and overlapping networks and sub-cultures. Membership of these exposes them to and allows them to participate in a web of diverse social spaces and discourses.

This approach is much more interested in the social and structural factors which enable or disable individual decision-making. It would require researchers to view interventions for MSM from a “total institution” perspective, looking not only at homophobia or the rights of MSM but at the totality of institutional practices and power dynamics as they play out in the halls of teaching and learning, in the curricula, and in the spaces where students live and socialise. This approach challenges the “either/or” thinking that underpins much HIV prevention work. While risk-reduction strategies do not always work, it makes more sense to build on them than to adopt simple succeed/fail prevention binaries. Future studies could benefit from a more nuanced and meaningful engagement with the topic of MSM and HIV risk behaviours.

### Recommendations for programme development and implementation

HEIs are in a position to develop policy and introduce health promotion interventions to address sexual risk among MSM as well as some of the factors that isolate student MSM, such as discrimination and social homophobia.

Understanding sexual risk behaviours among student MSM may lead to the development and implementation of evidence-based HIV prevention interventions designed to cater to MSM. Failure to respond to these vulnerabilities may lead not only to increased HIV transmission among student MSM, but also to transmission among the broader student population and could impact negatively on the ability of HEIs to fulfil their core mandate.

This study concludes with a range of recommendations which are set out below.

*Prioritise confidential HIV testing and STI screening opportunities for MSM at all HEIs in South Africa and make these services more accessible to this key population.* To avoid possible stigmatisation, these services could be offered as standard to student MSM at campus health centres. Dedicated staff members for MSM (or for a range of key populations) could work closely with institutional HIV units, as they do in the current NACOSA-funded MSM project. Although most student MSM had undergone HIV testing, the objective of this proposed intervention would be to improve the campus response to the specific sexual health needs of student MSM. In addition, the annual mass HIV testing campaigns held on most campuses should be expanded to specifically cater to student MSM/LGBTQI. This adaptation should not only increase uptake of HIV testing and STI screening but could achieve greater involvement of student LGBTQI and gay/straight alliance advocates.

Institutional HIV units could consider conducting HIV testing at their offices as an option to testing at campus health centres. This might encourage more students, including sexual minorities, to test. The approach was introduced at a couple of HEIs in 2014.

*Strengthen student development and psychological support services* with a view to addressing the mental health issues that affect many MSM/LGBTQI students as a result of belonging to a sexual minority in an environment that they often experience as hostile.

*Address attitudes in the broader HEI community – among students and staff – in order to promote an enabling environment for sexual minorities.* Many HEIs have communication infrastructure which could and should be utilised to promote inclusivity of LGBTQI and to combat discrimination.

*Utilise mass communication in unison with programme implementation in order to reach the often hard-to-reach student MSM population.* In order to succeed, sexual health programmes for MSM/LGBTQI are likely to require a multi-pronged approach which incorporates health communication, service delivery, policy infusion and the promotion of non-discriminatory practices at HEIs. Ideally, such an approach should not only be driven by HIV units but also by HEI management and student leadership structures of universities.

In addition to the above-mentioned approaches a broader initiative to achieve greater social justice for sexual minorities at HEIs should be introduced at policy, curriculum and human resource levels within HEIs.

## Conclusion

The study supports the findings of other studies which identify specific risky sexual behaviours among MSM and help define their particular vulnerability to HIV transmission. In the current study these potentially risky sexual behaviours included:

- Unprotected anal and/or vaginal sex.
- Low rates of lubricant use for penetrative anal sex.
- Multiple sexual partners.
- Multiple concurrent sexual partners.
- The presence of STIs other than HIV.
- Early sexual debut.
- Unknown HIV sero-status.
- Complacency about risk of infection.
- Lack of knowledge of HIV-positive status.
- Forced sex.
- Sexual violence.
- Meeting sex partners through the internet.
- Transactional sex.
- Substance use before or during sexual encounters.

Some social factors contributing to patterns of health care avoidance among MSM and/or behaviours that are damaging to health were identified. These included:

- An unaccepting campus environment.
- Discrimination based on sexual preference.
- Threat of abuse or violence.
- Lower levels of self-esteem (relative to non-MSM peers).
- Higher levels of alcohol and drug use than in the non-MSM sample.

The *combination* of various factors – such as mental health and behavioural vulnerabilities, a hostile social environment, and inefficiencies in the health care system – often heightens the risk of HIV transmission.

Innovative methods are necessary to reach student MSM and implement risk-reduction interventions. The respondent-driven sampling technique used in the current study could be modified, and possibly incentivised, in order to reach the most hidden student MSM and encourage them to access sexual health services and support.

The limited availability of research data on student MSM remains a matter of concern. This should be addressed through appropriate research at national level and institutional levels. HEIs should guard against complacency about their HIV and inclusivity responses.

There is also a need for HIV programmes to go beyond a mechanistic and reductionist approach to sex, especially in same-sex encounters and relationships. Interventions must recognise the reality of worlds of love, desire, pleasure, mutuality and concern. For example, sex without a condom is not just a negative HIV risk behaviour but also a positive choice for “pleasure”. In order to address HIV and its attendant risks successfully, these factors must be acknowledged in prevention programmes. The gaps and silences in prevention messaging, which tend to reduce gay men and other MSM to hedonistic and anti-social actors, must be filled.

Rather than viewing inconsistent condom use as an indication that people lack information, willingness, self-efficacy or a self-protective instinct, it might help to frame condom use within a language of intimacy, closeness and desire. Sex is relational and infused with meaning: if we focus on practice only (Kippax, 2013) we may be blind to the reality that using (or not using) condoms is imbued with complex meaning – and is not simply a health-seeking behaviour.

HIV interventions for those most at risk, such as student MSM, must be designed and services must be provided (HEAIDS, 2010) at sector level and by individual institutions through HIV units or other appropriate structures.

Findings of this research – specifically in relation to sexual risk behaviour, alcohol and drug use, and self-esteem among MSM, and perceptions of the responsiveness of HEI leadership on LGBTQI issues and non-discrimination – need to be integrated into the current Policy and Strategic Framework on HIV and AIDS for Higher Education (HEAIDS, 2012).

Careful analysis needs to be undertaken in relation to various types of MSM behaviours to understand which audiences need to be addressed to help achieve change in specific behaviours. The resulting audience profiles could be used more widely to inform harm-reduction strategies, to train health service staff and to shift mind-sets in the broad student population.

The data elicited by this study indicate that HIV risk behaviours are prevalent among many South African students whether they are men with same-sex partners or not. Although this study focused on student MSM it showed many similarities across all groups of sexually active students in terms of sexual behaviour and HIV risk. These similarities suggest that future HIV prevention work should be located in an understanding of the emerging sexuality and sexual cultures of young people in general. It is important to understand the various contexts within which students engage in sexual behaviour. These contexts include (but are not limited to) gender norms, sexual experimentation, patriarchy, hetero-normativity, culturally specific traditions, sexual orientation and perceived group/peer norms.

Developers and implementers of MSM/LGBTQI HIV harm-reduction programmes need to be careful not to treat MSM as a homogenous group and not to confuse same sex behaviour with sexual orientation. Furthermore, there are differences between and within institutions which require nuanced, flexible and context-driven interventions which acknowledge both the particularities and commonalities of youth sexualities. Embracing this reality would make sexual health messaging to these groups more sensitive, relevant and sufficiently specific to be of help. Interventions thus grounded would stand a better chance of contributing to a reduction in HIV transmission and the creation of enabling environments at HEIs.

*Compiled by Jaco Greeff Brink at Stellenbosch University on behalf of NACOSA  
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## Appendix A

### Informed Consent Form

#### Student Sexual Health Survey

You are invited to participate in a research study conducted by Jaco G Brink (MA Psychology) from the Institutional HIV Office at Stellenbosch University, on behalf of a national civil society network of organisations working in the HIV, AIDS, TB and related social development fields, namely NACOSA. You are asked to participate in this study since you are a registered student at one of 14 selected South African public higher education institutions (HEI).

#### 1. Purpose of the study

The overall purpose of the research will be to collect data from students on the extent of their sexual behaviours, HIV knowledge and testing history, drug and alcohol use, and self-efficacy. It is hoped that this research will inform policy and current HIV prevention, care and support initiatives in the HEI sector.

#### 2. Procedures

If you volunteer to participate in this study, we would ask you to do the following things:

Please take some time to read the information presented here, which will explain the details of this project. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is entirely voluntary and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

The research will be conducted according to the ethical guidelines and principles of the International Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research. This study has been approved by the relevant ethics committees, as stated below.

Higher Education Institution Name	Ethics Committee
Central University of Technology	University Research and Innovation Committee
Durban University of Technology	Institutional Research Ethics Committee (IREC)
Mangosuthu University of Technology	Research Committee and Ethics Research Committee [0319077450]
Nelson Mandela Metropolitan University	Research Ethics Committee (Human) [H13-ADM-CHS-001]
Stellenbosch University	Research Ethics Committee (Human Research, Non-medical)
Tshwane University of Technology	
University of Cape Town	Faculty of Commerce: Ethics Committee
University of KwaZulu-Natal	Biomedical Research Ethics Committee
University of Limpopo	
University of South Africa	UNISA Institutional Research Ethics Committee
University of the Free State	Dean of Student Affairs Research Desk
University of the Western Cape	University of Western Cape Ethics Committee
University of Venda	University of Venda Health and Safety Research Ethics Committee
Walter Sisulu University	Senate Research Ethics Committee

#### What is this research study all about?

The study will be conducted at your university as well as 13 other HEIs in South Africa. Any registered student may be invited to take part in this study. The aims of the study are: to collect data from students on the extent of their sexual behaviours, HIV knowledge and HIV testing history, drug and alcohol use, attitudes about the lesbian, gay, bisexual, transgender, queer and intersex (LGBTQI) community and self-esteem.

#### Why have you been invited to participate?

You are asked to participate in this study since you are a registered student at a South African public HEI.

### What will your responsibilities be?

If you volunteer to participate in this study, we will ask you to participate in one online survey and answer questions about your sexual behaviour, HIV knowledge, experience of HIV testing, attitudes about the LGBTQI community and how you perceive yourself. The online survey will last no longer than 20 minutes.

### 3. Potential risks and discomforts

There are no foreseeable risks and you may stop your participation at any time. In the event that you become emotionally distressed during the online survey you can request information about where to seek psychological and support services. Additional contact details of national call centre support services will be provided at the end of the survey and be sent via e-mail to all participants upon completion of the survey.

The preferred psychological and support service at/closest to your institution is:

Higher education institution name	Support services	Contact information
Central University of Technology	Wellness Centre	Central University of Technology, Free State (CUT), Private Bag X20539, Bloemfontein, 9300, South Africa Tel +27 51 507 3154
Durban University of Technology	Student Counselling and Health	Mr Sihle Mbanjwa: Senior Psychologist, 031 373 2163
Mangosuthu University of Technology	Student Counselling Department	031 907 7186
Nelson Mandela Metropolitan University	Student Counselling, Career & Development Campus Health Services	Hanna van Lingen, 041 504 2511 Antoinette Goosen/Greg Smith, 041 504 3364
Stellenbosch University	Centre for Student Counselling and Development	Hestia Kotze, 021 808 4994
Tshwane University of Technology	Student Health	012 382 5237. The clinic is in Building 4 on the Ground Floor, Room 60.
University of Cape Town	Student Wellness Services HIV/AIDS Inclusivity and Coordination Unit	021 650 1020 021 650 1006
University of KwaZulu-Natal	College of Humanities College of Agriculture, Engineering and Science College of Law & Management Studies	Vino Moodley, 031 260 2668 Meusel Rossella Rachele, 033 260 5696 Ishara Maharaj, 031 260 2875
University of Limpopo	Centre for Student Counselling and Development	Centre at Block "D", Tel No. (015) 268 2437/2552
University of South Africa	Unisa Campus Health Clinic Student Health & Wellness Unit	Sisters Thabisile Thwala and Keepile Mocumi, 012 429 2091/8632. Irene Mohasoa, 011 471 2849/ 012 429 4654, mohasip@unisa.ac.za
University of the Free State	Student Counselling and Development	Mrs Petro Herbst, 051 401 2853, HerbstP@ufs.ac.za
University of the Western Cape	Centre for Support Services	021 959 2299
University of Venda	Student Counselling Unit	Dr Violet Mathye, 015 962 8156
Walter Sisulu University	Student Counselling Unit	Ms Pumla Mahali, 043 702 9268

What will happen in the unlikely event of some form of injury occurring as a direct result of your taking part in this research study? There are no foreseen circumstances in which injuries might occur. If any injuries do occur, they will be addressed in terms of university policy.

### 4. Potential benefits to subjects and/or to society

As a participant, it is not intended that you will benefit directly from this research. However, it is possible that by discussing issues related to your sexual behaviour, these issues may become clearer for you and will influence your sexual health positively.

Your participation will help the researchers gain an understanding of sexual behaviour among students in SA HEIs. Insights into the sexual behaviour of students will inform psychological and health intervention services to students at HEIs with a view to improving overall sexual health of students.

#### 5. Payment for participation

You will not be paid to take part in the study. There will be no costs involved for you, if you do take part.

#### 6. Confidentiality

Any information obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by ensuring that the online data of your survey submission cannot be linked to you. All records of the survey data will be kept in a locked cabinet at Stellenbosch University and on a password and firewall protected online database. Only the research team and supervisor working on the study will have access to the data. Your information will be kept strictly confidential by the researchers. Your e-mail address will be removed from your responses before any data are analysed. This means we will not be able to link you to your responses based on your e-mail address.

If the data are published, you will not be identified by name. The data will be erased after a period of five years following publication of the data.

#### 7. Participation and withdrawal

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

#### 8. Identification of investigators

If you have any questions or concerns about the research, please feel free to contact:

Contact person at the organisation for which the research is being conducted: NACOSA (Collectively turning the tide on HIV, AIDS and TB), Benjamin Janse van Rensburg: Manager: Co-ordination and Support.

Tel: 021 552 0804

Email: benjamin@nacosa.org.za

#### **Principal researcher:**

Jaco G Brink (MA Psychology), Institutional HIV Office, Stellenbosch University.

Tel: 021 808 2865

Email: jgbrink@sun.ac.za

#### 9. Rights of research subjects

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact:

Higher Education Institution Name	Research Office	Contact information
Central University of Technology	University Research and Innovation Committee	Prof Lategan, llategan@cut.ac.za, 051 507 3336
Durban University of Technology	Research and Post-graduate Support	Prof S Moyo, 031 3732577, moyos@dut.ac.za
Mangosuthu University of Technology	Directorate: Research Unit	031 907 7450
Nelson Mandela Metropolitan University	Research Ethics Committee	Dr Blanche Pretorius, 041 504 2538
Stellenbosch University	Unit for Research Development	Ms Maléne Fouché (021 808 4622, mfouche@sun.ac.za)
Tshwane University of Technology	Directorate of Research and Innovation	012 382 5188
University of Cape Town	Department of Student Affairs	021 650 3535
University of KwaZulu-Natal	College of Humanities: Research Office	Ms Nomonde Mkatywa (HC) (mkatywa@ukzn.ac.za, 031 260 2325)
University of Limpopo	Turfloop Research Ethics Committee	Dr Hans Onya, 015 268 2212
University of South Africa	Tirisano Centre, College of Human Sciences	Mr Leon Roets, 012 352 4065/4110/4064, roetshjl@unisa.ac.za Dr Azwihangwisi Helen Mavhandu-Mudzusi, Department of Health Studies, 012 429 2055, mmudza@unisa.ac.za
University of the Free State	Students Affairs	Mr V Nthakheni, 051 401 3689, nthakheniv@ufs.ac.za
University of the Western Cape	HIV and AIDS Programme	021 959 2247
University of Venda	Directorate: Research and Innovation	Prof Ekosse 015 962 8484/8313
Walter Sisulu University	Directorate of Research Development	Dr EN Ciske, (047 502 2647/2947, eciske@wsu.ac.za)

## Appendix B

### Demographic questions

Are you currently registered as a student at your university?

- Yes  
 No

At which university do you study?

Select your institution carefully as this survey is only being implemented at 14 higher education institutions in South Africa.

Select:

#### Higher Education Institution Name

- Central University of Technology  
 Durban University of Technology  
 Mangosuthu University of Technology  
 Nelson Mandela Metropolitan University  
 Stellenbosch University  
 Tshwane University of Technology  
 University of Cape Town  
 University of KwaZulu-Natal  
 University of Limpopo  
 University of South Africa  
 University of the Free State  
 University of the Western Cape  
 University of Venda  
 Walter Sisulu University

I hereby confirm that I am a registered student at the university selected above.

- I confirm  
 I do not confirm

Are you a South African citizen?

- Yes  
 No

If not, are you an international student from Africa?

- Yes  
 No

If you are not South African, are you an international student but not from Africa?

- Yes  
 No

**What language do you speak at home? Select one:**

- Afrikaans
- English
- isiNdebele
- isiXhosa
- isiZulu
- Sepedi
- Sesotho
- Setswana
- siSwati
- Tshivenda
- Xitsonga
- Other

**What is your biological sex?**

- Female
- Intersex
- Male

**How old are you?**

- Under 18
- 18–20
- 21–23
- 24–26
- Older than 26

**Which best describes you?**

- Black
- White
- Indian
- Coloured
- Other
- Prefer not to answer

**Are you currently employed?**

- Yes
- No

**If Yes:**

Part-time

Full-time

**Do you have any children?**

Yes

No

**Are you married?**

Yes

No

**What is your year of study?**

1st

2nd

3rd

4th

5th

6th

7th

8th or higher

**Are you:**

Undergraduate

Post-graduate

**Where do you live while at university?**

I stay at a university residence

I stay with my family

I stay in other accommodation

**What is the highest level of education in your family?**

Did not finish high school

Finished high school

Some university education

Undergraduate university degree

Some post-graduate education

Post-graduate university degree

I don't know

**What do you think your household income is per year?**

- Under R10 000
- R10 000 to R20 000
- R20 001 to R30 000
- R30 001 to R50 000
- R50 001 to R75 000
- R75 001 to R100 000
- R100 001 to R200 000
- R200 001 to R300 000
- More than R300 000
- I don't know

**Choose an option from this list which best describes you?**

- Homosexual
- Bisexual
- Heterosexual
- Other

**How many people with HIV/AIDS have you ever known?**

- None
- 1 to 2
- 3 to 5
- 6 to 10
- 11 or more

**Have you missed classes to attend a funeral of a person who has died of AIDS-related diseases?**

- Yes
- No

**Do you use social media on a weekly basis?**

For example: Facebook, Twitter, Google+ etc.

- Yes
- No



## Appendix C

### Sexual behaviour questions

By "sex" we mean anal intercourse, vaginal intercourse or oral sex.

Have you ever had sexual intercourse?

- Yes → If Yes, **continue to the next**
- No → If No, go to page 74  
**(Self-esteem questions) and continue from there**

The next questions ask about your sexual behaviour. Some of the questions ask about sensitive information.

Remember your answers are confidential.

### Sexual behaviour questions

By "sex" we mean anal intercourse, vaginal intercourse or oral sex.

By "sexual intercourse" we mean sex when the penis is put into the vagina or the anus (rectum).

Select an option which is true for you:

- If I had sexual intercourse, I would prefer to have it only with men
- If I had sexual intercourse, I would prefer to have it only with women
- If I had sexual intercourse, I would prefer to have it with either men or women

What form of sex have you had (select all that apply)?

- Anal sex
- Oral sex
- Vaginal sex

Did you use alcohol and/or drugs the last time you had sex?

- Yes
- No

How often do you use alcohol and/or drugs when you are having sex?

- All of the time
- Most of the time
- Sometimes
- Rarely
- Never

**Are you currently in a relationship with a primary partner?**

By “primary partner” we mean someone you have lived with or have seen a lot, and to whom you feel a special emotional commitment.

- Yes
- No

**Do you have sex with your primary relationship partner?**

- Yes
- No
- Does not apply

**Do you have a steady, non-primary partner you have sex with?**

By “steady, non-primary partner” we mean a partner with whom you had sex three or more times in the past, but don’t consider your primary partner.

- Yes
- No
- Does not apply

**Do you have a non-steady partner you have sex with?**

By “non-steady partner” we mean a partner with whom you had sex less than three times in the past.

- Yes
- No
- Does not apply

**How old were you the first time you had sexual intercourse?**

- Younger than 10
- 10–12
- 13–15
- 16–18
- 19–20
- 21–23
- 24–26
- Older than 26

**Did you use a condom the last time you had sex?**

- Yes
- No

**If so, was it with a male or female condom?**

- Male condom
- Female condom

**If yes, which brand of condom do you use most of the time?**

- Choice
- Durex
- Lovers Plus
- Trojan
- Other

**Did you also use lubrication (“lube”)?**

- Yes
- No
- Does not apply

**How often do you use condoms when you are having sex?**

- All of the time
- Most of the time
- Sometimes
- Rarely
- Never

**Have you or a sex partner used needles to inject drugs?**

- Yes
- No

**Have you had a sexually transmitted infection (STI)?**

For example: Syphilis, Gonorrhoea, Chlamydia or Genital Herpes.

- Yes
- No

**Have you ever had a sore on your penis, testicles, anus or vagina?**

- Yes
- No

**Have you ever had a discharge or unexplained fluid from the genitals or anus?**

- Yes
- No

**Have you ever had burning or pain when you urinated?**

- Yes
- No

**In your lifetime, how many people have you had sexual intercourse with?**

Type in the number. For example: "5".

\_\_\_\_\_

**Has someone ever given you money, drugs, or a place to stay in exchange for sex?**

Yes

No

**Have you ever given someone money, drugs or a place to stay in exchange for having sex with you?**

Yes

No

**Have you ever found a sex partner through the internet?**

Yes

No

Below are a few more questions about your personal life. Please answer each question.

By "sex" we mean anal intercourse, vaginal intercourse or oral sex.

By "sexual intercourse" we mean sex when the penis is put into the vagina or the anus (rectum).

**Has a sex partner ever hit you?**

Yes

No

**Has someone ever forced you to have sex when you did not want to?**

Yes

No

**Would you be afraid to ask a partner to use condoms because they might hit you?**

Yes

No

**Have you ever had sex with someone when they really did not want to?**

Yes

No

**Have you ever threatened to use force to get someone to have sex when they did not want to?**

Yes

No

By “sex” we mean anal intercourse, vaginal intercourse or oral sex.

By “sexual intercourse” we mean sex when the penis is put into the vagina or the anus (rectum).

Please think carefully about the past 12 months and select your answers.

**How many men have you had sex with in the past 12 months?**

- 0
- 1
- 2–3
- 4–5
- 6–7
- 8–9
- More than 9 men

**How many women have you had sex with in the past 12 months?**

- 0
- 1
- 2–3
- 4–5
- 6–7
- 8–9
- More than 9 women

**Have you been in a sexual relationship which either overlapped with another sexual relationship or was within 3 months of each other during the past 12 months?**

- Never
- Once
- More than once

**How many times have you had anal sex without condoms in the past 12 months?**

- 0
- 1–2
- 3–5
- 6–10
- 11–20
- 21–30
- 31–40
- 41 or more times

**How many times have you had anal sex with use of condoms in the past 12 months?**

- 0
- 1-2
- 3-5
- 6-10
- 11-20
- 21-30
- 31-40
- 41 or more times

**How many times have you had vaginal sex without use of condoms in the past 12 months?**

- 0
- 1-2
- 3-5
- 6-10
- 11-20
- 21-30
- 31-40
- 41 or more times

**How many times have you had vaginal sex with the use of condoms in the past 12 months?**

- 0
- 1-2
- 3-5
- 6-10
- 11-20
- 21-30
- 31-40
- 41 or more times

**How many times have you had sex with blood present in the past 12 months?**

- 0
- 1-2
- 3-5
- 6-10
- 11-20
- 21-30
- 31-40
- 41 or more times

**How many times have you had oral sex with semen in your mouth in the past 12 months?**

- 0
- 1-2
- 3-5
- 6-10
- 11-20
- 21-30
- 31-40
- 41 or more times

**How many times have you had oral sex without semen in your mouth in the past 12 months?**

- 0
- 1-2
- 3-5
- 6-10
- 11-20
- 21-30
- 31-40
- 41 or more times

## Appendix D

### Self-esteem questions

In general, I am satisfied with myself.

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

At times, I think I am no good at all.

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

I feel that I have a number of good qualities.

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

I am able to do things as well as most other people.

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

I feel that I'm a person of worth, that I'm at least as good as other people.

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

I wish I could have more respect for myself.

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot



**In general, I feel like a failure.**

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

**I take a positive attitude toward myself.**

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

**What happens to me in the future mostly depends on me.**

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

**I can do just about anything I set my mind to do.**

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

**My future is what I make of it.**

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

**I have great faith in the future.**

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

**Sometimes I feel there is nothing to look forward to in the future.**

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

**I just live for today.**

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

**It's really no use worrying about the future, because what will be will be.**

- Disagree a lot
- Kind of disagree
- Kind of agree
- Agree a lot

## Appendix E

### HIV Testing Questions

Have you ever been for a HIV test?

- Yes → If Yes, **continue to the next**
- No → If No, go to page 78  
**(Questions about your experiences on campus)**

Please answer these next questions to the best of your knowledge. These questions are very sensitive and your answers will be kept private.

If so, what were the results of your most recent HIV test?

- HIV-positive
- HIV-negative
- Don't know
- Refuse to answer

How many times have you been tested for HIV?

- 1
- 2
- 3
- 4
- More than 5 times

Was your last HIV test less than one year ago?

- Yes
- No

Do you plan to get tested again?

- Yes
- No

Have you been tested for HIV on campus?

- Yes
- No

Would you go for free testing on campus again?

- Yes
- No

## Appendix F

### Questions about your experiences on campus

By LGBTQI we mean people who consider themselves part of the lesbian, gay, bisexual, transgender, queer, intersex and questioning community.

**Is free HIV testing available to you on campus?**

- Yes  
 No

**Would you feel comfortable accessing sexual health services provided at your university?**

- Yes  
 No

**Have you accessed sexual health services provided by your university in the past year?**

- Yes  
 No

**Have you accessed sexual health services provided outside your university in the past?**

- Yes  
 No

**Have you ever experienced abuse and/or violence on campus due to your sexual orientation?**

- No, neither  
 Yes, abuse  
 Yes, violence  
 Yes, abuse and violence

**How many friends on campus do you know who are openly from the LGBTQI community?**

- 0  
 1-2  
 3-5  
 6-10  
 11-20  
 More than 20 friends

**Do you consider your university a safe environment for LGBTQI students?**

- Yes  
 Not sure  
 No

**Do you consider your university an accepting environment for LGBTQI students?**

- Yes
- Not sure
- No

**I feel safe from physical harm on campus.**

- Yes
- Not sure
- No

**Female students are safe from sexual harassment on campus.**

- Yes
- Not sure
- No

**The management of this institution takes discrimination against the LGBTQI community seriously.**

- Yes
- Not sure
- No

**The student leaders of this institution take discrimination against the LGBTQI community seriously.**

- Yes
- Not sure
- No

**I feel confident that cases of discrimination (e.g. based on gender, race, sexual orientation etc.) reported by students at the university will be investigated properly.**

- Yes
- Not sure
- No

**I attended a meeting or function about HIV/AIDS on campus.**

- Yes
- No

**I attended a meeting or function about LGBTQI issues on campus.**

- Yes
- No

I have received information about HIV/AIDS on campus.

Yes

No

I have received information about LGBTQI issues on campus.

Yes

No

Free condoms are available on campus.

Yes

No

Free lubrication (“lube”) is available on campus.

Yes

No

I wore a t-shirt, cap, red ribbon or other item of clothing with a HIV/AIDS message on campus.

Yes

No

I am a member of an HIV/AIDS club or organization on campus.

Yes

No

I am a member of a LGBTQI club or organization on campus.

Yes

No

## Appendix G

### HIV knowledge questions

Having sex with only one faithful, uninfected partner can reduce the risk of HIV transmission.

- True
- False
- I don't know

Using condoms can reduce the risk of HIV transmission.

- True
- False
- I don't know

A healthy-looking person can have HIV.

- True
- False
- I don't know

A person can get HIV from mosquito bites.

- True
- False
- I don't know

A person can get HIV by sharing a meal with someone who is infected.

- True
- False
- I don't know

## Appendix H

### Alcohol and drug use questions

Have you used alcohol or other drugs in the last 6 months?

- Yes  
 No

If you have used alcohol or other drugs in the last 6 months, please select all that apply:

- Beer  
 Cocaine (Coke)  
 Crystal meth (Tik)  
 Ecstasy (E)  
 Hard liquor  
 Heroin  
 LSD (Acid)  
 Magic Mushrooms (Shrooms)  
 Mandrax (Buttons)  
 Marijuana (Weed, Dagga)  
 Whoonga (Nyaope, Wunga)  
 Wine  
 Other

Have you felt that you use too much alcohol or other drugs in the last 6 months?

- Yes  
 No

Have you tried to cut down or quit drinking or using alcohol or other drugs in the last 6 months?

- Yes  
 No

Have you gone to anyone for help because of your drinking or drug use in the last 6 months?

- Yes  
 No



**Have you had any health problems in the last 6 months?**

For example, have you (check all that apply):

- Had blackouts or other periods of memory loss?
- Injured your head after drinking or using drugs?
- Had convulsions, delirium tremens (DTs)?
- Had hepatitis or other liver problems?
- Felt sick, shaky, or depressed when you stopped?
- Felt "coke bugs" or a crawling feeling under the skin after you stopped using drugs?
- Been injured after drinking or using?
- Used needles to shoot drugs?
- I have not had any health problems in the last 6 months.

**Has drinking or other drug use caused problems between you and your family or friends in the last 6 months?**

- Yes
- No

**Have you been arrested or had other legal problems in the last 6 months?**

Such as bouncing bad checks, driving while intoxicated, theft, or drug possession.

- Yes
- No

**Have you lost your temper or gotten into arguments or fights while drinking or using other drugs in the last 6 months?**

- Yes
- No

**Did you need to drink or use drugs more and more to get the effect you want in the last 6 months?**

- Yes
- No

**Did you spend a lot of time thinking about or trying to get alcohol or other drugs in the last 6 months?**

- Yes
- No

**When drinking or using drugs in the last 6 months were you more likely to do something you wouldn't normally do, such as break rules, break the law, sell things that are important to you, or have unprotected sex with someone?**

- Yes
- No

Did you feel bad or guilty about drinking or drug use in the last 6 months?

- Yes
- No

In the last six months, about how often did you get high or have a few drinks immediately before or during sex?

- Never
- Occasionally
- Often
- All the time

In the last six months, about how often would you say that alcohol and drug use made it more difficult for you to have safer sex?

- Never
- Occasionally
- Often
- All the time

The next questions are about your lifetime experiences.

Have you ever had a drinking or other drug problem?

- Yes
- No

Have any of your family members ever had a drinking or drug problem?

- Yes
- No

Has your drinking or other drug use ever negatively affected your studies at university?

- Yes
- No
- I do not drink alcohol or use drugs

This is the end of the sexual health survey. Thank you for your time in completing it.

[Here are the contact details for support and referral services in South Africa:](#)

**Alcoholics Anonymous – 0861 HELP AA (435 722)**

**Narcotics Anonymous – 083 900 MY NA (083 900 69 62)**

**AIDS Helpline – 0800 012 322**





## Contacts

### HEAIDS

Building 3 UNISA Sunnyside Campus  
Corner Rissik and Joubert Streets  
Sunnyside, Pretoria  
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