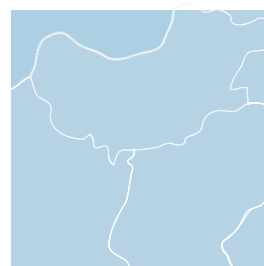
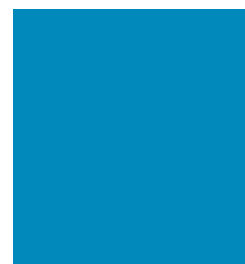


THE SECOND NATIONAL

HIV Communication Survey, 2009



The Second National HIV Communication Survey, 2009

This study was funded by the Department of Health, the United States Agency for International Development (USAID) through the President's Emergency Plan for AIDS Relief (USAID/PEPFAR), Centers for Disease Control and Prevention (CDC) and the Global Fund. The following organisations collaborated on this study: Community Media Trust (CMT), Johns Hopkins Health and Education in South Africa (JHHESA), Khomanani (National Department of Health) and Soul City. The survey was managed by Health and Development Africa (HDA). The Johns Hopkins Bloomberg School of Public Health Center for Communication Programs (JHU-CCP) provided support and technical oversight at all stages of the study. Data was gathered by Development Research Africa (DRA).

Authors

S Johnson, Health and Development Africa
DL Kincaid, Johns Hopkins Bloomberg School of Public Health, Center for Communication Programs
S Laurence, Health and Development Africa
F Chikwava, Health and Development Africa
R Delate, Johns Hopkins Health and Education in South Africa
L Mahlasela, Johns Hopkins Health and Education in South Africa

Acknowledgements

The following people contributed to the development of this publication: Debbie Kroon (CMT), Flavia Bianchi, Lawrence Mashimbye, Adonia Simango and Kerry Steele (HDA); Patrick L Coleman (Johns Hopkins Health and Education in South Africa: JHHESA); Zanele Mashao (Khomanani); Sue Goldstein and Renay Weiner (Soul City).

We would like to acknowledge all participants who participated in the study.

Preferred citation

Johnson S, Kincaid L, Laurence S, Chikwava F, Delate R, and Mahlasela L (2010). Second National HIV Communication Survey 2009. Pretoria: JHHESA.

Disclaimer

This study was made possible by the support of the American People through the United States Agency for International Development (USAID). The findings of this study are the sole responsibility of USAID/ Johns Hopkins University Project South Africa and do not necessarily reflect the views of USAID or the United States Government.

Copies of this publication are available from Johns Hopkins Health and Education, Block D Equity Park, 257 Brooklyn Road, Pretoria, 0001. Tel: 012 366 9300; fax: 012 366 9301; e-mail: info@jhuccp.co.za; website: www.jhhesa.org.za.

Table of Contents

i. List of Figures	1
ii. List of Tables	3
iii. List of Boxes	3
iv. Acronyms	4
v. Executive Summary	5
Context of the HIV epidemic in South Africa	9
The Second National HIV Communication Survey	10
Methodology	11
Survey Design and Sampling	11
Questionnaire Development	13
Methods of Analysis	13
Limitations of the Study	16
Ethical Considerations	16
Demographic Sample Description	17
Results	18
1. Media Access and Reach	18
1.1. Access to Media	18
1.2. Reach of HIV Communication Programmes	19
2. Structural Drivers of the HIV Epidemic	21
2.1. Education	21
2.2. Employment	22
2.3. Socioeconomic Status and Poverty	22
2.4. Violence	23
2.5. Relationships	23
3. Behavioural Drivers of the HIV Epidemic	25
3.1. Perceived Risk of Getting HIV	25
3.2. Multiple Sexual Partnerships	26
3.3. Correct and Consistent Condom Use	31
3.4. Intergenerational Sex	34
3.5. Transactional Sex	36
3.6. Alcohol	36
3.7. Delaying Sexual Debut	38
4. Biomedical Drivers of the HIV Epidemic	40
4.1. Male Circumcision	40
4.2. Prevention of Mother-to-Child Transmission of HIV	42
5. HIV Counselling and Testing	43
6. Treatment, Care and Support	48
6.1. Knowledge of TB	48
6.2. Knowledge of Antiretroviral Therapy	49
7. Social Capital	50
7.1. Personal Experience of HIV	50
7.2. Community participation and leadership	51
7.3. Stigma	52
8. Conclusions	54
Annexures	58
Annexure 1	58
Annexure 2	60
Annexure 3	61
Annexure 4	62
Annexure 5	63

i. List of Figures

Figure 1:	HIV prevalence in age group 2+ years by province in South Africa, 2008	9
Figure 2:	Media access in the national sample: Do you access the following media?	19
Figure 3:	Sum of the number of eleven HCP components seen or heard	19
Figure 4:	Distribution of exposure to HCPs by age group	20
Figure 5:	Percentage of people reached by at least one HCP component by province	20
Figure 6:	Percentage of respondents knowing about HIV prevention measures by education level	21
Figure 7:	Percentage of people using a condom at last sex by education level	22
Figure 8:	Percentage of men and women who have been involved in a physical fight in the past year	23
Figure 9:	Percentage of people married or living with sexual partner by age group	23
Figure 10:	How men and women described their relationships	24
Figure 11:	Frequency of sexual intercourse by type of relationship	24
Figure 12:	Percentage of men and women who expected to have sex with their partner again by relationship type.....	24
Figure 13:	Reasons why respondents believed they were not at risk of getting HIV	25
Figure 14:	Percentage of men and women who believe that cheating is pervasive in relationships	25
Figure 15:	Percentage of men and women who reported preventing HIV through being faithful or trusting their partner not to cheat.....	26
Figure 16:	Percentage of men and women who thought their sexual partner has other partners	27
Figure 17:	Percentage of men and women who had more than one sexual partner in the past year.....	27
Figure 18:	Percentage of people with one or more partner by relationship type.....	27
Figure 19:	Percentage of men and women with more than one partner in the past month	28
Figure 20:	Percentage of people mentioning different reasons why men have more than one sexual partner	28
Figure 21:	Percentage of people mentioning different reasons why women have more than one sexual partner	29
Figure 22:	Self-reported change in number of partners compared to one year ago among single men and women (weighted)..	29
Figure 23:	Percentage of single men and women who reported fewer sexual partners compared to one year ago by exposure to communication	30
Figure 24:	Percentage of respondents agreeing that one has to use a condom consistently in order to prevent HIV infection.....	31
Figure 25:	Percentage of sexually active men and women who used a condom at last sex by age.....	32
Figure 26:	Percentage of sexually active respondents who used a condom at last sex by province	32
Figure 27:	Percentage of sexually active respondents who used a condom at last sex by relationship type.....	33
Figure 28:	Percentage condom use with at least one partner in the last 12 months by the level of exposure to eleven HCP.....	33
Figure 29:	Percentage condom use by type of sexual partner in the last 12 months by level of recall of HCP	34
Figure 30:	Percentage of respondents reporting intergenerational sex by age.....	35
Figure 31:	Percentage of young women with partners 5 or more years older than themselves by province.....	35
Figure 32:	Percentage of people involved in transactional sex by province	36
Figure 33:	Percentage of men and women drinking heavily on one occasion in the past month	37
Figure 34:	Percentage of men reporting that they and/or their partner had too much to drink when they had sex	38
Figure 35:	Percentage of women reporting that they and/or their partner had too much to drink when they had sex	38
Figure 36:	Percentage of young men and women who have ever had sex by age.....	36
Figure 37:	Perceived benefits of male circumcision	40
Figure 38:	Percentage of men and women believing that men who are circumcised do not need to use a condom by settlement type.....	40
Figure 39:	Prevalence of circumcision amongst men and age at circumcision	41
Figure 40:	Percentage of men who are circumcised by province	41
Figure 41:	Percentage of respondents who knew that HIV can be transmitted through breast milk by race	42
Figure 42:	Percentage of men and women who discussed HIV testing with any of their friends by age	43
Figure 43:	Percentage of men and women ever tested for HIV by age	43
Figure 44:	Percentage of people who have ever tested for HIV by province.....	44
Figure 45:	Percentage of men and women who have been tested for HIV in the past year in 2006 and 2009	45
Figure 46:	Percentage of men and women whose sex partner told them their HIV status	45
Figure 47:	Percentage of men and women who have seen their partner's HIV test results.....	45

Figure 48: Percent that discussed with friends, asked, or been asked by one's sexual partner to get HIV test by the level of exposure to 11 communication programmes	46
Figure 49: Percent that had HIV test in the last 12 months by the level of exposure to 11 HCP components	46
Figure 50: Percentage of people who had HIV test in the last 12 months by discussion of HIV testing with their sexual partner or friends	47
Figure 51: Percentage of people reporting any sex partner in the last 12 months showed or told them the results of his/her HIV test by the level of exposure to 11 HCP components	47
Figure 52: Percentage of people who correctly answered various questions about TB and TB drugs	48
Figure 53: Percentage of respondents who believe that it is not possible to cure TB in people who are HIV positive by province	49
Figure 54: Percentage of people who correctly answered various questions about ARVs	51
Figure 55: Percentage of people who attended a meeting in a community where HIV was discussed by settlement type	52
Figure 56: Percentage of people who are leaders in HIV prevention organisations by age	52



ii. List of Tables

Table 1:	Sample of small areas and households selected.....	12
Table 2:	Description of the sample	17
Table 3:	Percentage of people accessing various media channels	18
Table 4:	Percentage of men and women who were employed, unemployed and students	22
Table 5:	Percentage of men and women who had more than one sexual partner in the past year in 2006 and 2009	28
Table 6:	Percentage of respondents agreeing with various statements concerning alcohol use and HIV and AIDS	37
Table 7:	Percentage of people knowing that formula feeding and exclusive breastfeeding can prevent MTCT.....	42
Table 8:	Percentage of people who correctly answered various questions about AIDS.....	49
Table 9:	Percentage of men and women with personal knowledge and experience of HIV and AIDS	50
Table 10:	Percentage of respondents agreeing with various statements concerning community participation and leadership around HIV and AIDS by province	51
Table 11:	Percentage of respondents agreeing with various statements concerning stigma around HIV and AIDS by province	53
Table 12:	Comparison of key findings, NCS 2006 and NCS 2009	60
Table 13:	Comparison of the 2009 NCS sample with the 2007 Statistics South Africa Community Survey on selected variables	61
Table 14:	Percentage of people in South Africa who were not exposed to any of the HIV communication Programmes by socio-demographic factors	62
Table 15:	Socio-demographic distribution of population according to age and sex	63
Table 16:	Household wealth index by race group	65

iii. List of Boxes

Box 1:	Key features of the evaluation survey	11
Box 2:	Measures included in the questionnaire	13
Box 3:	Exposure to HCPs in South Africa among people aged 16-55 years	14
Box 4:	Socio-economic and media exposure control variables* used in multiple regression analysis to estimate the adjusted impact of HCPs	15
Box 5:	Significant predictors of exposure to HCPs	21
Box 6:	Predictors of multiple sexual partners in the past 12 months	31
Box 7:	Predictors of condom use	34
Box 8:	Predictors of getting tested for HIV in the past 12 months.....	48

iv. Acronyms

ABC	Abstain, Be faithful, Condomise
AIDS	Acquired immune deficiency syndrome
ANC	Antenatal clinic
ARV	Anti-retroviral medicines
ASSA	Actuarial Society of South Africa
CDC	Centers for Disease Control and Prevention
CMT	Community Media Trust
DoH	Department of Health
DRA	Development Research Africa
HCP	HIV communication programme
HCPs	HIV communication programmes
HCT	HIV counselling and testing
HDA	Health and Development Africa
HIV	Human immunodeficiency virus
HSRC	Human Sciences Research Council
JHHESA	Johns Hopkins Health and Education in South Africa
JHU-CCP	Johns Hopkins University, Bloomberg School of Public Health, Center for Communication Programs
MCPs	Multiple and concurrent partnerships
MSPs	Multiple sexual partners
NCS	National HIV Communication Survey
PEPFAR	United States President's Emergency Plan for AIDS Relief
PLWHA	Person living with HIV and AIDS
PLWHAs	People living with HIV and AIDS
PMTCT	Prevention of mother-to-child transmission of HIV
PPS	Probability proportional to size
PSU	Primary sampling unit
SABC	South African Broadcasting Corporation
TB	Tuberculosis
TV	Television
UNAIDS	Joint United Nations Programme on HIV/AIDS



v. Executive summary

Background

The Second National HIV Communication Survey (NCS) examined the impact of HIV communication programmes in South Africa on improving knowledge and reinforcing positive beliefs, norms and attitudes, which in turn sustain or bring about behavioural change in relation to HIV prevention, care, support and treatment. The intention of this report is to assist policymakers and planners in the design of future HIV communication strategies and programmes.

Methods

A national quantitative survey was conducted between June and August 2009. The survey involved approximately 10 000 respondents in all provinces of South Africa and was designed to be representative of 16-55-year-olds across all race groups. The questionnaire covered socio-demographic characteristics, exposure to various HIV communication programmes, and indicators of HIV and AIDS knowledge, attitudes and behaviour.

In this survey, people were interviewed and asked about their values and behaviours, regardless of whether they had been exposed to any of the HIV communication programmes (HCPs). The evaluation used quantitative methods, which allow for measurement of the joint impact of HIV communication programmes on the South African population. By comparing the knowledge, attitudes and behaviours of survey participants who had interacted with these HCPs and with those of participants who had not, it was possible to measure changes attributable to mass media exposure.

Findings and recommendations

The reach of HCPs is impressive, with 90% of the population aged 16-55 years exposed to one or more HCP. Exposure to HCPs was highest in the segments of the population that such programmes intended to reach. These comprised individuals who are most likely to be at a higher risk of HIV infection: younger Africans who live in urban formal areas and report experiencing some aspects of poverty.

Areas of HCP impact

HCPs have shown success in a number of areas related to HIV and it is important that these gains should be sustained. Recommendations for future HCPs have therefore been made.

Multiple sexual partnerships

Since 2006 there has been an *increase in knowledge about faithfulness and partner reduction* as means of reducing HIV infection risk as well as a decline in the number of people reporting multiple sexual partners (MSPs) in the past year. This may be attributed to HCP programmes addressing these behaviours during the preceding year.

Exposure to HCPs was not associated with the absolute number of sexual partners a person had but there is evidence that partner reduction among single women may be occurring as a result of exposure to HCP.

The data clearly indicate that young men aged 20-29 years and older men are more likely to have MSPs than women. It is important for future HCP programmes to investigate innovative ways of engaging men on this aspect of HIV risk. Communication directed at men needs to be combined with the development of appropriate male-friendly services.

A high number of people of all ages believed that cheating was pervasive in relationships. However, this impression was not borne out by the actual number of people with MSPs. HCPs may need to focus their efforts on challenging people's beliefs that cheating is pervasive in relationships.

The focus on MSPs in HCPs has been relatively new. In contrast, condom promotion programmes have been operating for about 20 years in South Africa and the gains have been gradual. Changing condom use behaviour is different from changing MSP behaviour. Informing the population of the risk is an important first step, and will undoubtedly result in some behaviour change but additional strategies and support such as individual, couple and community level interventions may be required, particularly in a society where stable relationships are not the norm.

Reducing sexual partners may also be undercut by the option of using condoms to reduce HIV risk. Most people now know that condoms should be used to prevent HIV and may think that if they use condoms they do not have to reduce their number of sexual partners. It is therefore important for HCPs to continue to promote partner reduction and faithfulness, but to do so more explicitly within an approach of combining prevention methods.

Condom use

Knowledge of the importance of condoms as an HIV-prevention measure is very high in South Africa. Condom use has been promoted intensively in the last two decades as the primary means of HIV prevention and this level of knowledge indicates the relative success of these communication initiatives.

There were high levels of awareness of the availability of Choice™ condoms, largely as a result of HCPs which have focused on brand awareness. However, most people who knew about Choice™ condoms did not trust them to prevent HIV. HCPs need to emphasise the quality control measures taken to guarantee Choice™ condoms in order to increase public confidence in the brand.

A large proportion of people said they used condoms at last sex, although there has been a slight decrease in this indicator since the 2006 survey. This fall-off in condom use may be due to more people practising faithfulness or partner reduction. However, it underscores the need for communication to promote the use of a combination HIV prevention measures.

Condom use was lowest in the Western Cape and Northern Cape. Even though these provinces have lower levels of HIV infection, HCPs in these areas need to aggressively promote condom usage if they are to keep HIV prevalence at these relatively low levels and reduce STIs and teenage pregnancy.

Exposure to HCPs was related to increased condom use. Condom use was higher among men than women, and higher among younger people than older people. HCP campaigns have been particularly effective in reaching younger people and now need to focus on encouraging continued condom usage amongst the adult population. Future HCP programmes also need to support young men in continued condom use while finding innovative means to increase condom use among young women.

Condom use is related to the nature of relationships; there is a greater likelihood of condoms being used in less stable relationships than in more established ones. HCPs have been very successful in *increasing condom use in all types of relationship*. Greater exposure to HCP resulted in higher levels of condom use in more stable and less stable relationships.

Although knowledge of condoms as a method of HIV prevention is very high in South Africa, it is evident that campaigns need to use more nuanced messaging to reach those who are not yet using condoms.

HIV counselling and testing

Many communication programmes are designed to encourage audiences to discuss getting tested with their sexual partners as well as to visit a health centre to get tested.

Many people, especially younger women, had discussed testing with their friends. People who had discussed HIV testing with their friends or sexual partners were more likely to have gone for an HIV test in the past 12 months. People who were exposed to HCPs *were more likely to have discussed getting tested* with their friends, and to have asked/been asked by their sexual partner to get tested. Unsurprisingly, these people were *more likely to have undergone testing*.

Sexually active women were more likely than sexually active men to have had an HIV test in the last year. There has also been a considerable increase in the number of young people who have tested for HIV.

Exposure to HCPs has had a *direct effect* on large numbers of people *getting tested for HIV* in the past 12 months.

TB knowledge

Knowledge of TB treatment duration was high. Since the *duration of TB treatment* has been a focus of a number of campaigns in recent years, this high level of knowledge is probably attributable to these campaigns.

There were lower levels of awareness of the linkages between TB and HIV. This was to be expected as the relationship between HIV and TB has not been a major focus of communication interventions. There is therefore room to strengthen future communication about TB and its link to HIV.

Knowledge of ARVs

Knowledge of ARVs as treatment for AIDS was high and has increased considerably since 2006. The increase in knowledge of ARVs is encouraging and is quite likely due to messaging around this subject. HCPs should sustain these high levels of knowledge through continued messaging on ARVs.

Areas of low or unmeasured impact

There were some areas of knowledge, attitudes and behaviour where HCPs failed to show any impact and others where the impact of HCPs was not measured.

Delaying sexual debut

Most young people held positive attitudes towards *delaying sexual debut*. Yet the mean age of sexual debut has not changed since 2006. A significant number of young women – who are particularly vulnerable to HIV infection – start having sex early. Exposure to HCP was not related to delayed sexual debut. Given the late age at which lasting relationships are formed in South Africa, delaying sexual debut may not be a feasible strategy for young people.

Intergenerational sex

The impact of HCPs on intergenerational sex was not assessed although a number of communication interventions have highlighted intergenerational sex as an infection risk. The high percentage of women aged 16-24 years who are in relationships with men five or more years older than them is a matter of concern. This is clearly a transmission route for young women, since men in their own age group have a lower rate of HIV infection. HCPs need to sustain messaging on the risks of intergenerational relationships, specifically to young women, while seeking to understand this phenomenon better.

Transactional sex

Many communication initiatives highlighted the risk of transactional sex although the survey did not measure the impact of this messaging. Relatively few relationships described in the survey could be classified as transactional, but this was a risk factor among less stable relationships. Communication interventions need to continue to highlight the risky nature of transactional sexual relationships.

Alcohol use and risky sexual behaviour

A number of HCPs dealt with the relationship between alcohol, risky sexual behaviour and HIV infection but this survey did not assess the impact of this aspect of communication.

Men were most likely to drink alcohol heavily and often – and to report engaging in sex when they and/or their partners had had too much to drink. This occurred more frequently in less stable relationships. HCPs should focus on the link between alcohol and risky sexual behaviour, addressing men particularly.

New messaging challenges

Knowledge of male circumcision in reducing the risk of HIV infection amongst men

There were low levels of knowledge about the HIV risk-reduction which male circumcision provides. Prevalence of male circumcision was moderate. It also appears that many young men are circumcised only *after* they become sexually active and therefore they do not accrue the full risk-reduction benefits.

A concern about male circumcision is the possibility that behavioural disinhibition will occur - that men who are circumcised may stop using condoms to prevent HIV. However, the findings of this study are encouraging as most of people were aware that men who are circumcised still need to use condoms.

As the national male circumcision programme rolls out, there is a need to increase awareness of the risk reduction benefits of male circumcision while reinforcing messaging on partner reduction, and correct and consistent condom usage.

Knowledge of safer infant feeding practices to reduce the risk of MTCT of HIV

Communication programmes have focused on developing awareness of the risks of mother-to-child transmission (MTCT) of HIV. In this survey, knowledge about the risk of transmission through breastfeeding was found to be high. However, few people knew about exclusive breastfeeding as part of the strategy for reducing the risk of transmission. There is clearly considerable room to improve knowledge of safer feeding practices. This is a critical intervention which could help achieve the goal of effectively eliminating HIV infection in babies.

Conclusion

This evaluation of 11 communication programmes shows that HCPs have been successful in improving knowledge levels, and developing and/or reinforcing beliefs and attitudes conducive to HIV prevention and accessing care and treatment. Exposure to communication interventions was also responsible for a number of positive behaviour changes in relation to preventing and treating HIV.

These changes are gradual and in many cases show an uneven pattern across different segments of the population. This means that the impact of communication - in all its complexity – is not discernible to the casual observer and that formal evaluation is essential to the refinement and improved effectiveness of HCPs.



Context: the HIV epidemic in South Africa

According to the 2009 Statistics South Africa mid-year population estimates, South Africa is home to 49.3 million people. About 25.5 million people, or 52% of the population, are female. Africans are in the majority, constituting just over 79% of the total South African population¹. The 2008 South African national HIV prevalence, incidence, behaviour and communication survey (HSRC survey) reports that HIV prevalence among South Africans of all age groups is 10.6%. Put differently, it is estimated that about 5.2 million people in the total population were HIV positive in 2008. When children younger than two years are excluded, the estimate of HIV prevalence rises to 10.9% (95% CI: 10.0, 11.9). This estimate is comparable to those obtained in 2005 (10.8%, 95% CI: 9.9, 11.8) and 2002 (11.4%, 95% CI: 10.0, 12.7). HIV prevalence in the total population of South Africa has thus stabilised at a level of around 11% although there are significant differences in prevalence by age and sex².

HIV prevalence peaks among females aged 25–29 years at 32.7%, while for males it peaks at 25.8% in the 30–34 years age group. HIV prevalence has remained high in young women: for example, among 15–19-year-olds prevalence is 2.7 times higher than it is among males of the same age³.

The HSRC survey also suggests that, although the HIV epidemic has reached a plateau, HIV prevalence differs substantially by province. In the 2008 survey, the highest HIV prevalence among the general population is in KwaZulu-Natal (15.8%) and Mpumalanga (15.4%), and the lowest is in the Northern Cape (5.9%) and the Western Cape (3.8%) (Figure 1)⁴.

Figure 1: HIV prevalence in age group 2+ years by province in South Africa, 2008



Source: Adapted from HSRC Survey, 2009

¹ Statistics South Africa (2009) Mid-year population estimates. Statistical release P0302.

² Shisana O, Rehle T, Simbayi LC, Zuma K, Jooste S, Pillay-van-Wyk V, Mbelle N, Van Zyl J, Parker W, Zungu NP, Pezi S & the SABSSM III Implementation Team (2009) South African national HIV prevalence, incidence, behaviour and communication survey 2008: A turning tide among teenagers? Cape Town: HSRC Press

³ Shisana O, Rehle T, Simbayi LC, Zuma K, Jooste S, Pillay-van-Wyk V, Mbelle N, Van Zyl J, Parker W, Zungu NP, Pezi S & the SABSSM III Implementation Team (2009) South African national HIV prevalence, incidence, behaviour and communication survey 2008: A turning tide among teenagers? Cape Town: HSRC Press

⁴ Shisana O, Rehle T, Simbayi LC, Zuma K, Jooste S, Pillay-van-Wyk V, Mbelle N, Van Zyl J, Parker W, Zungu NP, Pezi S & the SABSSM III Implementation Team (2009) South African national HIV prevalence, incidence, behaviour and communication survey 2008: A turning tide among teenagers? Cape Town: HSRC Press

A large number of people living with HIV and AIDS (PLWHAs) have reached the stage of illness and need to access treatment programmes. HIV prevention programmes remain a cornerstone of the HIV response in the country but treatment, care and support interventions are also critical. Social and behavioural communication is required to reinforce and extend behaviour that contributes to HIV prevention. Such communication supports the promotion and uptake of biomedical prevention interventions, while addressing the socio-cultural barriers which may impede the uptake of prevention interventions.

Communication also positively promotes self efficacy and personal behaviours that reduce the risk of HIV infection, such as limiting sexual partners and condom use. Communication campaigns seek to tackle beliefs, attitudes and social norms that fuel risky behaviour – such as values that contribute to the notion of women-as-property and legitimise forced sex. Social and behavioural communication is also essential in ensuring the uptake of and adherence to essential care, support and treatment interventions. A major element of this is the reduction of stigma which can be a barrier to individuals seeking healthcare and other help.

The Second National HIV Communication Survey

Social and behavioural communication programmes aim to impact directly on improving knowledge and reinforcing positive beliefs, norms and attitudes. This in turn can sustain behaviour or bring about behavioural changes favourable to HIV prevention, care, support and treatment. Examples of the kind of behaviour that communication would seek to sustain or strengthen are condom usage, HIV testing, partner reduction and adherence to treatment.

Social and behavioural communication programmes do not impact directly on HIV incidence and prevalence. Their impact is indirect: they influence behaviours that in turn have an effect, primarily on HIV incidence.

The Second National HIV Communication Survey (NCS) examined the impact of HIV communication programmes in South Africa on improving knowledge and reinforcing positive beliefs, norms and attitudes, which in turn sustain appropriate behaviour or bring about behavioural changes that favour HIV prevention, care, support and treatment.

The programmes evaluated in this study were: Body, Mind and Soul; The Journey radio drama; Khomanani campaign; Khomanani Zithande campaign; Levi's® *Red for Life*; LoveLife's *Make Your Move* campaign; *Scrutinize*; *Siyayinqoba Beat It!*; Soul City's OneLove campaign; Soul City TV and radio programmes; and Tsha Tsha TV drama. For a more detailed description of each of these HCPs, refer to Annexure 1.

The findings of the survey are presented in the following sections:

- Access to media and reach of HCPs.
- Structural drivers of the HIV epidemic.
- Behavioural drivers of the HIV epidemic.
- Biomedical drivers of the HIV epidemic.
- HIV counselling and testing.
- Treatment, care and support.
- Social capital.

Where feasible, data from this survey are compared with data from the NCS 2006. *Annexure 2* presents a comparison of various indicators for 2006 and 2009.

The intention of this survey is to assist policymakers and planners in the design of future HIV communication strategies and programmes.

Methodology

A national quantitative survey was conducted between June and August 2009. The survey involved approximately 10 000 respondents across the nine provinces of South Africa and was designed to be representative of 16-55-year-olds of all race groups. For further details on the sample size and survey methods see *Box 1*.

The survey sample was drawn to be representative of the national population of South Africa. The data were weighted using the Statistics South Africa 2007 Community Survey data (*Annexure 3*). Weighted data have been used throughout the report, while unweighted data were used for the multivariate analysis which controlled for confounding factors.

Box 1: Key features of the evaluation survey

The research team responsible for the survey:

- Interviewed 9 728 participants during June to August 2009.
- Included persons aged 16-55 years across all provinces and language groups.
- Designed a structured questionnaire in consultation with members of the project team, including external advisors.
- Translated the questionnaire from English into Afrikaans, isiNdebele, isiXhosa, isiZulu, Sepedi, Sesotho, Setswana, siSwati, Tshivenda and Xitsonga.
- Conducted personal at-home interviews of about 1.5 hours' duration at each selected household.
Interviewers were trained and used a pre-tested questionnaire.
This covered socio-demographic characteristics and various knowledge, attitude, social and behaviour indicators relevant to HIV and AIDS.
Interviews were conducted in the home language of the respondent.
- Undertook a 10% validation check in person or telephonically to review the work of each interviewer and ensure validity.

Survey design and sampling

A multi-stage, stratified sampling approach was used to draw a sample of 400 primary sampling units (PSUs) or clusters. The PSUs consisted of 2001 Census small areas. Small areas are geographic units used by Statistics South Africa to demarcate areas that correspond as closely as possible to enumeration areas but allow for optimal confidentiality. All Statistics South Africa's available and eligible small areas were included in the sample frame. The sample was explicitly stratified by province. Within provincial strata, the sample was implicitly stratified accordingly to district councils and area type. Area types were urban formal, urban informal, peri-urban, tribal settlements and farming areas.

There were three stages of sampling. Firstly, the PSUs were sampled using probability proportional to size (PPS) principles where the measure of size was based on the number of dwelling units (which were assumed to correlate closely with number of households) in a PSU, as calculated in the 2001 Census. The measure of size used for the PPS selection was the number of people aged 16–55 years in the PSU. The second and third stage involved a selection of the secondary sampling unit or household, and the selection of one individual from the eligible members of the household, respectively.

Based on a target sample size of 10 000 individuals, and the utilisation of 400 PSUs or small areas, the proposed sample of small areas at the first stage of selection in the multi-stage selection process was calculated. The sample was allocated to the explicit strata (provinces) using the square root allocation to ensure that a sufficient sample was obtained from each province to allow for some provincial level analysis. The above sample was based on the population per province aged between 16 and 55 (as defined by Statistics South Africa) and not on the proportion of the entire population residing in each province.

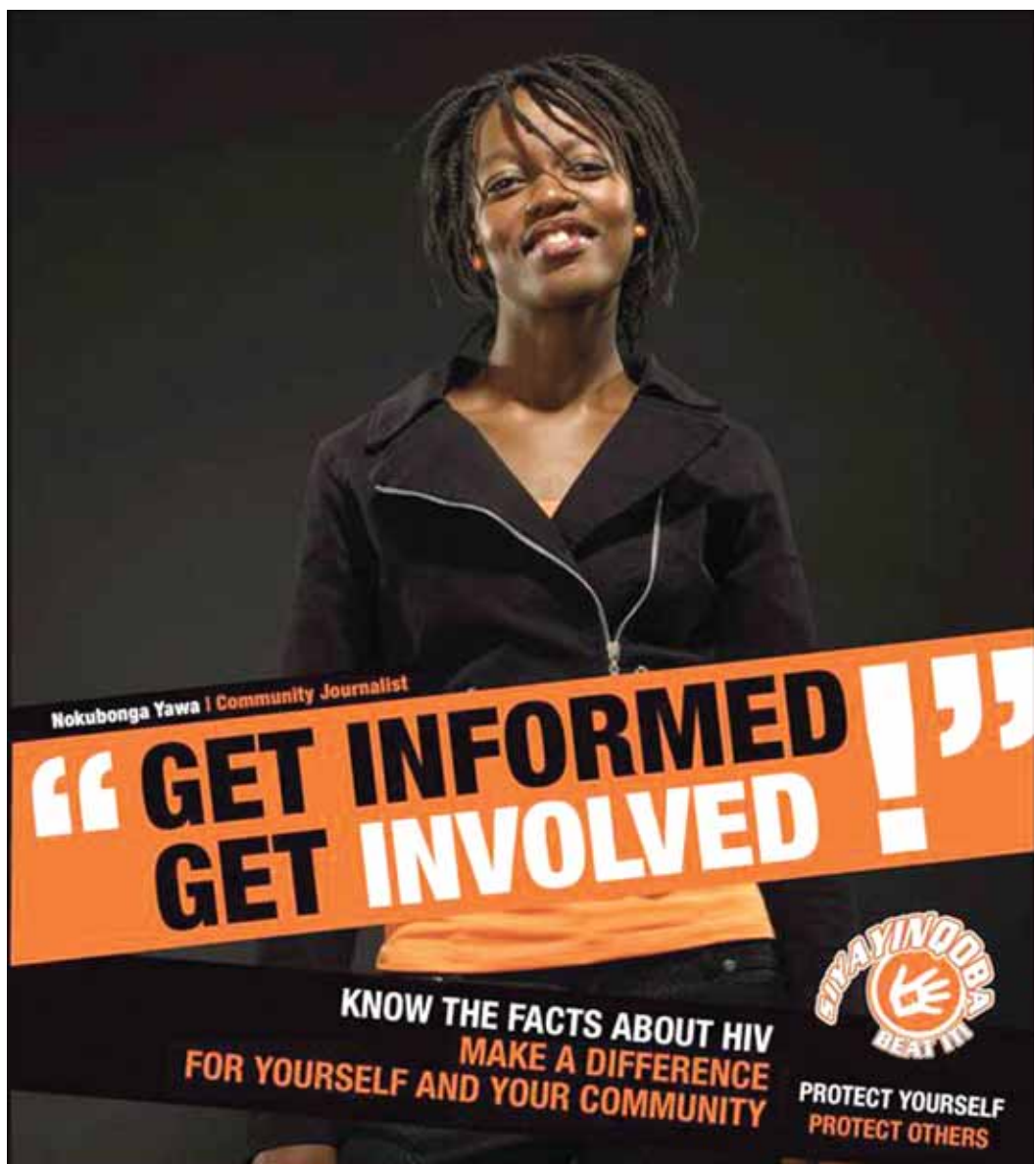
After selection of the small areas to be surveyed, the random walk method was used to randomly select the households to be surveyed. In line with rigorously implemented probability based studies, no substitution or replacement at a small area level was allowed. An estimated response rate per small area was calculated prior to the commencement of fieldwork to ensure that a total number of interviews as close to the required sample size was achieved and that response rates were at acceptable levels.

At the third stage, eligible household members aged between 16 and 55 years were randomly selected within a household utilising the KISH grid method. Once the respondent was selected, the fieldworker pursued only the randomly selected person per household. Each individual was visited at different times of the day for three days, where necessary, before being excluded.

Table 1: Sample of small areas and households selected

Province	Small areas		Interviews	
	Selected	Realised	Targeted	Realised
Eastern Cape	50	50	1 949	1 155
Free State	34	34	1 336	858
Gauteng	68	67	2 965	1 669
KwaZulu-Natal	63	63	2 433	1 557
Limpopo	45	44	1 743	1 321
Mpumalanga	38	37	1 434	1 056
North West	21	21	784	505
Northern Cape	37	36	1 804	836
Western Cape	47	47	2 371	771
Total	403	399	16 820	9 728

Socio-demographic information on non-responders was only available at a household level and not at an individual level because of confidentiality. It is therefore difficult to predict how the response rate may have influenced the results. That said, the response rate in the Western Cape appears to be poor and the findings from this province should be interpreted with caution.



Questionnaire development

The questionnaire for the survey was developed in consultation with CMT, JHHESA, JHU-CCP, Khomanani, and Soul City. The structured questionnaire was designed to measure key characteristics of respondents which might influence receptivity to HIV communication, exposure to various HIV campaigns, risk behaviours, and care and support behaviours. For further details on the measures included in the questionnaire see *Box 2*.

In addition, the questionnaire contained a sexual calendar. Sexually active respondents were asked to identify the person with whom they last had sex by the first-name initial (to maintain anonymity). A series of 19 questions was asked about the nature of this sexual relationship, including the dates of first and last sex, the nature of the relationship, the exchange of money or favours, HIV prevention, and perceptions about the possibility of the partner having other sexual partners. Where the respondent had more than one sexual partner in the last 12 months, the same procedure was followed for up to five sexual partners. Dates were used to calculate duration of partnerships. Each respondent was then asked how many sexual partners they had had in total during the last 12 months and last month.

Box 2: Measures included in the questionnaire

The questionnaire was designed to elicit information on:

- Socio-demographic variables.
- Social capital and social norms with respect to HIV and AIDS.
- Relation to HIV and AIDS, including personal knowledge of people who are ill or have died from an AIDS-related illness, community events and activities in relation to AIDS.
- Knowledge, attitudes and perceptions related to HIV prevention, AIDS care and support, TB and PMTCT.
- Ideational factors – such as values, beliefs and attitudes – and social norms related to HIV risk.
- The nature and extent of multiple sexual partnerships (MSPs), including duration of partnerships, use of condoms in various relationships, and the role of alcohol in relation to sex and HIV.
- Prevalence and attitudes to male circumcision.
- Perceptions and history of HIV counselling and testing (HCT).
- Media access and frequency of use.
- Overall exposure to various HCPS and details of exposure to specific campaign components.

The questionnaire was piloted in Gauteng, KwaZulu-Natal, the Eastern Cape and the Western Cape in February and March 2009. In order to ensure that the response categories were mutually exclusive and correctly understood by respondents, the questions were revised and phrased in a manner that could be understood by researchers and respondents. In this way, every effort was made to ensure that fieldwork errors could be addressed during training. Pre-testing of the sexual calendar revealed that rapport and self-reporting improved when the age and gender of the interviewer matched that of the respondent. Relationships among the 19 variables suggested that the instrument provided valid information about the nature of sexual relationships. The final post-piloted questionnaire was then translated from English into South Africa's other 10 official languages.

Methods of analysis

In this survey, people were asked about their values and behaviours, regardless of whether they had been exposed to any of the HCPS. The evaluation used quantitative methods, which allow for the measurement of the joint impact of HCPS on the South African population. By comparing the knowledge, attitudes and behaviours of those respondents who had interacted with these programmes with those of respondents who had not encountered these programmes, changes attributable to mass media interventions could be measured.

The research team used the statistical package STATA to analyse the data. Both uni-variate and multi-variate analytical methods were applied. Regression analysis was used to ensure that any reported changes could be attributed to the communication intervention and not to other interventions or associated variables that could have caused these.

During the 12 months prior to the survey, the four organisations responsible for it undertook several individual communication programmes as well as integrated communication campaigns to prevent HIV infection and help PLWHAs. This study examined the joint or combined effects of these communication interventions along with four other communication programmes found to have some independent effect. *Box 3* lists the seven programme components conducted by the four partners (1-7) and the four additional interventions (8-11). The level of exposure was based on respondents' recall of content from programmes broadcast during the preceding 12 months. In some cases actual

exposure might have been higher than the level indicated in the survey. The measures of exposure for the various programmes were not comparable so the information in the box below should not be used to compare the reach of various programmes.

The survey focused specifically on exposure during the preceding 12 months to link exposure to HIV and AIDS-related outcomes during this period. For the television programmes, *Siyayinqoba Beat It!* and *Tsha Tsha*, exposure for this period was 20% and 35%, respectively. However, both of these programmes have run for much longer than 12 months and over a longer period both programmes have actually reached about 50% of the population represented by the survey, or some 13-14 million people. Similarly, the OneLove campaign, had only been going for a few months at the time the survey was conducted. Over a longer period of time, *OneLove* would have reached a higher percentage of the population.

Box 3: Exposure to HCPs in South Africa among people aged 16-55 years

1.	Soul City's <i>OneLove</i> campaign*	51%
2.	Soul City TV and radio programmes	56%
3.	<i>Khomanani</i> campaign	65%
4.	<i>Khomanani Zithande</i> campaign	54%
5.	<i>Scrutinize</i>	65%
6.	<i>Tsha Tsha</i> TV drama	35%
7.	<i>Siyayinqoba Beat It!</i>	20%
8.	LoveLife <i>Make Your Move</i> campaign	34%
9.	Levi's <i>Red for Life</i>	17%
10.	<i>The Journey</i> community radio	6%
11.	<i>Body, Mind and Soul</i> radio	9%

Exposure to any one of eleven HCPs **90%**

N = 9 728 (16-55 years); Population (weighted) = 27 410 651

*Includes campaign elements only

To create the joint index of exposure, each programme was coded 0/1 for recall and then summed to create scale from 0 to 11, with 0 indicating no exposure to any programme and 11 exposure to all 11 programmes. Factor analysis was conducted to confirm that the 11 programmes were adequately related to one another. The internal reliability of the scale as computed with Cronbach alpha was 0.79, indicating a moderately high level of reliability. The validity of the scale is determined by its correlation with other variables to which it is expected to be related, such as frequency of watching television, socio-economic status, and the hypothesised HIV-related outcomes. The last two levels of exposure, programmes 10 and 11, were collapsed into the 9th level to create a final scale for analysis that ranges from 0 to 9+ programmes. The mean exposure of participants was 4.2 programmes.

Structural equation modelling (SEM), with linear and logistic regression, was used to estimate the impact of the communication programmes. This means that two regression equations were involved in each analysis, one for the communication programmes (exposure/treatment variable) and one for each outcome of interest. In this instance, the same regression equation for exposure was used with each outcome variable. In SEM, the same set of independent variables cannot be used in each pair of regression equations. Some of the variables that are theoretically and statistically unrelated to one of the dependent variables must be excluded from the regression equation for other one and vice versa.

In this survey, for example, frequency of exposure to mass media (TV, radio, magazines, and so forth) was highly related to HIV communication exposure, but not related to any of the behavioural outcomes when HIV communication was included in their regressions. This implies that mass media only affects the behavioural outcomes by making exposure to HIV communication programmes possible. Television, for example, has no direct effect on the outcomes of interest; it works *indirectly* through its effect on HIV communication programme exposure. Thus, the mass media exposure variables can be excluded from the behavioural outcome regression analysis. Gender and marital status, among others, do not affect or determine exposure to the HIV communication programmes, but they do affect the outcome variables of interest. So, they can be excluded from the HIV communication regression analysis. The likelihood ratio test (lrtest) in STATA was used to test the exclusion of variables from each question. No statistically significant differences were found when any of these variables was excluded.

To draw a causal inference, the communication variable also must also be shown to be *exogenous* to each outcome variable. Statistical tests of exogeneity help to rule out the possibility that *unobserved variables* (not measured or included) may be responsible for the observed relationship between exposure and each outcome of interest. They also to rule out the possibility that the relationship is *reciprocal* (for example, that condom use determines HCP exposure). These two threats are ruled out if the residual (disturbance) terms from each pair of equations are statistically uncorrelated or if the residual term from the communication equation is not statistically significant when added to each outcome equation⁵. This statistical requirement was met for each analysis of impact that is presented in this report, providing additional support for the interpretation that differences in HIV prevention behaviour may be causally attributed to exposure to the HIV communication programmes⁶.

Once all of these conditions were met, the post-estimation, *adjust* command in STATA was used after each outcome regression to estimate the probability of behaviour at each level of the joint communication variable, after controlling for the socio-economic variables included in the analysis. Each of these adjusted probabilities (percentages) shown below takes the form of a classic dose response – that is, the outcome becomes more pronounced with increased exposure to the communication programmes.

Fifteen socio-economic and media exposure variables were used to estimate the independent effect of communication exposure on each HIV outcome variable (*Box 4*).

In the results section, we present analysis conducted to determine the relationship between exposure to HCPs and the following HIV prevention behaviours:

- Reduction in the number of sexual partners.
- Faithfulness to one sexual partner.
- Condom use.
- Delayed sexual debut.
- Discussion with one's sexual partners about getting tested for HIV.
- Getting tested for HIV during the last 12 months.
- Disclosure of HIV test results to/by one's sexual partner(s).

Box 4: Socio-economic and media exposure control variables* used in multiple regression analysis to estimate the adjusted impact of HCPs

The following variables were used in multiple regression analysis to estimate the adjusted impact of HCPs:

- Sex.
- Marital status: single vs ever married.
- Level of education.
- Level of living standard: household items.
- Poverty: lack of fuel, clean water, medicine and food.
- Currently employed or student vs unemployed.
- Frequency of watching TV: SABC 1-3 and eTV.
- Frequency of listening to the radio.
- Frequency of reading newspapers.
- Frequency of internet use.
- Type of settlement: urban formal, urban informal, peri-urban, tribal and farming.
- Race: African, coloured, Indian, white.
- Province of residence.

*Weighted by sex, age, race, settlement type and province

⁵Bollen, K. A., Guilkey, D. K., and Mroz, T. A.. (1995). Binary outcomes and endogenous explanatory variables: Tests and solutions with an application to the demand for contraceptive use in Tunisia. *Demography*, 32(1), 111-131.

⁶Kincaid, D. L., & Do, M. P. (2006). Multivariate causal attribution and cost-effectiveness of a national mass media campaign in the Philippines. *Journal of Health Communication*, 11 (Supplement 2): 1-21.

Limitations of the study

Cross-sectional studies are carried out at one point in time and give no indication of the sequence of events. For example, such studies cannot tell us whether exposure to communication programmes occurred before, after or during an individual acquiring the knowledge, attitudes or behaviour that we are investigating. In this study, however, the various statistical methods described above were used to adjust for the limitations of cross-sectional methodology. As a result, the statistical associations reported here are more likely to be causal. There is also strong theoretical support for a causal inference. The content of the HCPs that were implemented during the year before the survey were designed to influence the expected outcomes.

All studies which use self-reported data are susceptible to both recall and social desirability bias. It seems likely that such factors would affect the HCP-exposed and unexposed groups equally and therefore they would not significantly influence the calculation of impact. The evidence of a strong dose response to the number of HCPs recalled also suggests that self-report was not a serious problem.

The overall response rate was 58%. Non-responders included ineligible households, households where no-one was at home and refusals. Given that no information is available on the demographic characteristics of individual non-responders, it is impossible to know if non-responders biased the results of this study.

Ethical considerations

Ethical approval for this study was obtained from the University of the Witwatersrand's Human Research Ethics Committee (Non-medical) and from the Institutional Review Board of the Johns Hopkins Bloomberg School of Public Health. Several ethical issues were considered in the study design and in administering the survey.

Researchers and fieldworkers received extensive training on ethical issues. Gender considerations were addressed by ensuring, as far as possible, that participants were interviewed by fieldworkers of a similar age and gender to the participant. Male fieldworkers only interviewed male participants while female fieldworkers could interview both male and female respondents.

Each participant received information and a consent form in his or her home language. The information and consent form invited the individual to participate in the study and explained the purpose of the study, the respondent selection process, the voluntary nature of participation, confidentiality, anonymity, and the fact that participants could change their mind about participating at any time. The information document also explained the potential benefits of participating in this study. While there were no financial or material incentives, respondents were informed that the information gathered in this study would be used to help HIV communication organisations better serve the population. Respondents were also warned that they might feel some discomfort as several questions were about sex and sexual behaviour. In addition, the name and contact number of a professional who could be contacted 24 hours a day was provided for respondents who had concerns.

The fieldworker read the information and consent form to each selected respondent. If the individual was willing to participate, s/he signed a copy of the consent form or, in the case of respondents with limited literacy, placed a mark on the paper. Each respondent kept a copy. Wits University provided HDA with guidance on participation by children – that is, participants under the age of 18 years. For participants aged 16 and 17 years, the child's own consent was sought as well as that of a parent or guardian. Each respondent was given a choice as to where and when the interview would be conducted.

Once the interviews were completed, respondents were asked if they would like to make any other comments or ask any questions. Thereafter, they were thanked and provided with a list of organisations where they could seek additional information or assistance.

Careful training of fieldworkers included enabling them to observe a number of measures introduced to ensure confidentiality of information. For instance, fieldworkers could not conduct the face-to-face interview if there was a third person present in the room. Names of participants were recorded on a separate sheet from the questionnaire answer sheet and there was no way of linking specific answers back to individuals. Anonymity of respondents was maintained throughout the study and all data that HDA received contained only unique identifier numbers. All original questionnaires and consent forms were placed safely in storage and will be destroyed after five years.

Demographic sample description

Of the total sample, 46% were male and 54% were female. The mean age was 30.2 years. Sample weights were introduced to correct for bias at the small area, household and individual levels. Some areas (like the Northern Cape) were over-sampled – so that analysis of sub-samples could be undertaken – but the sample was weighted back to be representative of the population in South Africa in respect of gender, age, race, area type and province. Sample weights were benchmarked using the 2007 Community Survey undertaken by Statistics South Africa. *Annexure 3* consists of a comparison of the 2009 NCS sample and the 2007 Statistics South Africa Community Survey on selected variables.

A general description of the sample and the weighted sample is presented in Table 2 below.

Table 2: Description of the sample

Descriptor	Sample Number (Percent)	Weighted Number (Percent)
Gender		
Male	4 437 (45.6%)	13 360 977 (48.7%)
Age Group		
16-19 years	1 811 (18.6)	4 463 715 (16.3)
20-24 years	1 950 (20.1)	4 401 066 (16.1)
25-29 years	1 567 (16.1)	4 888 944 (17.8)
30-34 years	1 202 (12.4)	3 493 723 (12.8)
35-39 years	1 036 (10.7)	3 013 970 (11.0)
40-44 years	858 (8.8)	2 704 724 (9.9)
45-49 years	671 (6.9)	2 160 449 (7.9)
50-55 years	633 (6.5)	2 284 060 (8.3)
Race		
African	7 926 (81.7)	21 253 637 (77.8)
Coloured	1 203 (12.4)	2 590 313 (9.5)
White	431 (4.4)	2 706 899 (9.9)
Indian	146 (1.5)	775 012 (2.84)
Province		
Eastern Cape	1 155 (11.9)	3 250 281 (11.9)
Free State	858 (8.8)	1 609 441 (5.9)
Gauteng	1 669 (17.2)	6 630 405 (24.2)
KwaZulu-Natal	1 557 (16.1)	5 611 728 (20.5)
Limpopo	1 321 (13.6)	2 610 894 (9.5)
Mpumalanga	1 056 (10.9)	2 020 460 (7.4)
North West	505 (5.2)	1 886 942 (6.9)
Northern Cape	836 (8.6)	603 827 (2.2)
Western Cape	771 (7.9)	3 186 673 (11.6)

Results

1 Media access and reach

1.1. Access to media

This study examined the use of mass media (broadcast, print and outdoor) by HIV communication programmes. It should be noted, however, that in addition to the mass media, most programmes utilise social mobilisation (such as peer education and community dialogues), supported by small media (posters, booklets and utility items).

Radio and television are the most popular mass media consumed by people in South Africa, with approximately 87% of people watching TV or listening to the radio. SABC 1 was the most frequently watched TV station (48.1%), followed by eTV (35.1%) and SABC 2 (30.1%).

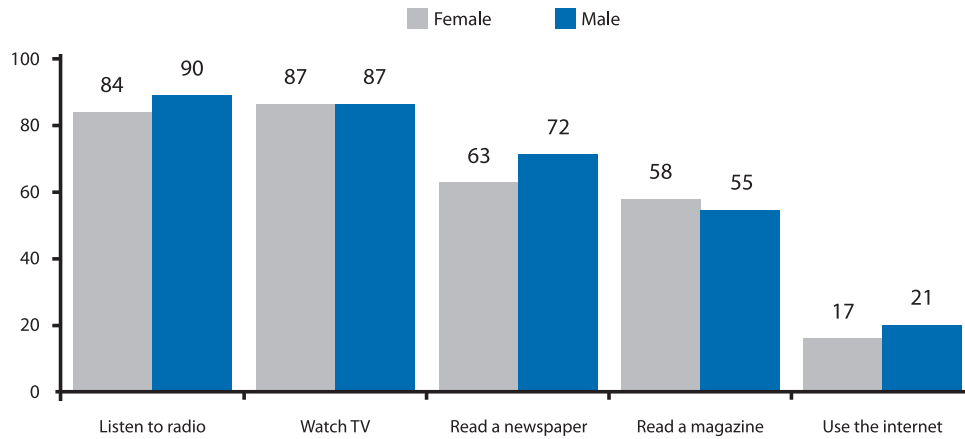
While 68% of people reported reading a newspaper, only 6.3% reported reading a newspaper every day. DSTV and the internet were the least accessed channels, with less than 20% of the population accessing each of these. This pattern was similar to the findings of the NCS 2006. There was no real difference by age in terms of the preferred medium of communication, although there was slight variation in terms of selection of TV channels or radio stations.

Table 3: Percentage of people accessing various media channels

Media channel	Frequency of accessing various media channels				
	< once a week	1 - 3 days/ week	4 - 6 days/ week	Every day	Total
Listen to radio	13.5	14.4	11.4	47.8	87.1
Watch SABC 1	12.0	12.0	9.5	48.1	81.6
Watch SABC 2	15.6	19.4	10.7	30.1	75.8
Watch SABC 3	16.6	18.7	9.3	22.5	67.1
Watch eTV	11.4	14.5	10.9	35.1	71.9
Watch DSTV	2.9	2.7	2.2	12.0	19.8
Read a magazine	26.5	18.2	5.2	6.3	56.2
Read a newspaper	21.9	19.3	8.6	17.7	67.5
Use the internet	5.3	4.7	1.8	6.7	18.5

Figure 2 indicates that there were slight differences between men and women in relation to media access. Men were more likely to listen to radio than women but both genders were equally likely to watch TV. Men were more likely to read a newspaper and access the internet, while women were more likely to read magazines.

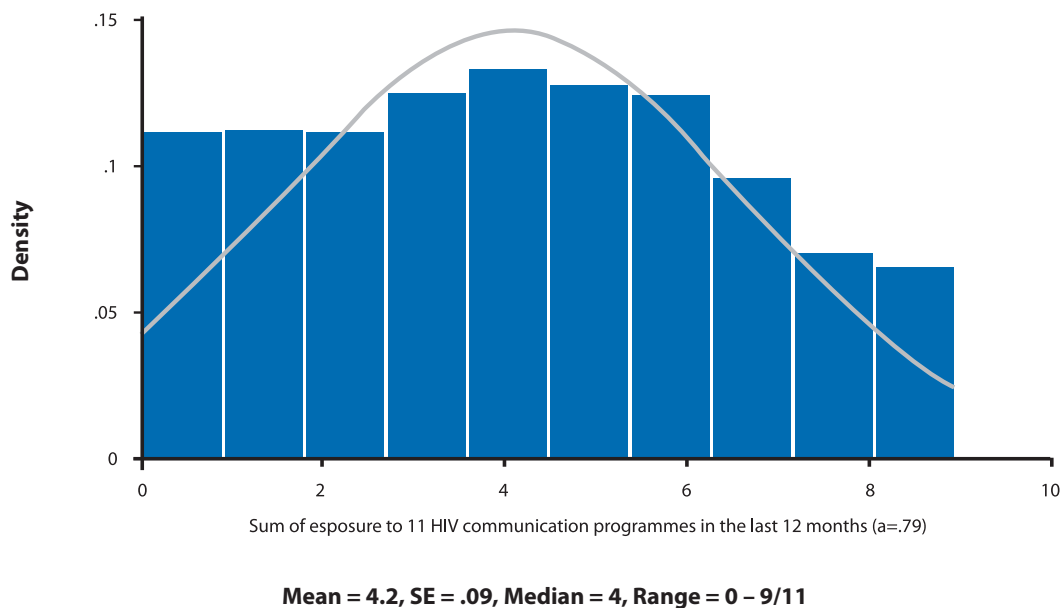
Figure 2: Media access in the national sample: Do you access the following media?



1.2. Reach of HIV communication programmes

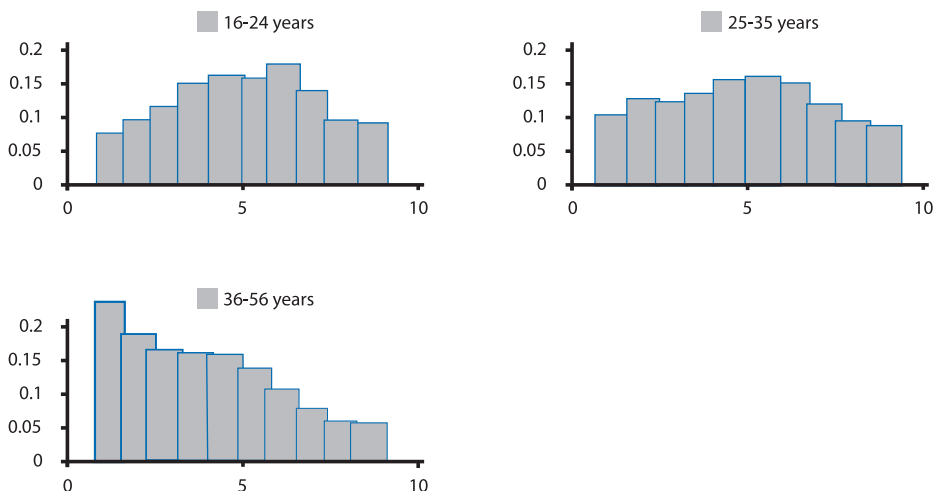
Ninety percent of the population was exposed to at least one HCP. This means that HCPs reached a total of 24 603 800 men and women between the ages of 16-55 years. The frequency distribution of the joint exposure scale is shown in *Figure 3*.

Figure 3: Sum of the number of eleven HCP components seen or heard



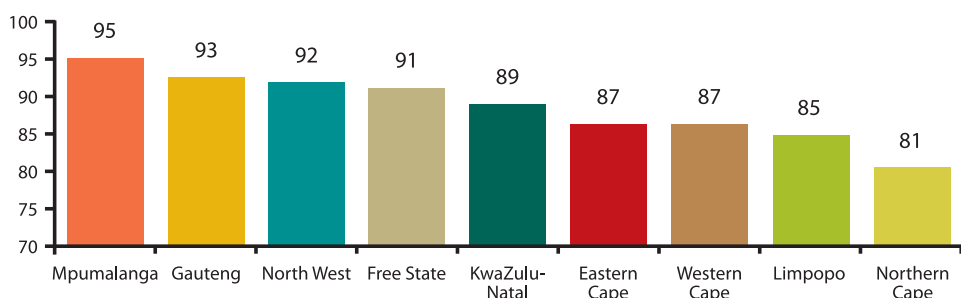
There was no statistically significant difference in media exposure by gender, but the mean level of exposure was higher among participants aged 16-35 years than those older than 35 years.

Figure 4: Distribution of exposure to HCPs by age group



The reach of the HCPs varied significantly by province, with 95% of people in Mpumalanga exposed to at least one HCP compared with 81% of people in the Northern Cape (Figure 5). These findings may require further investigation.

Figure 5: Percentage of people reached by at least one HCP component by province



It is important to consider who HIV communication programmes failed to reach. Ten percent of the population was not exposed to any of the 11 programme components measured in this survey. Among people whose highest level of education was primary school, this non-exposure figure rose to 22% and it diminished as education levels increased, to 9% among those with high school education up to grade 11, and to 6% among those with matric or tertiary education. A detailed breakdown of the sociodemographic characteristics of people unexposed to any HIV communication is set out in *Annexure 4*.

Joint exposure to these eleven HCPs is used to estimate the effect of exposure on HIV prevention behaviours. It is expected that the observed level of each outcome variable will be higher as the number of programmes recalled increases. This is the familiar dose response hypothesis derived from epidemiology: the greater the exposure to communication, the greater the probability of practising a desired behaviour, such as condom use or getting tested for HIV. If the behaviour increases consistently with exposure without any oscillation (monotonically), then it is more likely that the relationship is causal.

Box 5 lists the variables that are statistically related to the joint measure of HCP exposure. The strongest predictor of HCP exposure is frequency of watching television. Exposure to HCPs was also higher in the youngest age group (16-24 years), among Africans compared to all other ethnic groups, and among those reporting experience of poverty, either at a high or low level. These results indicate that the HCPs are reaching segments of the population that they were intended to reach. These are also sections of the population most likely to be at higher risk of HIV infection: younger Africans living in urban formal areas who experience some aspects of poverty.

Box 5: Significant predictors of exposure to HCPs

Respondents were more likely to be exposed to HCPs if they:

- Were no older than 35 years.
- Had more education than primary school only.
- Were of medium or high socio-economic status.
- Had experienced some degree of poverty, whether high or low, rather than no level of poverty.
- Were students, rather than employed or unemployed.
- Watched TV frequently compared to the rest of the sample.
- Listened to radio and read newspapers and magazines more frequently than the rest of the sample.
- Were African, rather than coloured, Indian or white.
- Resided in urban formal areas rather than other settlements, especially farming settlements.
- Live in Mpumalanga, as compared to the Western Cape and most other provinces and, especially, as compared to Limpopo.

N = 6 794 men and women aged 16-55 years who have had sex in the last 12 months; R² = 0.46

2. Structural drivers of the HIV epidemic

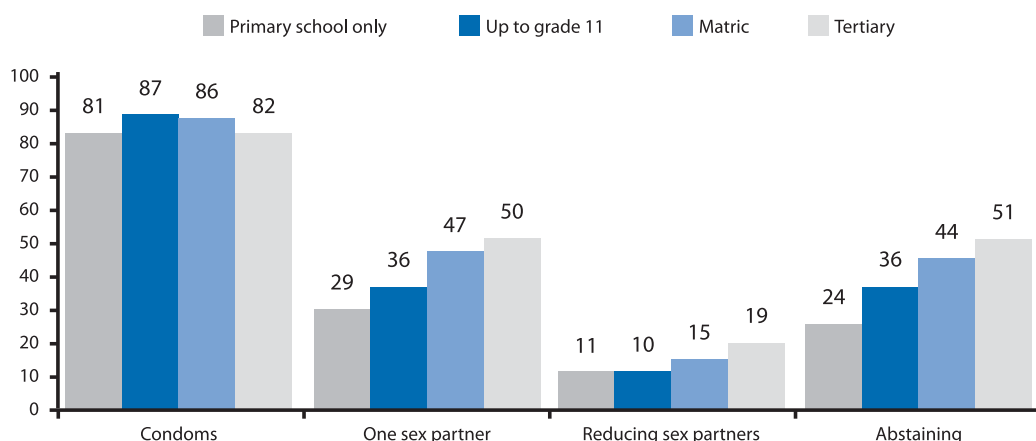
In addition to evaluating various HIV communication initiatives, the NCS 2009 aimed to describe key drivers of the HIV epidemic in South Africa. This understanding should enable policymakers and programme managers to strengthen HIV communication programmes so that they are strategically aligned to the risk behaviours and key drivers of the epidemic. Some of the structural drivers of the epidemic include education, employment, socio-economic status, violence and relationship status.

2.1. Education

This study found that 82% of people had attained some secondary education or higher. There were no differences in education level by sex. About one-fifth (18%) of people had primary school education or less, while 45% had some secondary education (up to and including grade 11). About a third (32%) reported having completed matric, while tertiary education was restricted to a small group (5%).

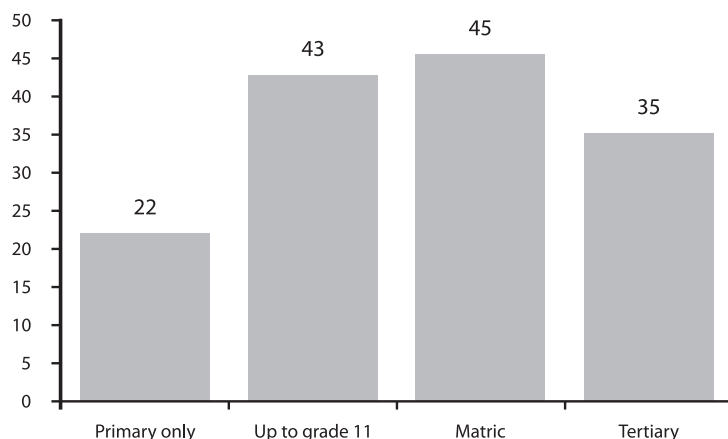
People with higher levels of education were more likely to know about HIV prevention methods. For example, 24% of people with primary education or less held the view that abstinence is one way to prevent HIV compared to 51% of those with tertiary education. There was no relationship between education level and knowledge about condom use, which was already high due to the prominence of this subject in previous HCPs (Figure 6).

Figure 6: Percentage of respondents knowing about HIV prevention measures by education level



There was a significant difference in the reported rate of condom use at last sex by education level. Matriculants and those with some high school education reported higher condom usage than those with tertiary education (*Figure 7*). However, this relationship may be complicated by factors such as age and relationship status. Condom use tends to decrease with age, among couples in stable relationships.

Figure 7: Percentage of people using a condom at last sex by education level



2.2. Employment

Individuals with higher education were more likely to be employed. More men than women were employed. More men than women were students. People who are employed and students are also more likely to be exposed to workplace-based HIV prevention programmes and interventions within tertiary settings (*Table 4*).

Table 4: Percentage of men and women who were employed, unemployed and students

Employment Status	Males	Females	Total
Unemployed	36.1	58.1	47.4
Employed	44.2	28.7	36.3
Student	19.7	13.2	16.4

2.3. Socioeconomic status and poverty

Two measures of socio-economic status were used. In the first approach, this study measured socio-economic status by means of a living standards measure, which was derived from the household items that individuals indicated they had. There were no significant differences in socio-economic status by gender.

In contrast, the second approach which used the poverty index did reveal differences by gender. Poverty index questions included how often people had gone without the following in the past 12 months: fuel for cooking or heating the home, clean water to drink, medicines and food. Six percent of women and 4% of men reported that they had often not had enough food to eat.

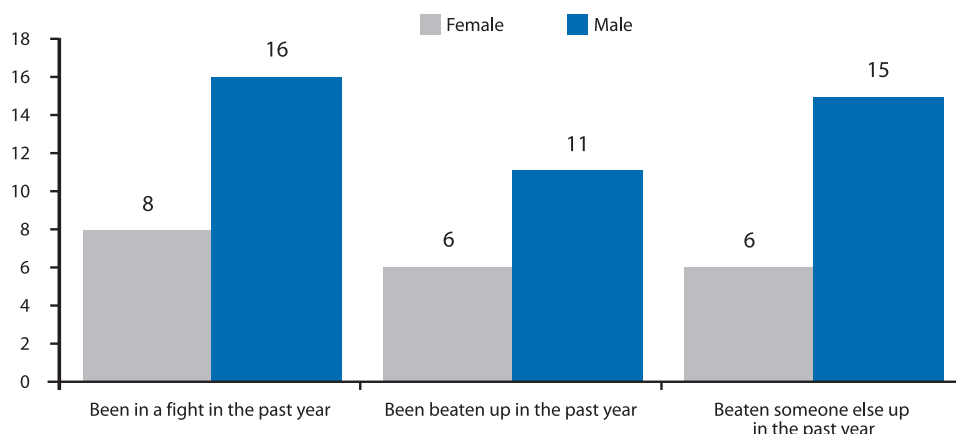
People living in Limpopo, Eastern Cape and Northern Cape were more likely to report going without food often (10%) compared with people in the Free State and Mpumalanga (2%).

Poverty was associated with the scope of knowledge of HIV prevention. Poorer people were less likely to know that faithfulness, reduction in sexual partners and abstinence are methods to prevent HIV. Poverty was not associated with a lack of knowledge of condom use as a method of HIV prevention. This may be due to the continued promotion of condom use in HIV communication initiatives. Although such programmes have begun to encourage faithfulness and partner reduction as a means for HIV prevention, these messages appear to have had limited absorption in marginalised sections of our population and there is a need for strategies to overcome this.

2.4. Violence

This study measured involvement in physical violence in order to have a baseline against which to evaluate the impact of future programmes addressing violence and its links to HIV. Men reported greater involvement in physical violence in the last year, when compared to women.

Figure 8: Percentage of men and women who have been involved in a physical fight in the past year

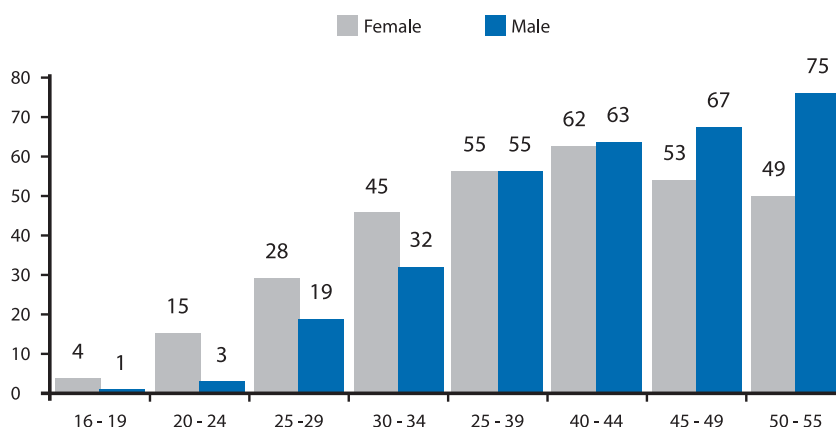


2.5. Relationships

The design and delivery of HIV prevention programmes should take into account relationship status as a factor influencing attitudes, perceptions and behaviour in relation to sex.

This study found that there were fairly low levels of marriage and cohabitating relationships in South Africa, particularly among men and respondents younger than 35 years. It would be expected that the majority of men and women aged between 20 years and 35 years would have formed longer-term relationships. This is not the situation in South Africa.

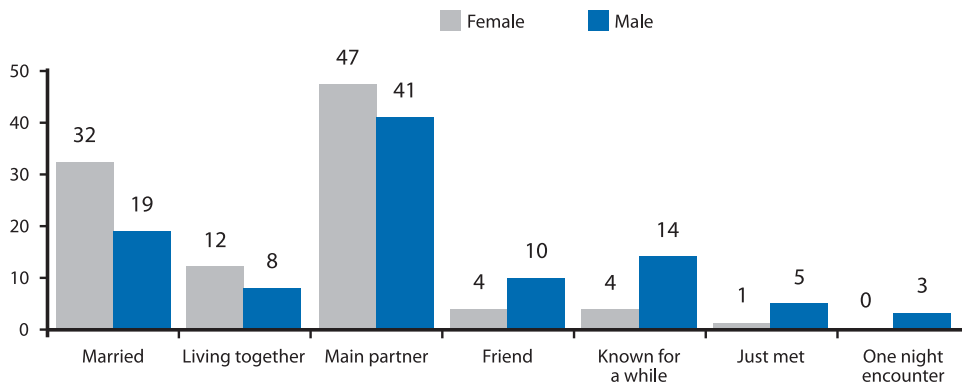
Figure 9: Percentage of people married or living with sexual partner by age group



Among people who reported being married to their sexual partner, the majority (65%) reported being married for more than eleven years. Among those who reported a main partner, 34% had been with that partner for between seven months and two years.

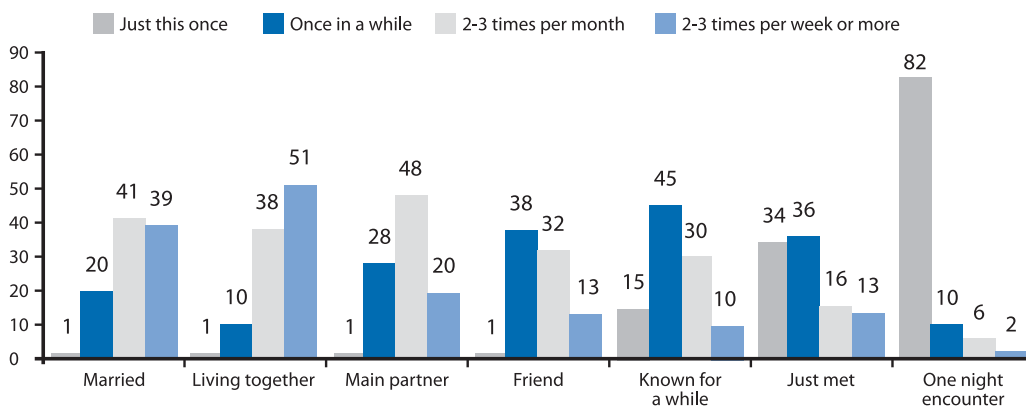
Women were more likely to have sexual relationships with people they described as a spouse or main partner. Men on the other hand were more likely than women to describe their sexual partners as “friends”, “someone I’ve known for a while”, “some-one I’ve just met” or a “one night encounter”. However the majority of sexual relationships reported by men were with a main partner or spouse (N= 4,121; 3,720 partners) (Figure 10).

Figure 10: How men and women described their relationships



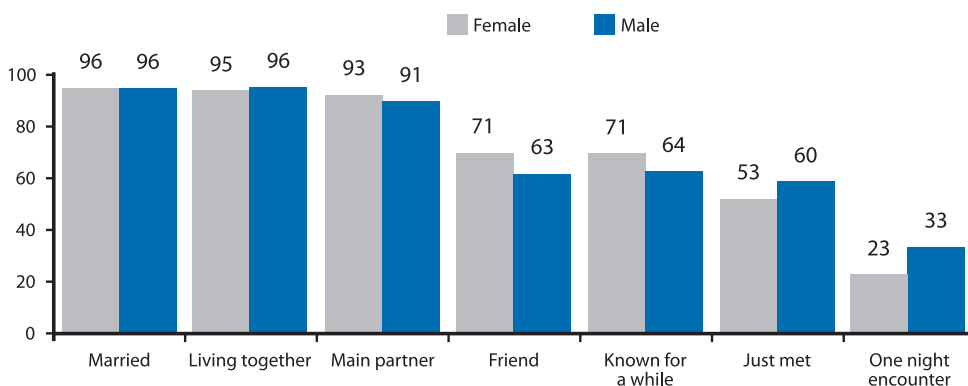
This study found that sexual intercourse was more frequent in relationships that can be considered stable (married, main partner and living together). It is worthwhile noting, however, that even in relationships that can be considered casual, frequency of sex was quite high and occurred over an extended period of time (Figure 11). This may increase the likelihood of multiple sexual partnerships which may or may not overlap. These may in turn contribute to the spread of HIV.

Figure 11: Frequency of sexual intercourse by type of relationship



People in more stable relationships were more likely to expect to have sex with that partner again compared to those in less stable relationships. Women in less stable relationships were more likely to expect to have sex again within that relationship than were men in the same type of relationship. This suggests the sexes differ in their understanding and expectations of sexual relationships and has important implications for HIV prevention behaviour, such as condom use. More detail about relationships is presented in the section on MSPs.

Figure 12: Percentage of men and women who expected to have sex again with their partner by relationship type



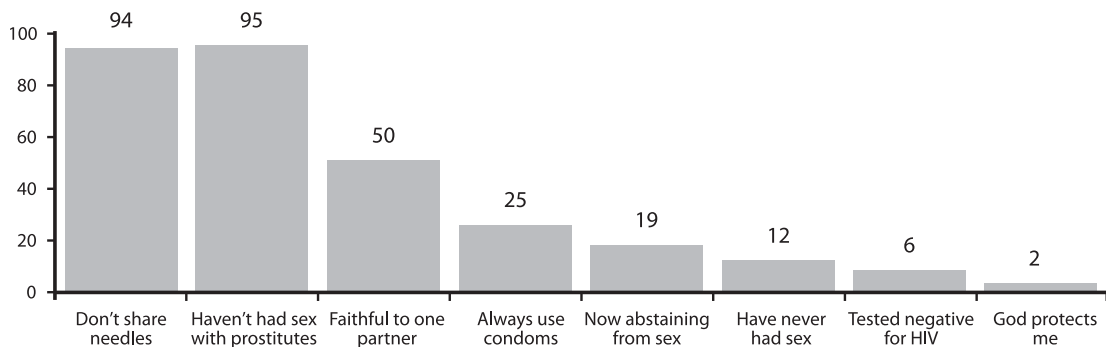
3. Behavioural drivers of the HIV epidemic

3.1. Perceived risk of getting HIV

Peoples’ perceived risk of getting HIV is likely to have an effect on their risk-taking behaviour. In this study, 21% of people - or 5.8 million – believed that they would become infected with HIV. More women (28%) felt that they were likely to get HIV than men (15%). People in their mid-twenties to mid-thirties were also more likely to expect that they would get HIV in the future. Encouragingly, risk perception amongst those with MSPs was high: 31% of people with MSPs said they thought they would become infected with HIV, compared to 24% of people with one sexual partner. This increased risk perception is probably likely due to messaging on the risk of having MSPs in communication programmes.

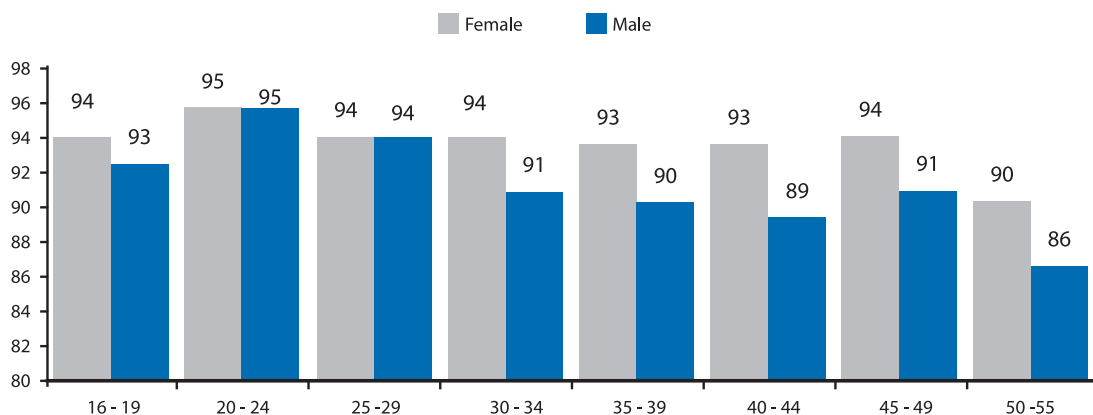
The main reasons for people believing that they were not at risk of getting infected with HIV are shown in *Figure 13*. The most commonly mentioned reasons included not sharing needles and not having sex with sex workers. While these are certainly high-risk behaviours, many of those who focused on them avoided the main drivers of HIV transmission in South Africa – heterosexual sex in the general population. Intravenous drug use and commercial sex work are not common forms of HIV transmission in this country.

Figure 13: Reasons why respondents believed they were not at risk of getting HIV



Some 37% of people believed they were at risk of getting HIV because their partner was unfaithful or had been unfaithful. A high number of both men and women of all ages believed that cheating is pervasive in relationships (*Figure 14*).

Figure 14: Percentage of men and women who believe that cheating is pervasive in relationships



The widespread perception that cheating is pervasive may indicate a concern with the risk involved in having MSPs. However, the perceptions about cheating are not borne out by the data on the number of people with MSPs. HCPs may need to focus on challenging people’s misguided beliefs that cheating is pervasive in relationships.

3.2. Multiple sexual partnerships

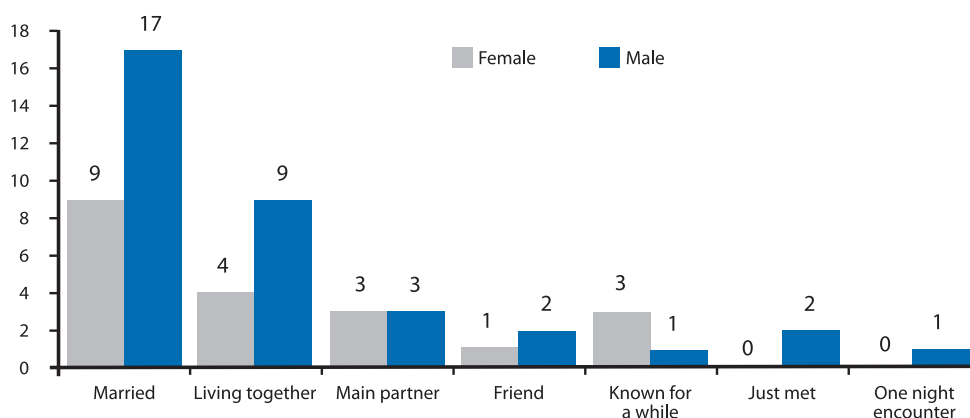
Having MSPs increases the likelihood of an individual being exposed to HIV. This is particularly true in populations where there is a high burden of HIV, such as South Africa. Evidence from Uganda and Zimbabwe shows that partner reduction is associated with declines in new HIV infections. This report measured MSPs which are defined as having more than one sexual partner in a given time period. These relationships may or may not overlap in time. This study reports on MSPs in the past year and in the past month. Further analysis of the data is being conducted, using the sexual calendar in the questionnaire, in order to determine extent of concurrency – that is, the number of overlapping partnerships per individual.

Knowledge of MSPs

Knowledge of the risk of MSPs in relation to HIV transmission was high, with 86% of people agreeing that “having several sexual partners at the same time makes it more likely that you will get HIV”. However, when asked to mention all the ways in which HIV can be prevented, far fewer people *spontaneously* mentioned reducing the number of sexual partners or sticking to one sexual partner.

Less than one in five respondents across all types of relationships spontaneously mentioned being faithful or trusting their partner not to cheat as a way of preventing HIV (Figure 18). The fact that this method is not top of mind for many people probably indicates that messaging on faithfulness has not fully sunk in.

Figure 15: Percentage of men and women who reported preventing HIV through being faithful or trusting their partner not to cheat



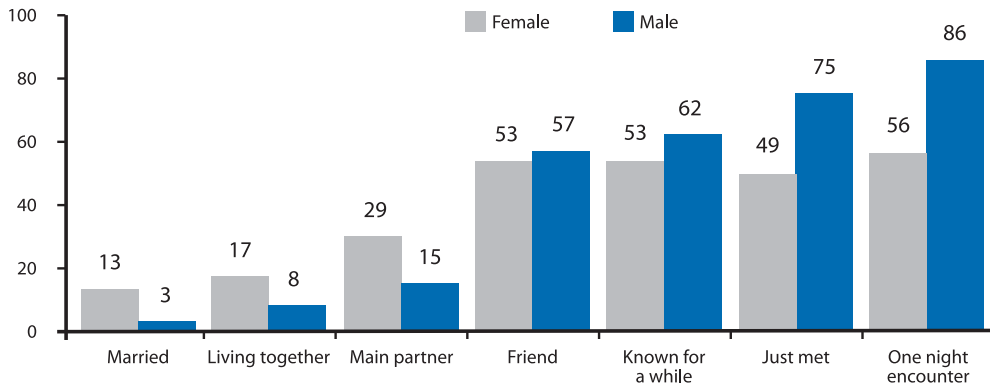
Despite this, the study found that knowledge of faithfulness and partner reduction to reduce HIV risk has increased. Between 2006 and 2009, mention of faithfulness as a means of preventing HIV rose from 26% to 39.1%, while knowledge of partner reduction as a way to reduce the risk of HIV infection increased from 6.7% to 12.2%. This is probably due recent HCPs that have promoted faithfulness and partner reduction as a means of HIV prevention.

Half the respondents agreed that people in their communities were openly talking about the risk of HIV from having sex with more than one partner.

Beliefs about MSP

This study asked people whether they thought that their partners had other sexual partners. People in casual relationships were more likely to believe that this was the situation. In casual relationships, men were more likely than women to believe that their partners had other partners. In stable relationships, women were more likely than men to believe that their partners had other partners.

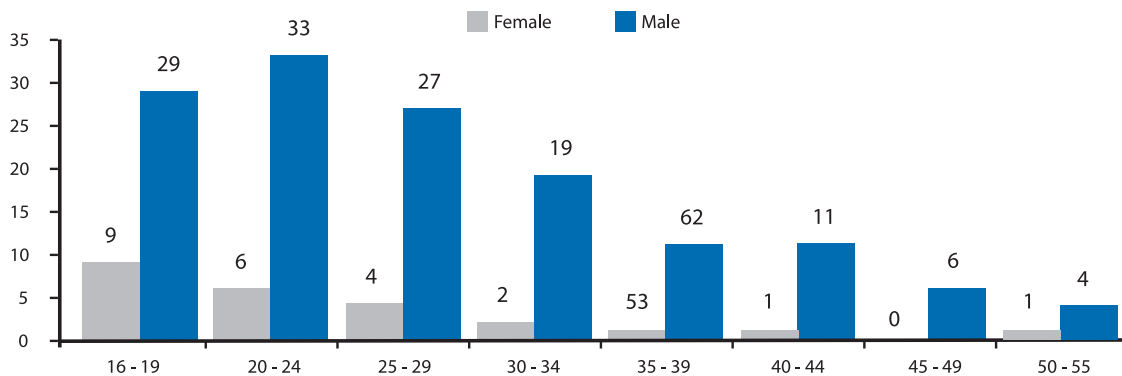
Figure 16: Percentage of men and women who thought their sexual partner had other partners



Prevalence of MSP

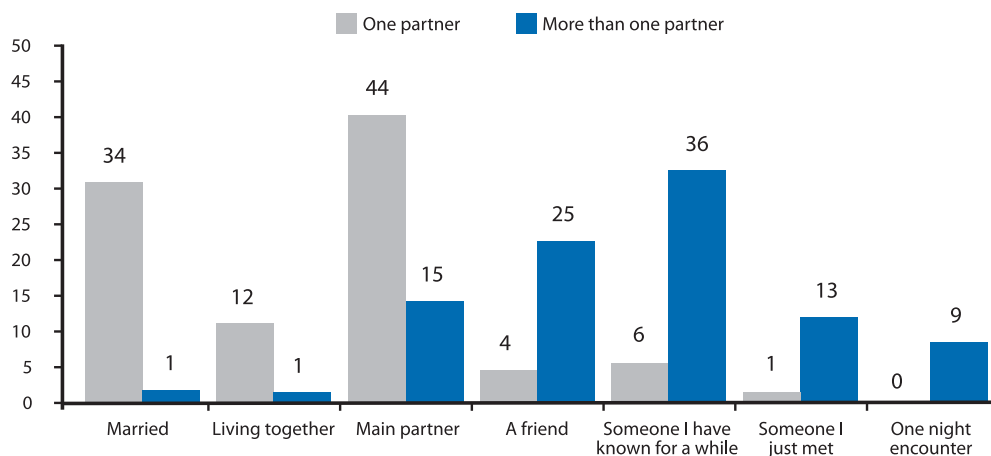
About 11% of sexually active respondents aged 16-55 years reported having had MSPs in the past year. Men were more likely than women to have had multiple partners in the past year. This was true across all age groups. Young men and women were more likely to report having MSPs than somewhat older men and women. A third of young men aged 20-24 years and one out of 10 young women aged 16-19 years reported having MSPs in the past year. This needs to be seen in a context where many people below the age of 30 years describe themselves as single and not in stable relationships.

Figure 17: Percentage of men and women who had more than one sexual partner in the past year



This study found that people who were in less stable relationships (one night encounter, just met, friend and known for a while) were more likely to report having more than one sexual partner than people in more stable relationships (married, living together, main partner).

Figure 18: Percentage of people with one or more partner by relationship type



Between 2006 and 2009 there was an encouraging reduction in the number of people reporting MSPs in the past year. This was apparent in both men and women, as can be seen in *Table 6*.

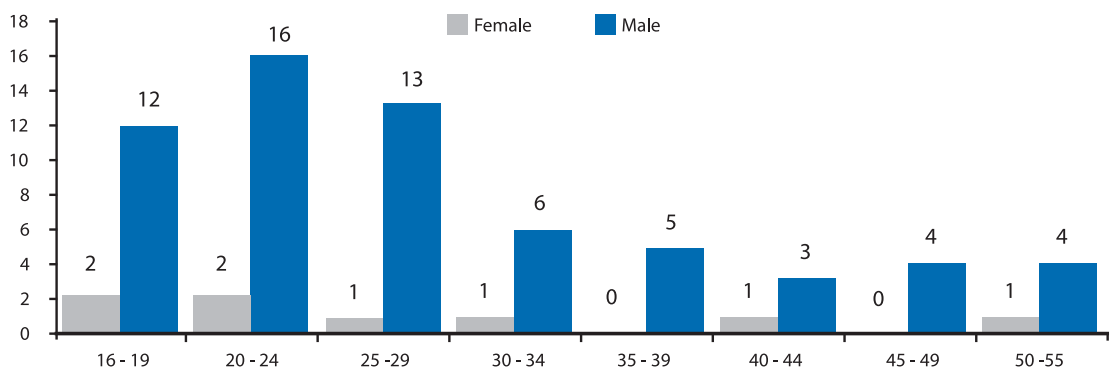
Table 5: Percentage of men and women who had more than one sexual partner in the past year in 2006 and 2009

	2006	2009
Males	25.9 (95% CI 21.6 - 28.6)	20.1 (95% CI 20.0 - 20.1)
Females	7.2 (95% CI 3.7 - 11.9)	3.0 (95% CI 2.9 - 3.1)
Total	16.5 (95% CI 13.6 - 18.9)	11.4 (95% CI 11.4 - 11.5)

There was no significant reduction in the reported number of MSPs amongst young men in the 16-24 year age group: in 2006 the figure was 33% and in 2009 it was 31%. However, there was an encouraging reduction for young women – from 12% in 2006 to 7% in 2009. Once again, this needs to be seen in a situation where an unusually low number of young people marry or form stable relationships.

Participants were much less likely to report having MSPs during the last month than during the course of the last year. Between 12% and 16% of sexually active young men aged 16-29 years reported having two or more partners in the past month (*Figure 19*).

Figure 19: Percentage of men and women with more than one partner in the past month

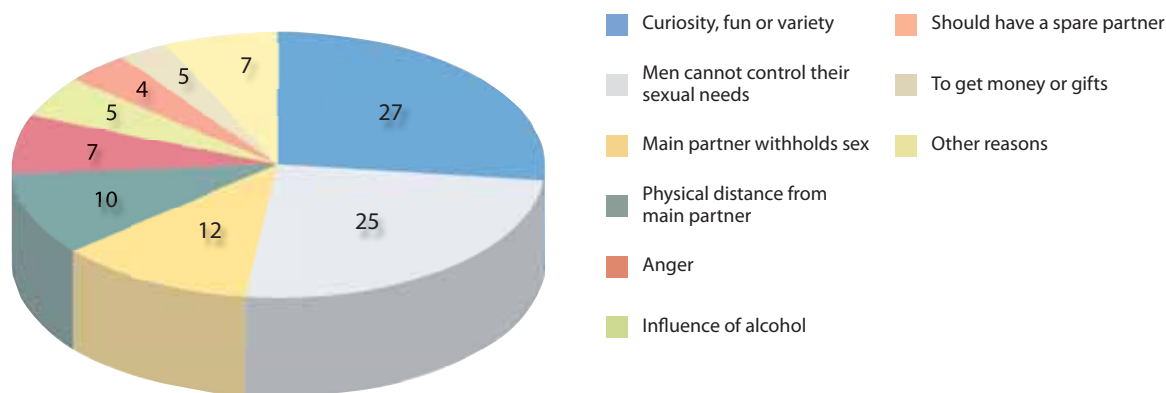


Over a three-year period there was no significant change in the number of people who reported having MSPs in the past month. In 2006, 5.4% of participants reported having MSPs in the past month, compared to 4.9% in 2009.

Perceived reasons why people have MSPs

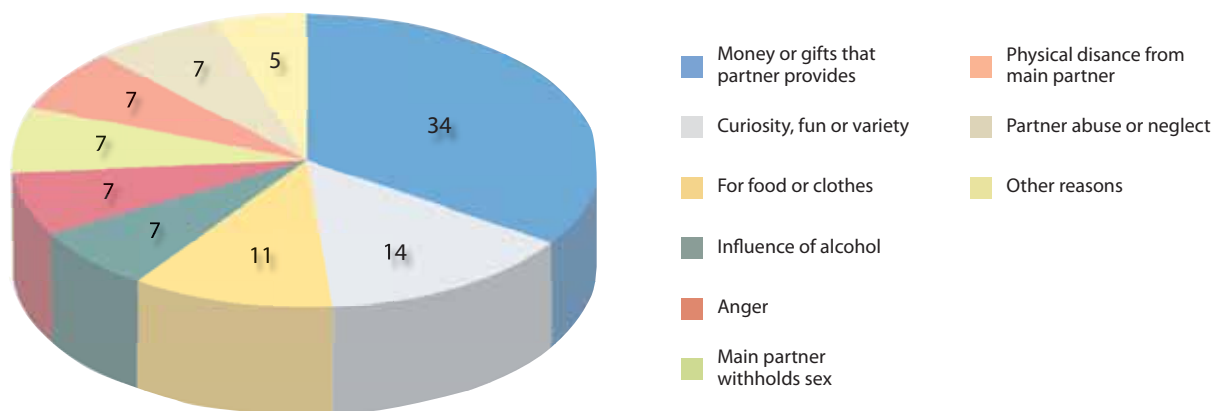
People were asked why they thought that men and women would have more than one sexual partner. The most commonly mentioned reasons for men having MSPs were “curiosity, fun or variety” (27%) and “cannot control their sexual urges” (25%). The next two most cited reasons were that the “main partner withholds sex” and there was “physical distance from their main partner”.

Figure 20: Percentage of people mentioning different reasons why men have more than one sexual partner



Reasons for women having more than one sexual partner included: "money or gifts that their sexual partner provides" (34%), "curiosity, fun or variety" (14%), "food or clothes" (11%), and the influence of alcohol (7%).

Figure 21: Percentage of people mentioning different reasons why women have more than one sexual partner



The perceived reasons for having multiple partners were very different for men and women. People thought that men were more likely to have MSPs in order to satisfy their sexual needs and wants. On the other hand, they perceived that women would have MSPs to fulfil material and security needs, such as food, clothing and family support.

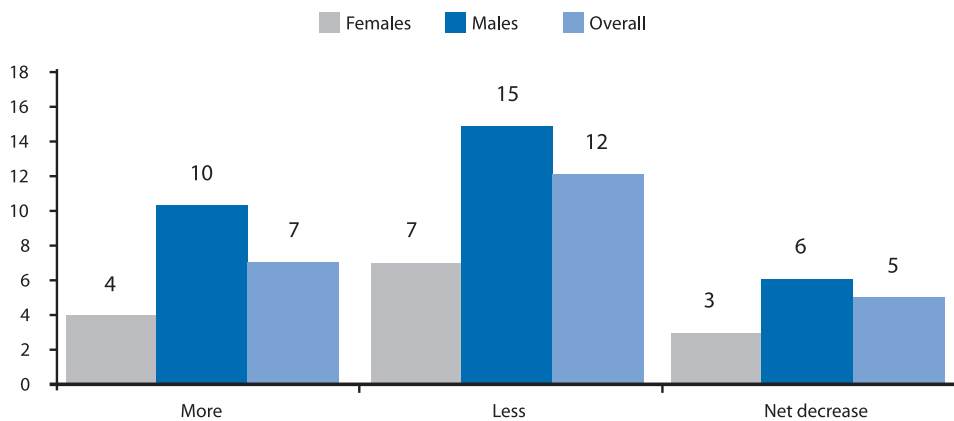
Impact of communication programmes

The signs are encouraging in terms of increased knowledge about the link between HIV infection-risk and multiple partners and in terms of changes in related behaviour, which is reflected in decreasing numbers of people with MSPs between 2006 and 2009. Most HCPs in this study placed an emphasis on the risk of MSPs and promoted partner reduction. They may be partly responsible for the positive trends in this area of HIV prevention.

However, the analysis found no statistically significant relationship between exposure to HCPs and the practice of faithfulness or the proportion of participants who had MSPs in the last 12 months. When the questions focused more specifically on reports of partner reduction, there was some statistical evidence that *single women* may be taking action as a result exposure to HCPs.

Respondents were asked if they had about the same, more, or fewer sexual partners during the previous year. Overall, 11.5% percent said that they had fewer sexual partners (15.3% among men and 7.3% among women). This reduction was partly off-set by 7% saying they had more sexual partners. But there was still a net decline in sexual partners of 4.5% for both sexes. When this figure was broken down by sex, the net reduction for men was 5.8% and for women 3%.

Figure 22: Self-reported change in number of partners compared to one year ago among single men and women (weighted)



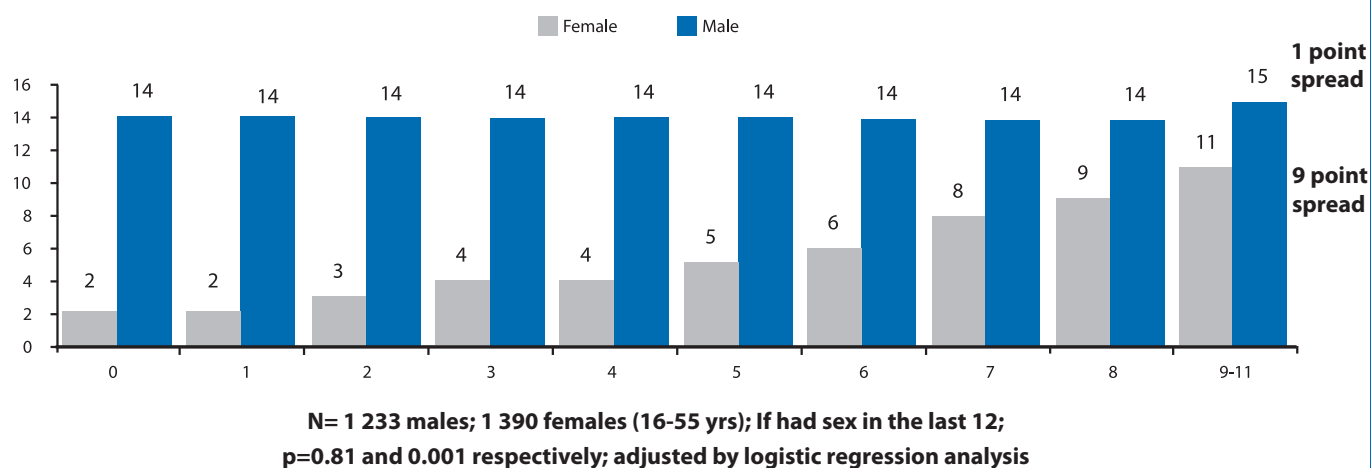
N = 1370 males; 1444 females who had sex in the last 12 months; p<0.01

Multinomial logistic regression was performed on this outcome (more, fewer or the same number of sexual partners). Exposure to HCPs was found to make no statistically significant difference in terms of having more or fewer sexual partners than the year before.

The same analysis was then run separately for single men and single women, on the assumption that the change in partner numbers might affect them more than married respondents. No significant impact was found for single men, *but HCPS showed a statistically significant effect on single women*. The percentage of single women reporting fewer sexual partners in the last 12 months increased in accordance with the number of communication programmes that they had seen or heard during that period. Exposure to communication showed no significant relationship with having more sexual partners for either men or women.

To obtain the adjusted level, logistic regression was used to recalculate the effect of communication exposure on single men and women, respectively, in terms of having fewer sexual partners rather than retaining the same number. As the results show in *Figure 23*, the percentage of single men who reported fewer sexual partners than a year ago does not vary by level of communication exposure. The one percentage point spread is not statistically significant. In contrast, there is noticeable dose response observed for single women; the spread is 9.4 percentage points, from 1.9% for women with no exposure to 11.3% for those exposed to nine or more programmes.

Figure 23: Percentage of single men and women who reported fewer sexual partners compared to one year ago by exposure to communication



These results suggest that some positive change may be starting to happen, but further research is required to reach any definite conclusions. The number of sexual partners and the reduction in numbers need to be tracked over a longer period to determine if change is actually occurring and if this can be attributed to communication interventions.

This study found that there was a significant association between HCPs and the number of single women reporting MSPs. However, the analysis clearly indicates that men aged 20-29 years and older men are more likely to have MSPs than women. It is important for HCPs to find innovative ways to strengthen messaging on MSPs so that resonates particularly with men. The development of male-friendly services should also receive serious attention.

The predictors for individuals having MSPs are shown in *Box 6 below*.



Box 6: Predictors of multiple sexual partners in the past 12 months

MSPs were more likely occur among:

- Men.
- Single people.
- People under the age of 35 years.
- Those with secondary and tertiary education.
- Those experiencing a high degree of poverty.
- Those with tolerant attitudes to MCPs.
- People who indulge in medium to heavy drinking, especially in shebeens.
- Residents of KwaZulu-Natal rather than any other province.

MSPs were less likely to occur:

- In the Indian and white populations.
- In urban informal areas, tribal settlements and farming areas.

3.3. Correct and consistent condom use

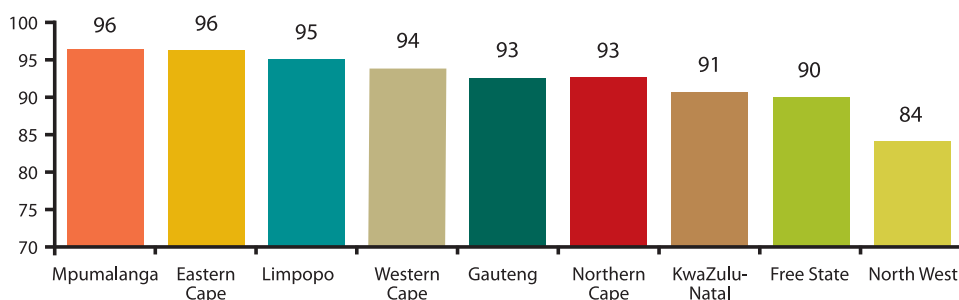
Correct and consistent condom use is an important means of preventing HIV infection, as well as preventing other sexually transmitted infections (STIs) and unwanted pregnancies, and has been an important component of health campaigns in South Africa.

Knowledge of condom use

Knowledge of the importance of condoms as an HIV prevention measure was very high in South Africa. The method was spontaneously mentioned by 85% of people when asked to name all the ways they knew HIV could be prevented. This finding should be seen in the light of two decades of intense promotion of condom use as the primary method of HIV prevention and reflects, among other things, the relative success of such HCPs.

The overwhelming majority (93%) of respondents, when prompted, agreed that “In order to prevent getting HIV you have to use a condom every time that you have sex with someone”. However, in North West province, far fewer people agreed with this statement (*Figure 24*), a finding that may require further investigation.

Figure 24: Percentage of respondents agreeing that one has to use a condom consistently in order to prevent HIV infection



This study concludes that there were very high levels of awareness of the availability of Choice™ condoms but significant doubts about the effectiveness of this brand of condom. Only one third of respondents said they trusted Choice™ condoms very much or completely to prevent HIV infection. It is evident that there was a very high level of brand awareness of Choice™ condoms but there is a need for HCP programmes increase public confidence in the brand. This could be done by highlighting the stringent quality testing applied to Choice™ condoms.

Condom usage

Forty percent of sexually active respondents said that they used a condom to prevent HIV at last sex. This represents a slight decrease compared with the 2006 data. This may be as a result of more people practising faithfulness or partner reduction (See Annexure 2). While the small downward shift does not represent a trend, this indicator needs to be continually monitored over time. It suggests the need for communication campaigns not only to deal with a range of prevention methods but to emphasise the need to combine prevention methods for the best outcome. It would be extremely unfortunate if gains in condom use were to be eroded by people – erroneously – trading off one prevention method against another. The risks are readily apparent in the context of low rates of stable relationships amongst sexually active South Africans. If male circumcision is added to the current set of prevention behaviours, then this issue will become even more important in the future.

Despite this small dip, condom use amongst sexually active young people (16-24 years) remained encouragingly high at 63%. Young men in particular were likely to report using a condom at last sex to prevent HIV infection.

This study found that there is a persistent generational gap in condom usage between younger and older men. This is likely to be due to older men being in more stable relationships and therefore perceiving themselves at a lower risk of HIV infection compared to younger men. Condom usage was higher among women under the age of 30 years than among women over this age, although not as high as for young men. Despite the fact that many women in stable relationships believed that their partners had other partners, condom use was low among women over the age of 30.

Figure 25: Percentage of sexually active men and women who used a condom at last sex by age

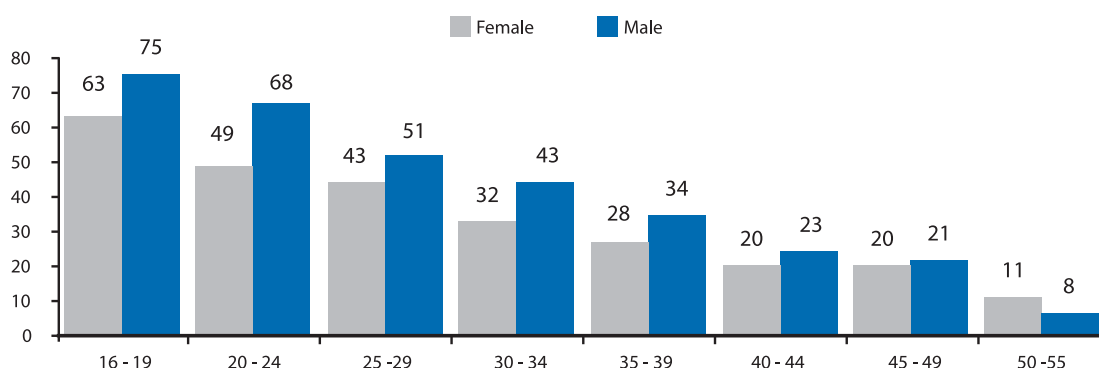
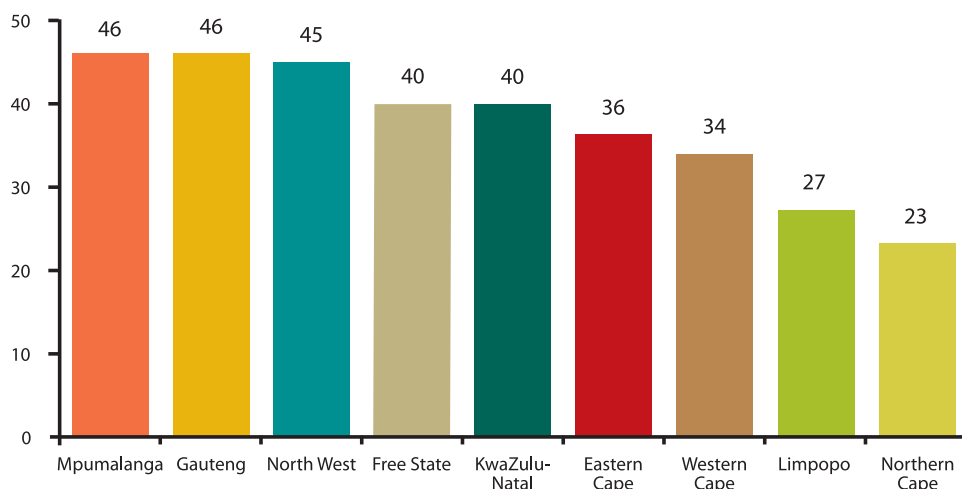


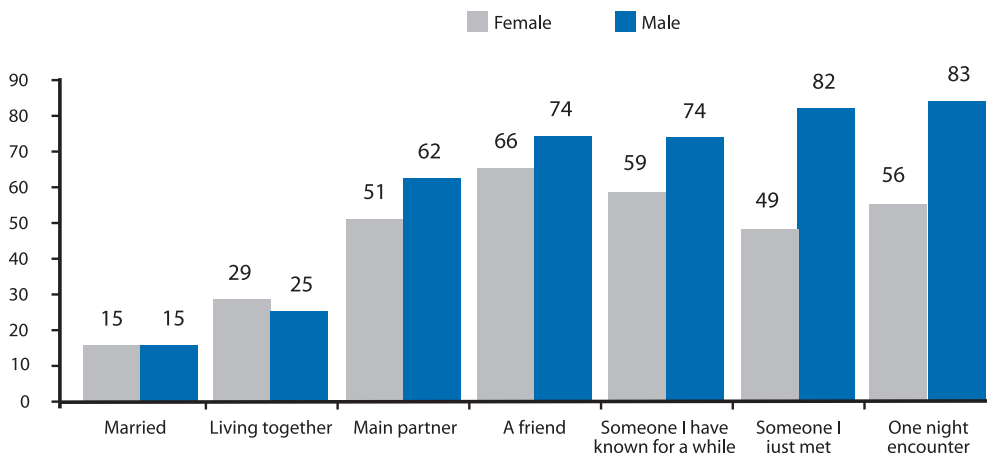
Figure 26 shows that condom use at last sex differed significantly by province. Condom use was highest in Mpumalanga and North West at 46% and lowest in the Western Cape and Northern Cape. Even though the Western Cape and Northern Cape have lower levels of HIV infection, HCP programmes in these provinces need to promote condom usage powerfully if they are to sustain these relatively low levels of HIV, reduce the incidence of other STIs and lower teenage pregnancy rates.

Figure 26: Percentage of sexually active respondents who used a condom at last sex by province



The sexual calendar used in the survey provided information about patterns of condom use with different kinds of sexual partners. In the last year, about 43% of all participants and 66% of young people (16-24 years) used a condom at last sex across all types of partner. But condoms were clearly used more frequently in less stable relationships, where people were more likely to perceive themselves as vulnerable to HIV, STIs and unwanted pregnancies, than in steady or longer-term relationships (Figure 27).

Figure 27: Percentage of sexually active respondents who used a condom at last sex by relationship type

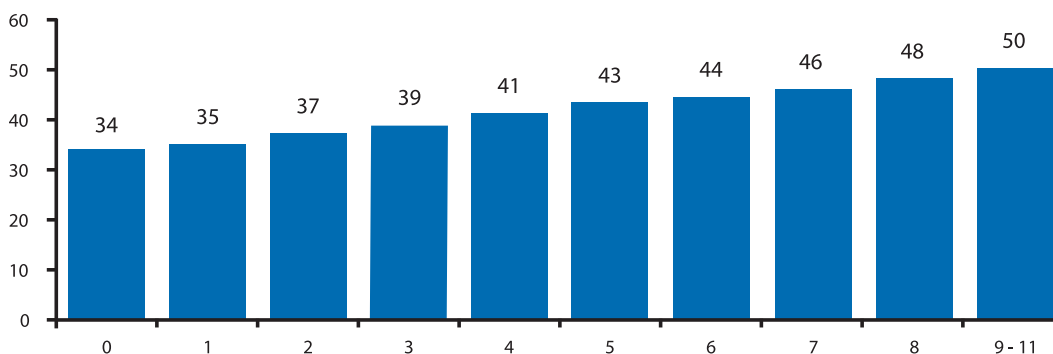


HCPs dealing with condom use have been effective in reaching younger people and now need to focus on encouraging continued condom usage among older adults who are at risk. Communication interventions in the future also need to find innovative ways to address the challenge of increasing condom use among young women. Although knowledge of condoms as a method of HIV prevention is very high in South Africa, it is evident that more nuanced communication is needed to begin to overcome the barriers to achieving high levels of condom use across the sexually active population – barriers that are often linked to entrenched gender disparities. This implies that new HCPs that facilitate condom self-efficacy and negotiating skills among young women and that increase men’s willingness to accept women’s insistence on condom use are needed.

Impact of HCPs on condom use

This study found that condom use was more likely to increase when there was greater exposure to HCPs. Condom use increased monotonically from 34% for those with no exposure to HCPs to a high of 50% for those exposed to 9-11 programmes. This represents a 17 percentage point spread by level of exposure and the monotonic nature of the increase is strongly suggestive of a causal relationship between communication and behaviour.

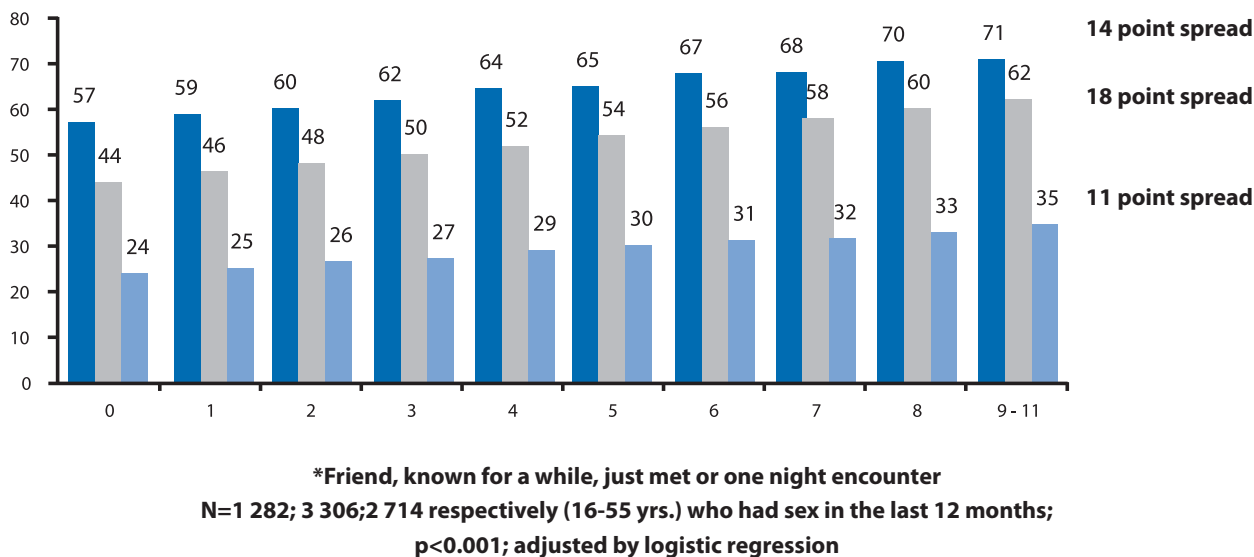
Figure 28: Percentage condom use with at least one partner in the last 12 months by the level of exposure to eleven HCP



**N=6 794 (16-55yrs) if had sex in the last 12 months
P<0.001; adjusted by logistic regression analysis
R2 =0.15; goodness of fit, Chi2=0.32; 70% correctly predicted)**

The study shows that condom use increased monotonically in relation to HCP exposure across three main types of relationship (Figure 29). The highest level of condom use was reported by those with casual partners, where it ranged across 14 percentage points, from 57% to 71%. Among respondents with main partners, condom use increased, along with HCP exposure, from 44% to 62% (an 18-point spread) while those who were married or living together had a condom use rate of 24% to 35%, depending on their exposure to HCPs.

Figure 29: Percentage condom use by type of sexual partner in the last 12 months by level of recall of HCP



The predictors of condom use are shown in Box 7 below.

Box 7: Predictors of condom use

Condom use was found to be more likely among those who were:

- Exposed to a greater number of HCPs.
- Men rather than women.
- In younger age groups rather than older ones.
- Single rather than married or formerly married.
- Relatively better educated – that is, at least some high school education.
- Studying rather than unemployed.
- African rather than coloured, Indian and white.
- Living in urban formal areas rather than farming and tribal areas.
- Living in Gauteng, Limpopo, Mpumalanga and North West, rather than the Western Cape.

3.4. Intergenerational sex

In this study, intergenerational sex was defined as having at least one sexual partner who was five years older or younger than the respondent.

This study found that men aged 30 years and older were more likely than younger men to have a sexual partner who was five or more years younger than themselves. Conversely, women aged 16–24 years were more likely than older women to report having a partner who was five or more years older than themselves.

Intergenerational sex was found to be more prevalent amongst the African population (47%), those with low socio-economic status (50%), and those with no education beyond primary school (55%). Prevalence of intergenerational sex was higher among those who reported being currently employed (49%), than among unemployed participants.

Figure 30: Percentage of respondents reporting intergenerational sex by age

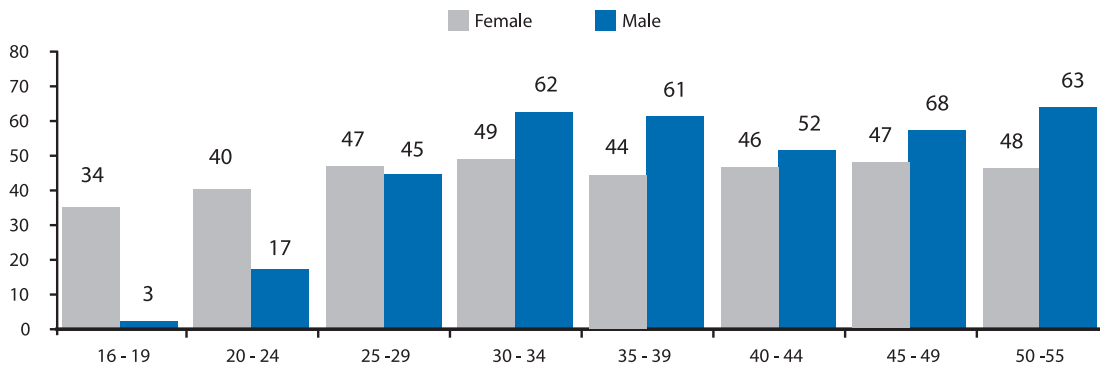
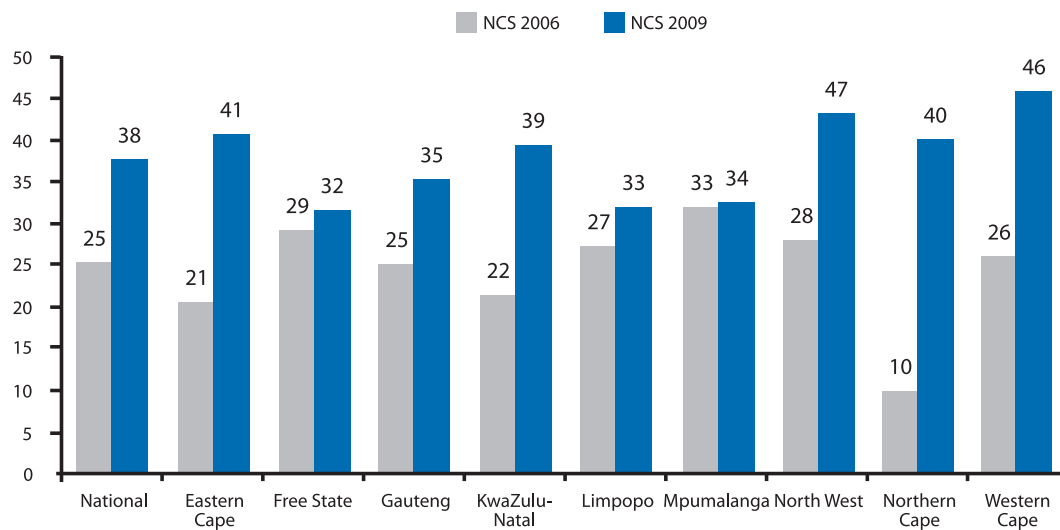


Figure 31 shows the percentage of women aged 16-24 years in each province who reported having sexual relationships with men at least five years older than them. In 2009, North West had the highest percentage of young women with partners five or more years older than themselves (47%). Since 2006, the largest increase in intergenerational sex (30%) appears to have been in the Northern Cape. However, there appears to have been an increase in the number of women with older sexual partners in all provinces. This finding may require further investigation to establish the nature of these relationships and the reasons for their increase.

Figure 31: Percentage of young women aged 16-24 years reporting intergenerational sex by province



The high percentage of women aged 16-24 years in relationships with men five or more years older than them is cause for concern. This situation clearly exposes the women to a much greater HIV risk than they would encounter in sex with men of their own age, among whom HIV prevalence is considerably lower and condom use generally higher. HCPs need to highlight the risks of these relationships to young women in a way that focuses on the health issues and avoids moralising.

3.5. Transactional sex

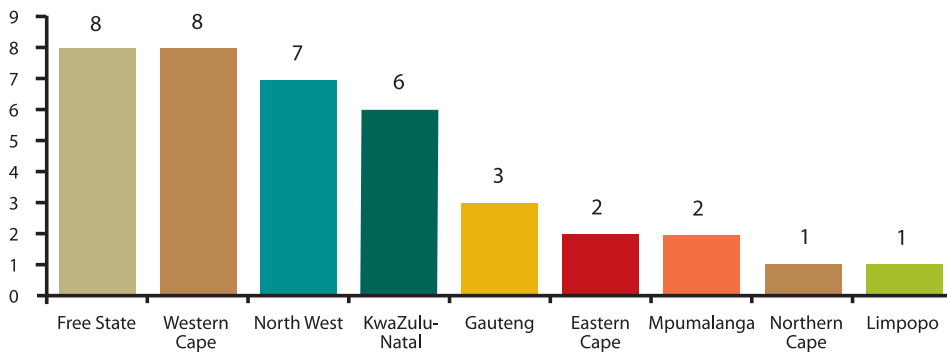
In the present study transactional sex was defined as providing or receiving sex in exchange for money or gifts.

Four percent of all relationships conducted by survey participants over the last year featured the *provision* of sex in return for money or goods. Three percent involved *receiving* sex in exchange for goods or money. Some people reported giving money in exchange for sex *as well as* receiving money in exchange for sex – often in the same relationship. So the transactions that were reported did not conform to the pattern of commercial sex work, and the power imbalances typically associated with transactional sex were often absent.

Some patterns emerged when looking at the data generated by using the sexual calendar. Transactional sex was more prevalent in less stable relationships than in stable relationships. In one-night encounters, 14% of men provided money in exchange for sex while 11% of women provided sex in exchange for money.

People in the Western Cape, Free State and North West were more likely to report being involved in transactional sex than residents of other provinces.

Figure 32: Percentage of people involved in transactional sex by province



This study found that significantly more employed people (6%) were involved in transactional sex in the past year than unemployed people and students (3%). This may reflect both the higher disposable income available to those who are employed and the material needs of those who are unemployed or students.

3.6. Alcohol

Consumption of alcohol may influence decision-making and result in behavioural disinhibition that increases the individual's risk of HIV infection.

Perceptions of alcohol

Half the participants in this study thought that if they or their partner had had too much to drink they would not care about getting HIV. This finding indicates that a large number of people were aware of the relationship between alcohol and risky sexual behaviour.

Significantly more men than women – nearly seven out of 10 - felt that it was easier to have sex with people who frequent places where alcohol is served.

Table 6: Percentage of respondents agreeing with various statements concerning alcohol use and HIV and AIDS

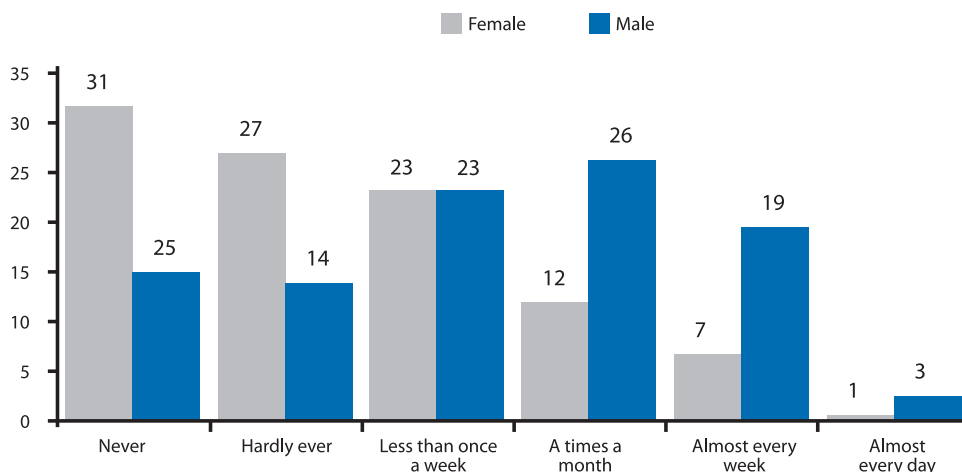
Percentage agreeing with statement	Females	Males	Total	P-value
If you and your sex partner have too much to drink, neither one of you will care about getting HIV	50.1	51.3	50.6	0.52
It's a lot easier to have sex with people who go to clubs/shebeens	56.8	68.0	62.1	0.00

Alcohol use

Some 33% of women reported ever having an alcoholic drink compared to 57% of men. Ever drinking alcohol was highest amongst whites (72%), followed by coloureds (58%), Africans (40%) and Indians (26%). In KwaZulu-Natal only 32% reported ever drinking compared with 57% in Gauteng.

This study investigated the extent to which people consumed high levels of alcohol - defined as five or more drinks in one sitting for men, and four or more drinks on one occasion for women. Of those who consumed alcohol, many men (and women) often drank heavily (Figure 33).

Figure 33: Percentage of men and women drinking heavily on one occasion in the past month



Men were more like than women to have visited a place where alcohol was served in the past month (31% and 7%, respectively). More employed people reported having visited a place where alcohol was served (22%) than people who were unemployed (17%) or students (18%). Visiting a place where alcohol was served was highest in Gauteng (23%) and the Northern Cape (23%) and lowest in KwaZulu-Natal (15%) and the Eastern Cape (16%).

Alcohol use and sex

Of all respondents, 7% said that the last time that they went to a place serving alcohol they had sex with a person whom they met there for the first time.

This study looked at alcohol use with all sexual partners in the past year. About 43% of men who described a relationship as a one night encounter said they had had too much to drink at the time they had sex, and 37% said their partner had had too much to drink. These figures were lower for both men and women in more stable relationships.

Figure 34: Percentage of men reporting that they and/or their partner had too much to drink when they had sex

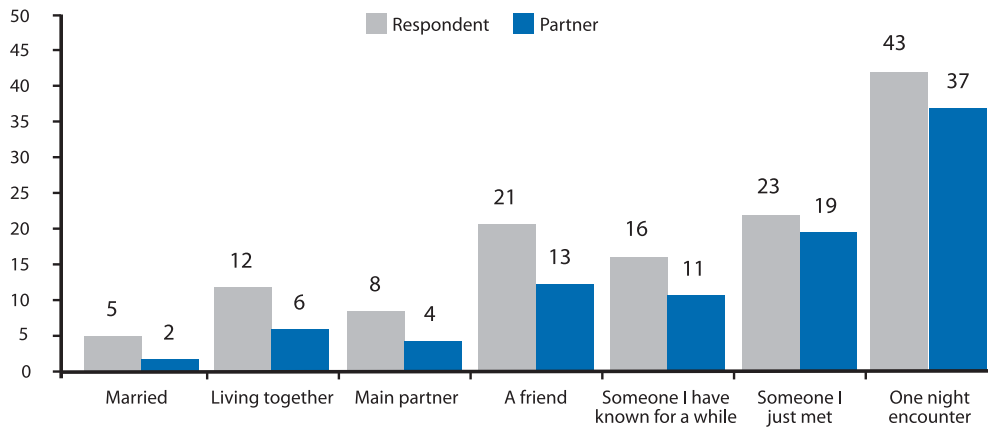
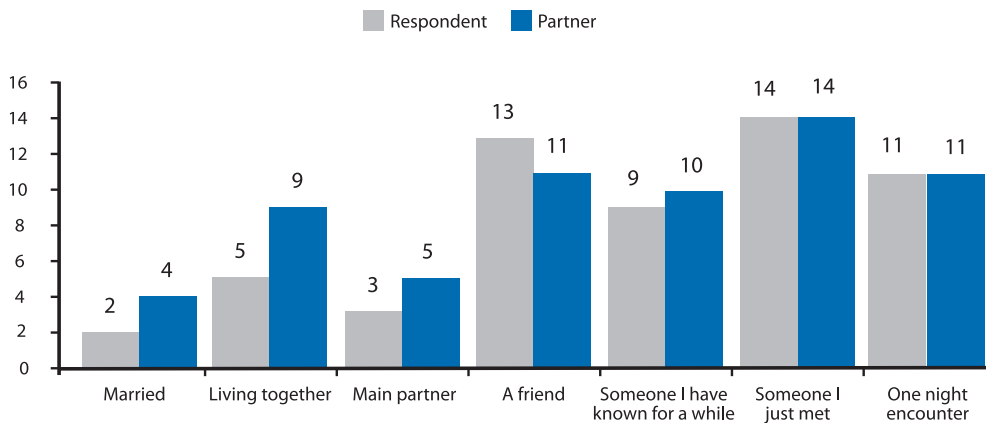


Figure 35: Percentage of women reporting that they and/or their partner had too much to drink when they had sex



Men were more likely to drink alcohol heavily often and to report engaging in sex when they and/or their partner had had too much to drink, especially in less stable relationships. HCPs should focus on addressing the link between alcohol and risky sexual behaviour and should focus on men particularly.

3.7. Delaying sexual debut

Delaying the age at which people start to have sex, together with reducing the numbers of partners and increasing condom use from the point of first sex is critical in reducing new HIV infections. The analysis presented here was restricted to young people aged 16-24 years old.

Knowledge and perceptions of delaying sexual debut

This study found that 84% of all young people agreed that if you wait to have sex “you will find the right person for yourself”. Two thirds of young people held the view that delaying sexual debut would not result in them losing most of their friends. As described earlier, however, lasting relationships in terms of marriage and cohabitation are only formed later for many people. Delaying sexual debut may therefore not be a feasible option for young people.

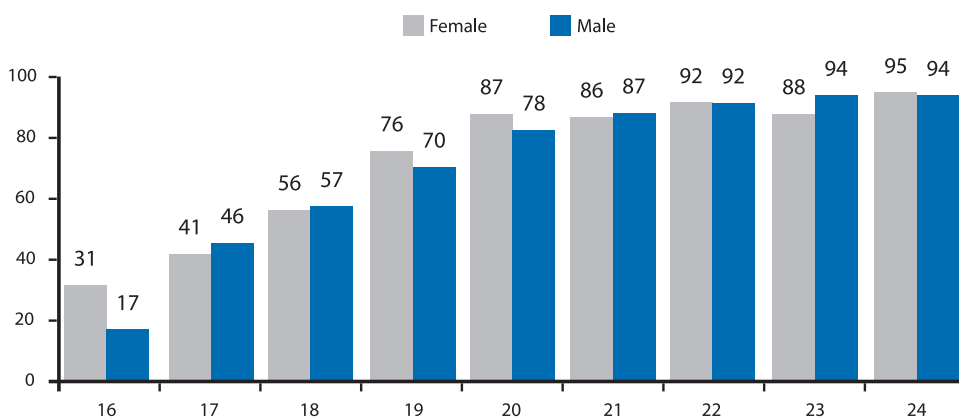
Age of sexual debut

This survey showed that the age of sexual debut for those aged between 16-24 years was at 16.3 years for males and 17.2 years for females. Mean age of sexual debut for young people has not changed since 2006.

Of all the 16-24-year-olds interviewed, 70% had ever had sex. There has been no change in this proportion since 2006 when the figure was 69%.

By 16 years of age, 31% of girls and 17% of boys had ever had sex and by 19 years, 76% of girls and 70% of boys had ever had sex.

Figure 36: Percentage of young men and women who have ever had sex by age



The percentage of young people who had sex before the age of 15 years was similar in 2006 and 2009. In 2006, 11% of young men and 3% of young women reported having had sex before turning 15, while in 2009 these figures were 14% and 5% respectively.

This study found that 8% of men and 4% of women aged 16-19 years had had sex before 15 years while 10% of men and 3% of women aged 20-24 years had had sex before this age. In terms of abstinence, 30% of 16-24 year-olds had never had sex and 20% of 16-24 year-olds had not had sex and in the past 12 months.

A significant number of young women start having sex early. Their particular vulnerability to HIV infection is reflected in the high HIV prevalence among female teenagers compared to males in the same age group.

Impact of HCP

The analysis found no statistically significant relationship between exposure to HCPs and delayed sexual debut.



4. Biomedical drivers of the HIV epidemic

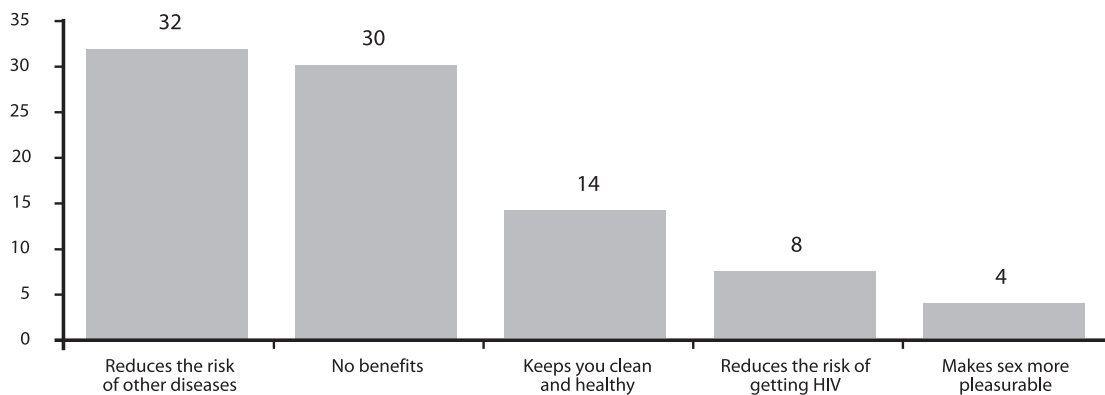
4.1. Male circumcision

Male circumcision is performed for cultural, religious, social and health reasons. Recent studies from South Africa, Uganda and Kenya have indicated that male circumcision reduces the risk of HIV transmission. This study aimed to assess the current knowledge that people have in relation to the risk-reduction benefits of male circumcision and their attitudes towards male circumcision.

Knowledge and perceptions of male circumcision

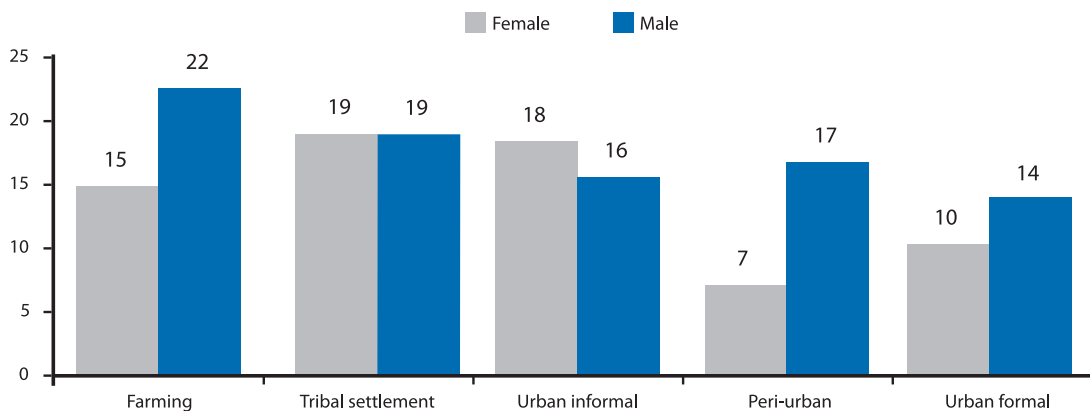
The study found that there were low levels of knowledge about the HIV risk-reduction which male circumcision provides. About a third of the population believed that male circumcision has no benefits and only 10% knew that it reduces the risk of HIV transmission.

Figure 37: Perceived benefits of male circumcision



There did not appear to be potential for high levels of behavioural disinhibition resulting from circumcision. The majority of people indicated that men who are circumcised still need to use condoms. This indicator needs to be tracked over time to monitor for any behavioural disinhibition.

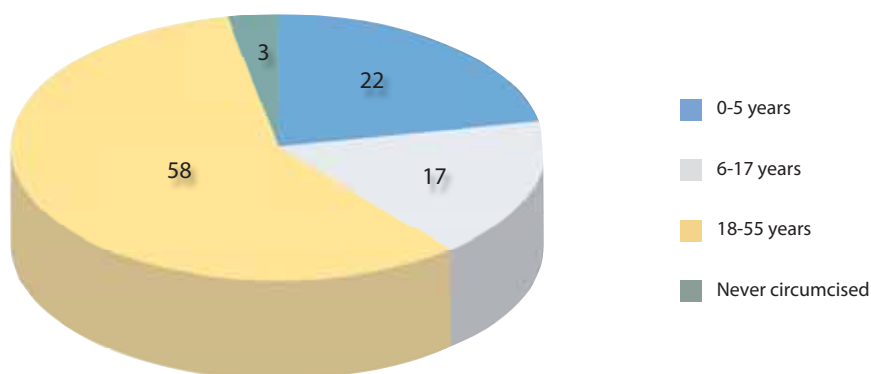
Figure 38: Percentage of men and women believing that men who are circumcised do not need to use a condom by settlement type



Prevalence of male circumcision

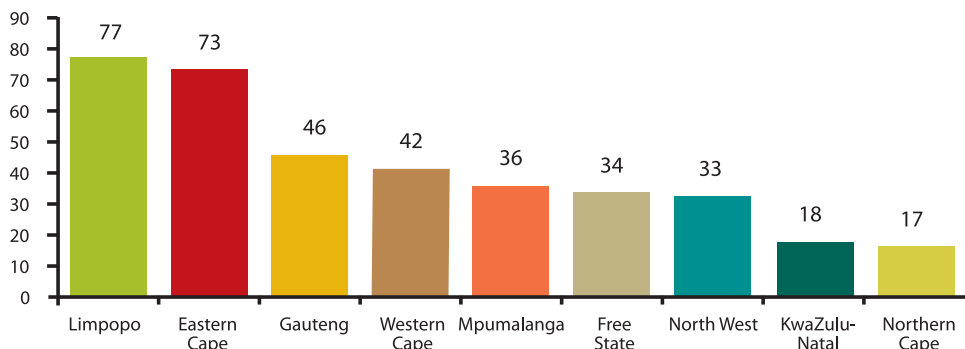
This study asked men whether they were circumcised or not. No distinction was made between medical and other methods of circumcision. Nationally, 42% of men aged 16-55 years reported they had been circumcised. However, only 25% had been circumcised before the age of 18 years (Figure 39). Since the mean age of sexual debut is around 17 years of age for men, at least two thirds of those who reported they were circumcised may have undergone circumcision only after becoming sexually active. Therefore they may not have received the HIV risk-reduction benefits associated with circumcision as they could already have been exposed to HIV infection.

Figure 39: Prevalence of circumcision amongst men and age at circumcision



Rates of male circumcision varied by province. Limpopo (77%) and the Eastern Cape (73%) had the highest levels of male circumcision, probably due to prevailing cultural practices.

Figure 40: Percentage of men who are circumcised by province



This study found that there were low levels of knowledge about male circumcision’s relationship to HIV risk-reduction. As the national male circumcision programme rolls out there is a need to increase awareness levels about this and to promote the practice while at the same time reinforcing partner reduction and correct and consistent condom usage.

4.2. Prevention of mother-to-child transmission of HIV

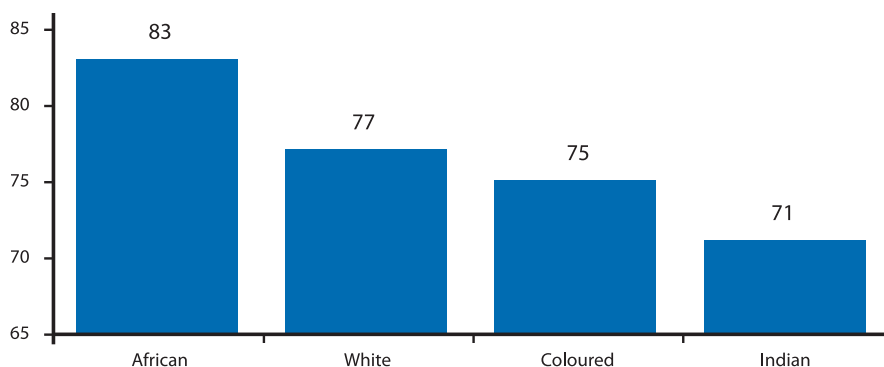
HCPs focus mainly on increasing knowledge of PMTCT.

This study found that the majority (81%) of the population knew that a woman with HIV can transmit the virus to her baby through breastfeeding. More women (83%) than men (78%) correctly identified this statement as true.

Residents of the North West and the Western Cape had significantly lower knowledge of this than those of other provinces.

Of all population groups, Africans had the highest knowledge of the fact that HIV can be transmitted through breast milk (Figure 41)

Figure 41: Percentage of respondents who knew that HIV can be transmitted through breast milk by race



Participants were asked to name all the ways to prevent an HIV positive mother or pregnant woman from passing the virus on to her child. Spontaneous mention of infant feeding options was very low. Furthermore, far fewer people were aware of the benefits of exclusive breastfeeding than were aware of formula feeding as preventive measure (Table 7).

Table 7: Percentage of people knowing that formula feeding and exclusive breastfeeding can prevent MTCT

	Males	Females	Total
Formula feeding	10.5	19.1	14.9
Exclusive breastfeeding	1.1	2.2	1.7

There is clearly considerable room to improve knowledge of PMTCT in general and particularly in relation to safer feeding practices. This is a critical area of communication as new infections among babies are almost entirely preventable, particularly with government’s introduction of an improved PMTCT regimen and earlier initiation of antiretroviral treatment for pregnant women.



5. HIV counselling and testing

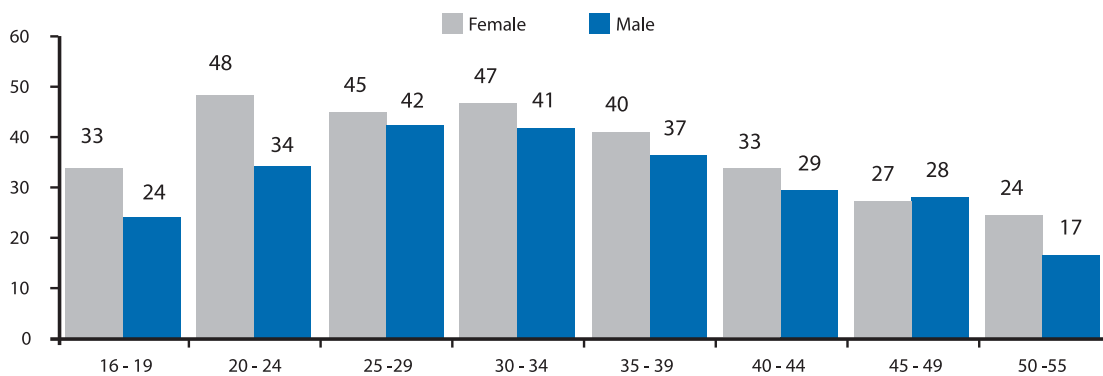
HCT services have long been regarded as a critical bridge between HIV prevention, and care and support services. This study explored the extent to which people discussed HIV testing with their friends and sexual partners and whether they had been tested for HIV, ever and in the past year. It was found that people exposed to HCPs were more likely to have shared information about their HIV status with their sexual partner.

Discussion of HCT with friends and sexual partners

The content of many of the communication programmes is designed to encourage the audience to discuss getting tested with their sexual partners as well as encouraging them to visit a health centre to get tested. Discussions about HIV testing are assumed to increase the likelihood of people actually getting tested.

This study found that 50% of South Africans had at some stage discussed testing with their friends. Women were more likely to have discussed HCT with their friends than men were. Younger women, particularly those aged 20-24 years, were more likely to discuss HCT with their friends than older women were (Figure 42).

Figure 42: Percentage of men and women who discussed HIV testing with any of their friends by age

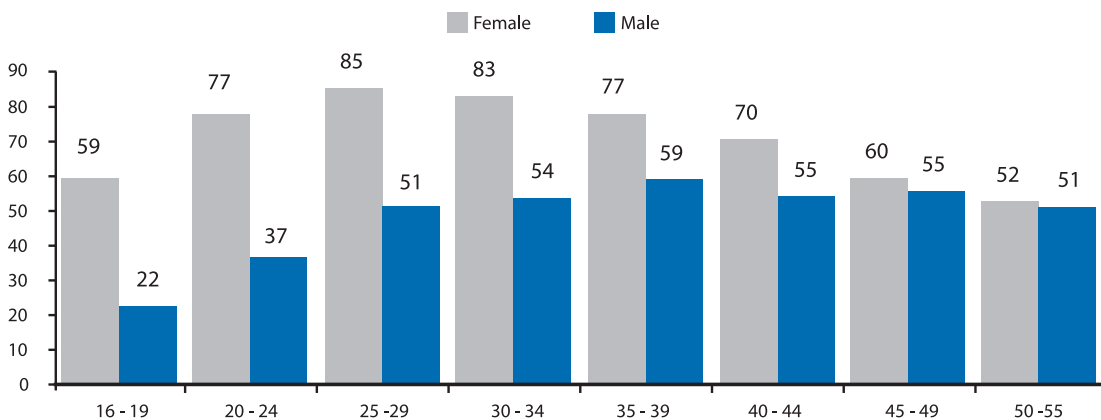


The study confirmed that, when controlling for other factors, people who discussed HIV testing with their friends or sexual partners were, indeed, more likely to have undergone testing in the past 12 months.

Ever tested for HIV and tested in the past 12 months

This study found that 61% of sexually active people had ever tested for HIV. Women were more likely to test than men (74% as compared to 48%). The difference in HIV testing between men and women is probably due to women undergoing routine testing during pregnancy. Men are generally less likely to access health services and this may also be a contributing factor (Figure 43).

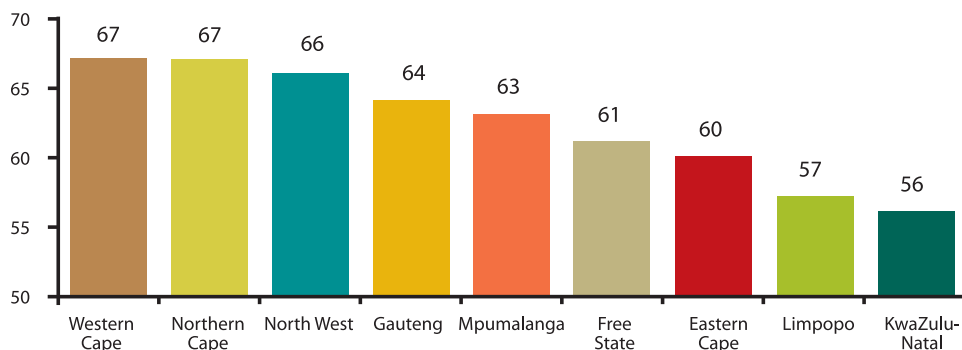
Figure 43: Percentage of men and women ever tested for HIV by age



Eight out of 10 participants with tertiary education had ever tested for HIV, compared to 49% of those who had only primary school education.

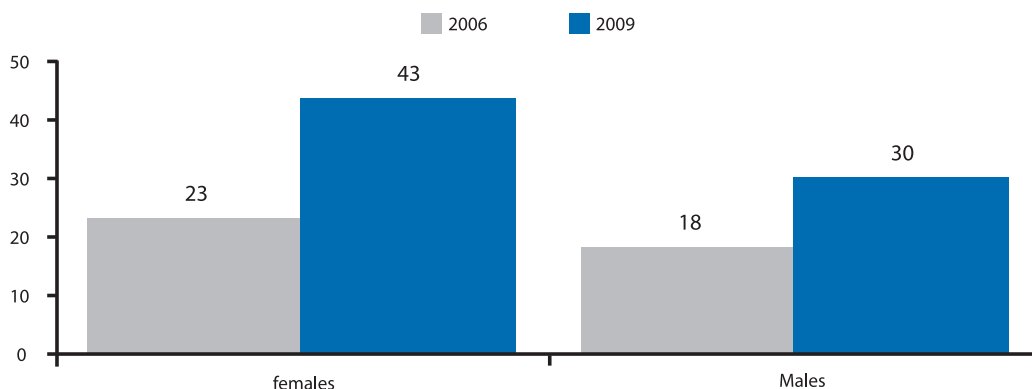
Africans were less likely to have ever tested for HIV (59%) than whites (78%), Indians (67%) and coloureds (66%). Rates of testing also differed significantly by province, with the highest rates recorded in the Western Cape and Northern Cape (67%) - provinces with the lowest HIV prevalence. KwaZulu-Natal, which has the highest HIV prevalence, had the lowest testing rate at 56% (Figure 44).

Figure 44: Percentage of people who have ever tested for HIV by province



The proportion of all sexually active people who had gone for an HIV test in the preceding 12 months was 37%. Sexually active women were more likely to have had an HIV test in the last year than sexually active men. The survey results suggest that, in 2009, a total of 2.9 million men and 4.3 million women nationwide took an HIV test (Figure 45).

Figure 45: Percentage of men and women who have been tested for HIV in the past year in 2006 and 2009



The data indicate that there has been a considerable increase in the number of young people who have tested for HIV. In 2006, HCT uptake among sexually active 15-24-year-olds was 37% while this survey found that 51% of sexually active people aged 16-24 had ever tested for HIV.

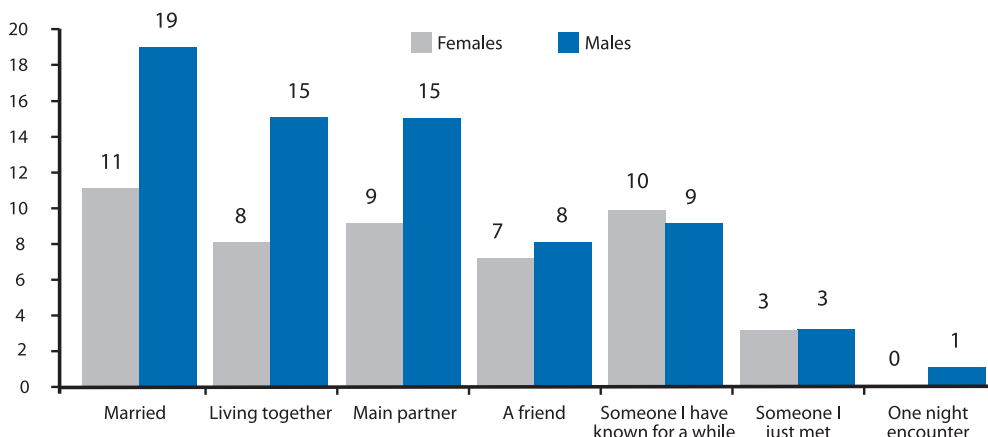
It is important that individuals with many partners, or high rates of sexual partner change, undergo HIV testing more than once – ideally, at least each time they start a new sexual relationship. This study found that the median number of times sexually active people had tested was two. This indicates that knowledge of repeat testing was quite high.



Knowledge of sexual partner's HIV status

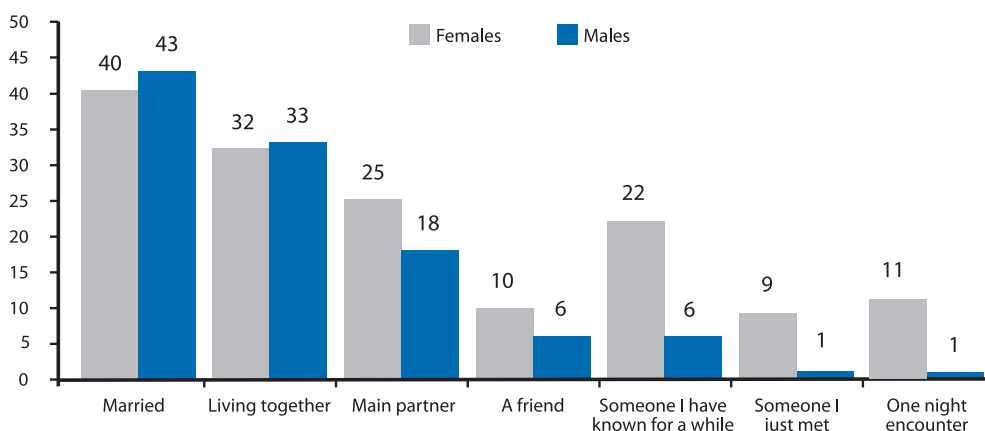
More men than women reported being informed about their partner's HIV status. The rates were higher among people in stable partnerships compared to those in less stable relationships. Among married people, 19% of men said their spouse had told them about her HIV status, while 11% of women reported their spouse had done this (Figure 46).

Figure 46: Percentage of men and women whose sex partner told them their HIV status



Married men and women who said they had been told of their spouse's HIV status were asked if they had seen their partner's HIV test results: 43% of men and 40% of women reported said they had seen the test results (Figure 47).

Figure 47: Percentage of men and women who have seen their partner's HIV test results



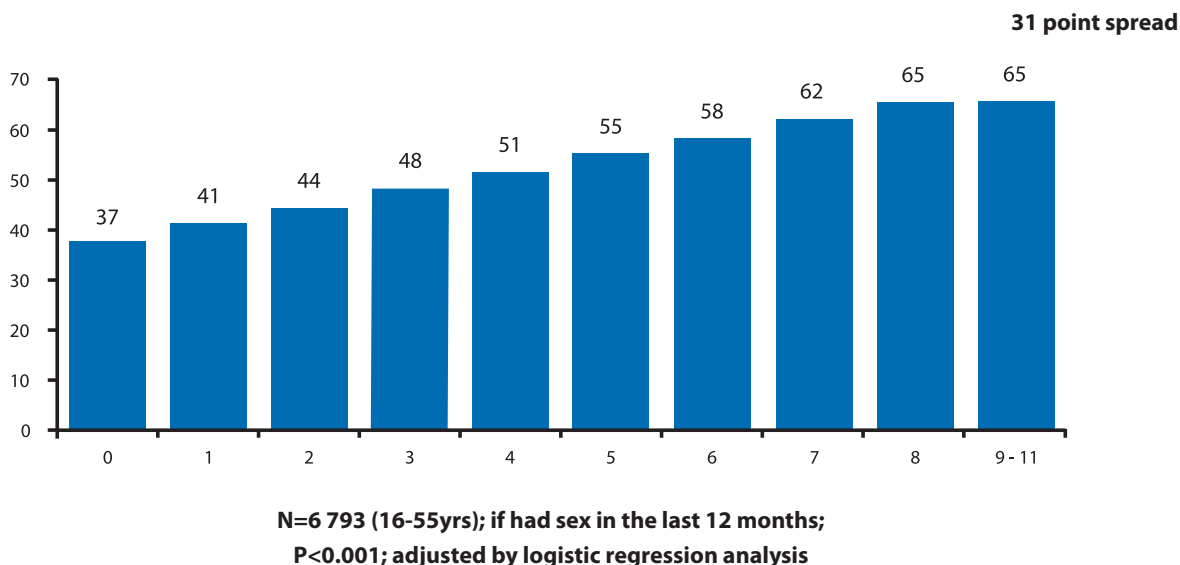
Impact of HCPs

This study found that people who were exposed to HCPs were more likely to have discussed getting tested with their friends, and to have asked or been asked by their sexual partner to get tested. These people were also more likely to have tested for HIV. Exposure to HCPs also had a direct effect on getting tested for HIV in the past 12 months.

The structural equation model for HIV testing involves three related regression equations: one for communication exposure (as described earlier), one for getting tested for HIV in the last 12 months, and the third for discussing HIV testing with friends and/or asking or being asked by one's sexual partner to get tested. The hypothesis underlying this analysis is that communication has both a direct and indirect effect on getting tested for HIV. Exposure to the 11 HCPs is expected to increase the likelihood individuals will talk about getting tested with friends and/or ask or be asked by their sexual partners to get tested. This interpersonal communication about HIV testing is then expected to increase the likelihood of actually getting tested. Discussion about getting tested has a separate and direct effect on getting tested that reinforces exposure to communication programmes. The design of communication programmes so that they encourage audiences to discuss HIV testing with their friends and sexual partners as well as encouraging testing directly is therefore appropriate.

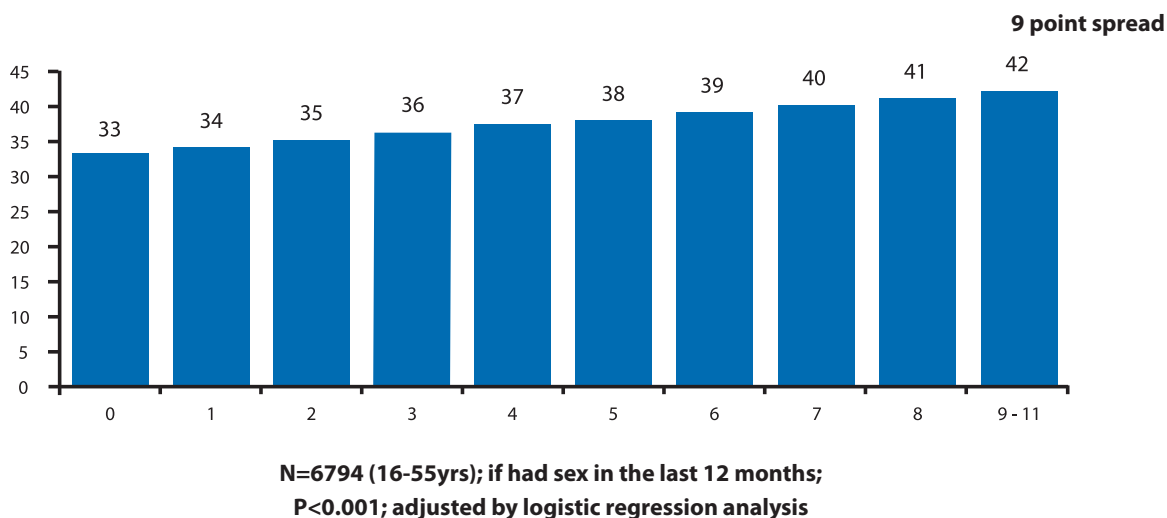
Figure 48 shows the percentage of participants who discussed getting tested with their friends and/or asked or were asked to get tested by their sexual partners by the number of HCPs seen or heard. The 31 percentage point spread indicates a very strong dose response to the communication programmes. Among the section of the population (aged 16-55 years) who were not exposed to communication programmes, about one third had discussed HIV testing. This figure rose to over two thirds among respondents who encountered at least nine HCPs.

Figure 48: Percent that discussed with friends, asked, or been asked by one’s sexual partner to get HIV test by the level of exposure to 11 communication programmes



The direct effect of communication - after controlling for discussion of getting tested as well as the socio-economic control variables - is shown in Figure 49. The direct effect of communication programmes on getting tested for HIV appears quite modest because it has been adjusted to discount their *indirect* effect through interpersonal communication. The overall impact of communication on HIV testing is strong, *mostly* because it prompts many people to talk about testing and this can lead to them going for a test, and to a lesser extent because it persuades audiences directly to take an HIV test.

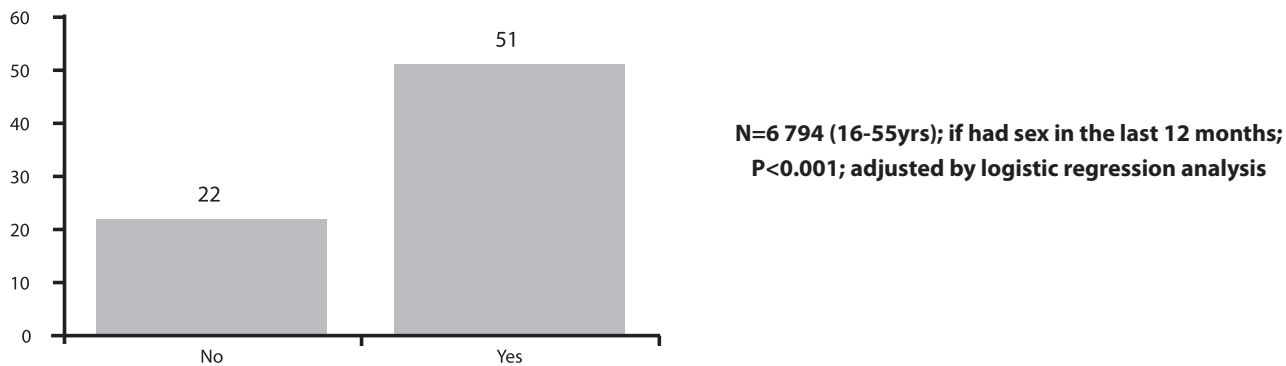
Figure 49: Percent that had HIV test in the last 12 months by the level of exposure to 11 HCP components



The results show a nine percentage point spread by level of communication, increasing monotonically from 33% among participants with no exposure to 42% among those exposed to nine or more communication programmes.

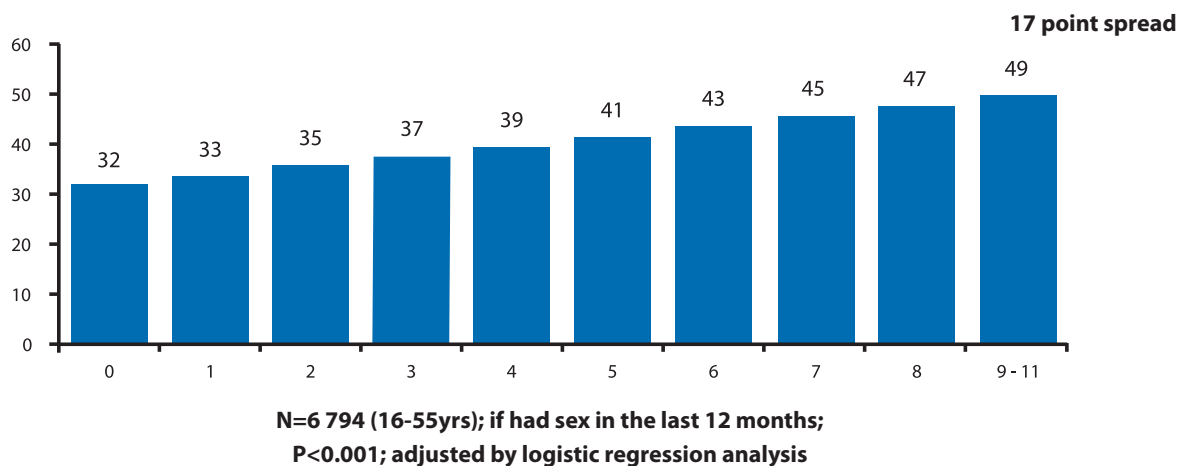
Figure 50 shows the effect of interpersonal communication on getting tested for HIV during the last 12 months. Respondents who said that they discussed HIV testing with friends and/or asked or were asked to get tested by their sexual partner were more than twice as likely to undergo testing as those who did not engage in such discussions (51% vs 22%). This was once all other variables, including exposure to HCPs, had been controlled for.

Figure 50: Percentage of people who had HIV test in the last 12 months by discussion of HIV testing with their sexual partner or friends



This study examined whether communication programmes also influenced couples to share information with one another about their HIV status. This analysis involves two equations, one for HIV communication exposure and the other for sharing of HIV status, either by being told or shown the results of the partner’s HIV test. The regression results show a strong dose response for this outcome, from 32% for those with no exposure to 49% for those exposed to nine or more programmes. This is a 17.8 percentage point spread by level of exposure.

Figure 51: Percentage of people reporting any sex partner in the last 12 months showed or told them the results of his/her HIV test by the level of exposure to 11 HCP components



The extent of talking about getting tested for HIV and sharing one’s HIV status with a sexual partner seems to indicate that social stigma related to HIV and AIDS may be less of a problem than in the past. Seeing tests performed on television or hearing the matter discussed on the radio, as well as watching characters in popular dramas disclose their HIV status and discuss methods of prevention, should all make it much easier for members of the audience to do these things. This phenomenon of teaching by example is referred to as social learning or social modelling. The results of our analysis for HIV testing provide strong support for this communication hypothesis. In addition to these results, the regression analysis also found the following socio-demographic control variables to be related to getting tested for HIV.

Box 8: Predictors of getting tested for HIV in the past 12 months

Getting tested for HIV test in the last 12 months was more likely among:

- Those exposed to a greater number of HCPs.
- Women.
- Sexually active people in the 16-24 year age bracket.
- Those who have undergone tertiary education.
- Frequent newspaper readers and internet users.

Getting tested for HIV test in the last 12 months was less likely among:

- Students at secondary and tertiary institutions.
- Whites or Indians (compared to Africans).
- Residents of farming settlements.
- Residents of the Free State, Gauteng and KwaZulu-Natal.

6. Treatment, care and support

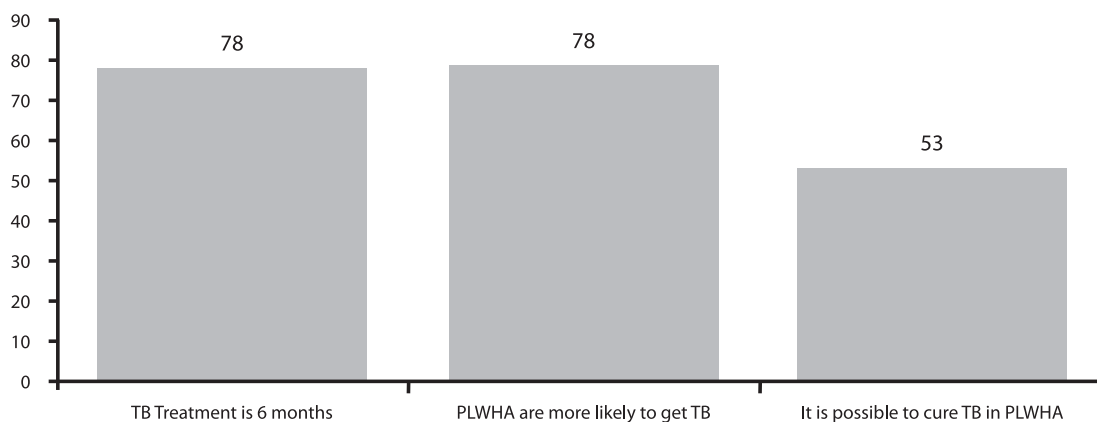
6.1. Knowledge of TB

The HIV epidemic exacerbates the burden of TB in South Africa. HCPs have largely focused on increasing knowledge about adherence to TB treatment and TB/HIV co-infection.

This study found that knowledge of TB treatment duration was high, with 78% of people knowing that standard treatment lasted six months. More women (80%) knew the correct duration of treatment than men (75%). Knowledge was similar among all age groups with the exception of 16-19 year olds, among whom only 69% knew the duration of TB treatment - compared with approximately 80% of people in other age groups. The duration of TB treatment has formed the focus of a number of HCP sub-campaigns over the past few years and the high levels of knowledge are probably attributable to these campaigns.

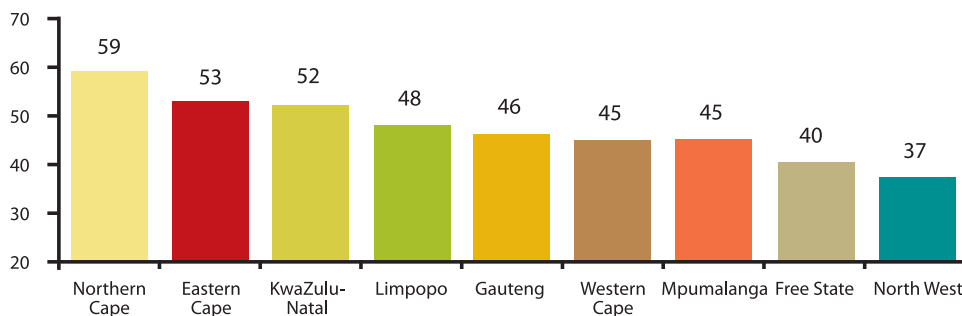
The majority of people knew that TB infection was more likely in PLWHAs. Far fewer people knew that it is possible to cure TB in PLWHAs.

Figure 52: Percentage of people who correctly answered various questions about TB and TB drugs



Knowledge that TB can be cured in people living with HIV varied significantly by province. *Figure 53* shows that over 50% of people in the Northern Cape, Eastern Cape and KwaZulu-Natal believed that TB cannot be cured in people with HIV. This is likely to affect health-seeking behaviour among people with TB/HIV co-infection in these provinces.

Figure 53: Percentage of respondents who believe that it is not possible to cure TB in people who are HIV positive by province



This study found that there were relatively low levels of awareness of the linkages between TB and HIV. Perhaps this was to be expected, as the subject has not been a major focus of communication. There is therefore room to strengthen messaging about TB and its link to HIV.

6.2. Knowledge of antiretroviral therapy

HCPs focus on making people aware of treatment options for AIDS and AIDS-related conditions, assuming this will increase the likelihood that people will come forward for testing and access services before their illness is too far advanced for treatment to be effective. In addition, better understanding of treatment may encourage and support positive prevention strategies. This is based on the premise that people who benefit from treatment will be more concerned about avoiding reinfection and infecting others.

This study found that knowledge about treatment for AIDS – in the sense that treatment restores and maintains health but does not eliminate the infection – was high at 84%. Thirteen percent of people believed there was no treatment and 3% were uncertain if there was treatment.

Of those who knew there was treatment for AIDS, 87% named antiretrovirals (ARVs) as the form of treatment. There has been a considerable increase in knowledge of ARVs since 2006, when only 42% of people knew that ARVs were a treatment for AIDS.

Knowledge of duration of ARV treatment was also high, with 73% of those who were aware that ARVs are a treatment for AIDS also knowing that this treatment is for life (*Table 8*).

Table 8: Percentage of people who correctly answered various questions about ARVs

	Frequency	Percentage
People who know there is treatment for HIV	23 017 125	84.2
People who know that ARVs are a treatment for HIV	19 908 583	86.5
People who know that ARV treatment is for life	16 760 811	73.3

The increased knowledge of ARVs is encouraging and can probably be ascribed to HCP messaging on this issue. HCPs should sustain these high levels of knowledge through continuing appropriate ARV messaging.

7. Social capital

7.1. Personal experience of HIV

The way in which people experience illness among their family and friends may affect the way they understand and acknowledge HIV. Direct contact with the impact of HIV can profoundly influence people's perceptions of the risk of becoming infected.

Some 43% of respondents knew someone who was living with HIV or had died of an AIDS-related illness in the past year. Women and people between the ages of 25 and 49 years were most likely to know of someone living with and affected by HIV and AIDS (47%). Nearly 16% of participants (12% of men and 19.3% of women) said they had provided care for someone living with HIV. People over the age of 50 were more likely to report having cared for someone living with HIV, indicating that the burden of care is more likely to fall on older people and women.

A large proportion of South Africans has been directly affected by the HIV epidemic. Forty-nine percent of people reported that an immediate family member had died of an AIDS-related condition. Women (55%) were more likely to report knowing of an immediate family member who had died of HIV than men (41%).

Table 9: Percentage of men and women with personal knowledge and experience of HIV and AIDS

Statement	Males	Females	Total
Personally knew someone who is HIV positive	39.4	46.4	43.0
Personally knew someone who died of an AIDS-related illness in the past year	40.1	45.7	42.9
Personally helped take care of someone sick with AIDS	12.0	19.3	15.7
Personally helped care for orphans whose parents died of AIDS-related conditions	7.9	12.8	10.4
Think they will get infected with HIV	14.6	27.5	21.2

The data suggest that fatalism may be a significant problem among women, 28% of whom felt that they had a high chance of becoming infected with HIV. The figure among men was much lower, at 15%. Women were more likely to know someone who was HIV positive and to know someone who had died of an AIDS-related condition. These experiences might prompt women to consider and accept that they are likely to become infected. Another explanation is that a considerable proportion of women think or know that their partners have other sexual partners, and this would put them at greater risk of infection.



7.2. Community participation and leadership

Positive family relations and strong social relations within the wider community are important factors in ensuring that those who are infected and affected with HIV receive help and support.

This study found that, relative to all other provinces, a lower proportion of people in KwaZulu-Natal thought that their communities and leaders showed support or leadership with regard to HIV (Table 10). In all provinces, trust in members of the community was higher than the perception that communities rallied to help PLWHAs and leaders took the HIV issue seriously.

Table 10: Percentage of respondents agreeing with various statements concerning community participation and leadership around HIV and AIDS by province

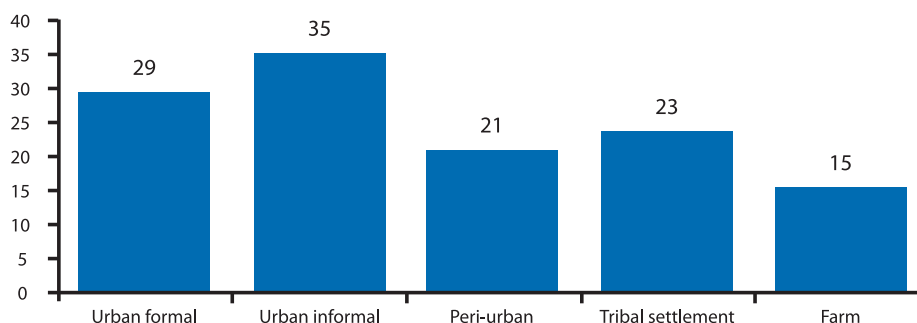
	Leaders in communities take HIV and AIDS seriously	People in communities are joining together to help PLWHA	Trust most people in their communities
Western Cape	46.7	48.0	52.0
Free State	48.8	43.1	63.4
Gauteng	47.3	44.2	49.6
KwaZulu-Natal	35.8	30.7	47.5
Limpopo	47.4	45.9	57.7
Mpumalanga	46.6	53.2	61.1
North West	44.9	46.5	53.3
Northern Cape	50.5	49.0	54.7
Eastern Cape	45.3	37.3	59.3
Total	44.6	42.1	53.4
P-value	0.00	0.00	0.00

The fact that KwaZulu-Natal had the lowest reported community support and leadership is particularly worrying because this province has the highest HIV prevalence.

Local-level activities are one way to expand social capital within communities. Community responses to the challenges posed by HIV and AIDS are not homogenous and information is distributed in different ways within each community. Often messages on HIV have a greater reach and impact if the community response to HIV is apparent.

This study found that less than 20% of people had attended a community meeting where HIV and AIDS was discussed. The figure was particularly low in peri-urban and farming areas but rose to over one third in urban informal areas (Figure 54).

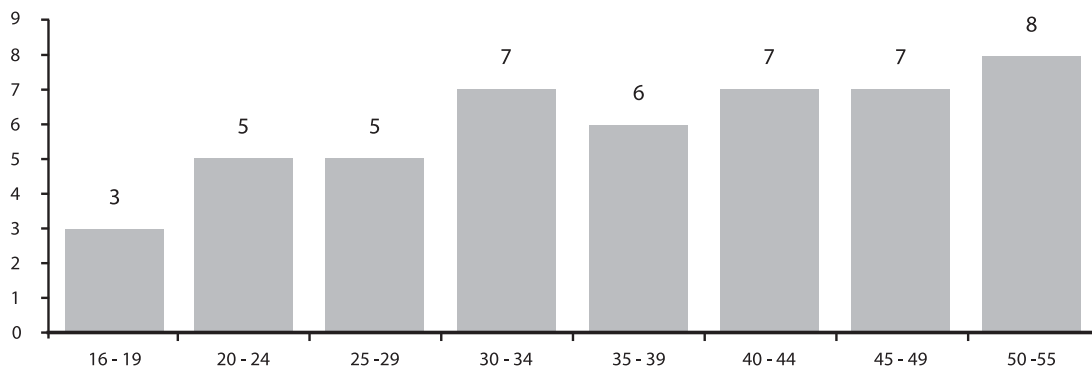
Figure 54: Percentage of people who attended a community meeting where HIV was discussed by settlement type.



Community meetings are a potential space for interpersonal communication on HIV and AIDS and reported levels of attendance at such meetings is promising.

Five percent of participants identified themselves as leaders of organisations or groups aimed at preventing HIV. This would equate to 1.5 million people if scaled up to national proportions. The majority of these leaders were in the over-30 age groups, with very few leaders falling into the 16-29 year age bracket (Figure 55).

Figure 55: Percentage of people who are leaders in HIV prevention organisations by age



It is encouraging to note the large number of people who are involved in community-level responses to HIV prevention. HCPs should continue to encourage people to be involved in community-based HIV prevention responses, focusing particularly on youth.

7.3. Stigma

Stigma towards PLWHAs is a cross-cutting issue that affects the quality of life of those infected and affected by HIV and is an important determinant of care and support received by individuals and families. HCPs have aimed to decrease stigma associated with HIV and AIDS.

There are many statements that may be used to measure stigma. These are usually found to be highly correlated, in that people who answer negatively to one question tend to answer negatively to most of the others. Although some survey reports combine a range of responses into a single stigma scale, in this report the items are presented separately to allow for more in-depth analysis.

This study found that people from the Western Cape showed the highest levels of stigma. Stigma associated with HIV and AIDS was much lower in Mpumalanga and KwaZulu-Natal. This finding is encouraging, as both provinces have large numbers of HIV infections (Table 11).

Table 11: Percentage of respondents agreeing with various statements concerning stigma around HIV and AIDS by province

	People with HIV will soon lose their friends	I would be embarrassed to be seen with someone who everyone knows has HIV
Western Cape	54.3	24.7
Free State	39.4	20.2
Gauteng	47.5	15.9
KwaZulu-Natal	37.6	14.2
Limpopo	43.6	16.7
Mpumalanga	35.9	8.0
North West	39.8	17.4
Northern Cape	52.5	15.6
Eastern Cape	35.0	17.5
Total	42.7	16.6
P-value	0.00	0.00

It is interesting to note that the stigma in relation to HIV and AIDS was most evident among whites and least evident among Africans. Stigma was also more prevalent in the older population (50-55 years) than among young people (16-24 years).

Sustained messaging to address stigma is still needed in order to maintain acceptance of PLWHAs where this has been achieved and to reduce stigma where this persists.



8. Conclusions

This study examined the joint impact of HIV communication programmes in South Africa on improving knowledge and increasing positive beliefs, norms and attitudes - which in turn sustain or bring about a behaviour change in relation to HIV prevention, care, support and treatment.

The NCS used a strong study design and has generated a large amount of valuable data on indicators relevant to understanding the impact HCPs.

Reach and impact of Health Communication Programmes

Reach of HIV communication programmes is impressive, with 90% of the population aged 16-55 years exposed to one or more HCP. Exposure to HCPs was highest in the segments of the population that HCPs intended to reach – segments comprising individuals who are most likely to be HIV-infected or at highest risk of infection. These are younger Africans, living in urban formal areas, who indicated they had experienced some degree of poverty.

HCPs have shown success in a number of areas related to HIV in terms of building knowledge, developing appropriate attitudes and beliefs, and – as a consequence – changing behavior patterns. These achievements require continued communication interventions if they are to be sustained. In some cases, modifications to messaging could increase impact and, in such cases, specific recommendations for future HCPs have been made.

Areas of Health Communication Programme impact

Multiple sexual partnerships

Since 2006, there has been an *increase in knowledge that faithfulness and partner reduction* are ways to reduce HIV infection risk. Over the same period, there has also been a decline in the number of people reporting that they had MSPs in the past year. These positive changes in knowledge and behaviour occurred at a time when HCP programmes were beginning to address the question of MSPs seriously.

Although exposure to HCPs was not associated with the overall number of sexual partners a person had, there is evidence that *partner reduction by single women* is occurring as a result of exposure to HCPs.

The data clearly indicate that young men aged 20-29 years as well as older men are more likely to have MSPs than women. However, men were also more likely than women to claim a reduction in the number of sexual partners in the last year. It is important that this new campaign front on MSPs is sustained and that additional messages that “speak” directly to men are crafted. This approach needs to be coupled with the expansion of appropriate male-friendly services.

A high proportion of people of all ages believed that cheating is pervasive in relationships. While this may indicate that people perceive the risk relating to MSPs, the impression that cheating is pervasive in relationships is not borne out by the actual number of people with MSPs. HCPs may need to focus on challenging people’s beliefs that cheating is pervasive in relationships as part of a process of promoting more trusting and honest relationships with better interpersonal communication.

The focus on MSPs in HCPs is relatively new and it is not yet clear how long communication interventions will have to be sustained, and what additional social interventions might be necessary, to achieve substantial change in this behaviour. Informing the population of the risk is an important first step, and will undoubtedly result in some people changing their behaviour. But sexual relationships are often complex and unpredictable, and it is much more difficult to achieve a stable, satisfying, low-risk relationship than it is to obtain and use condoms to protect oneself from HIV infection. Social circumstances also play a powerful role in defining people’s partner options and a multilevel intervention that addresses social norms, gender and culture and has an advocacy component is required in order to shift MSP behaviour.

Motivation to limit sexual partners is also affected by the relative success of campaigns to promote condom use. Most of the population now knows that condoms should be used to prevent HIV and feel that they can avoid infection. People may think that if they use condoms they do not have to bother to reduce the number of sexual partners they may have. It is important for HCPs to continue to promote partner reduction and faithfulness in the future, and to present this messaging within the framework of a combined or multi-method approach to HIV prevention.

Condom use

Knowledge of the importance of condoms as an HIV prevention measure was *very high*. Condom use has been promoted intensively over two decades in South Africa as the primary method of HIV prevention and rates of awareness are a measure of the relative success of these HCP efforts.

There were high levels of awareness of the *availability of Choice™* condoms, largely as a result of HCPs which focused on brand awareness. However, most people who knew about Choice™ condoms did not trust them to prevent HIV and future communication needs to highlight the stringent quality control measures that are in place in order to increase public confidence in the brand.

A large proportion of people used condoms at last sex although there has been a slight decrease in this rate since 2006. This may be due to more people substituting faithfulness or partner reduction for consistent condom use. The figures support the argument that future HCPs should design clear, easy-to-understand messages on how to use a combination of prevention methods under different and changing circumstances. South Africa cannot afford to lose ground on condom use, especially in the context of low levels of stable relationships among sexually active South Africans.

Condom use was lowest in the Western Cape and Northern Cape. Even though these provinces have lower levels of HIV infection, HCPs addressing their residents need to promote condom usage vigorously if they are to sustain their low infection levels, and reduce the prevalence of STIs and rates of teenage pregnancy.

Exposure to HCPs was related to increased condom use. Condom use was higher among men than women and among young people under the age of 30 years than in older people. HCP campaigns have been particularly effective in reaching younger people and need to focus on encouraging continued condom usage over-30 age groups. Future HCP programmes need to continue to encourage young men to use condoms while finding ways to increase condom use among young women.

Condom use is related to relationship status, with a greater likelihood of use in less stable relationships than in more stable ones. However, HCP campaigns have been very successful in *increasing condom use in all relationships types*. The greater the exposure to HCPs, the higher the proportion of respondents using condoms in all types of relationships.

Although knowledge of condoms as a method of HIV prevention is very high in South Africa, condom use is uneven and it is evident that more nuanced messaging is needed to reach those who are not yet using condoms.

HIV counselling and testing

The content of many HCPs is designed to encourage the audience to discuss taking an HIV test with their sexual partners, as well as actually going and getting tested.

Since 2006, there has been a considerable increase in the proportion of young people who have tested for HIV. The survey showed that sexually active women were more likely to have had an HIV test in the last year than sexually active men. *Exposure to HCPs had a direct effect on respondents getting tested for HIV* in the past 12 months.

Many people, especially younger women, had discussed testing with their friends. People who *discussed HIV testing* with their friends or sexual partner were more likely to have gone for an HIV test in the past 12 months. Exposure to HCPs was associated with a greater likelihood of individuals discussing getting tested with their friends and/or sexual partners, and with a greater likelihood of having taken an HIV test.

TB Knowledge

Knowledge of the *duration of TB treatment* was *high*. This information has been a focus of a number of HCPs over the past few years and the high levels of knowledge are probably attributable to these interventions.

There were lower levels of awareness of the links between TB and HIV. This was to be expected as the TB/HIV link has not been a major focus of communication. There is therefore room to strengthen communication about TB and its link to HIV.

Knowledge of ARVs

Knowledge of ARVs as treatment for AIDS was high and has increased considerably since 2006. *The increase in knowledge of ARVs is encouraging and is most likely due to messaging on this matter.* HCPs should seek to sustain these high levels of knowledge by continuing to feature specific ARV messaging.

HCP impact low or unmeasured

Delaying sexual debut

Most young people held positive attitudes towards delaying sexual debut. However, the mean age of sexual debut has not changed since 2006. A significant number of young women – who are particularly vulnerable to HIV infection – continue to start having sex early. Exposure to HCPs has not had the effect of delaying sexual debut. The factors that shape patterns of sexual initiation are complex and may not be easily modified by communication alone.

Intergenerational sex

The impact of HCPs on intergenerational sex was not assessed although a number of HCPs highlighted this risk. The greatest concern is the high percentage of women aged 16-24 years in relationships with men five or more years older than them. This is clearly a major factor in transmitting HIV to women in this age group since men of their own age have much lower rate of HIV infection. HCPs need to sustain messaging on the risks of these relationships. New qualitative research might help to refine messaging and identify additional social interventions to reduce this pattern of behaviour.

Transactional sex

Many HCPs highlighted the risk of transactional sex although their impact was not measured. *Relatively few relationships* described by respondents in this study could be classified as *transactional*, but this risk factor was more prevalent in less stable relationships. Given the limited numbers of people involved in transactional sex, programme planners need to evaluate whether to approach this area of risk behaviour primarily through use of the mass media or through more targeted forms of communication.

Alcohol use and risky sexual behaviour

A number of HCPs address the relationship between *alcohol consumption, risky sexual behaviour and HIV infection.* These were not assessed in terms of impact.

Men were most likely to drink alcohol heavily often and to report engaging in sex when they and/or their partner had had too much to drink. This occurred especially in less stable relationships. HCPs should focus mainly on men when addressing the link between alcohol and risky sexual behaviour.

New priorities for message development

Knowledge of male circumcision in reducing the risk of HIV infection amongst men

Levels of *knowledge were low* in respect of HIV risk-reduction provided by *male circumcision.* Prevalence of male circumcision was moderate and varied across provinces. It appears that many young men are circumcised only after they first become sexually active. This means that some will accrue no benefits in terms of HIV protection.

One of the concerns about male circumcision is that behavioural disinhibition may occur and that many men who are circumcised may stop using condoms. The findings from this study are encouraging as the majority of participants indicated that men who are circumcised still need to use condoms.

As the national medical male circumcision programme rolls out there is a need to increase awareness of the risk-reduction benefits of medical male circumcision. The point made earlier applies: specific prevention interventions need to be framed within a comprehensive approach to prevention. In addition to circumcision, such an approach would include partner reduction and correct and consistent condom usage.

Knowledge of safer infant feeding practices to reduce the risk of MTCT of HIV

HCPs have focused on increasing awareness of the risks of MTCT of HIV and knowledge about the risk of breastfeeding was high. However, few people knew about exclusive breastfeeding as an option for reducing the risk of transmission. There is clearly considerable room for interventions to improve knowledge of safer feeding practices. This is a critical area as new infections amongst babies are almost entirely preventable. New government guidelines on earlier initiation of ARV therapy for pregnant women and the introduction of an improved regimen for PMTCT will substantially reduce HIV transmission during pregnancy, labour and breastfeeding. Safer infant feeding practices would complete the picture in terms of giving HIV positive mothers a great chance of rearing HIV-free children.

Final comments

The Second National HIV Communication Survey has described and revealed patterns of knowledge, belief and behaviour in relation to critical methods of preventing HIV infection. It has also shown the detail of shifts in knowledge, attitudes and behaviour over the past three years – as well as highlighting areas where desired changes are not taking place.

In addition to painting this detailed picture, the survey has examined the links between HCPs and changes in the areas of HIV-related knowledge, attitudes, norms and behaviour.

The study has established that HCPs have been successful in improving knowledge levels and building positive beliefs and attitudes in relation to HIV prevention, care and treatment. Exposure to HCPs was also responsible for a number of positive behaviour changes in relation to HIV.

These links between HCPs and the consolidation of knowledge and positive behaviours were shown most clearly in areas such as condom use and HCT which have been the focus of campaigns for relatively long periods. However, there was also a suggestion that HCPs could have an impact in such complex and sensitive areas as multiple sexual partners.

The significance of the study for those who design and fund national communication interventions lies also in its identification of gaps and constraints in HIV prevention. Many of the findings help to pinpoint specific audiences or specific messages that require attention in the future. The results also encourage communication experts to consider how community interventions and interpersonal interventions such as counselling can be designed and implemented to address some of these issues, and conversely, how future mass media programmes can be used to support and reinforce efforts at the community level.

Annexure 1

HIV communication programmes

Body, Mind and Soul

ABC Ulwazi developed an HIV and AIDS educational programme for community radio stations called *Body, Mind and Soul*. This was a 13-part drama series that was broadcast on 60 radio stations countrywide in 2004-2005 and repeated in 2006-2007. In 2008-2009, *iLife*, which also fell under the *Body, Mind and Soul* umbrella was broadcast. The themes of this radio drama were derived from the messages of *Tsha Tsha* (see below). Talk shows were then held on radio to allow for discussion and debate about the content of the series. The talks were facilitated by a presenters' guide which was developed to drive conversations on key topics related to HIV and AIDS.

The Journey radio drama

ABC Ulwazi partnered with CADRE to develop an educational radio programme that centred on the effect of HIV and AIDS on women and young girls. The 13-part series, called *The Journey*, was broadcast nationally in four languages (English, Afrikaans, isiZulu and seSotho) starting in 2005 and running into 2006. More recent productions by ABC Ulwazi drew on messages from *The Journey* and reinforced them. The key focus areas of this radio drama were: gender inequalities, gender roles, domestic and gender-based violence, living positively with HIV, and the psychological and emotional impact of HIV and AIDS on individuals and families.

Khomanani

The *Khomanani* campaign is a government mass media and communications campaign which aims to reduce new HIV infections and increase access to treatment, care and support for those infected and affected. It is a dynamic campaign that involves wide-ranging use of the mass media, public relations and social mobilisation. *Khomanani III*, which began in July 2006, aimed to consolidate and build on the success of *Khomanani II*. It had five major focus areas: accelerated prevention; treatment, care and support; TB and HIV; nutrition and health promotion. The *Zithande* campaign underpinned every *Khomanani* intervention on the above themes. *Zithande* encouraged South Africans to adopt a positive, responsible attitude towards HIV and AIDS. It also encouraged respect for others and a willingness to stand together to address HIV and AIDS. The *Khomanani* campaign utilised the full spectrum of media channels to convey its messages. This included above-the-line (ATL) or paid advertising, as well as below-the-line (BTL) advertising (which involves payment for the inclusion of messages in programming rather than advertising), the development of print materials, and community-level activities.

Levi's® Red for Life

Levi's® *Red for Life* is an HIV and AIDS prevention campaign that was developed by Levi's® together with the Southern African HIV Clinicians Society, New Start South Africa, UCLA's Department of Global Health, Johns Hopkins Health Education South Africa and others. The key objective is to instill a sense of personal responsibility amongst the Levi's® target market of 16-24 year olds. The campaign's elements are designed to address the stigma associated with HIV and AIDS and to increase the uptake of HCT by leveraging the brand's credibility and global cache. This campaign features branded condoms, concerts, a mobile HCT facility co-branded with New Start, mass media advertising, and a documentary film featuring high profile music artists and celebrities. In addition, Levi's® is marketing for the third season its popular RFL clothing range that combines relevant prevention messaging with Levi's® fashion style. To date, RFL has distributed over 1 million free branded condoms in stores and via university programmes. The New Start/RFL mobile HCT programme has tested over 400 000 individuals in many cities and communities across the country.

LoveLife

LoveLife is a national HIV prevention programme for youth which uses media to promote awareness of the programme and to encourage more open discussion of sex, responsible sexuality, informed choice, gender and HIV. It also connects young people with services such as counselling. *LoveLife* uses advertising strategies similar to those used to market popular brands to young people. The core values of the advertisements include: love, respect, dignity and responsibility. In March 2008, *LoveLife* launched a new phase of its campaign designed to go beyond the promotion of healthy sexuality by changing young people's sense of day-to-day opportunities to take charge of their lives. Using the tagline. *Make YOUR Move*, the new approach recognised that most young South Africans knew about HIV and AIDS and how to avoid getting it, but their actions were constrained by their perception of limited opportunity to assert themselves. *Make YOUR Move* was intended to mobilise young South Africans to take control of their future, by identifying and seizing opportunities - no matter how small.

Scrutinize

Scrutinize is a strategic, evidence-based communication tool for HIV prevention. It combines mass media and interpersonal communication to reinforce and promote social and behavioural change to reduce the number of new infections amongst South Africans aged 18 – 32 years. The campaign is managed by Johns Hopkins Health and Education in South Africa, with funding through USAID/PEPFAR. It features a partnership with the popular youth brand, Levis, and 25 South African partners, and creative incubation by Matchboxology. The mass media component comprises the use of animated advertisements featuring identifiable characters that face tricky situations that young people can relate to. *Scrutinize Live*, uses workshops and community events to expand mass media messages. The campaign aims to achieve social and behavioural change by getting young adults to critically assess their own behaviour and the extent to which this puts them at risk of HIV infection – and challenges them and to take action to reduce this risk. Key objectives of *Scrutinize* are to delay the age of sexual debut, increase awareness of the risk of multiple concurrent partners and reduce the number of partners, promote correct and consistent condom use with all partners, and increase the percentage of people who regularly test for HIV.

Siyayinqoba Beat It!

Siyayinqoba Beat It! has been broadcast on SABC 1 since 2004 and was on eTV before that. The show, which is currently weekly, promotes positive living and HIV prevention through the delivery of simple evidence-based messages that are not culturally exclusive. *Siyayinqoba Beat It!* is an educational show for everyone living with HIV, their partners, family members and friends. It incorporates stories from eight of the nine provinces and regularly features marginalised and vulnerable groups such as young women, children, prisoners, mobile populations, men who have sex with men, sex workers and substance abusers in the show. The current series draws on a team of community journalists based in KwaZulu-Natal, Gauteng, Eastern Cape and the Western Cape who research, write, shoot and tell the stories that most affect them and their communities.

Soul City

Soul City is a South African NGO, founded in 1992, that aims to use the media to promote health and development and improve people's quality of life. Soul City uses a mix of social and behaviour change models, largely resting on the health promotion model described in the Ottawa Charter. The objective of these interventions is to develop an environment favourable to individual and social change, and encourage community action for health. This is achieved through mass media products: a prime time television drama, comprising 13 half-hour episodes per series, that began its ninth season in 2009, a radio drama in nine African languages (which was also in its ninth season, with each season comprising 30 15-minute episodes) and a range of easy-to-read booklets. Talk shows on community radio follow each televised drama episode to allow audiences to discuss the issues covered. Mass media interventions are backed up by community training, mobilisation and advocacy. *OneLove* is a national campaign coordinated by Soul City to reduce multiple concurrent partners as a means of curtailing new HIV infections. The campaign aims to shift social norms and reinforces positive behaviours without blaming people who are behaving in risky ways. It models safer sexual behaviour, and challenges men and women to change their behaviour to live a safer and happier life. *OneLove* also confronts gender stereotypes and cultural norms that reinforce multiple partnerships and fuel the AIDS epidemic. *OneLove* uses mass media (Soul City TV, radio dramas as well as some radio adverts) and social mobilisation in the form of numerous community dialogues, and provided toolkits to partner organisations to expand participation. The campaign was launched in South Africa at the end of January 2009.

Tsha Tsha

Tsha Tsha is an educational drama series consisting of 78 half-hour episodes which that have been aired on television since 2003. This series focuses on young people in a fictional rural town who are affected by HIV and AIDS. The series targets the youth and centres on the idea of personal and social transformation. Themes addressed in the drama include: HIV and AIDS prevention methods, treatment care and support for people infected and affected by HIV and AIDS, relationships and sexuality, life skills and problem solving, parent-child relationships, alcoholism, violence, and community mobilisation. The first three series of *Tsha Tsha* are also available to organisations involved with HIV and AIDS training and education. These resources are for particular use in non-governmental organisations, community-based organisations, institutions, government departments and correctional facilities. A facilitators' guide has been developed to encourage discussion on particular *Tsha Tsha* episodes.

Annexure 2

Table 12: Comparison of key findings, NCS 2006 and NCS 2009

		2006 (%)	2009 (%)
General	Mean age (years)	33.3	30.2
	Male	49.2	48.7
	Ever had sexual relationships	85.2	88.7
	Had sexual relations in the past 12 months	82.2	80.3
Knowledge	Condom use to prevent HIV transmission	90.7	85.6
	Faithfulness to prevent HIV transmission	26.0	39.1
	Abstinence to prevent HIV transmission	40.1	37.4
	Reduce the number of partners to prevent HIV transmission	6.7	12.2
Behaviour	Used condoms to prevent AIDS	44.6	40.2
	Used condoms at last sex	43.3	39.8
	HIV counselling and testing, % of people who have ever tested	47.1	61.4
	HIV counselling and testing, % of people ever tested who have tested in the past 12 months	24.1	36.9
	Multiple partners in last 12 months	16.5	11.4
	Multiple partners in last 12 months (males)	25.9	20.1
	Multiple partners in last 12 months (females)	7.2	3.0
Multiple partners (>1 partner in the past month)	5.4	4.9	

Annexure 3

Table 13: Comparison of the 2009 NCS sample with the 2007 Statistics South Africa Community Survey on selected variables

Variables	NCS 2009			StatsSA 2007 estimates Percent
	Not weighted Percent	Weighted by pop freq Percent	Weighted population frequencies	
Gender				
Male	45.6	48.7	13 360 977	48.7
Female	54.4	51.3	14 049 674	51.3
Age group				
16 - 24 Years	38.7	32.3	8 864 781	31.9
25 - 49 Years	54.8	59.3	16 261 810	58.6
50 - 56 years	6.5	8.3	2 284 060	9.5
Race				
African	81.6	77.8	21 253 637	77.6
Coloured	12.4	9.5	2 590 313	9.5
White	4.4	9.9	2 706 899	10.0
Indian	1.5	2.8	7 75 012	2.9
Province				
Western Cape	7.9	11.6	3 186 673	11.6
Eastern Cape	11.9	11.9	3 250 281	11.9
Free State	8.8	5.9	1 609 441	5.9
Gauteng	17.2	24.2	6 630 405	24.2
KwaZulu-Natal	16.0	20.5	5 611 728	20.5
Limpopo	13.6	9.5	2 610 894	9.5
Mpumalanga	10.9	7.4	2 020 460	7.4
North West	5.2	6.9	1 886 942	6.9
Northern Cape	8.6	2.2	603 827	2.2
Total	100	100	27 410 651	100

Annexure 4

Table 14: Percentage of people in South Africa who were not exposed to any of the HIV communication Programmes by socio-demographic factors

		South Africa
Gender	Female	10.4
	Male	10.1
Marital status	Single	8.1
	Not married or living together but in a steady relationship	5.4
	Not married but living with sexual partner	11.8
	Married, living together	14.3
	Married, not living together	13.6
	Divorced/widowed	23.6
Age group	16 – 24	5.7
	25 – 49	11.1
	50 – 55	21.8
Had sex in the past 12 months	Yes	9.2
	No	14.7
Employment status	Unemployed	11.1
	Employed	11.4
	Student	5.2
Education status	Up to Primary	22.2
	Up to standard 9	8.8
	Matric	6.4
	Tertiary	5.9
Socio-economic status	Low	18.9
	Medium	5.2
	High	8.0
Settlement type	Urban formal	8.1
	Urban informal	6.6
	Peri-urban	16.8
	Tribal settlement	11.2
	Farming	26.2

Annexure 5

Supplementary tables of socio-demographic variables

Table 15: Socio-demographic distribution of population according to age and sex

	Total	16-24yrs	25-49yrs	50-55yrs	Female	Male
Provinces						
Western Cape	11.6	9.6	12.4	13.9	11.1	12.2
Free State	5.9	5.5	6.1	6.1	6.4	5.3
Gauteng	24.2	21.5	25.1	28.0	23.4	25.0
KwaZulu-Natal	20.5	22.3	19.9	17.6	18.6	22.4
Limpopo	9.5	12.1	8.6	6.3	9,6	9.4
Mpumalanga	7.4	9.1	6.8	4.5	7.4	7.3
North West	6.9	5.7	7.6	6.2	8.2	5.6
Northern Cape	2.2	1.8	2.3	3.0	2.3	2.1
Eastern Cape	11.9	12.5	11.1	14.6	13.0	10.7
Settlement type						
Urban formal	46.1	41.9	47.4	52.3	45.4	46.8
Urban informal	11.8	10.3	12.8	10.7	12.4	11.3
Peri-urban	5.7	4.1	6.3	8.1	5.7	5.8
Tribal settlement	31.7	40.1	28.3	23.4	32.0	31.5
Farming settlement	4.6	3.6	5.1	5.5	4.6	4.7
Race						
African	77.8	84.2	75.8	66.8	76.9	78.7
Coloured	9.5	7.4	10.3	11.5	9.3	9.7
White	9.9	6.8	10.7	16.5	10.6	9.2
Indian	2.8	1.7	3.1	5.2	3.2	2.4
Sex						
Female	51.3	46.6	53.1	56.2	-	-
Male	48.7	53.4	46.9	43.8	-	-
Age						
16-24	32.3	-	-	-	29.4	35.5
25-49	59.3	-	-	-	61.5	57.1
50-55	8.3	-	-	-	9.1	7.5
Employment status						
Unemployed	47.4	38.7	50.9	56.2	58.1	36.1
Employed	36.3	14.2	47.2	43.8	28.7	44.2
Student	16.4	47.1	1.9	0.0	13.2	19.7
Socio-economic status						
Low	27.5	28.0	27.5	25.4	27.9	27.0
Medium	28.6	32.2	27.3	24.0	28.9	28.4

	Total	16-24yrs	25-49yrs	50-55yrs	Female	Male
Socio-economic status						
High	13.9	80.2	39.8	16.6	47.8	54.2
Marital status						
Single	50.9	80.2	39.8	16.6	47.8	54.2
Not married or living together but in a steady relationship	12.1	14.0	12.3	2.7	10.1	14.1
Not married but with sexual partner	6.3	2.4	8.5	5.5	6.7	5.9
Married living with partner	23.3	2.4	31.0	49.3	25.1	21.3
Married not living with partner	3.3	0.7	4.4	5.9	4.3	2.3
Divorced/widowed	4.1	0.2	4.0	19.9	6.0	2.1
Education levels						
Primary school	17.6	6.8	19.5	46.2	17.9	17.3
Grade 11	44.9	58.2	40.1	28.1	45.0	44.9
Matric	32.2	31.9	33.9	20.8	32.5	31.9
Tertiary	5.3	3.1	6.5	5.0	4.7	5.9

Table 16: Household wealth index by race group

	African		Coloured		White		Indian	
	No.	%	No.	%	No.	%	No.	%
Hot running water	1 219	15.4	427	35.5	400	93.0	140	95.9
Microwave oven	2 419	30.5	579	48.1	387	90.2	138	95.2
Flushing toilet in house or on plot	3 578	45.2	945	78.6	424	98.6	144	98.6
VCR/DVD player in home	4 195	52.9	724	60.2	391	90.9	125	85.6
Washing machine	1 329	16.8	632	52.5	400	93.0	112	76.7
Personal computer at home	784	9.9	199	16.6	296	69.0	75	51.4
TV in household	5 780	72.9	983	81.7	417	97.0	141	96.6
Radio in household	6 066	76.5	804	66.8	402	93.5	136	93.2
Landline telephone	469	5.9	235	19.5	207	48.3	77	52.7
Built in kitchen sink	1 967	24.8	656	54.5	396	92.1	136	93.2
Water in home or on stand	4 935	62.3	1 044	86.8	427	99.3	141	96.6
Electricity in household	6 433	81.2	1 085	90.2	424	98.6	146	100.0
Motor vehicles in household	1 438	18.2	283	23.5	373	86.7	112	76.7
Cell phone in household	6 640	84.0	873	72.6	406	94.6	142	97.3