

The Third National HIV Communication Survey, 2012



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COMMUNICATION

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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 (PEPFAR) and the Global Fund. The following organisations collaborated on this study: Johns Hopkins Health and Education in South Africa (JHHESA), loveLife and Soul City. The survey was managed by Health and Development Africa (HDA). The Johns Hopkins Bloomberg School of Public Health Center for Communication Programmes (JHU-CCP) provided support and technical oversight at all stages of the study. Data were gathered by Freshly Grounds Insights (FGI).

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Acknowledgements

The following people contributed to the development of this publication: Debbie van Zyl (CMT), Braimoh Bello, Ziphozonke Dube, Nicoletta Mabhena and Kerry Mangold (HDA); Frieda Subklew-Sehume (loveLife); Bongiwe Nondo and Renay Weiner (Soul City).

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

Preferred citation

Johnson S, Kincaid DL, Figueroa, ME, Delate R, Mahlasela L, and Magni S. (2013). The Third National HIV Communication Survey, 2012. 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/JHU HIV Communication Programme in South Africa and do not necessarily reflect the views of USAID or the United States Government.

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iv. Acronyms

AIDS	Acquired immune deficiency syndrome
AOR	Adjusted odds ratio
ARV	Anti-retroviral drugs
CMT	Community Media Trust
HCP(s)	HIV communication programme(s)
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
MCA	Multiple causal attribution
MSP	Multiple sexual partners
MTCT	Mother-to-child transmission of HIV
NCS	National HIV Communication Survey
NSP	National Strategic Plan on HIV, STIs and TB
PEP	Post-exposure prophylaxis
PEPFAR	United States President's Emergency Plan for AIDS Relief
PLHIV	People living with HIV
PMTCT	Prevention of mother-to-child transmission of HIV
PSU	Primary sampling unit
SABC	South African Broadcasting Corporation
SANAC	South African National AIDS Council
SEM	Structural equation modelling
STI	Sexually transmitted infection
TB	Tuberculosis
TV	Television
UNAIDS	Joint United Nations Programme on HIV/AIDS
VMMC	Voluntary medical male circumcision

Executive summary

Background

The Third National HIV Communication Survey (NCS) examined the extent to which HIV communication programmes in South Africa have impacted on people's knowledge and skills, influenced their beliefs and attitudes, challenged existing and prevailing norms, increased their perception of risk to HIV infection and has brought about social support and influence, also known as ideational factors. HIV communication programmes have a direct impact on these ideational factors which in turn validate the existing knowledge and behaviours of those who are already practicing those behaviours, reinforces the need to practice a given behaviour amongst those who may have stopped practicing a given behaviour, while providing those who are sexually active with critical knowledge and skills to prevent new HIV infections. Communication programmes may directly impact on peoples' behaviour if and when the commodities (condoms, test kits, etc.) and services exist that enable them to take up the given behaviour. 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 February and May 2012. 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 population 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 statistical methods to measure the combined impact of HCPs 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 82% 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 informal areas.

Reach and impact of HIV communication programmes

Reach of HIV communication programmes is impressive, with 82% 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 informal areas. However, reach of HCPs has decreased since 2009, where 90% of those aged 16-55 years were exposed to at least one HCP. As communication is critical to achieving the NSP objectives, reach of HCPs needs to be carefully monitored.

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 behaviour 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 programming have been made throughout this report by thematic area.

Areas of HIV communication programme impact

HIV counselling and testing

The content of many HCPs is designed to encourage its target audience to discuss taking an HIV test with their sexual partners, as well as actually going and getting tested. A large proportion of people have ever tested for HIV – the majority of whom were tested in the past 12 months. Although women were more likely to have tested, there has been an encouraging increase in the number of men getting tested. Exposure to HCPs had a *direct effect* on respondents getting tested for HIV in the past 12 months.

Many people had discussed testing with their sexual partner(s). People who discussed HIV testing 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 sexual partner(s), and with a greater likelihood of actually having been tested for HIV.

Most people who had tested were willing to share their results with the interviewer, possibly indicating an improvement in openness and acceptance. HCPs should build on this encouraging finding.



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.

A large number of people used a condom the first time they had sex. This was particularly apparent amongst those who had sex for the first time in the last three years. Condom use at first sex increased consistently after 1995, which marks the beginning of large-scale HIV communication programmes that promoted the use of condoms to prevent HIV in South Africa.

A large proportion of people used condoms at last sex and this has increased since 2009. Condom use is related to relationship status, with a greater likelihood of use in less stable relationships than in more stable ones. However, HCPs 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.

Multiple sexual partnerships

Knowledge of faithfulness and partner reduction as HIV prevention methods has increased since 2009 although this remains lower than for other methods such as condom use and abstinence. Overall, MSP ideation, comprising attitudes against MSP and being able to resist influences to have them, was high. Over 90% of people also thought that having MSP was unacceptable.

A large proportion of people believed that having more than one sex partner was a norm in their community although this was not borne out by the data. Only 13% of sexually active respondents reported MSP in the past 12 months – with more men reporting this than women. A small percentage but significant percentage of people reported having MSP in the last month.

The level of exposure to the HCPs did not have a significant direct effect on MSP after controlling for the effects of MSP ideation: attitudes that discourage MSP and self-efficacy for resisting MSP. The HCPs did have a positive, significant effect on MSP ideation, however, which means that their impact on MSP occurred indirectly through MSP ideation. This result is consistent with the theory used to design the programmes and evaluate their impact on behaviour. Unfortunately, the observed impact of HCPs on MSP ideation only occurred among women. No impact was found among men after controlling for all other variables. This is especially surprising because the HCPs had about the same, strong impact on MSP ideation among both men and women.

There were important differences in the other predictors of MSP ideation that may be responsible for this outcome. Age was not a statistically significant predictor of MSP ideation among women, but did predict men's level of MSP ideation. On the other hand, level of education had no effect on men's ideation, but was a strong predictor of women's MSP ideation. And finally, having been in a physical fight in the past year had a negative effect on men's MSP ideation (lower if in a fight), but no effect on women's MSP ideation. It is possible that these other differences between men and women affected the statistical relationship between HCPs and MSP ideation. These other differences suggest that other factors mediate the effect of MSP ideation on this important determinant of HIV risk for men and women. This is an important finding that clearly needs further research.

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.

Male circumcision

Although there have been improvements since 2009, levels of knowledge were low in respect of HIV risk-reduction provided by male circumcision. Prevalence of male circumcision was moderate but the percentage of men being circumcised has increased substantially and there has been a shift towards more men being circumcised in a medical setting.

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 and there was no difference in condom use at last sex by circumcision status.

Many men intend to circumcise in the next 12 months and HIV communication interventions have led to this increase in intention: 56% of men with high levels of exposure to communication programmes say that they will definitely get circumcised in the next 12 months, while only 25% of those with low levels of exposure intend to get circumcised.

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. Given that many men intend to be circumcised, male-friendly VMMC facilities are needed to ensure that

supply meets the demand created through communication. 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. Few people knew about exclusive breastfeeding as an option for reducing the risk of transmission but knowledge levels have improved since the previous survey and the introduction of messaging around breastfeeding options. There is clearly considerable room for interventions to build on the promising increase in knowledge of safer feeding practices. This is a critical area as new infections amongst babies are almost entirely preventable.

TB knowledge

Overall, knowledge of TB was high and has improved since 2009. TB has been a focus of a number of HCPs over the past few years and this survey found that these knowledge improvements are attributable to HCP exposure. There were slightly lower levels of awareness of the links between TB and HIV, especially in relation to TB treatment outcomes in PLHIV. There is room to build upon the strong base and strengthen communication about TB and its link to HIV.

Knowledge of ARVs

Knowledge of ARVs as treatment for AIDS was high and improved since 2009. This increase in knowledge of ARVs is encouraging and is due to messaging on this matter. HCPs should seek to sustain these high levels of knowledge by continuing to feature specific ARV messaging.

Areas not assessed for communication impact

Intergenerational sex

The impact of HCPs on intergenerational sex was not assessed. The greatest concern is the high percentage of young women 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, focusing especially on condom use in these relationships.

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. 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

The impact of HCPs on the relationship between alcohol consumption and risky sexual behaviour was not assessed. Of those men who drink alcohol, many drank heavily often. Communication should focus mainly on men when addressing the link between alcohol and risky sexual behaviour.

Delaying sexual debut

Most people held positive attitudes towards delaying sexual debut. Mean age of sexual debut has not changed since the previous surveys. A significant number of young women – who are particularly vulnerable to HIV infection – continue to start having sex early. Given the young age that some people become sexually active, it is critical that HCPs promote and emphasise condom use from first sexual experience.

Conclusion

In conclusion, the 2012 NCS findings show that communication programmes have a direct effect on behavioural outcomes such as HIV counselling and testing, condom use and male circumcision. Communication programmes also have an indirect impact on these outcomes by addressing norms and attitudes regarding HIV and providing people with information, knowledge, and motivation to exercise decisions that best work for them and that keep them healthy. The findings show that the effect of the communication on people's behaviour resembles a dose-response, -the more people are exposed to the HIV communication programmes, the more likely they are to adopt and maintain positive behaviours such as condom use, HIV counselling and testing, and to undergo male circumcision.

The evidence presented in this report can be used to customise and 'fine tune' HCPs, including where continued focus and effort is required.



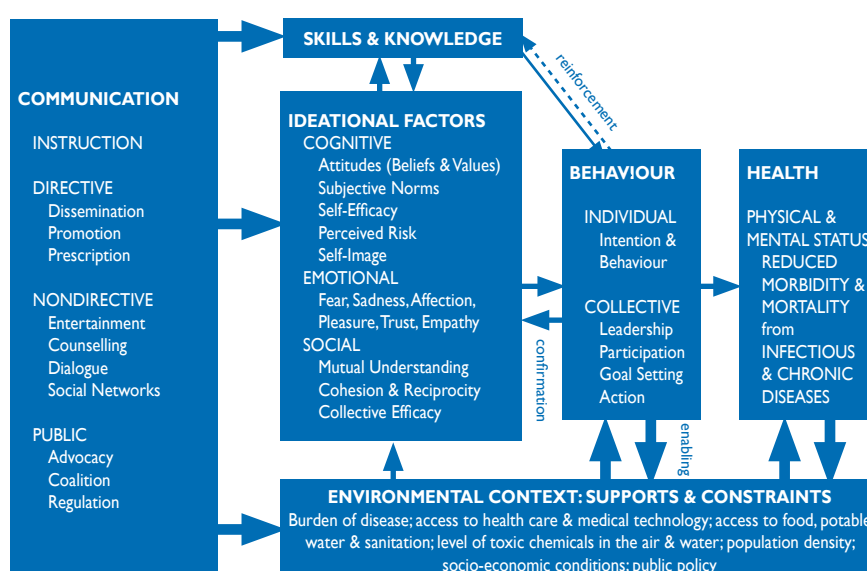
Introduction

Social and behavioural communication programmes aim to improve people's knowledge and skills, influence their beliefs and attitudes, challenge existing and prevailing norms, increase their perception of risk to HIV infection and bring about social support and influence. These factors are also known as ideational factors. Social and behavioural communication programmes directly impact on these ideational factors, which in turn validate the existing knowledge and behaviours of those who are already practicing those behaviours and may reinforce the need to practice a given behaviour amongst those that may have stopped practicing a given behaviour. At the same time these programmes provide those who are becoming sexually active with critical knowledge and skills and influence their norms and values that enable them to take action to prevent being infected with HIV (Kincaid, 2000).

Social and behavioural communication programmes may directly impact on people's behaviours if and when the socio-cultural norms, commodities (condoms, test kits etc) and client-friendly services exist that enable them to take up the given behaviour. Therefore social and behavioural communication programmes on their own do not directly impact on HIV incidence and prevalence (Kincaid, 2000).

The figure below demonstrates that communication interventions work primarily to increase people's knowledge and skills of the behaviours that may enable them to take action to prevent HIV, TB, etc. But they also work indirectly to affect health outcomes by impacting upon the cognitive, emotional and social ideational factors that underlie a given health issue.

Figure 1: Meta-theory of health communication



Source: Kincaid et al. 2013

The Third National HIV Communication Survey (NCS) examined the combined impact of HIV communication programmes (HCPs) 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 NCS examined the combined impact of a number of HIV communication programmes and their components, which total to 19 communication interventions. The programmes included in this study were:

- Community Media Trust that produced Siyayinqoba Beat It!
- iLife Community Radio Talk Show produced by ABC Ulwazi
- Johns Hopkins Health and Education in South Africa, that oversees Brothers for Life; Scrutinize; 4Play: Sex Tips for Girls; and Intersexions
- loveLife, including loveLife's youth magazine UNCUT, Radio programmes (foxy chix and radio talk shows), TV programmes (Make your Move and I am Mzansi), social media (MYMsta), face to face programmes and the Call Centre
- SANAC "I am responsible" campaign
- Soul City, including the One Love and Phuza Wise campaigns; Love Stories in the Time of AIDS; and Soul Buddyz TV and Clubs

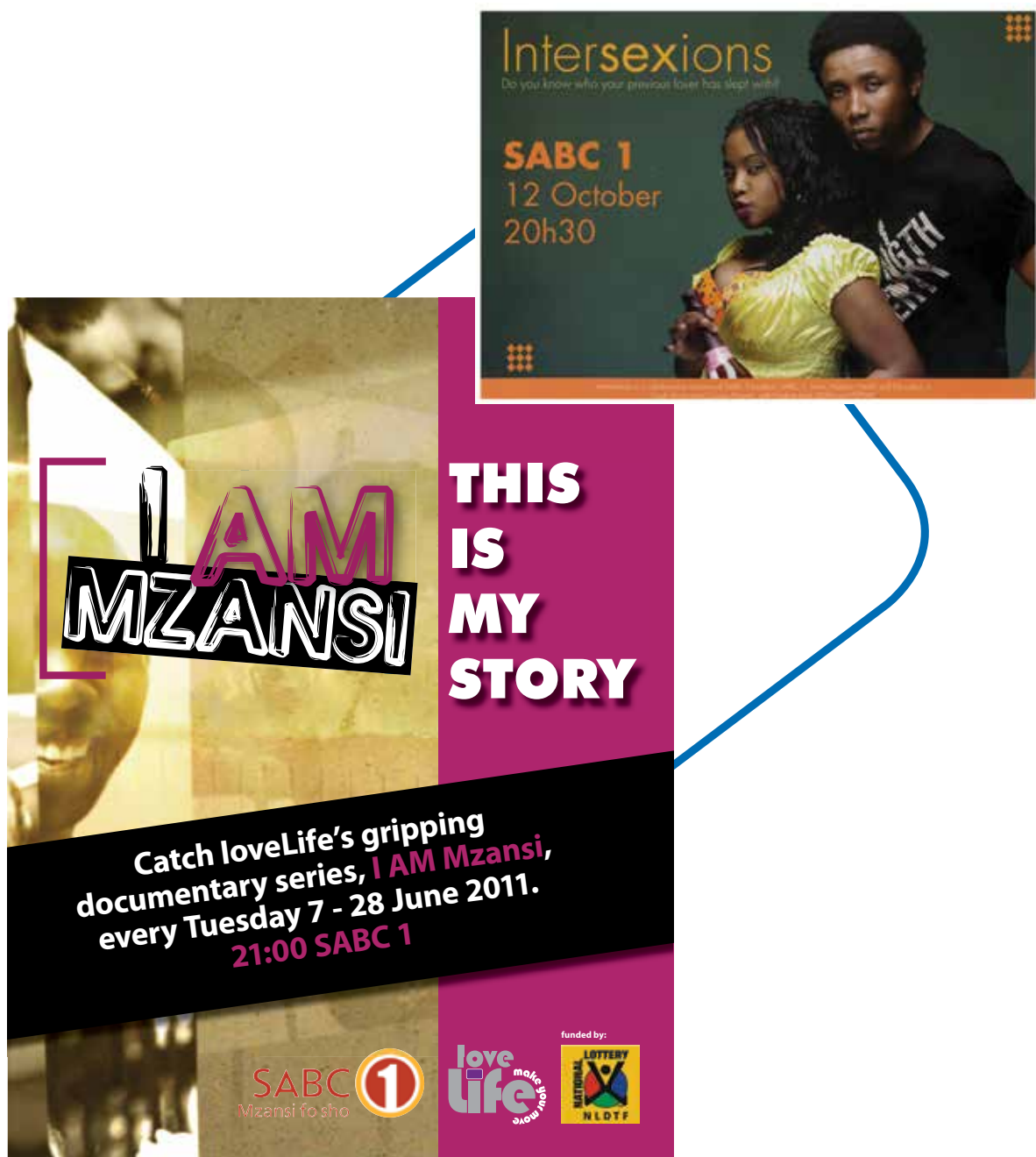
For a more detailed description of each of these HCPs and their content, refer to Annexure 1.

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

- Media access, language and reach
- Social and structural drivers of the HIV epidemic
- Prevention of new HIV infections
- Sustaining health and wellness
- Community participation and leadership

Where feasible, data from this survey are compared with data from the NCS 2009 and 2006. Annexure 2 presents a comparison of various indicators for the NCS 2006, 2009 and 2012.

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





The South African HIV epidemic

South Africa is home to 51.7 million people; about 26.6 million (51.3%) of whom are females. Africans are in the majority, constituting just over 79.6% of the total South African population (Statistics South Africa, 2012). The 2008 *South African national HIV prevalence, incidence, behaviour and communication survey* (HSRC, 2009) reports that HIV prevalence among South Africans of all age groups is 10.6%. When compared with the previous HSRC surveys (2002 and 2005), the epidemic has stabilised at a prevalence of around 11% although there are significant differences by age, population group, gender and province.

In 2008, HIV prevalence peaked among females aged 25–29 years at 32.7%, while for males it peaked at 25.8% in the 30–34 years age group. HIV prevalence has remained high in adolescent females 15–19 years whose prevalence is 2.7 times higher than amongst males of the same age (HSRC, 2009).

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 was in KwaZulu-Natal (15.8%) and Mpumalanga (15.4%), and the lowest was in the Northern Cape (5.9%) and the Western Cape (3.8%)

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



Source: Adapted from the HSRC survey, 2009

Mortality from HIV has reduced drastically due to the increased availability and access to anti-retroviral drugs (ARVs) and living with HIV has evolved from being fatal to becoming a chronic illness. Though treatment, care and support interventions are critical in the response to the epidemic, prevention of HIV still remains a cornerstone in mitigating the impact of the epidemic on the health and wellbeing of the South African population.

The South African National AIDS Council (SANAC) adopted a 5 year, HIV, STIs and TB strategic plan, 2012-2016, (NSP) to guide the national response. The NSP has adapted, as a 20-year vision, the three zeros advocated by the Joint United Nations Programme on HIV/AIDS (UNAIDS). The plan has four strategic objectives which form the basis of the South African response to the HIV, STIs and TB:

- Addressing social and structural barriers that increase vulnerability to HIV, STIs and TB infections
- Preventing new HIV, STI and TB infections
- Sustaining health and wellness
- Increasing the protection of human rights and improving access to justice.

The NSP identifies communication as a critical strategic enabler for the successful implementation of the strategic plan. Social and behavioural communication is required to sustain and enhance the gains made in relation to HIV prevention, care and support, and treatment. Communication addresses the drivers of the epidemic and influences the socio-cultural barriers, while supporting demand creation for biomedical prevention, care and support, and treatment services.

Through effective communication, ideational factors that affect individual behaviours can be promoted and reinforced and these may result in the mitigation of the risk of HIV infection. Such individual behaviours include reduction in sexual partners and correct and consistent condom use. HCPs can be designed to reinforce and improve ideational factors such as beliefs, attitudes and perceived norms that may influence HIV risk behaviour. HCPs can also address gender inequities, and gender based violence. As HIV infection generates significant stigma and discrimination, HCPs are a strategic tool which aids in their elimination as they can be a barrier to individuals seeking healthcare and support.





Methods

The third NCS was a nationally representative survey. It was conducted in all 9 provinces of South Africa with fieldwork by Freshly Ground Insights. The survey aimed to include approximately 10,000 respondents across all nine provinces of South Africa and was designed to be representative of the 16-55 year olds across all population groups. For further details on the sample size and methods of the survey, see the box below. The survey received oversight from HDA and technical assistance from JHU-CCP.

The national sample of South Africa was drawn to be representative of the national population. The data were weighted using the Statistics South Africa 2007 Community Survey as can be seen in Annexure 3. Weighted data have been used throughout the report.

Box 1: Key features of the evaluation survey

- Interviewed 10,034 participants across 398 sub places during February to May 2012
- Included persons aged 16-55 years across all provinces and language groups
- A structured questionnaire was designed in a consultative manner with the members of the project team, including external advisors. The questionnaire was translated from English into Afrikaans, isiNdebele, isiSwati, isiXhosa, Sepedi, Sesotho sa borwa, Setswana, Tshivenda, Xitsonga and isiZulu
- At each selected household, individual at-home interviews were conducted by trained interviewers matched as far as possible to the demographics of the respondent, using a structured questionnaire
- The questionnaire covered socio-demographic characteristics, various HIV and AIDS knowledge, attitude and behaviour indicators and exposure to HIV communication programmes
- Interviews were conducted in the home language of the respondent
- The interview was approximately 1.5 hours in duration
- A 10% validation check was undertaken in person or telephonically to review the work of each interviewer and ensure validity



Survey design and sampling

A multi-stage, cluster sampling approach was used to draw a sample of 400 primary sampling units (PSUs). The multistage cluster sampling involved three stages, at the first stage Statistics South Africa sub-places were the PSUs. The primary reason for using sub-places as the PSUs for this study is because sub-places are the smallest “common denominator” sampling unit between the Census 2001 and the Community Study 2007, for which population data exists. This facilitated the updating of population data from Census 2001 with population data from the 2007 Community Survey.

The country was stratified into nine provinces, with sample size proportional to the population size of each province. The “smallest” province in the sample, the Northern Cape, yielded a sample size prediction of less than 100 respondents for the age group 16-24 (based on a possible 33:66 age group proportion split between ages 16-24 and ages 25-55), which is considered too small to yield reliable results when analysing the data at provincial level. Therefore, the sample for the Northern Cape was oversampled from 198 respondents to 235 respondents, allowing for the possibility of 100 respondents in the age group 16-24 years being drawn.

Within each province, the PSU was sampled on probability proportional to size, the measure of size being the number of individuals in each sub place. An initial sub-place was randomly selected from each province, thereafter additional sub-places were selected from each province by systematically skipping through the listed sub places in each province according to a sampling interval that yielded the desired sample size for each province. This led to a total of 400 PSUs being selected.

The second stage involved that within each PSU (sub place), the number of households (one person per household) to be sampled was calculated proportional to the size of the population of each sub place. A systematic sampling approach was utilised to select the households to be visited in each sub place. For each sub-place, a sampling interval was calculated and the starting point was randomly selected.

At the third stage of the sampling eligible respondents are household residents aged between 16 and 55 years who spend 4 or more nights at the household for most days of the year. One eligible respondent per household was randomly selected to be interviewed using the KISH Grid method.

Table 1: Sample of sub-places and households selected

Province	Small areas		Interviews	
	Selected	Realised	Targeted	Realised
Eastern Cape	50	50	1,252	1,254
Free State	22	22	580	572
Gauteng	83	83	2,081	2,057
KwaZulu-Natal	84	84	2,093	2,087
Limpopo	41	41	1,039	1,034
Mpumalanga	29	28	726	722
North West	27	27	668	672
Northern Cape	8	8	236	231
Western Cape	56	55	1,404	1,405
Total	400	398	10,079	10,034

The overall response rate was 83%. Non-responders included ineligible households, households where no-one was at home, and refusals.

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.



Questionnaire development

The questionnaire for the survey was developed in consultation with CMT, HDA, JHHESA, JHU-CCP, loveLife 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 24 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 gifts, 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 three 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 prevention of mother-to-child transmission of HIV (PMTCT)
- Ideational factors – such as values, beliefs and attitudes – and social norms related to HIV risk
- Self-esteem
- The nature and extent of multiple sexual partnerships (MSP), 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 and Eastern Cape. A sample of 100 respondents was drawn from the five selected wards.

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. The final post-piloted questionnaire was then translated from English into South Africa's other 10 official languages.

Methods of analysis

In this survey, respondents were asked all sections of the questionnaire, regardless of whether they had been exposed to any of the HCPs. The evaluation used multivariate statistical regression methods to assess the combined impact of HCPs on HIV prevention behaviours in the South African population. A continuous combined measure of exposure was used to assess the impact of the programmes on ideational factors such as knowledge, attitudes, norms, perceived risk and on HIV prevention behaviours.

A statistical package, STATA version 12 was used for data analysis, and both univariate and multivariate analytical methods were applied to investigate factors associated with HIV prevention behaviour outcomes. 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 organisations responsible for the NCS implemented several independent communication programmes as well as integrated communication campaigns to prevent HIV infection and help people living with HIV (PLHIV). This study examined the combined effects of these communication interventions on HIV prevention behaviours and ideational variables, after controlling for more than 30 potential confounders. Box 3 lists the nineteen programme components, usually measured as “in the past 12 months”.

To create the combined measure of programme exposure, several steps were taken. In each step, several statistical analyses were undertaken that ended in the creation of 19 differentiated programme components. Factor analysis was conducted to confirm that the 19 programmes could be added into a single measure of exposure. The internal reliability of the combined measure as measured by Cronbach alpha was 0.853, indicating a 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 mean level of exposure among respondents in the sample was 4.1 programmes.

Box 3: Nineteen HIV communication programmes

1. *Intersexions* TV drama and radio programme
2. *4Play: Sex Tips for Girls* TV drama
3. *Brothers for Life* programme components (7)
4. *Scrutinize Campaign*
5. *iLife* community radio drama
6. *Siyayinqoba Beat It!* programme components (7)
7. *Soul City* TV drama
8. *Soul City OneLove* campaign components (5)
9. *Soul City* community radio talk show
10. *Soul City Love Stories in a Time of HIV/AIDS*
11. *Soul City Soul Buddyz* TV and/or club participation
12. *Soul City* booklets (8)
13. *loveLife UNCUT* magazine
14. *loveLife* talk radio
15. *loveLife Foxy Chix* radio drama
16. *loveLife Nakanjani* TV campaign (3)
17. *loveLife* telephone activities (4)
18. *loveLife* face-to-face programmes (14)
19. SANAC “I am responsible” campaign

To minimise acquiescence response set and social desirability of self-reported recall of communication programmes, combined exposure to communication was measured by means of unaided recall, recognition of still images, and correct interpretation of relevant health messages. Thirty eight socio-economic and media exposure variables were used as statistical controls to estimate the independent effect of communication exposure on each HIV outcome variable (Annexure 4).

Multiple causal attribution (MCA) analysis was used to estimate the impact of combined communication programmes on HIV testing, condom use and multiple sexual partners. MCA analysis is appropriate under the following conditions: a population-level intervention has been implemented that can be evaluated by a survey of the population *after* it has occurred; an appropriate theory of causality is assumed; the intervention is based on appropriate causal theories of change; and the statistical requirements for a causal inference, (structural equation modeling (SEM) and path analysis) have been met. The latter includes control of confounding variables, exclusion tests, tests for exogeneity, and Hosmer-Lemeshow χ^2 goodness of fit test (Babalola & Kincaid, 2009; Kincaid & Do, 2006). The integrated statistical methodology of MCA is supported by the general theory of causation based on Pearl's Structural Causal Model (SCM) which "subsumes and unifies other approaches to causation, and provides a coherent mathematical foundation for the analysis of causes and counterfactuals" (Pearl, 2009a, p. 96; 2009b).

By means of multiple regression analysis, SEM examines two or more dependent (endogenous) variables in which one is a covariate (predictor) in the equation of the other. SEM helps resolve the problems of confounding variables and selection bias. The effect of exposure to the combined communication programmes is estimated after adjusting for a set of potential exogenous or confounding variables, which are expected to affect exposure as well as the outcome of interest. SEM allows us to investigate the direct and indirect effect of the communication programmes on each behaviour.

We estimated a structural equation model for three key HIV prevention behaviours—HCT, condom use and MSP. We used factor analyses to compute the composite measures for each of the ideational variables (casual pathways) that corresponded to each outcome, and we tested for exogeneity of the communication programme variable and each of the ideational variables using bivariate regression analysis.

To draw a causal inference, the communication variable also must also be shown to be exogenous to each outcome variable or a predicted measure of exposure can be used. The impact analysis of the combined communication programmes used a predicted variable, thus ruling out any potential endogeneity of the exposure measure. Statistical tests of exogeneity were conducted for each of the intermediate pathways (e.g. HIV test discussion) for each outcome variable 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. Exogeneity tests also 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 equation (Bollen, Guilkey & Mroz, 1995). 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 programmes (Kincaid & Do, 2006).

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 combined communication variable, after controlling for the socio-economic variables included in the analysis. Each of these adjusted probabilities (percentages) shown below take the form of a classic dose response – that is, the outcome becomes more pronounced with increased exposure to the communication programmes.

To estimate the dose-response effect of the combined communication exposure on each outcome, the combined exposure measure was divided into 10 equal parts, or deciles, so that each part represents one-tenth of the sample, which reflects a continuum of exposure to the communication programmes. Those with the least exposure would be in the lowest decile (lowest 10%) and those with the most exposure in the highest decile (highest 10%).



Study limitations

Cross-sectional studies are carried out at one point in time, usually give no indication of the sequence of events, and therefore the observed relationships are only considered as associations or correlations rather than causal. When a cross-sectional survey is conducted *after* a population level intervention, however, a time-order is implied. Potential outcome measures can be treated as occurring after exposure to the intervention or as simultaneous during the period that the intervention is implemented. Measurement of the key outcome behaviours (HIV testing, for example) were restricted in time to the 12 months prior to the survey when the programmes were implemented. This condition makes a causal attribution possible if other criteria are met, such as control for confounding variables, exogeneity tests, dose response effects, and theoretical coherence. After meeting these statistical requirements, the causal inferences reported here are justified, especially given the strong theoretical support for a causal attribution as indicated by the confirmed intermediate pathways of the ideation factors between exposure to the communication programmes and the hypothesised behavioural 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 exposed and unexposed groups equally and therefore they would not significantly influence the calculation of impact. The consistency of results from the various methods used (multivariate regressions, SEM, dose response analysis) do not support any lack of validity due to self-report in this survey.

The overall response rate was 83%. 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 University 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. The University of the Witwatersrand provided 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. There was no way of linking specific answers back to individuals. Anonymity of respondents was maintained throughout the study and all data received contained only unique identifier numbers. All original consent forms were placed safely in storage and will be destroyed after five years.



Sample description

Of the total sample, 41% were male and 59% were female. The mean age was 31.3 years. The final sample was weighted in order to be representative of the population of South Africa with respect to sex, age, population group, urban/rural residence, and province. Sample weights were corroborated using the 2007 Community Survey conducted by Statistics South Africa.

Annexure 3 consists of a comparison of the 2012 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	Unweighted sample size (Percentage)	Weighted Population (Percentage)
Sex		
Male	4,065 (40.5)	13,576,269 (48.3)
Female	5,969 (59.5)	14,516,510 (51.7)
Age (years)		
16-19	1,336 (13.3)	3,647,908 (13.0)
20-24	2,063 (20.6)	5,228,315 (18.6)
25-29	1,769 (17.6)	5,030,280 (17.9)
30-34	1,369 (13.6)	3,781,785 (13.5)
35-39	1,077 (10.7)	3,209,269 (11.4)
40-44	821 (8.2)	2,572,740 (9.2)
45-49	684 (6.8)	1,962,806 (7.0)
50-55	915 (9.1)	2,659,676 (9.5)
Population group		
African	8,225 (82.0)	21,955,060 (78.2)
Coloured	1,447 (14.4)	2,605,677 (9.3)
White	183 (1.8)	2,806,375 (10.0)
Indian/Asian	171 (1.7)	709,853 (2.5)
Urban/rural		
Urban	6,870 (68.5)	17,460,690 (62.2)
Rural	3,164 (31.5)	10,632,089 (37.9)
Province		
Eastern Cape	1,250 (12.5)	3,373,473 (12.0)
Free State	576 (5.7)	1,649,632 (5.9)
Gauteng	2,055 (20.5)	6,711,830 (23.9)
KwaZulu-Natal	2,083 (20.8)	5,754,675 (20.5)
Limpopo	1,037 (10.3)	2,727,336 (9.7)
Mpumalanga	726 (7.2)	2,084,027 (7.4)
North West	672 (6.7)	1,931,669 (6.9)
Northern Cape	235 (2.3)	617,834 (2.2)
Western Cape	1,400 (14.0)	3,242,303 (11.5)

n= 4,065 men 16-55 & 5,969 women 16-55



Results

1. Media access, language and reach

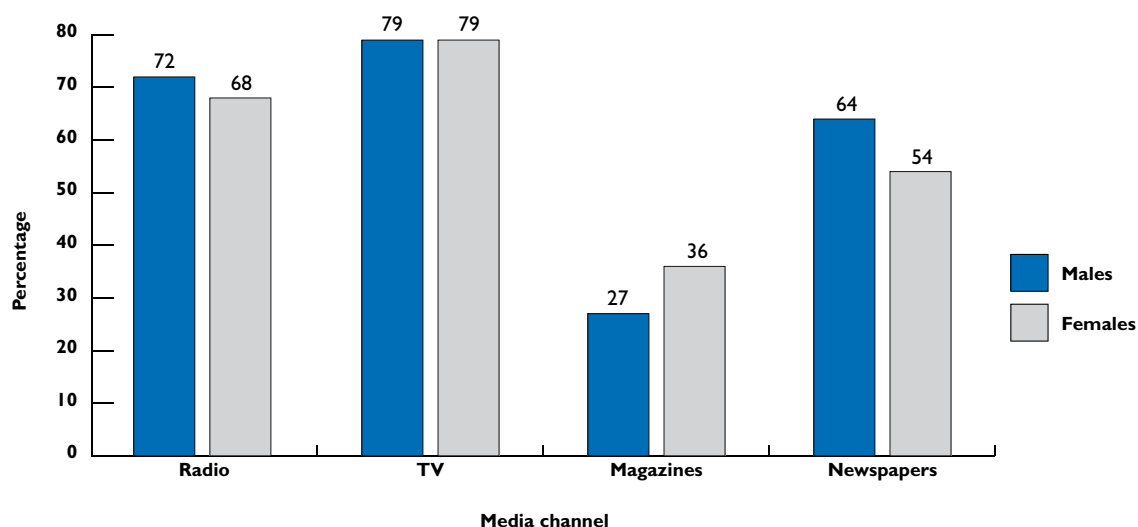
1.1 Access to media

This study examined the use of mass media (broadcast, print and outdoor) in South Africa which is important to understand when designing communication strategies. It should be noted, however, that in addition to the mass media, most programmes utilise community mobilisation (such as peer education and community dialogues), supported by small media (posters, booklets and utility items).

Radio and television were the most popular mass media consumed by people in South Africa, with 79% of people watching TV and 70% listening to the radio.

More women reported reading magazines while men were more likely to report reading newspapers and accessing the internet (Figure 3).

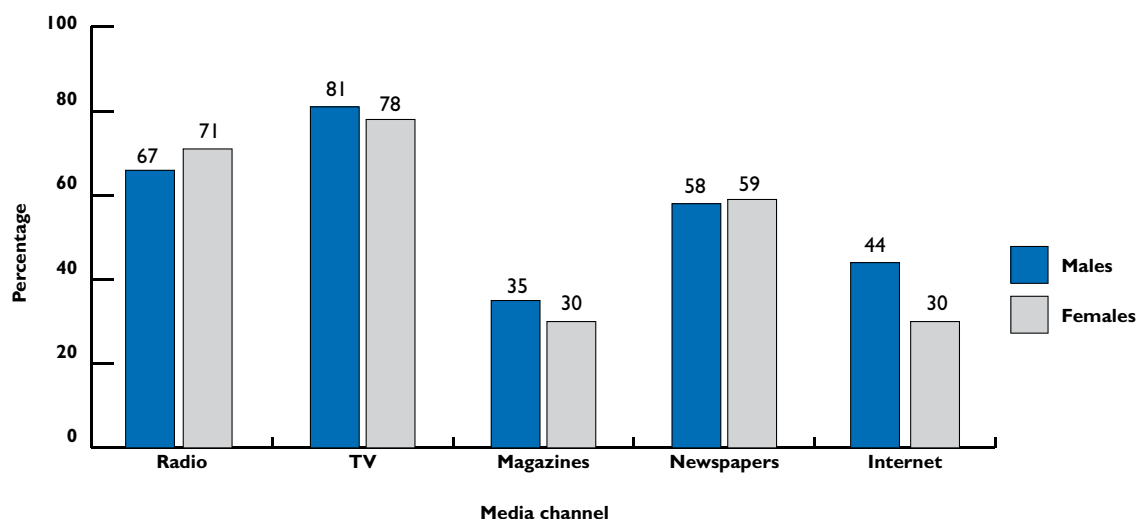
Figure 3: Percentage of men and women accessing various media, weighted data



n = 4,065 men 16-55 & 5,969 women 16-55

Reach of all media except radio was higher amongst young people (16-24 years) than amongst those aged 25-55 years. Newspaper consumption was similar amongst both age groups (Figure 4).

Figure 4: Percentage of men and women accessing various media by age, weighted data



n = 3,399 men and women 16-24 & 6,634 men and women 25-55

Respondents were most likely to watch SABC 1 and e.tv with 43% and 40% accessing these stations daily. When compared to 2009, total media access has increased for all TV stations and internet, while use of radio, newspapers and magazines has decreased. For a full breakdown of frequency of accessing various media in comparison to 2009 see Annexure 5.

The top five radio stations that people reported listening to were all local language stations of the SABC: Ukhozi FM, Metro FM, Thobela FM, Lesedi FM and Umhlobo Wenene FM.

An important development, since the previous 2009 survey, is the growth of social media use. Twenty one percent of *all* respondents reported using Facebook which was currently more popular than other forms of social media such as Twitter (8%) or Mxit (14%). Younger respondents were more likely to use social media than those aged 25-55 years (Table 3). Fifteen percent of young respondents who accessed Facebook said that they got information on HIV/AIDS from this source, while 24% of respondents accessing Twitter said they used it to access HIV related information.

Table 3: Weighted number and percentage of respondents accessing social media by age

	16-24 years		25-55 years	
	Weighted no.	%	Weighted no.	%
Access Facebook	2,807,858	31.6	3,003,542	15.6
Use Twitter	888,243	10.0	1,393,787	7.3
Access Mxit	2,613,999	29.5	1,282,701	6.7

n= 3,399 respondents 16-24 & 6,635 respondents 25-55

Less than 2% of all respondents reported accessing the AIDS helpline or the Stop Gender Violence helpline. There were no differences in use of the helplines by age or sex. Exposure to either helpline was not included in the combined exposure measure.

Implications for HCPs

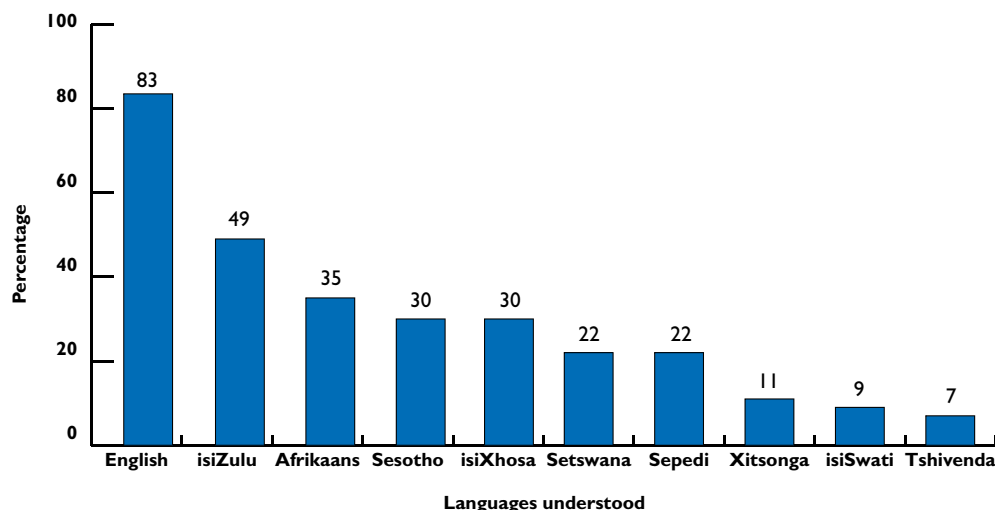
- Widest media access and reach is achieved via TV. HCPs should continue to use TV, especially SABC 1 and e.tv, to reach the largest number of people
- A sizeable majority of people also listen to the radio. Reaching people via radio is likely to be achieved by broadcasting on the following stations: Ukhozi FM, Metro FM, Thobela FM, Lesedi FM and Umhlobo Wenene
- While more people are using social media than previously, use remains far lower than for traditional media. HCPs should invest in social media campaigns – particularly Facebook as it has the widest reach and Twitter as it is most used to obtain information about HIV. However, caution should be exercised in diverting focus away from traditional media where reach is highest and when the impact of social media is not yet clear. Social media should rather be integrated with traditional media as a complementary channel
- The low utilisation of the helplines suggests that better marketing of these is needed in addition to improving integration of the helplines into HCPs

1.2 Language

Language comprehension and use impacts on the extent to which the population is able to engage with messages circulated through mass media. The three main languages that respondents reported being able to understand were English (83%), isiZulu (49%) and Afrikaans (35%).



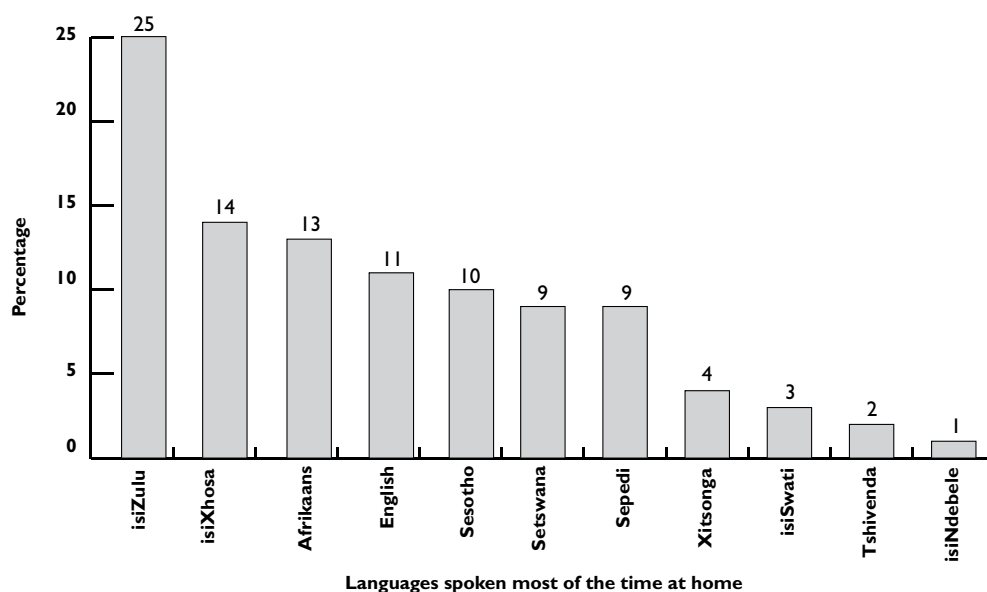
Figure 5: Percentage of men and women understanding various South African languages, weighted data



n= 4,065 men 16-55 & 5,969 women 16-55

We asked respondents which South African language they spoke most of the time at home. Figure 6 shows that isiZulu was the most common language spoken at home.

Figure 6: South African language most commonly spoken at home by men and women, weighted data



n= 4,065 men 16-55 & 5,969 women 16-55

Implications for HCPs

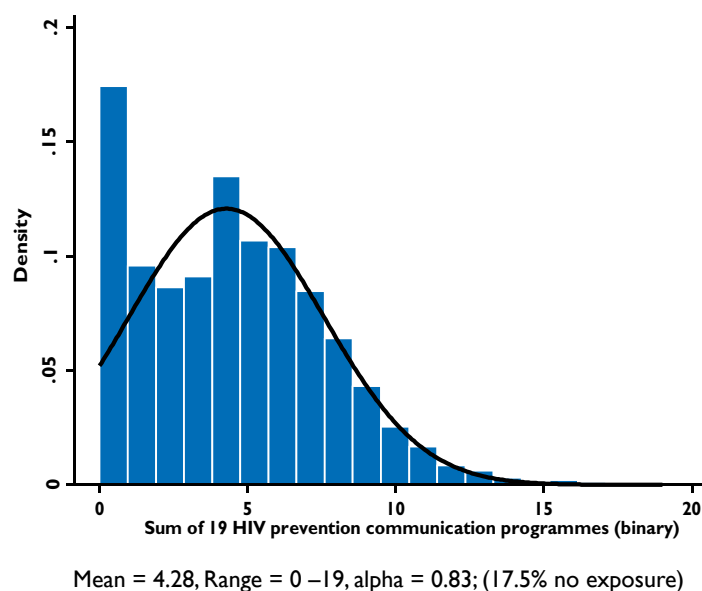
- The vast majority of people understand English when it is spoken. HCPs will reach the highest percentage of people using English as the language medium.

1.3 Reach of HIV communication programmes

Eighty two percent of the population was exposed to at least one of the 19 communication interventions in the last 12 months, and over one third were exposed to 6 or more interventions. On average, people were exposed to 4 communication interventions. This high level of exposure was the result of the combination of communication channels used by the programmes – television, radio, print media and community mobilisation - and the significant collaboration that media owners in South Africa provided for the distribution of these programmes. These communication programmes also benefitted from the involvement of leaders who promoted campaign messages. When leaders speak, the media report on what they say and do, and people talk about what leaders think and say, and emulate their example.

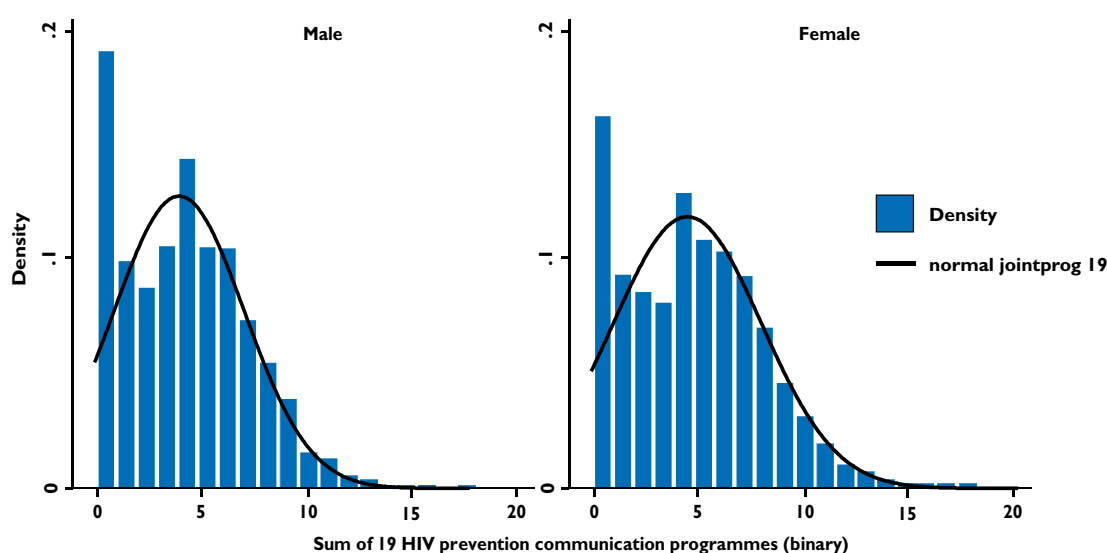
In 2012, HCPs reached a total of 23,037,050 men and women between the ages of 16-55 years. However, reach decreased to 82% compared to 2009, where 90% of those aged 16-55 years were exposed. The frequency distribution of the combined exposure measure for 2012 is shown in Figure 7.

Figure 7: Distribution of exposure to HIV communication programmes



The mean level of exposure was higher among women (4.49) than amongst men (3.98).

Figure 8: Distribution of exposure to HIV communication programmes by sex

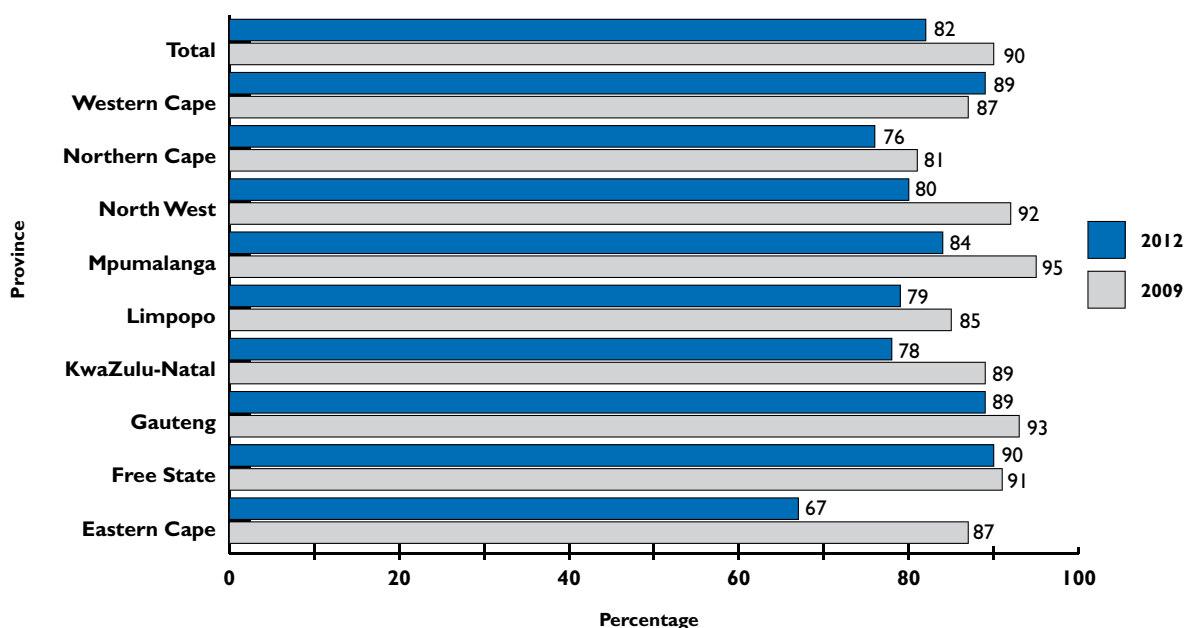


Graphs by Female versus male sex (q1_1)
 *Mean exposure: males=3.98, females=4.49; prob. (F)=0.001

The reach of the HCPs varied significantly by province, with 90% of people in Free State exposed to at least one of the 19 HCPs compared with 67% of people in the Eastern Cape. Reach of HCPs was also lower in 2012 in every province except the Western Cape compared to 2009 (Figure 9). These findings may require further investigation.



Figure 9: Percentage of men and women reached with at least one HIV communication programme by province, weighted data



n= 4,065 men 16-55 & 5,969 women 16-55 (2012)
n= 4,437 men 16-55 & 5,291 women 16-55 (2009)

It is important to consider who HIV communication programmes failed to reach. Eighteen percent of the population was not exposed to any of the 19 programme components measured in this survey. This survey found that those who were unreached were more likely to be older (50 years +), married and living together or divorced/widowed, with no or low levels of schooling and living in farming settlements. Annexure 6 describes the characteristics of those people not reached in 2009 and 2012.

The combined measure of exposure to these nineteen HCPs is used to estimate the effect of the communication 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. Dose response is one criterion to claim causal attribution of the HCPs on HIV prevention behaviours.

Box 4 lists the variables that are statistically related to the combined measure of HCP exposure. The strongest predictor of HCP exposure is frequency of watching television. Exposure to HCPs was also higher in the younger age groups (16-24 and 25-35 years), among Africans compared to all other population groups, and among those with higher socio-economic status.

Box 4: Significant predictors of exposure to HIV communication programmes

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

- Were female
- Were younger (under 36 years old)
- Were single or had a steady partner whom they did not live with (compared to married or living with sex partner)
- Had higher socio-economic status (continuous variable)
- Had a grade 11, matric and tertiary level of education
- Has participated in community meetings where HIV/AIDS was discussed
- Had heard HIV/AIDS spoken about in church or mosque
- Perceived support for HIV prevention and care (social capital) in their community (continuous variable)
- Frequently watched SABC 1, SABC 2, e.tv, Top-TV
- Frequently read magazines and newspapers
- Frequently used the internet
- Lived in Free State or Mpumalanga

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

- Were Coloured, White, Indian
- Lived in a tribal or peri-urban type of settlement
- Resided in KwaZulu-Natal, North West, Northern Cape or Eastern Cape

n= 6,062 men and women ages 16-55 years who have had sex in the last 12 months; R2 =0.45

Implications for HCPs

- There has been a decrease in reach of HCPs since 2009. As communication is defined as a critical strategic enabler in the NSP, reach needs to be carefully monitored
- HCPs are reaching segments of the population likely to be at higher risk of HIV infection such as younger Africans. HCPs should consider alternatives to mass media, such as community mobilisation, to reinforce messaging amongst those less likely to be exposed such as poorer people

1.4 Community mobilisation

In 2012, 16% of respondents reported having attended a community meeting where HIV was discussed and 23% indicated that HIV had been discussed at a place of worship. Six percent reported that they were leaders of an organisation that helped PLHIV or which focused on related prevention activities. There were no major changes since 2009.

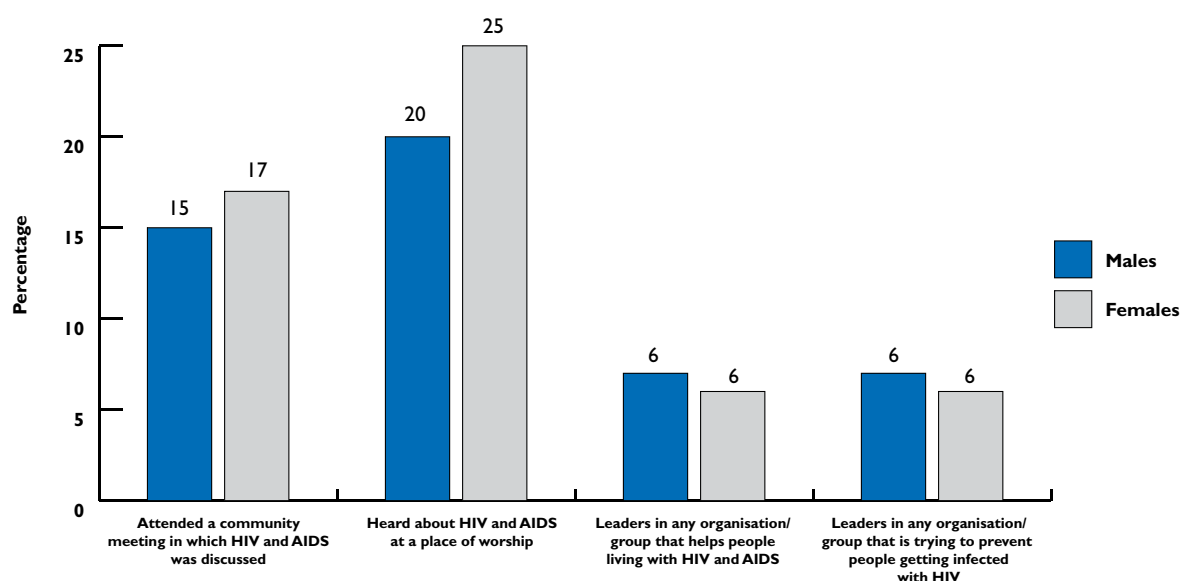
Table 4: Percentage of men and women involved in community meetings or organisations addressing HIV in 2009 and 2012, weighted data

	2009	2012
Attended a community meeting in which HIV and AIDS was discussed	15.8	16.4
Heard about HIV and AIDS at a place of worship eg. church, mosque	26.8	22.5
Leaders in any organisation/group that helps people living with HIV and AIDS	5.0	6.1
Leaders in any organisation/group that is trying to prevent people getting infected with HIV	5.4	6.0

n= 4,065 men 16-55 & 5,969 women 16-55

Slightly more women attended a meeting where HIV was discussed or heard HIV spoken about at a place of worship. There were no differences in leadership of HIV-related organisations by sex (Figure 10).

Figure 10: Percentage of men and women involved in community meetings or organisations addressing HIV in 2009 and 2012, weighted data



n= 4,065 men 16-55 & 5,969 women 16-55

Implications for HCPs

- There is room for HCPs to continue to promote discussion of HIV at a community level and to promote leadership in relation to HIV
- HCPs need to engage the religious sector as part of the multisectoral response to HIV

2. Social and structural drivers of the HIV epidemic

In addition to evaluating various HIV communication initiatives, the NCS 2012 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 social and structural drivers of the epidemic include education, employment, socio-economic status, marital status, violence, stigma and alcohol use.

2.1 Education

Forty percent of respondents reported being educated up to Grade 11, 34% reported having completed matric and 14% reported having tertiary education. Twelve percent reported a primary school education or no schooling. There have been demonstrable improvements in education since the NCS 2009, with more people in 2012 indicating they had completed matric or had tertiary level education.

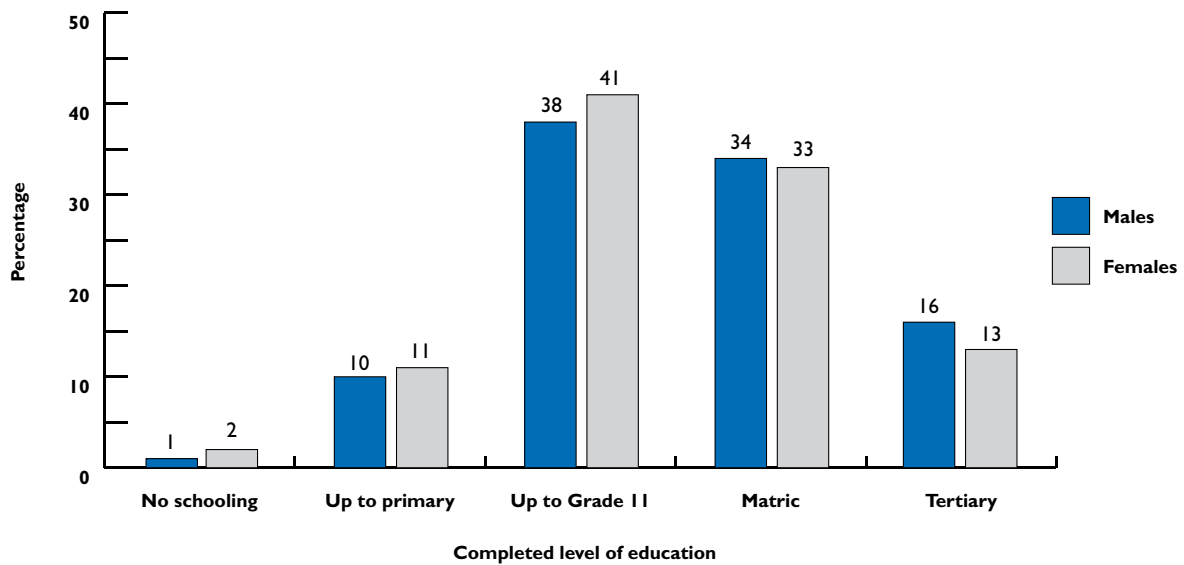
Table 5: Completed level of education in 2009 and 2012, weighted data

	2009	2012
No schooling/ primary school only	17.6	12.0
Up to Grade 11	44.9	39.8
Matric	32.2	33.8
Tertiary	5.3	14.4

n= 4,065 men 16-55 & 5,969 women 16-55 (2012); n=4,437 men 16-55 and 5,291 women 16-55 (2009)

This survey found that there were few differences in educational attainment by sex. Figure 11 shows that 3% more women reported a Grade 11 education than men did but more men had a tertiary education as compared to women.

Figure 11: Completed level of education by sex, weighted data



n= 4,065 men 16-55 & 5,969 women 16-55

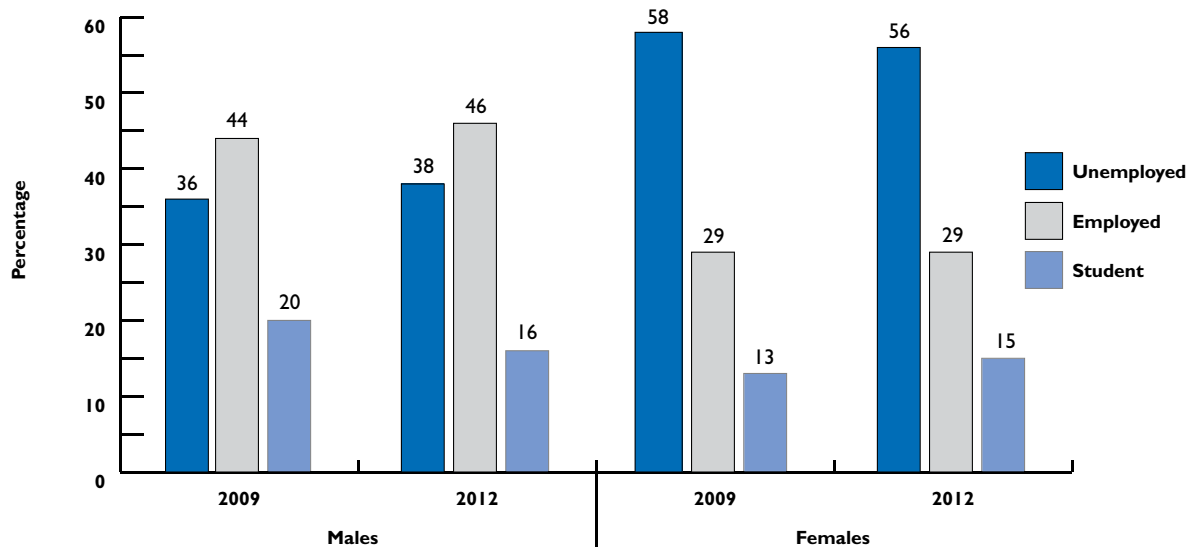
Implications for HCPs

- HCPs need to take cognisance of the improved levels of education. While existing efforts need to be sustained, given that reach of HCPS is lower amongst those with lower levels of education, more focus on this vulnerable group is needed

2.2 Employment

This study found that just under half (48%) of all respondents reported being unemployed. Thirty eight percent were employed and 15% were currently students. Significantly more men (46%) were employed than women were (29%). Figure 11 shows that employment levels amongst both men and women have stayed roughly the same since the previous survey.

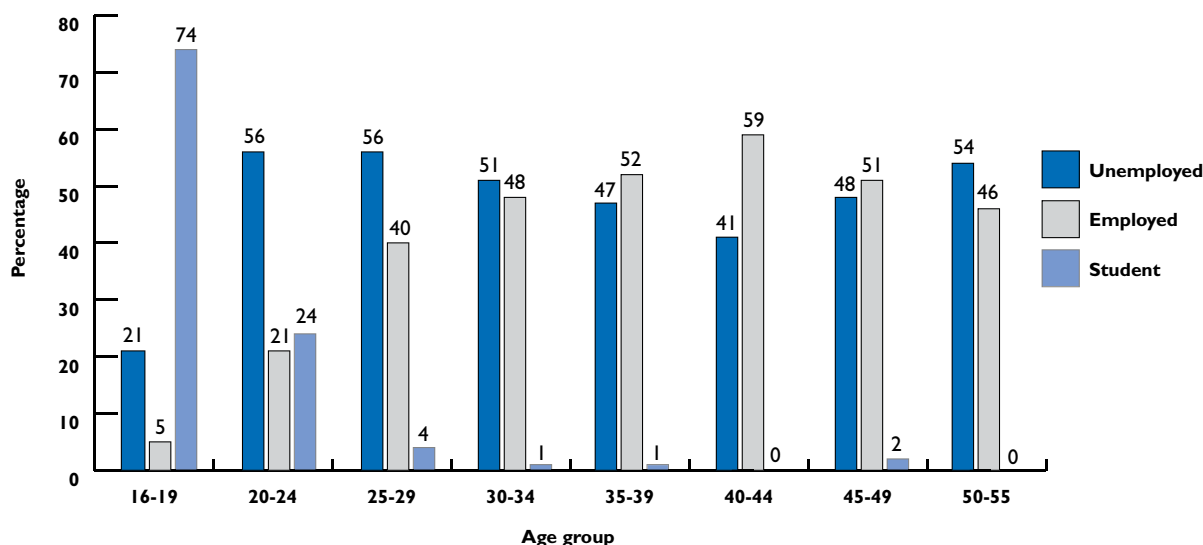
Figure 12: Employment status in 2009 and 2012 by sex, weighted data



Despite improved levels of education, unemployment remains high. For example, of those who reported having completed matric, the majority (45%) were unemployed. Forty percent were employed and 15% were students. Unemployment was particularly high amongst young people with over 50% of people aged 20-34 years reporting being unemployed.



Figure 13: Employment status by age, weighted data



n= 4,065 men 16-55 & 5,969 women 16-55

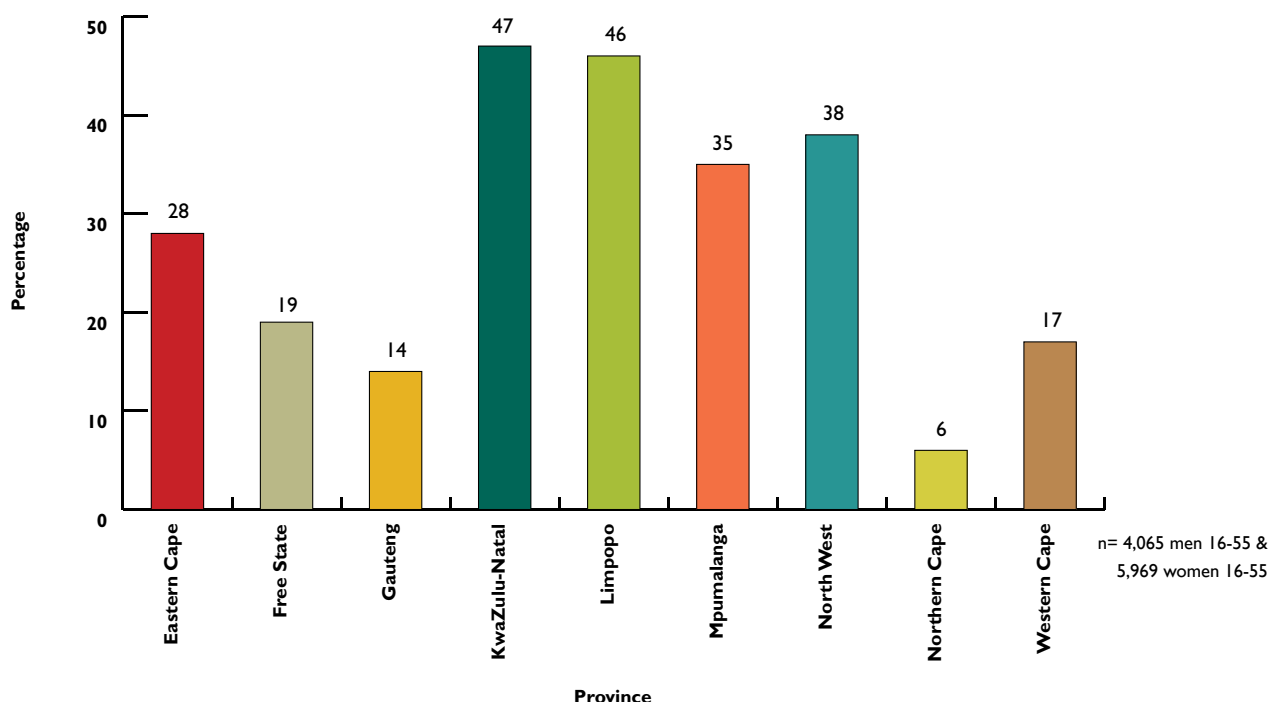
Implications for HCPs

- Levels of unemployment were high, with particularly high unemployment amongst women. Unemployment is a risk factor for HIV and HCPs have an obligation to use the employment information in this report for advocacy purposes
- HCPs should be conscious that 50% of their audience is unemployed when framing their messages
- Community action components of HCPs are likely to reach the unemployed. Schools, universities and other places of learning remain good channels through which HCPs can reach people whom are studying

2.3 Socio-economic status and poverty

In this study, we measured socio-economic status by means of a living standards measure, which was derived from the household items that individuals indicated they had. Thirty nine percent of people were classified as having a 'high' socio-economic status. Thirty two percent of respondents were classified as having a 'medium' socio-economic status while 29% had a 'low' socio-economic status. However, socio-economic status differed significantly across provinces. KwaZulu-Natal and Limpopo had the highest percentage of people classified as having a 'low' socio-economic status while Northern Cape and Gauteng had the lowest (Figure 14).

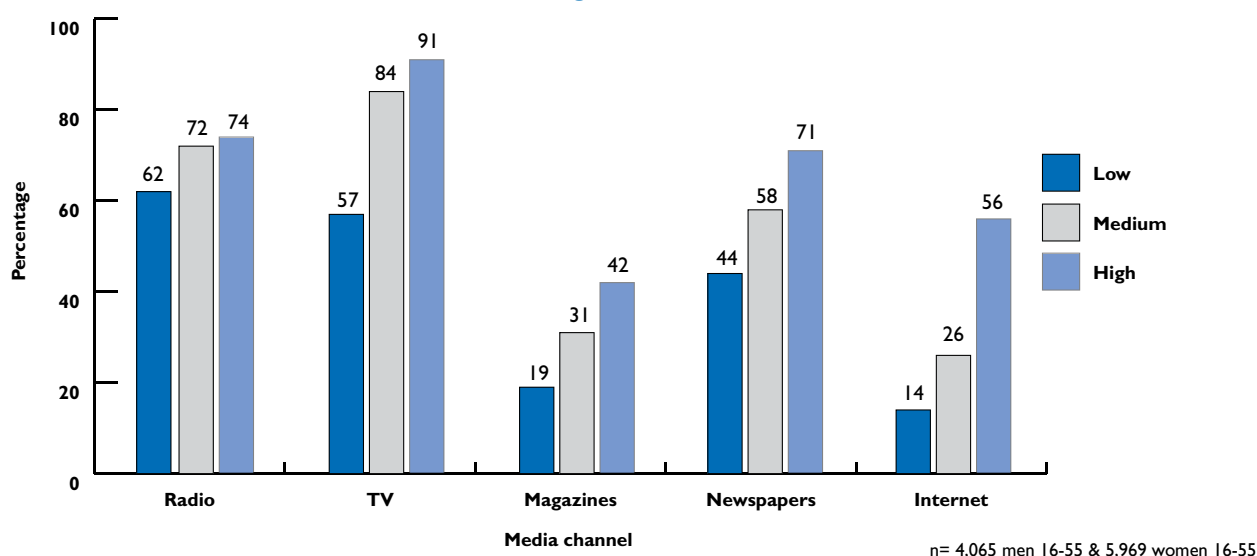
Figure 14: Percentage of men and women classified as having a low socio-economic status by province, weighted data



n= 4,065 men 16-55 & 5,969 women 16-55

Figure 15 shows that those with a higher socio-economic status were more likely to access all types of media than those with medium and low socio-economic statuses.

Figure 15: Percentage of men and women aged 16-55 years accessing various media by socio-economic status, weighted data



People classified as from the higher socio-economic group were likely to demonstrate better knowledge of HIV prevention measures (e.g. condom use, protective effect of few sexual partners etc.) compared to counterparts from the 'low' socio-economic groups.

Implications for HCPs

- Knowledge of HIV prevention is lower amongst poorer young people. HCPs should focus their efforts on reaching these individuals
- People from KwaZulu-Natal, North West, Northern Cape and Eastern Cape are less likely to be exposed to HCPs (see section 1.2). As three of these provinces have a large population of poor people, HCPs should pay particular attention to working in these provinces. Community engagement may be a better way of reaching these groups than through mass media

2.4 Marital status

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. Forty three percent of all respondents reported being single with more men (46%) reporting this than women (40%). For both men and women, fewer sexually active respondents indicated that they were single in comparison to all respondents.

Figure 16: Marital status of men, weighted data

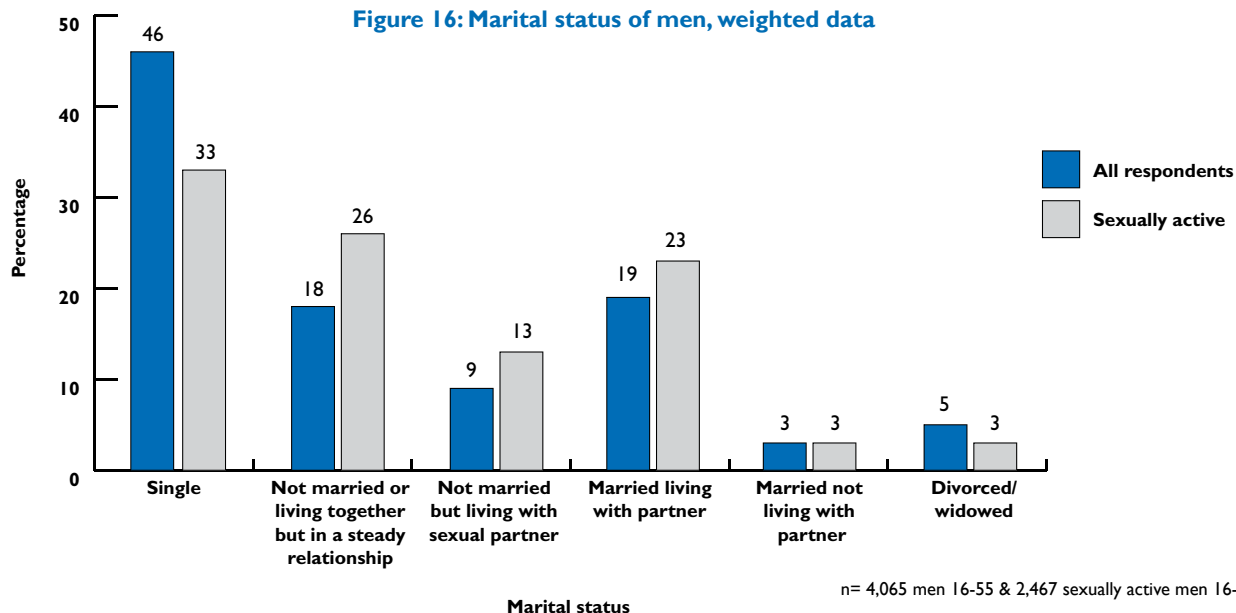
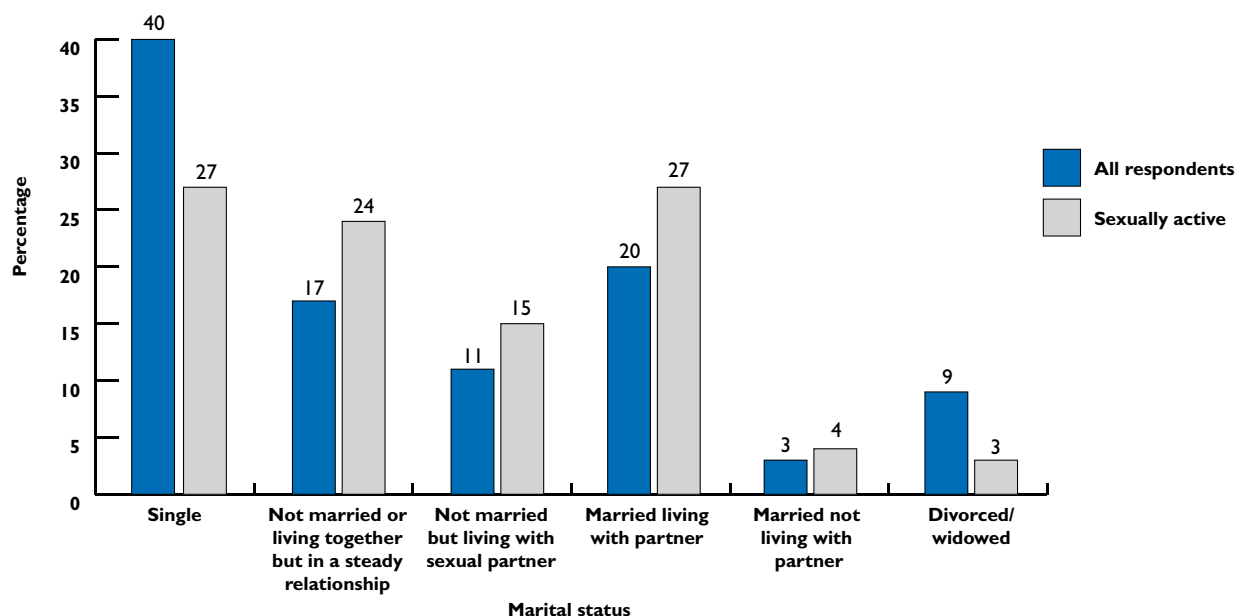




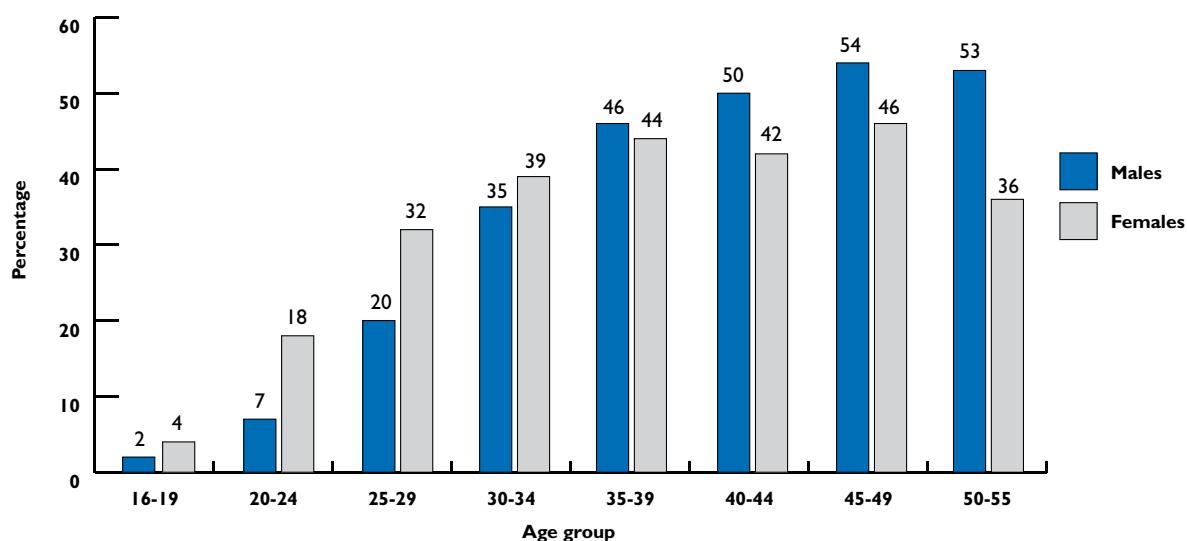
Figure 17: Marital status of women, weighted data



n= 5,969 women 16-55 & 3,594 sexually active women 16-55

This study found that there were fairly low levels of marriage and cohabitating relationships. 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 18: Percentage of men and women married or living with sexual partner by age, weighted data



n= 4,065 men 16-55 & 5,969 women 16-55

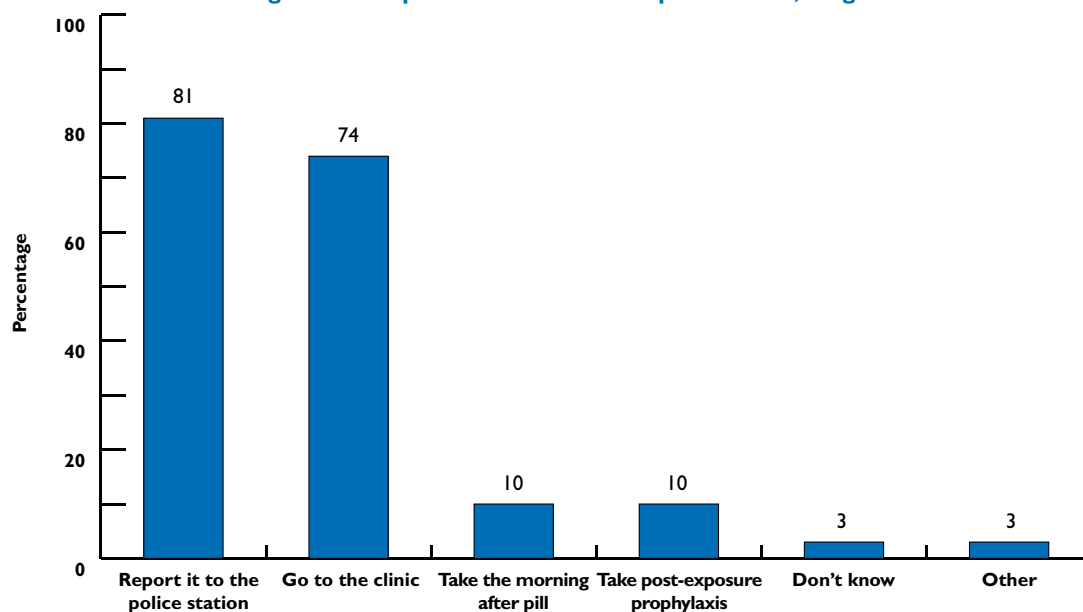
Implications for HCPs

- HIV prevention interventions need to be tailored knowing that South Africa is largely a non-marrying society.
- Low levels of marriage and cohabitating relationships will make it less likely that young people will abstain from sex until cohabitation or marriage. While knowledge of abstinence as an HIV prevention option is high (see section 3.2.5), actually implementing this behaviour may not be a very realistic option. HCPs should ensure a greater focus on sustaining messaging around consistent condom use as well as on faithfulness and partner reduction as well.

2.5 Violence

All respondents were asked what they would advise someone whom they knew had been raped to do. The most common response (81%) was to report the rape to the police, followed by encouraging the survivor to go to the clinic (74%). Only 10% of respondents said that they would advise someone who had been raped to take post-exposure prophylaxis (PEP).

Figure 19: Respondents' advice for rape survivors, weighted data



n= 4,065 men 16-55 & 5,969 women 16-55

Twenty seven percent of respondents reported knowing of services available to women who have experienced violence in the home. More women (30%) knew of these than men (25%).

Table 6 shows that people had favourable attitudes towards a woman's right to refuse sex, talking rather than resorting to violence and not beating a partner if one suspects they are having an affair.

Table 6: Attitudes towards violence, weighted data

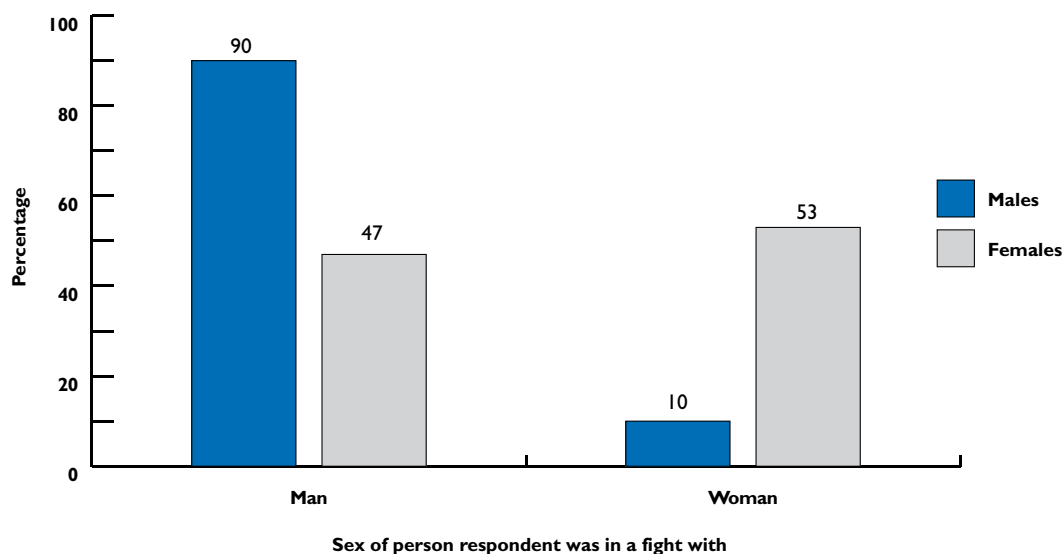
	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
It's okay for a man/woman to beat his/her sex partner if he/she thinks he/she is having an affair	81.2	7.7	3.8	7.3
Men should talk to women when they have conflict rather than resorting to violence	9.9	4.2	10.1	75.8
It is okay to physically beat children when they misbehave	63.6	10.8	12.0	13.6
A woman has a right to say no to sex if she does not want it	7.3	3.7	7.6	81.3

n= 4,065 men 16-55 & 5,969 women 16-55

A small but not insignificant proportion of respondents (10%) reported being in a physical fight in the past year. This was slightly lower than in 2009, where 12% of respondents reported having been in a physical fight. Men who reported having been in a fight were more likely to have fought with another male. Of those women who have been in a fight, 47% reported being in a fight with a man.



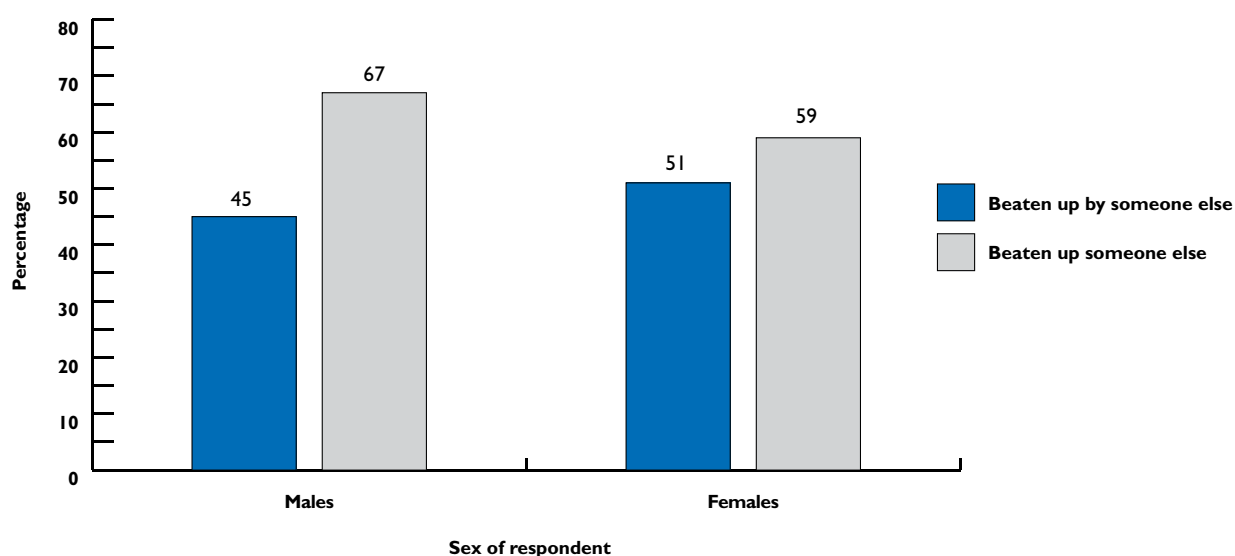
Figure 20: Sex of person respondent was in a physical fight with, weighted data



n= 541 men 16-55 & 384 women 16-55 who have been in a physical fight in the past year

Of those who reported having been in a physical fight, 47% reported having been beaten up and 64% reported having beaten up someone else. More women reported having been beaten up than men (51% vs 45%) and more men reported having beaten up someone else than women (67% vs 59%).

Figure 21: Percentage of men and women reporting having been beaten up or having beaten up someone else, weighted data



Implications for HCPs

- The majority of respondents knew that rape survivors needed to go to the clinic. This has been a message HCPs have emphasised
- However, few people mentioned that someone who has been raped needs to take PEP. This is a message that HCPs need to strengthen
- There is a need for HCPs to promote local services for women who have experienced violence amongst both men and women
- Relatively few respondents reported having been in a physical fight but the importance of violence in relation to HIV prevention should not be forgotten. HCPs should continue to address violence, not only as it pertains to HIV but as part of a broader development agenda

2.6 Stigma

This study showed that people are accepting of people living with HIV in their communities. Respondents did not report major problems with HIV and AIDS stigma related issues with 80% of people strongly agreeing that they would remain friends with someone who was HIV positive and 74% of people strongly disagreeing that they would be embarrassed to be seen with someone who is HIV positive.

Table 7: Stigma-related attitudes, weighted data

	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
I would remain friends with someone even if I found out that he/she has HIV	8.7	4.0	7.0	80.3
I would be embarrassed to be seen with someone who everyone knows has HIV & AIDS	74.1	9.0	5.1	11.8

n= 4,065 men 16-55 & 5,969 women 16-55

Women were more likely to display favourable attitudes towards people living with HIV, with 76% of women strongly disagreeing that they would be embarrassed to be seen with someone everyone knows has HIV compared with 73% of men.

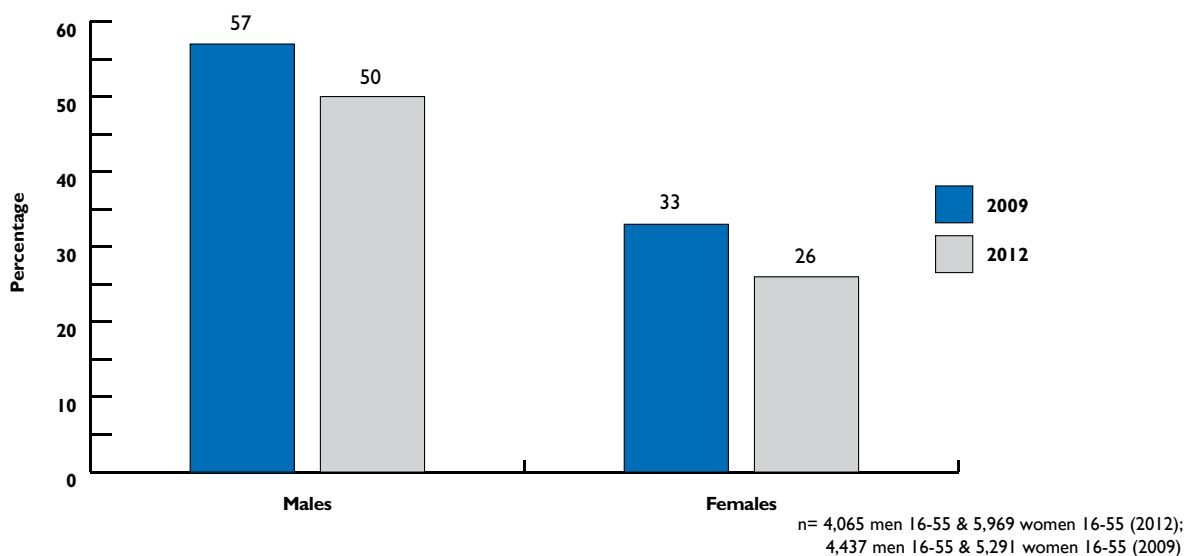
Implications for HCPs

- Continued and sustained communication efforts are indicated to inform and influence those remaining people with negative attitudes.

2.7 Alcohol

Just over half of respondents (52%) agreed that excessive alcohol consumption would mean that they and their sex partners would not care about getting HIV. Two thirds of respondents said that it was easier to have sex with people who go to clubs and shebeens. Thirty seven percent of all respondents reported having ever had an alcoholic drink. Compared to 2009, fewer men and women reported ever drinking (Figure 22).

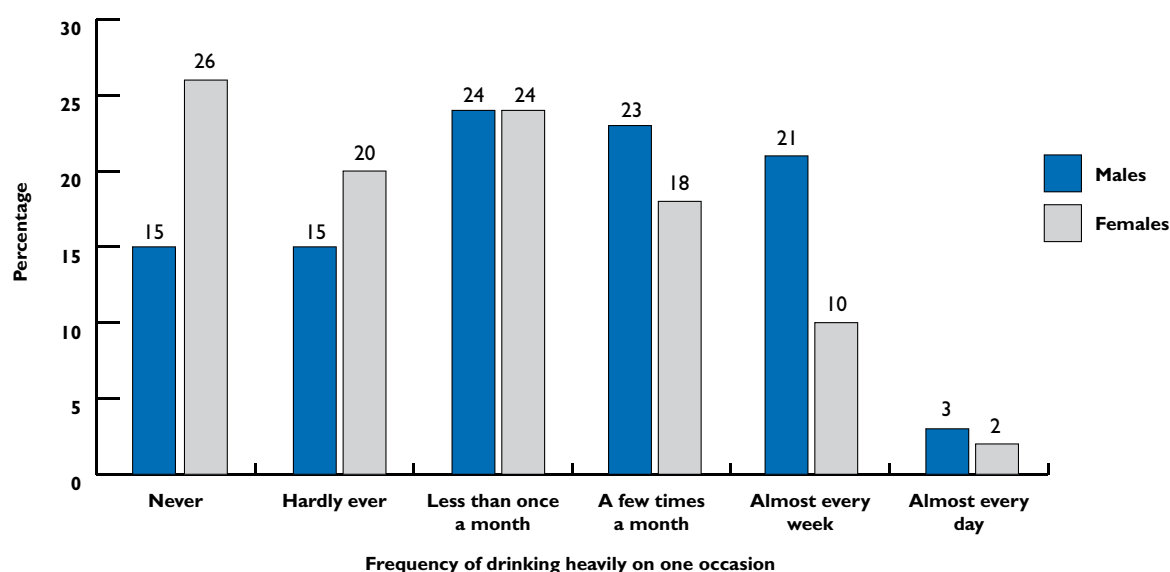
Figure 22: Percentage of men and women reporting ever drinking alcohol in 2009 and 2012, weighted data



Of those who reported drinking, a significant percentage reported drinking excessively (defined as 5 or more drinks on one occasion for men and 4 or more for women). Figure 23 shows that binge drinking was high amongst both men and women. Forty seven percent of men and 30% of women reported binge drinking more than once a month.



Figure 23: Percentage of men and women who reported drinking heavily on one occasion, weighted data



n= 1,909 men 16-55 & 1,460 women 16-55 who have ever had a drink

Implications for HCPs

- Of those who do drink, a fair number drink heavily. HCPs need to emphasise that riskier sexual behaviour is more likely with excessive alcohol consumption. Messaging should be part of broader safer alcohol use programmes

3. Prevention of new HIV infections

3.1 HIV counselling and testing

The uptake and acceptance of HIV counselling and testing (HCT) and treatment, care and support programmes is essential for HIV prevention efforts. This study found that there has been a large increase in the number of South Africans ever tested for HIV with 2.6 million more people reporting having ever tested than three years ago (Table 8). This study found that 38% or 10.7 million people were tested for HIV in the past 12 months. This correlates well with the routine HCT campaign testing data – records indicate that 10,700,276¹ people were tested in this period.

Table 8: Number and percentage of men and women tested for HIV in 2009 and 2012

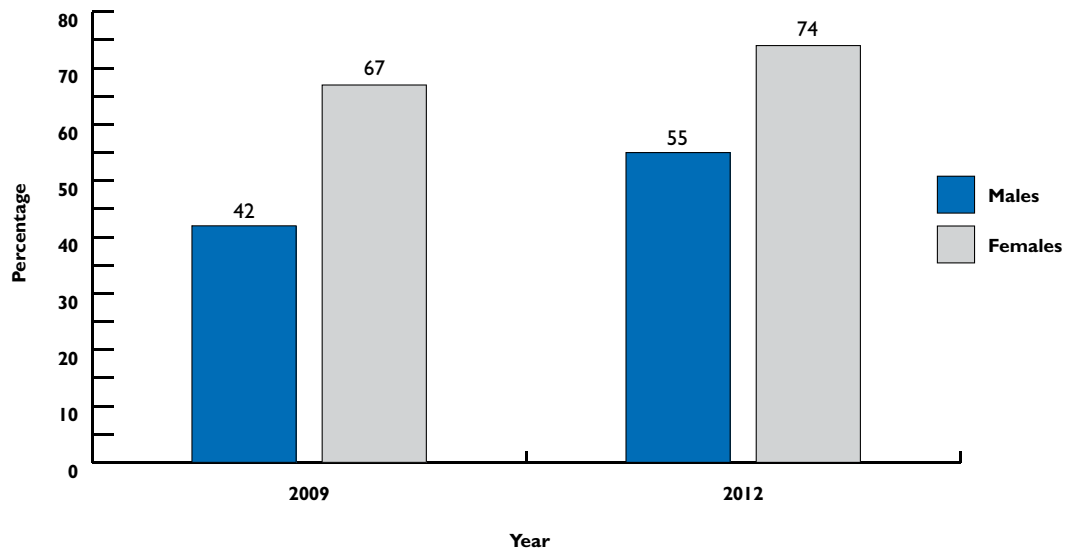
	2009			2012		
	n	Weighted number	Weighted percentage	n	Weighted number	Weighted percentage
Ever tested for HIV	5,214	14,947,451	54.7	6,444	17,632,568	65.0
Tested for HIV in the past 12 months	3,169	8,849,625	32.3	3,994	10,707,127	38.1

n= 4,065 men 16-55 & 5,969 women 16-55 (2012); n=4,437 men 16-55 and 5,291 women 16-55 (2009)

More women had ever tested for HIV than men but there has been a 13% increase in the percentage of men ever tested since 2009 (Figure 24).

¹ NDoH, 2011 in Global AIDS Response Progress Report, 2012. Calculated by dividing number of people tested in 15 months (13,375,345) by 15 and multiplying by 12. NDoH data not restricted to 16-55 year olds.

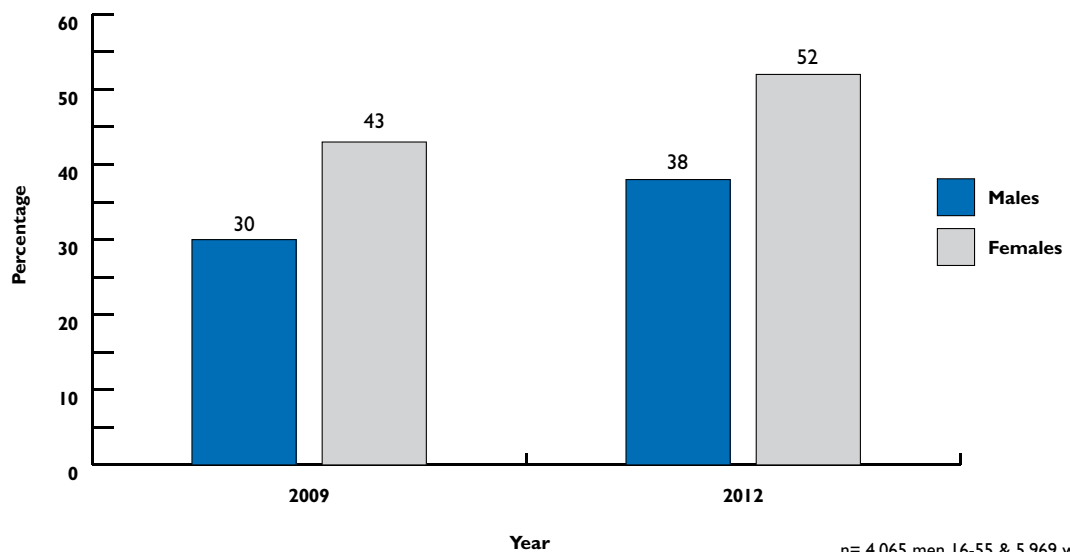
Figure 24: Percentage of men and women ever tested for HIV in 2009 and 2012, weighted data



n= 4,065 men 16-55 & 5,969 women 16-55 (2012);
4,437 men 16-55 & 5,291 women 16-55 (2009)

Three quarters (74%) of sexually active respondents reported ever testing for HIV and 45% reported testing for HIV in the past 12 months. More sexually active women (52%) than sexually active men (38%) were tested in the past year (Figure 25).

Figure 25: Percentage of sexually active men and women tested for HIV in the past 12 months in 2009 and 2012, weighted data

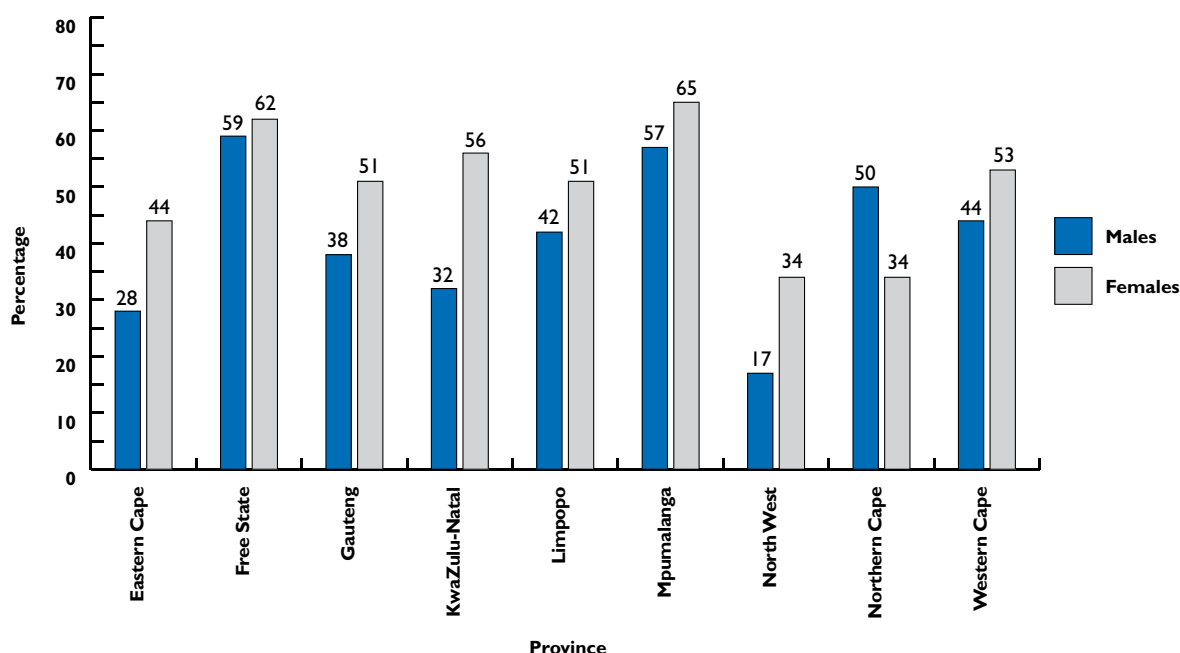


n= 4,065 men 16-55 & 5,969 women (2012);
4,437 men 16-55 & 5,291 women 16-55 (2009)

There were differences in uptake of HCT amongst sexually active people by province. Sixty two percent of all sexually active people in Mpumalanga reported testing for HIV in the past year while in North West only 26% had.



Figure 26: Percentage of sexually active men and women tested for HIV in the past 12 months by province, weighted data

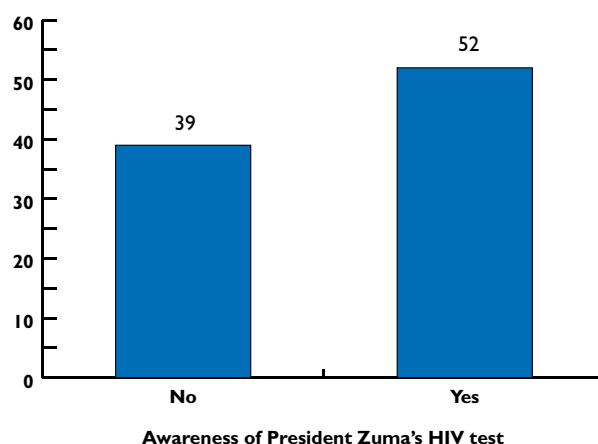


n= 1,478 men 16-55 & 2,991 women 16-55 who are sexually active and have ever tested for HIV

The study found that these gains are the result of the government led and coordinated HCT campaign that combined strong political leadership with powerful communication programmes and greater accessibility to HCT services. As part of the SANAC-led HCT Campaign, President Jacob Zuma, Deputy President Kgalema Motlanthe and Minister of Health, Aaron Motsoaledi were at the forefront of the national campaign that aimed to promote the uptake of counselling and testing. The campaign saw President Zuma publicly tested for HIV together with other prominent leaders. National communication campaigns, like Brothers for Life, worked with national celebrities drawn from the world of sport and entertainment to promote HCT. Drama series such as Intersexions and Soul City integrated HCT within their story lines. Talk shows on national television and radio such as Siyayinqoba-Beat It! promoted dialogue and discussion with audience members on HCT. In communities, community based activities were undertaken to promote the uptake of HCT. These included door to door campaigns, community based events and activities in higher education institutions all worked to promote the uptake of HCT.

Among survey respondents who knew that President Zuma tested for HIV, 52% were more likely to discuss testing with their sex partners compared to 39% that did not know (Figure 27). These represent adjusted percentages after controlling for potential confounders by means of logistic regression.

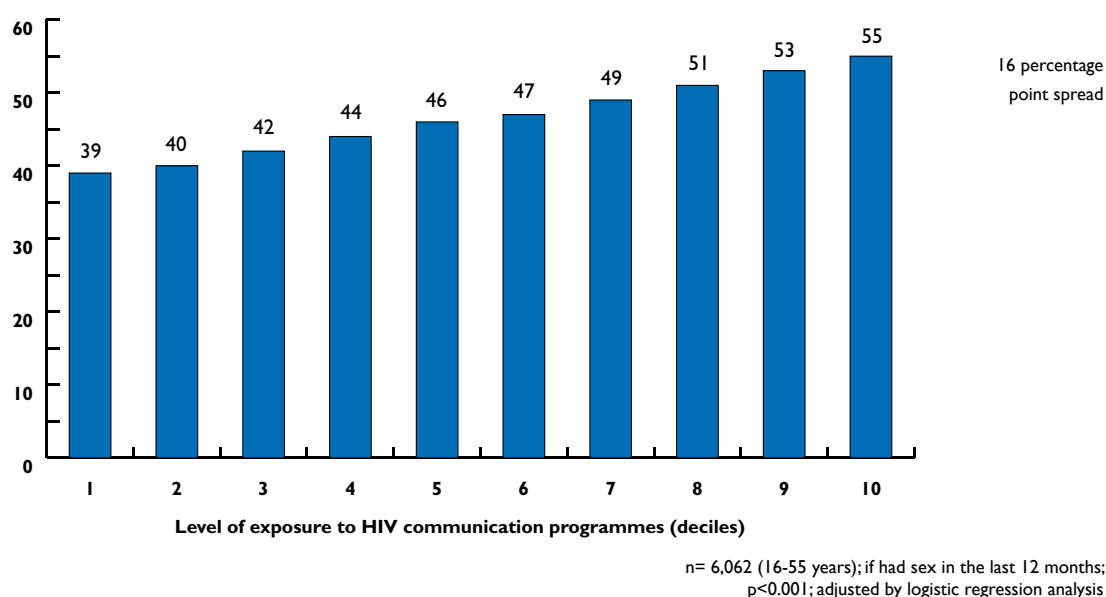
Figure 27: Percentage of men and women discussing HIV testing by knowledge of President Zuma's HIV test



n= 6,062 (16-55 years); if had sex in the last 12 months; p,0.001; adjusted by logistic regression analysis

This study found that HCPs played a significant role in contributing towards the national dialogue on HIV counselling and testing. After controlling for potential confounders, those who had higher level of exposure to HCPs were more likely to have discussed HCT with their sex partners than those with lower levels of exposure (Figure 28).

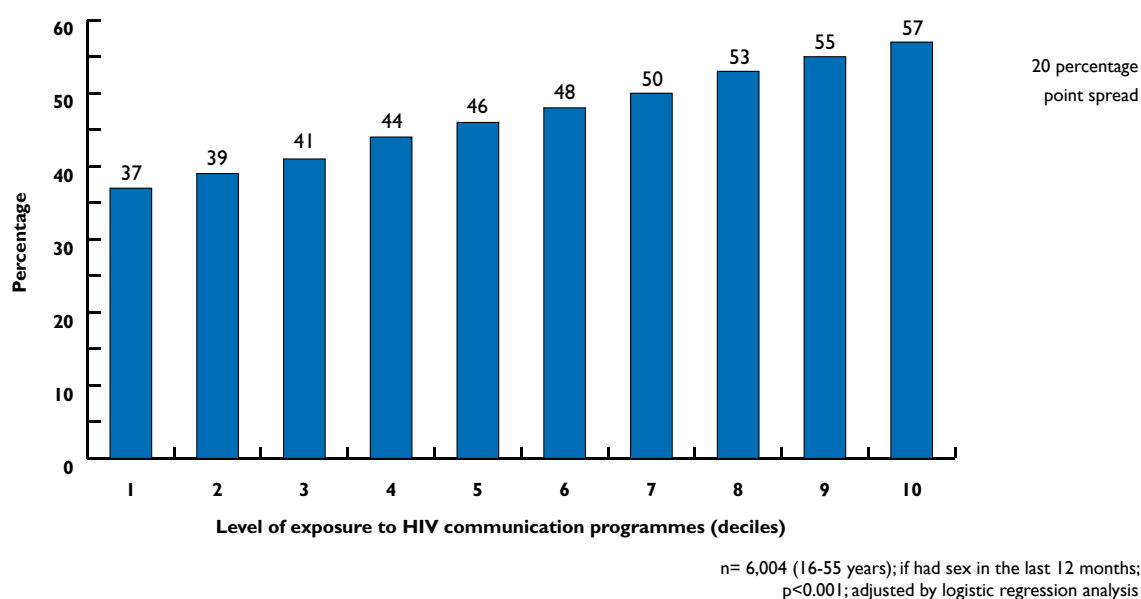
Figure 28: Impact of HIV communication programmes on discussion of HIV testing



People who talked about testing with their sex partner, in turn, were more likely to test for HIV (63%) than those who did not talk about testing with their partners (33%). People who discussed HIV testing were 3.5 times more likely to actually test for HIV in the past 12 months than those who did not (AOR: 3.49). Other predictors of getting tested in the past year included residing in Mpumalanga as compared to Gauteng (AOR: 1.90), female (AOR: 1.50), younger and middle age groups compared to older (AOR: 1.45 & 1.17), social norms for testing (AOR: 1.06) and exposure to HCPs (AOR: 1.03).

HCPs also had a direct impact on people testing, which is likely given the high levels of services that were available during the HCT campaign. After adjusting for potential confounders, people who were exposed to more HCPs were more likely to get tested for HIV: 57% of men and women with high levels of exposure were tested in the last 12 months, while only 37% of those with low levels of exposure did so. Figure 29 shows this clear dose response relationship.

Figure 29: Impact of HIV communication programmes on HIV testing in the last 12 months



People who were less likely to have tested included those who drank heavily, people who watched DSTV, Indian people and those from North West province.



Implications for HCPs

- There are good gains in terms of the uptake of HIV testing and counselling and HCPs have impacted on this. Communication should continue reinforcing messages about the benefits of knowing your status to improve upon the proportions of people who know their status, especially in North West.
- HIV prevention programmes need to :
 - Continue to communicate the importance of *regular* testing
 - Scale up HCT campaigns which involve men
 - Use innovative methods to promote testing in those less likely to test
 - Promote discussion around HCT
 - Use leaders and role models in campaigns

3.2 Behavioural drivers of the HIV epidemic

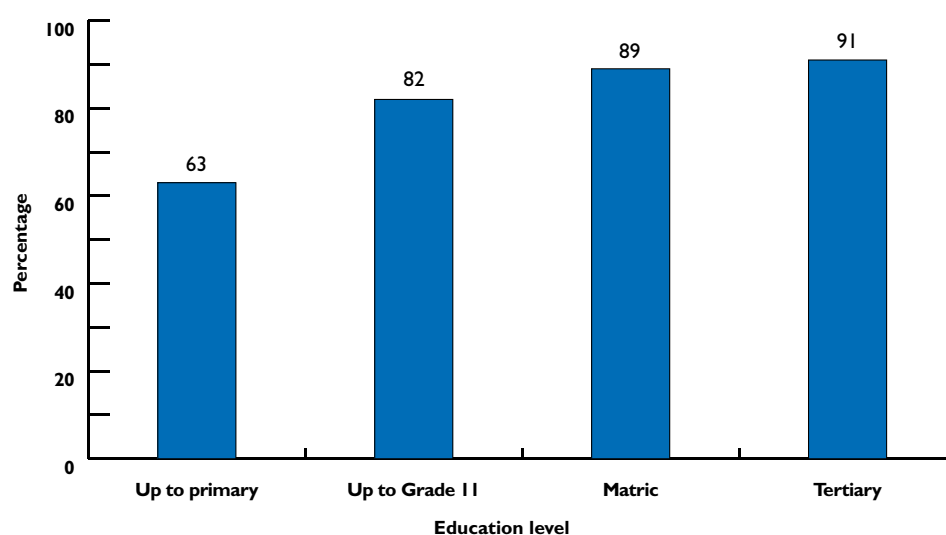
3.2.1 Correct and consistent condom use

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 HCPs in South Africa.

In 2012, the vast majority of respondents (89%) were aware of the importance of condom use as a measure of HIV prevention, demonstrating sustained and improving levels of awareness over time – i.e. compared to 86% of awareness in 2009. 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.

Figure 30 shows that knowledge of the protective effect of condom use was high in all respondents irrespective of education level although those with a higher level of education were more likely to know about condom use as a means of preventing HIV than those with lower levels of education.

Figure 30: Percentage of men and women knowing that a condom can prevent HIV by education level, weighted data



n= 2,467 men 16-55 & 3,594 women 16-55 who are sexually active

Encouragingly, Table 9 shows that most respondents are confident that they can buy a condom and use it correctly. However, only half of respondents felt confident that they could use a condom if they have had too much to drink.

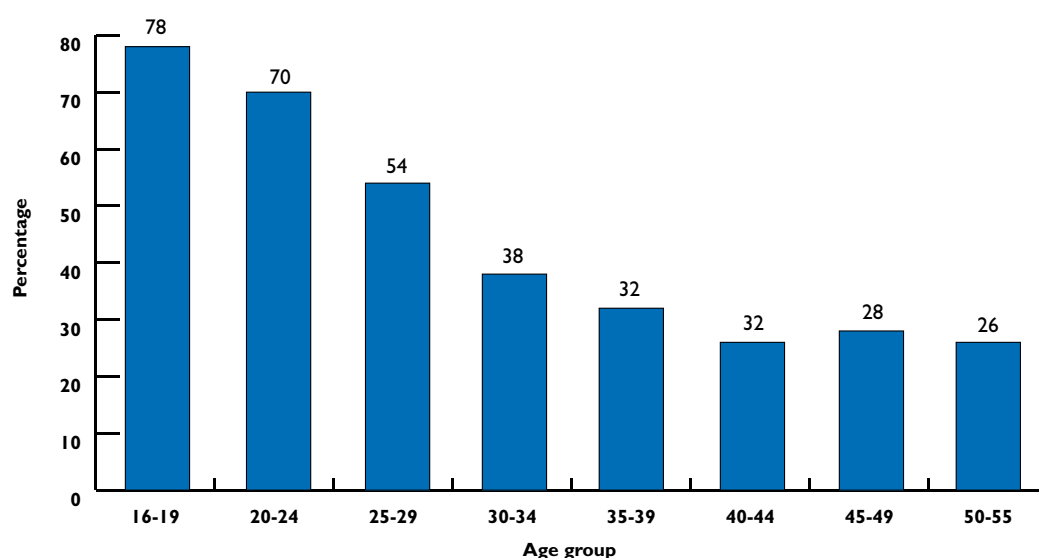
Table 9: Percentage of men and women strongly agreeing with various statements about condom self-efficacy

	Ever had sex		Sexually active	
	Males	Females	Males	Females
I can use a condom even when I have too much to drink	53.9	55.4	54.0	55.3
I can refuse to have sex if someone I like refuses to use a condom	58.8	66.3	57.7	64.8
I can buy a condom without feeling embarrassed	77.4	74.6	77.7	75.7
I am confident that I can put a condom on correctly (men)	80.5	-	81.4	-
I am confident that I can put a condom on a man correctly when having sex with him (women)	-	68.9	-	70.3
I am confident that the man that I have sex with can put a condom on correctly (women)	-	75.0	-	77.1

n=3,185 men who had ever had sex and n=4,978 women who had ever had sex;
n=2,467 men who had sex in the past 12 months and 3,594 women who had sex in the past 12 months

Seventy percent of people who had ever had sex reported having ever used a condom. Forty nine percent of respondents who had ever had sex reported using a condom the first time they had sex. Fifty one percent of women reported using a condom at first sex compared to 46% of men. Figure 31 clearly shows that younger people were more likely to have used a condom the first time they had sex as compared to older people.

Figure 31: Percentage of men and women who used a condom the first time they had sex, weighted data



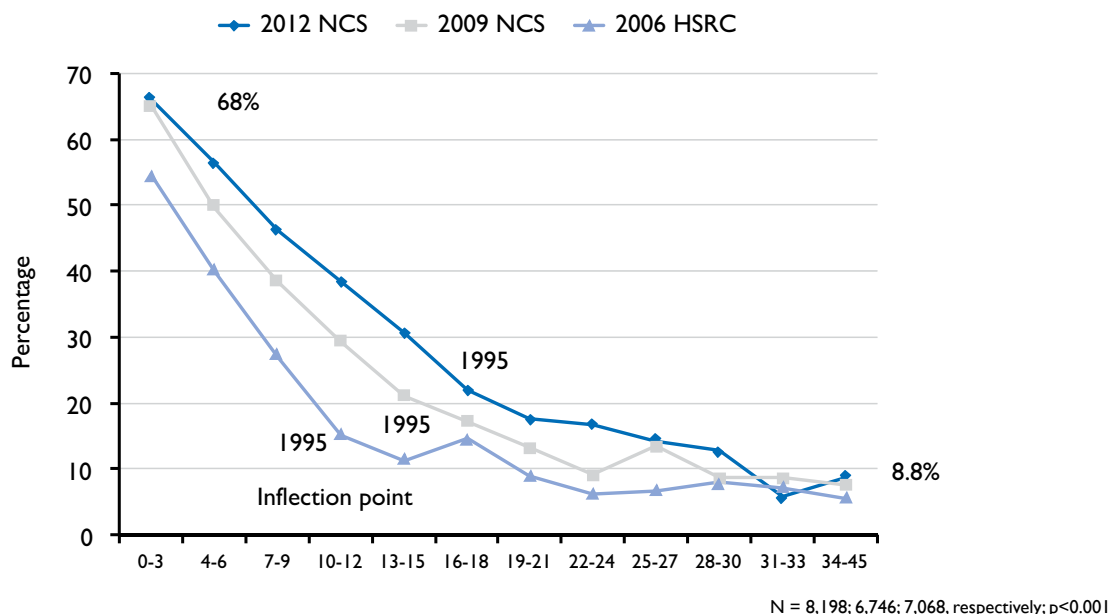
n= 3,185 men 16-55 & 4,978 women 16-55 who have ever had sex

One of the most remarkable changes in HIV prevention behaviour in South Africa over the last 20 years has been the dramatic increase in condom use at first sex. Less than 10% of respondents who first had sex 40 years ago said they used a condom the first time. From 1992 to 2012, condom use at first sex increased from 18% to 66%, a 48% increase in the last 20 years. Condom use at first sex increased consistently after 1995, which marks the beginning of large-scale HCPs that promoted the use of condoms to prevent HIV in South Africa. This positive increase in condom use was combined with the increased availability of condoms in the period 1995 onwards, with over 450-million condoms now being distributed through the public health system.

Today condom use is a social norm in South Africa: two-thirds of people who had sex for the first time during the last 3 years said they used a condom the first time they had sex (Figure 32). It is noteworthy that the inflection point (increase in the rate of change) in all three surveys occurred around 1995 when the national HIV prevention communication programmes began in earnest.

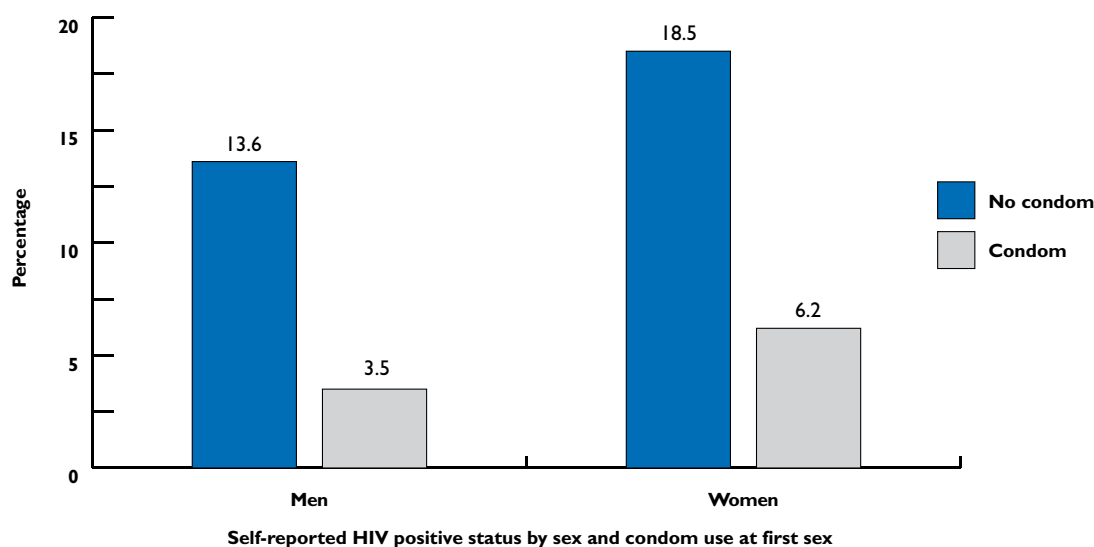


Figure 32: Condom use at first sex by number of years ago respondent first had sex



The analysis also showed that the probability of condom use with one's most recent partner is greater (68%) if one used a condom the first time he/she had sex than if not (43%). Figure 33 shows that self-reported HIV positive status is significantly and substantially lower among those who used a condom the first time they had sex (3.5% for males; 6.2% for females) compared to those that did not use a condom at first sex (13.6% for men and 18.5% for females).

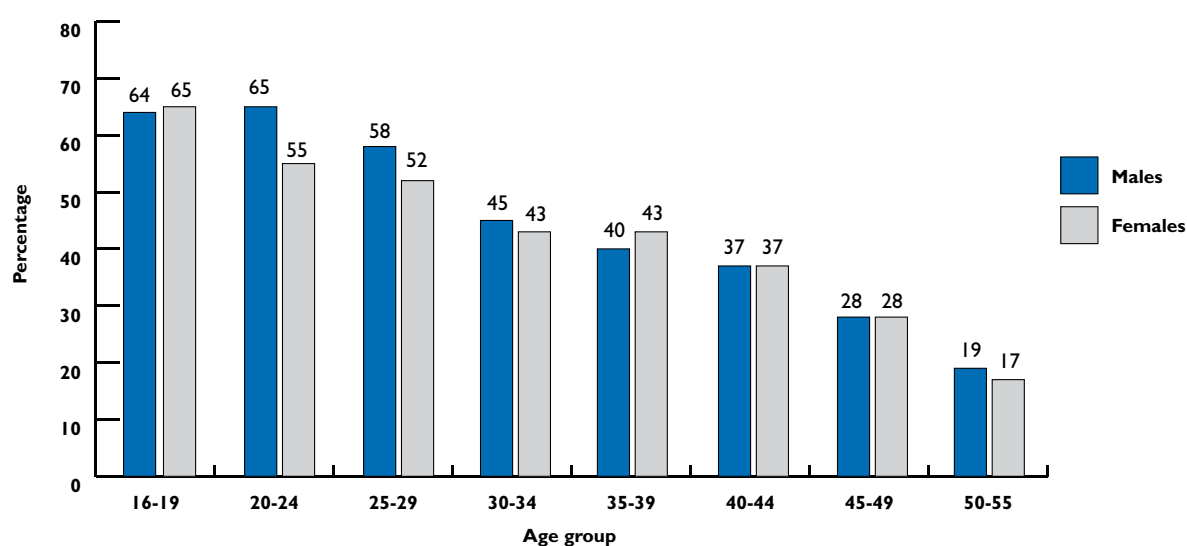
Figure 33: Self-reported HIV positive status amongst men and women by condom use at first sex



n= 1,508; 3,223 men and women aged 16-55 years, respectively, who have ever had sex; p<0.001 (weighted)

This study found that 47% of sexually active respondents reporting using a condom the last time they had sex. Although women were more likely to report high self-efficacy for refusing unprotected sex than men were (see Table 9), fewer women reported condom use at last sex than men (Figure 34).

Figure 34: Percentage of sexually active men and women who reported using a condom at last sex by age, weighted data



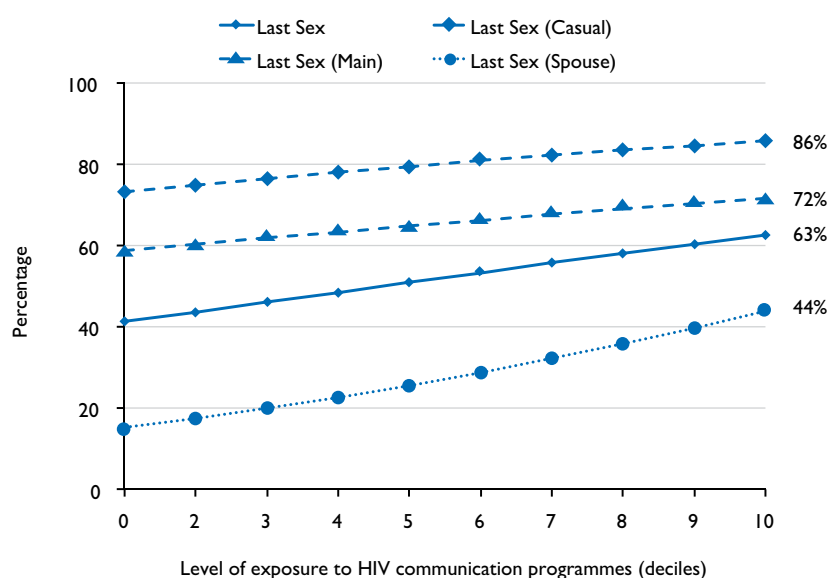
n= 2,467 men 16-55 & 3,594 women 16-55 who sexually active

Condom use at last sex show differs by sexual relationship type. This survey revealed that 76% of respondents used a condom at last sex with a casual partner; 65% used a condom at last sex with a main/regular partner, and 28% used a condom at last sex with one's spouse or live-in partner.

Predictors of using a condom use with one or more of one's three most recent sexual partners included: having more than one sexual partner (AOR: 3.53); being single (AOR: 2.85); using a condom at first sex (AOR: 2.83); being widowed or divorced (AOR: 2.44); having a steady (main) sex partner (AOR: 2.25); knows that one's sex partner(s) has other sex partners (AOR: 1.56) and being exposed to HCPs (AOR: 1.10).

Figure 35 shows that the more that one was exposed to communication programmes the more likely they were to use condoms irrespective of the nature of their relationship. The graph also shows that the level of condom use at last sex is higher when the type of sexual relationship is casual (86% at the highest level of exposure) than when the last sex is with a main partner or the spouse (72% and 44% respectively, at the highest level of exposure).

Figure 35: Impact of HIV communication programmes on condom use by type of sexual relationship





Implications for HCPs

- Knowledge of condom use as an HIV prevention method is high. HCPs need to sustain this messaging, focusing especially on the importance of consistent condom use with all sexual partners
- Self-efficacy for condom use is generally good. Continued emphasis on the relationship between alcohol use and risky sexual behavior, including difficulty using a condom is needed
- Around half of people used a condom the first time they had sex and 47% of sexually active respondents used a condom at last sex. Communication needs to continue to encourage the use of condoms at first sex through practical real-world examples. In addition it needs to sustain messaging about using a condom every time one has sex

3.2.2 Multiple sexual partners

Knowledge of faithfulness and partner reduction as ways to prevent HIV was relatively low. Forty one percent mentioned faithfulness as a means of HIV prevention while only 24% mentioned partner reduction. However, levels of knowledge have improved over time. This is probably due recent HCPs that have promoted faithfulness and partner reduction as a means of HIV prevention.

Table 10: Percentage of men and women knowing that faithfulness and partner reduction are methods for preventing HIV in 2006, 2009 and 2012, weighted data

	2006	2009	2012
Faithfulness	26.0	39.1	40.7
Partner reduction	6.7	12.2	23.5

Table 11 lists the 12 statements acquired from qualitative research with youth that were used to measure attitudes and self-efficacy related to having multiple sexual partners (MSP). Extensive factor analysis of over 100 similar statements was conducted to create a small set of reliable scales that would be expected to predict MSP and sometimes used by people to justify or resist having MSP.

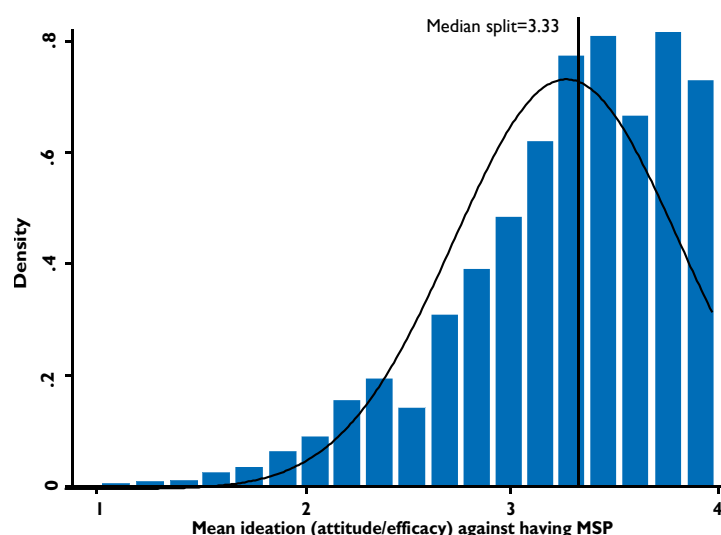
Table 11: Scale of Ideation related to having multiple sexual partners

Attitude Items	Mean
1. If you wait to have sex you will find the right person for yourself	3.1
2. If you have good communication with your partner, you can be sexually satisfied with one person	3.6
3. When a relationship ends, you should wait a few months and do not rush into a new sexual relationship	3.4
4. I don't really feel a tie with anyone I have sex with (reversed)	3.0
5. I need someone else to fill the gap in case I ever break up with my main partner (reversed)	3.4
6. Now and then, I go to someone else besides my main partner because the sex is so good (reversed)	3.5
7. It's okay to have sex with others as long as your main partner does not find out (reversed)	3.5
Self-Efficacy Items	
8. Resist the temptation of having sex with anyone else besides your main sex partner	3.1
9. Remain with one sexual partner even if your friends make fun of you	3.4
10. Say no when friends invite you to go out looking for new people to have sex with	3.3
11. Avoid having sex if you have been drinking too much	3.2
12. End a relationship if you suspect he/she is having sex with someone else	2.7
* 4-point scale: (1) Strongly disagree to (4) strongly agree. Alpha coef. = 0.76 (12 items)	3.3

Figure 36 shows the frequency distribution of the average, combined scale score for MSP ideation, reversed to indicate a position against having MSP and resisting influences to have them. As can be seen, it is highly skewed in the direction that would discourage MSP.

The median score is 3.33 on a scale from 1 to 4, where 4 indicates the strongest level of ideation against having MSP. This continuous scale was split into low (0) and high (1) to use in the SEM using logistic regression. Binary (low/high) scales lead to odds ratios that are easier to interpret and understand and which allow for adjusted effect sizes in familiar percentages. The continuous scale shown below was also divided into ten, equal sized categories (deciles) in order to examine the possibility of a dose response effect: the higher the level of ideation (1-10) against having MSP, the lower the probability (percentage) of having MSP.

Figure 36: Frequency distribution of multiple sexual partner ideation (attitude and self-efficacy)

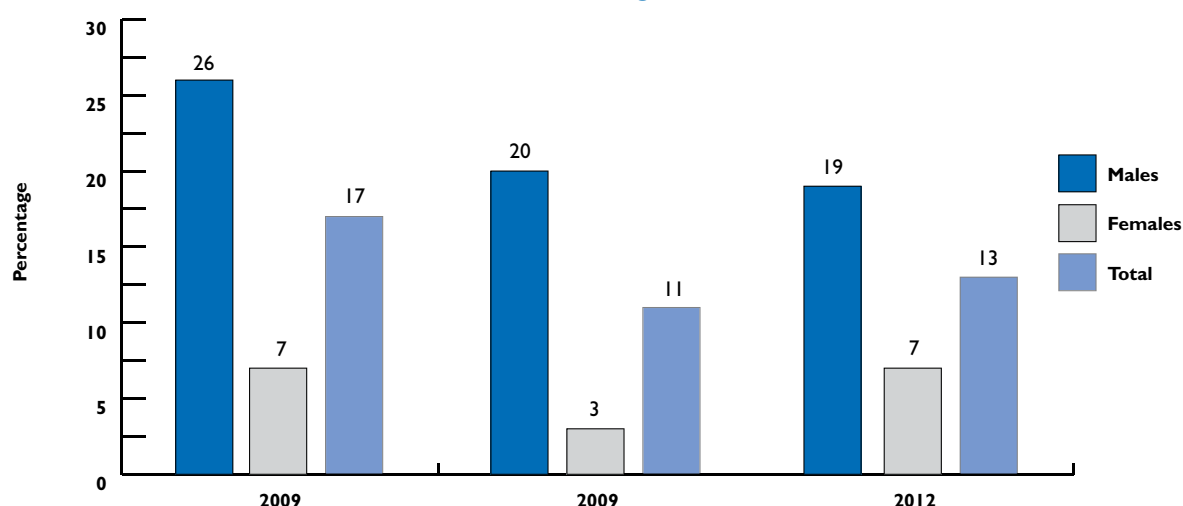


n=6,062 sexually active men and women aged 16-55 years; median 3.33

To assess perceived norms regarding MSP, respondents were asked how many men and women they thought had sex with more than one partner in their community. Two thirds of respondents thought that 6 or more men out of 10 in their community had more than one partner. Fifty five percent of young people thought that 6 or more women in their community had more than one partner. Although people thought levels of MSP amongst both men and women to be high, 91% thought that this practice was unacceptable. In addition, *perceived* levels of MSPs are much higher than in reality. Only thirteen percent of sexually active respondents aged 16-55 years (19% of men and 7% of women), reported having MSPs in the past 12 months.

Figure 37 shows that overall; the percentage of people reporting MSPs in the past 12 months is similar to those in 2009. For men, levels of MSP in 2012 were similar to 2009 and down from 2006. For women, 2012 levels are the same as in 2006 but are higher than in 2009. It is unclear why this is the case.

Figure 37: Percentage of sexually active men and women who had multiple sexual partners in the past year in 2006, 2009 and 2012, weighted data

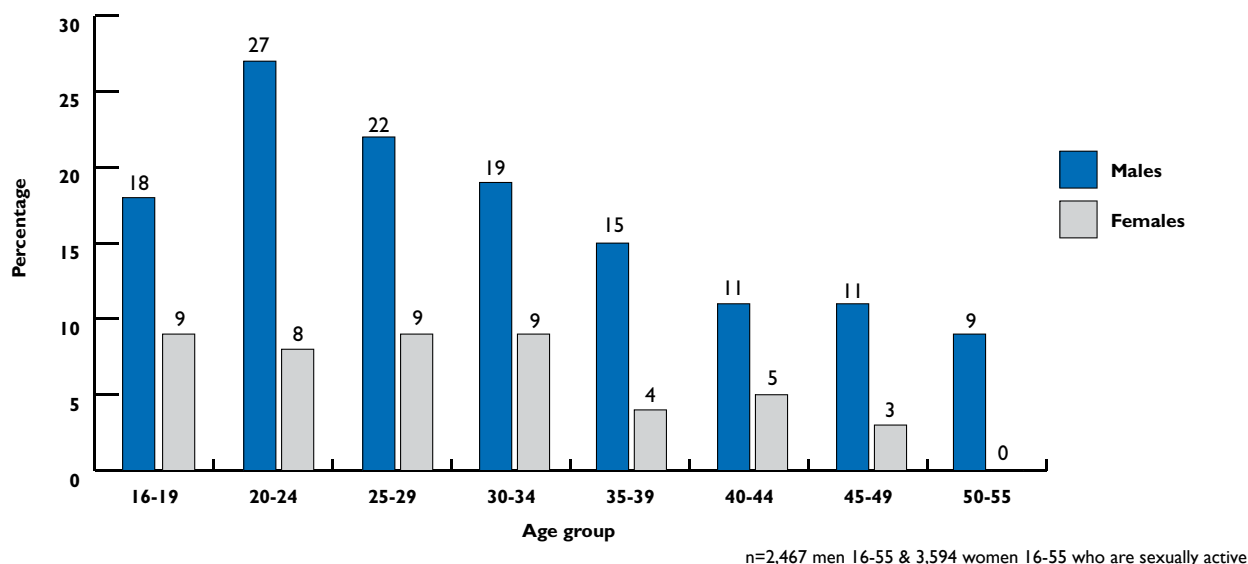


n=2,467 men 16-55 & 3,594 women 16-55 who are sexually active (2012); 3,152 men 16-55 & 3,646 women 16-55 (2009); 2,454 men 16-55 & 2,390 women 16-55 who are sexually active (2006)



Across all age groups men were more likely to have MSP than women (Figure 38). Young men and women were more likely to report having MSP than somewhat older men and women. Twenty seven percent of young men aged 20-24 years reported having MSP 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 (section 2.4).

Figure 38: Percentage of sexually active men and women who had multiple sexual partners in the past 12 months by age, weighted data



Prevalence of MSPs has remained roughly similar since 2009 across all provinces, except for the Free State where 16% more people reported MSPs than in the previous survey.

Figure 39: Percentage of sexually active men and women who had multiple sexual partners in the past 12 months in 2009 and 2012 by province, weighted data

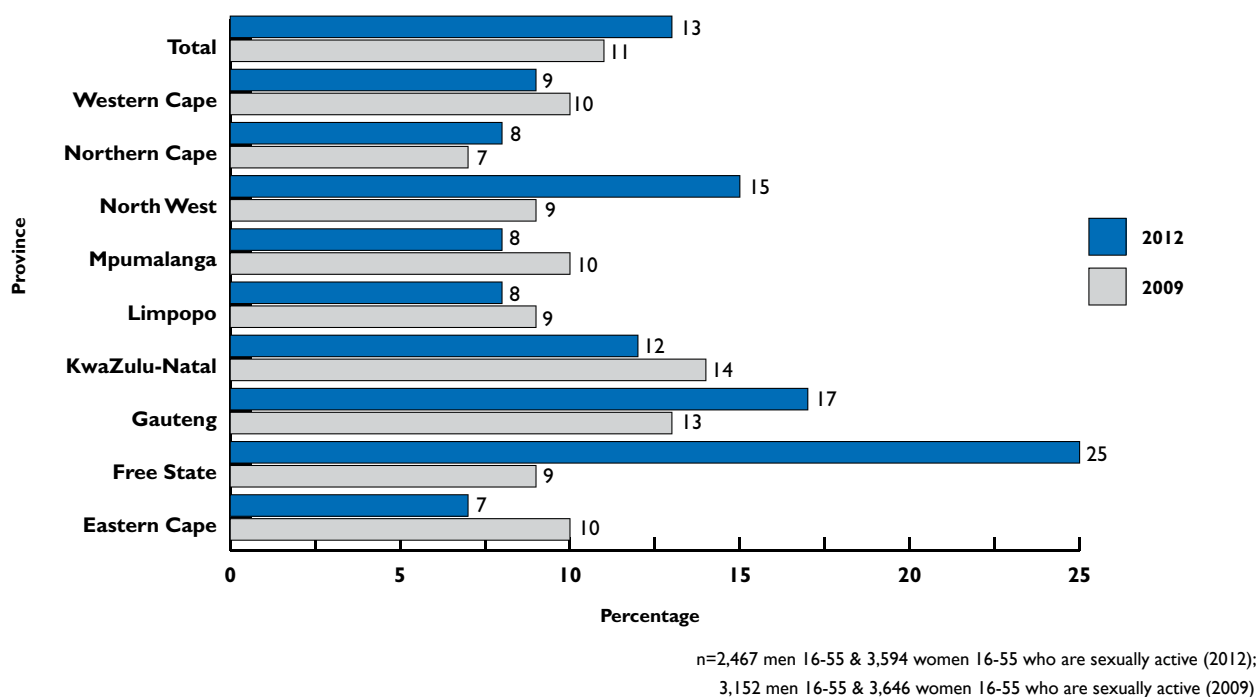
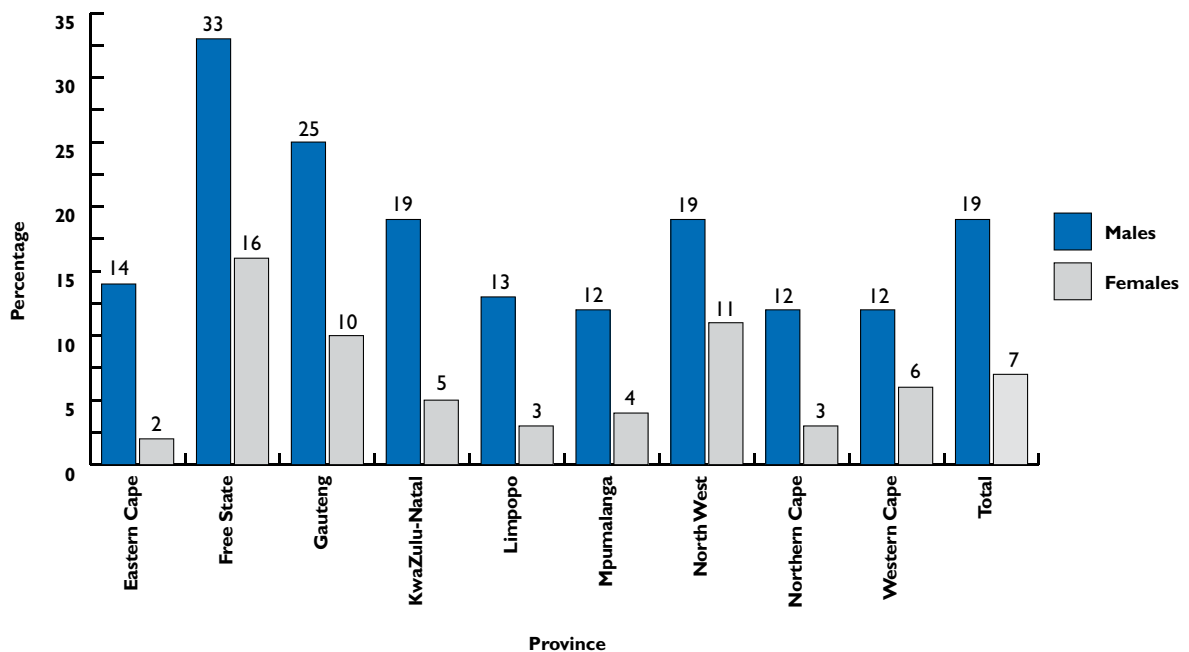


Figure 40 shows that in 2012 levels of MSP were high amongst *both* men and women in the Free State.

Figure 40: Percentage of sexually active men and women who had multiple sexual partners in the past year by province, weighted data

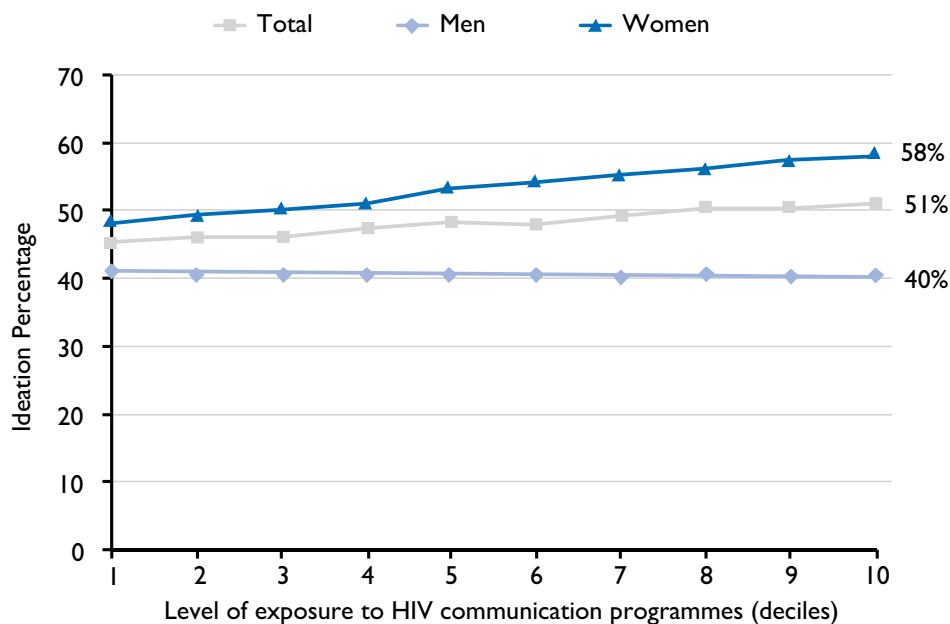


n=2,467 men 16-55 & 3,594 women 16-55 who are sexually active

Nine percent of sexually active respondents reported having *more than one sexual partner in the past month*. Men were more likely to report having MSPs in the past month (14%) as compared to women (5%).

An SEM with three endogenous variables - level of exposure to HCPs, MSP ideation (attitude and self-efficacy), and having more than one sex partner in the last 12 months (MSP) - was fit to the data. Each equation was adjusted for some 18 statistically significant, exogenous control variables that would have confounded the observed relationship between HCPs and MSP, and between MSP ideation and MSP. The SEM met all the requirements for exclusion and exogeneity so that a causal inference was justified statistically as well as theoretically. Figure 41 shows the dose response of MSP ideation by level of exposure to HCPs. For the total sample, the relationship is statistically significant and monotonically increasing (shows an ever increasing dose response), but not strong, a 6 percentage-point difference between the lowest level of exposure and the highest level.

Figure 41: Impact of HIV communication programmes on level of multiple sexual partner ideation



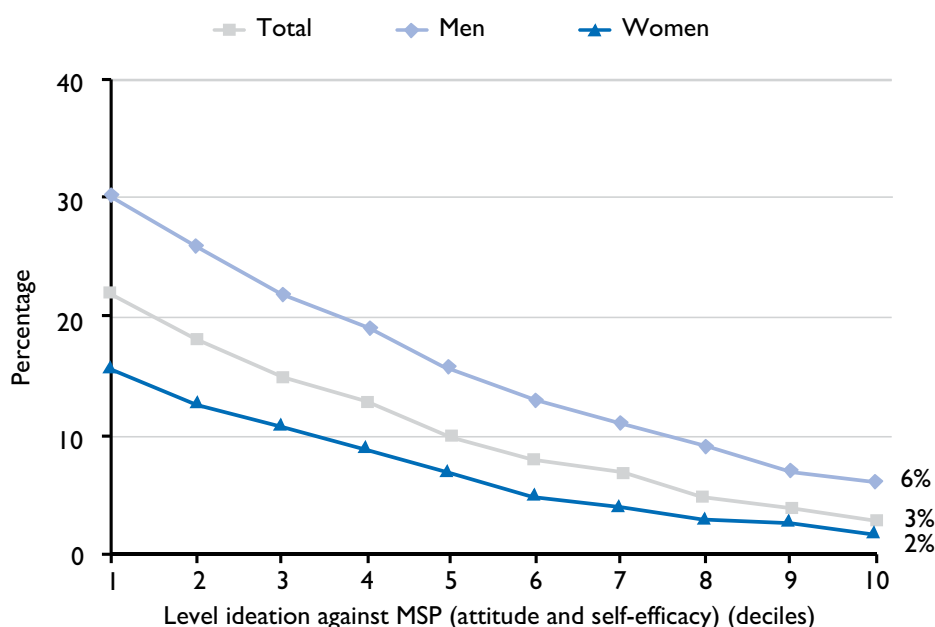
n=6,062 sexually active; adjusted by logistic regression; Odds ratios = 1.03 (p<0.010), 0.99 (p<0.782), 1.05 (p<0.002)



The primary reason for the modest impact was due the complete lack of impact on men. The only statistically significant impact was on women, for whom the dose response ranged from 48% to 58%, a 10 percentage-point spread. The results confirm the expectation that HCPs collectively could improve attitudes that would discourage MSP and increase the degree of self-efficacy or confidence that one can resist MSP. This only happened among women. This unexpected outcome needs further research to explain why this happened and to develop better approaches to improve MSP ideation among men.

This leaves open the question of whether or not attitudes and self-efficacy that would discourage MSP actually has any effect. Figure 42 shows a similar dose-response relationship between MSP ideation and MSP itself. Level of ideation has a strong impact overall, and for both men and women separately. As expected, the level of MSP is higher for men across the whole range of ideation than for women. For men, MSP drops from 30% for those at the lowest level of MSP ideation down to only 6% among men with the highest level of ideation that discourages MSP, a spread of 24 percentage points. Average MSP among women with the lowest level of ideation is 16%, dropping to just 2% among women with the highest level of MSP ideation, a 14 percentage-point spread. The impact overall and for both sexes was statistically significant and strong. This suggests that this theoretical approach to reducing MSP should be continued, but in ways that affect men as well as women.

Figure 42: Impact of the level of multiple sexual partner ideation on having multiple sexual partners in the last 12 months



n=6,062 sexually active; adjusted by logistic regression; Odds ratios = .77 (p<0.000), .78 (p<0.000), .76 (p<0.000)

Just how much weight should be given to communication and ideational change as a means to reduce MSP? That can be answered by comparing the size of the effect of ideation on MSP and its other determinants after controlling/adjusting for the other 20 relevant predictors of MSP. Sex, as seen earlier, is one of the strongest predictors of MSP. In the logistic regression for MSP, the adjusted odds of having MSP are 1.94 greater for men than for women (AOR). The adjusted odds ratio for population group is not statistically significant. All four racial groups are equally likely to have MSP. The perceived prevalence of MSP in one's community was calculated as the mean percentage of MSP in one's survey cluster after excluding oneself. This objective social norm for MSP is also a strong predictor of one's own likelihood of having MSP. Those living in communities with a high level of MSP (above the median) are 1.97 times more likely to have MSP, about the same effect size as sex. MSP is higher among youth and the middle age groups (AOR: 1.34 and 1.51, respectively) and much higher among those who are divorced or widowed (AOR: 2.25).

Ever slept away from home in last 12 months and having been in a physical fight in the past year have expected but moderate independent effects on MSP (AOR: 1.48 and 1.41, respectively). Again, as expected, those who had sex with someone they just met at their last visit to a shebeen, bar, tavern, or club and those with a high frequency of heavy drinking (5 drinks or more at a time) were also more likely to have MSP (AOR: 2.15 and 1.32 respectively). These are the strongest predictors of MSP, except for MSP ideation. The odds of having MSP among those with a high level of ideation that favours MSP (above the median and reversed for purposes of comparison) is 2.65. When reversed to indicate ideation that discourages MSP the odds ratio is 0.38, indicating a negative relationship. Surprisingly, MSP ideation is the best predictor of having MSP. Adjusting for all other variables, MSP among those with high ideation

against MSP is only half that of those with low ideation (7.4% versus 15.4%). Controlling for MSP ideation, the joint HCPs had no statistically significant direct effects on MSP. All of the observed effects were indirect, by means of the impact of HCPs on MSP ideation and then MSP ideation on MSP.

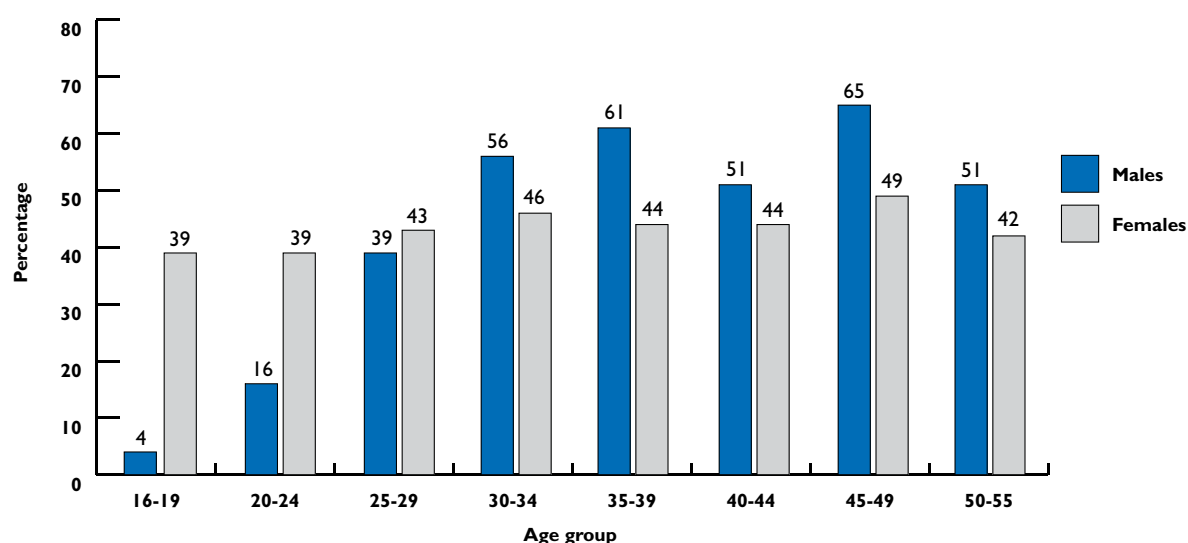
Implications for HCPs

- MSPs are not a norm with the majority reporting only one sexual partner. However, most people consider it a norm. MSP messaging should convey that MSP is not a norm and be careful that through displaying MSPs in its programmes it does not create the impression that it is in fact a norm.
- MSP is higher amongst youth than older age groups, particularly amongst young men. HCPs need to develop tailored messaging for people more likely to have MSP, such as young men.
- Although the minority of respondents reported having MSPs, a not insignificant percentage reported having more than one partner in the past month. This was particularly true for young men. MSP messaging should focus specifically on the risks of overlapping sexual relationships and continue to reinforce the importance of consistent condom use.
- An evidence-based strategy for reducing MSP would be to get people to ignore and go against the local community norms for MSP when it is high, reduce violence and heavy drinking, discourage having sex with someone just met at shebeens and bars until they are better known and have been tested for HIV, and finally, changing attitudes related to MSP and increasing everyone's self-efficacy and confidence to resist having MSP by showing them various ways to do it (positive social modelling).

3.2.3 Intergenerational sex

Forty two percent of sexually active people reported having sex with partners 5 or more years older or younger than themselves. Amongst young people (16-24 years), intergenerational sex was more common amongst women (39%) than men (13%).

Figure 43: Percentage of sexually active men and women who had intergenerational sex by age, weighted data



n=2,467 men 16-55 & 3,594 women 16-55 who are sexually active

Of particular concern is the high percentage of women aged 16-24 years who reported having a sex partner 5 or more years older than themselves. Ten percent of women aged 16-24 years had a sex partner 10 or more years older than themselves.

This study found that 52% of young women with a partner 5 or more years older than themselves used a condom at last sex. Amongst those with a partner 10 years or older than themselves, only 36% used a condom the last time they had sex.

Implications for HCPs

- Messaging needs to emphasise the increased risk to young women of sex with older men (particularly unprotected sex) where the prevalence of HIV is higher.
- The levers to influence this dynamic largely lie outside of HCPs with other social and economic solutions although HCPs can play a key role in contributing to social attitude change and what are viewed as social norms (i.e. programmes may contain messages that target transactional sex as an undesirable or 'negative' norm).

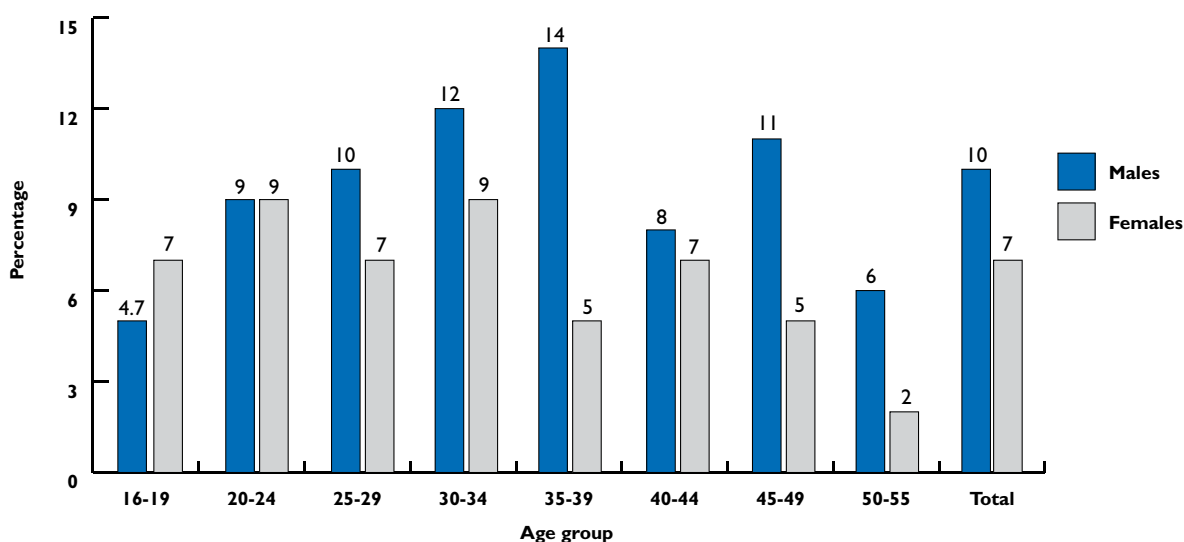


3.2.4 Transactional sex

Eight percent of sexually active people reported engaging in transactional sex (i.e. either the giving or receiving of gifts/money for sex) with any of their sex partners. Five percent of all relationships conducted by survey participants over the last year featured the provision of sex in return for money or goods. Seven percent involved receiving sex in exchange for goods or money.

In this survey, slightly more men (10%) reported transactional sex than women did (7%).

Figure 44: Percentage of sexually active men and women who had transactional sex by age, weighted data



n=2,467 men 16-55 & 3,594 women 16-55 who are sexually active

There was no difference in condom use at last sex amongst respondents who had transactional sexual relationships and those who did not.

Implications for HCPs

- Transactional sex is a difficult concept to measure in a questionnaire and may be better understood through qualitative research
- HCPs should continue to emphasise the importance of condom use in all types of relationships, especially high-risk ones like transactional sexual relationships

3.2.5 Sexual debut

Forty six percent of respondents knew that abstinence was a method of preventing HIV. Just over half of (54%) of respondents strongly agreed that waiting to have sex will mean finding the right person although 20% strongly disagreed with this statement.

Eighty five percent of all respondents reported ever having had sex and the mean age of sexual debut was 18.0 years. The mean age of sexual debut amongst young people (16-24 years) was 16.9 years of age which is comparable to findings in the 2009 survey (mean age of sexual debut was 16.8 years).

One in five young respondents who had ever had sex reported that they were 15 years or less when they first had sex. This is high – a considerable proportion of young people are sexually active at a very young age.

Implications for HCPs

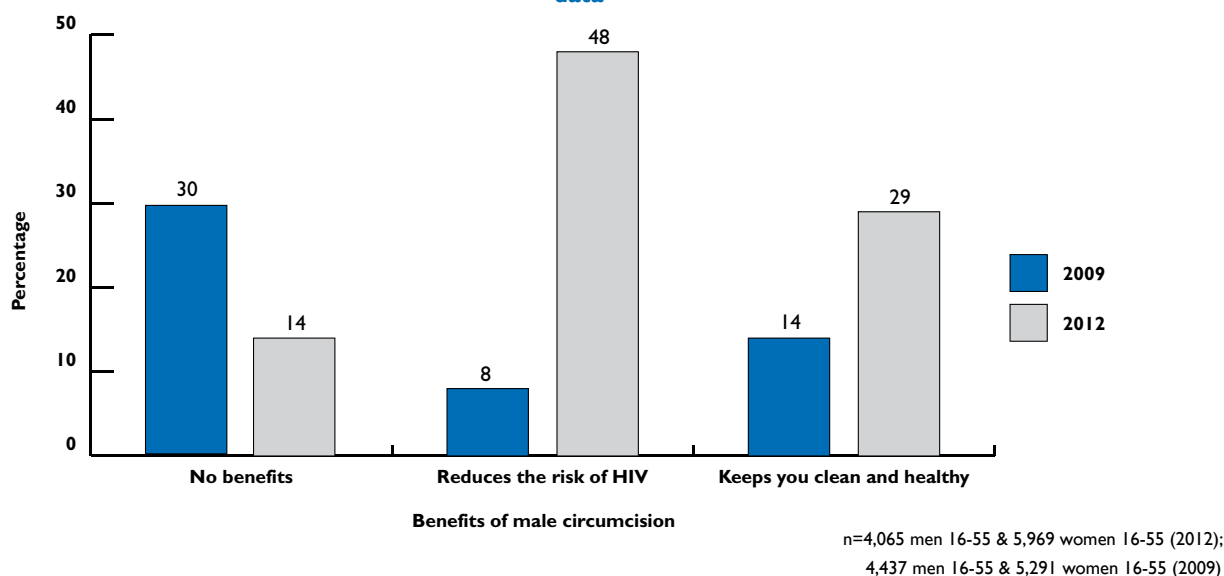
- Age of sexual debut has remained constant and it is unrealistic to assume that it will increase substantially. Communication should continue to promote delaying age of sexual debut
- Given the young age that some people become sexually active, it is critical that HCPs promote and emphasise condom use from first sexual experience

3.3 Biomedical drivers of the HIV epidemic

3.3.1 Medical male circumcision

There have been considerable improvements in knowledge of male circumcision benefits since 2009. All respondents (men and women) were asked what they thought the benefits of male circumcision were. In 2012, 48% of respondents were aware that male circumcision reduced the risk of getting HIV and this had markedly improved from knowledge levels in 2009. Interestingly, in 2012, the most frequently reported benefit by all respondents of being circumcised was reported to be a reduction in the risk of STIs (54%). Since this was not an answer option in 2009 we were unable to compare this finding.

Figure 45: Percentage of men and women mentioning benefits of male circumcision in 2009 and 2012, weighted data



All respondents were also asked to name all the ways they knew that HIV could be prevented. When phrased in this way, only 6% of respondents spontaneously mentioned male circumcision. However, this has improved since 2009, when less than 1% (0.4%) of respondents mentioned male circumcision.

We also looked at knowledge of male circumcision as an HIV prevention option amongst men who were circumcised and those who were not. Fifty eight percent of circumcised men said that one of the benefits of getting circumcised was that it reduced the risk of HIV infection as compared to 48% of uncircumcised men. However, when asked to spontaneously mention the ways in which HIV could be prevented, there was little difference between men who were circumcised (8.1%) and men who were uncircumcised (6.7%).

The majority of all respondents (84%) knew that it was still important for a circumcised man to wear a condom every time he has sex to prevent HIV. Notably there is no significant difference in condom use at last sex between circumcised (52%) and uncircumcised men (46%) ($p>0.05$). Around 49% of all men (circumcised and uncircumcised) reporting condom use at last sex.

All respondents were asked how long a man should wait to have sex after they are circumcised. Forty three percent of respondents correctly indicated that a man should wait 6 weeks, with more men (49%) knowing this than women did (37%). However a large proportion of respondents (38%) indicated that they did not know how long a man should wait. Nearly half (49%) of women said this compared to 26% of men. Amongst men, knowledge of the length of time a man should wait to have sex after getting circumcised was much higher amongst those who were circumcised (62%) than amongst those who were not (34%).

Fifty four percent of men reported that they were circumcised of which the vast majority (92%) said they were fully circumcised. Half said they had been circumcised by a medical doctor (50%), with 48% reporting they were circumcised by a traditional surgeon. The overall prevalence of men reporting being circumcised is higher than in the 2009 survey (43%) with more men having circumcisions conducted by a medical doctor rather than traditional surgeon (Table 12).



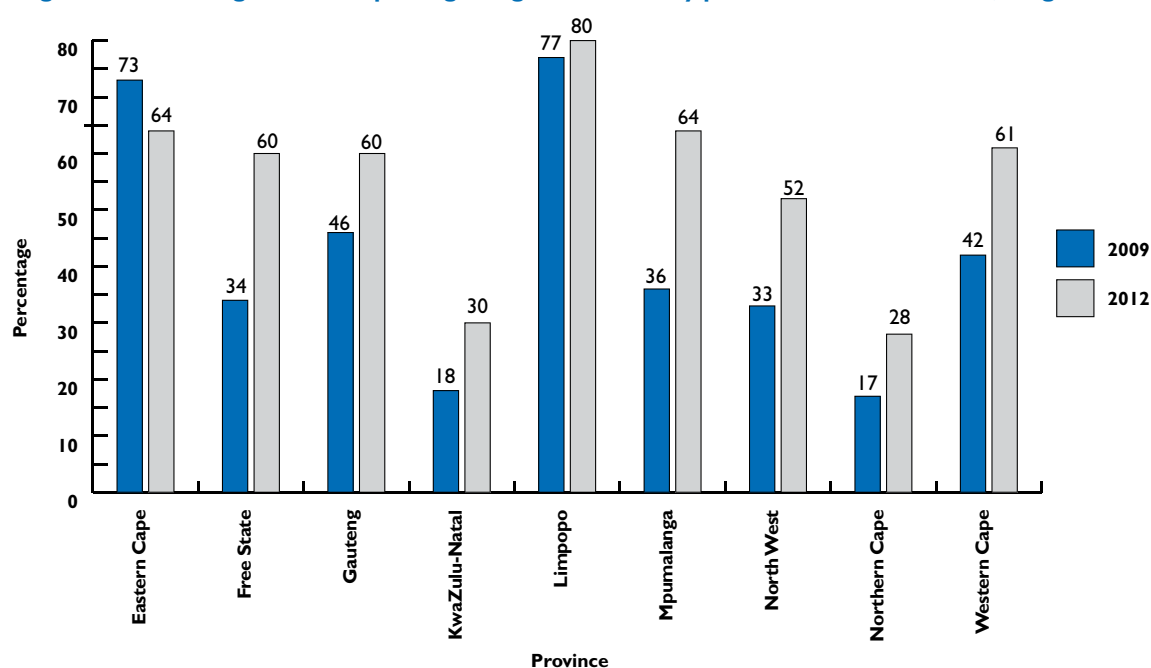
Table 12: Type of circumcision amongst circumcised men in 2009 and 2012

	2009			2012		
	n	Weighted number	Weighted Percentage	n	Weighted number	Weighted Percentage
Medical	574	1,796,685	32.7	962	3,465,307	49.9
Traditional	1,339	3,696,056	67.3	1,133	3,360,238	48.4
Other	-	-	-	36	121,348	1.8
Total	1,913	5,492,741	100.0	2,131	6,946,893	100.0

Using weighted data, this study found that during the year preceding this survey, 350 000 men were circumcised, of which 64% were medical circumcisions.

Figure 46 below shows that there has been an increase in male circumcision in all provinces except for the Eastern Cape. Prevalence of male circumcision is highest in the two provinces where circumcision is practised culturally – Eastern Cape and Limpopo. However, there has been a decrease in the male circumcision prevalence in the Eastern Cape. Reasons for this are unclear and may require monitoring.

Figure 46: Percentage of men reporting being circumcised by province in 2009 and 2012, weighted data



n=4,065 men 16-55 (2012) & 4,437 men 16-55 (2009);

Of the 5,630,656 men not currently circumcised, 18% or 1,005,866 men reported they *definitely intend* to get circumcised in the next 12 months. A further 15% or 847,664 men said that they 'probably will' get circumcised. The vast majority of men who definitely intend to get circumcised (81%) said that this circumcision would be medical.

Table 13: Weighted number and percentage of men who intend to circumcise in the next 12 months and type of intended circumcision

	Medical circumcision	Traditional circumcision	Total
Definitely intend to circumcise in the next 12 months	812,557 (80.8)	180,109 (17.9)	1,005,866 (100.0)
Probably intend to circumcise in the next 12 months	745,529 (88.0)	91,315 (10.8)	847,664 (100.0)

Understanding where the men are who definitely intend to be circumcised in the next 12 months is important for ensuring that services are made available to those needing them. Table 14 shows that over 200,000 men in Gauteng and KwaZulu-Natal definitely intend to be medically circumcised in the next 12 months. A sizeable number of men also intend to get medically circumcised in Mpumalanga, North West and Limpopo.

Table 14: Weighted number of men who *definitely* intend to circumcise in the next 12 months and type of intended circumcision by province

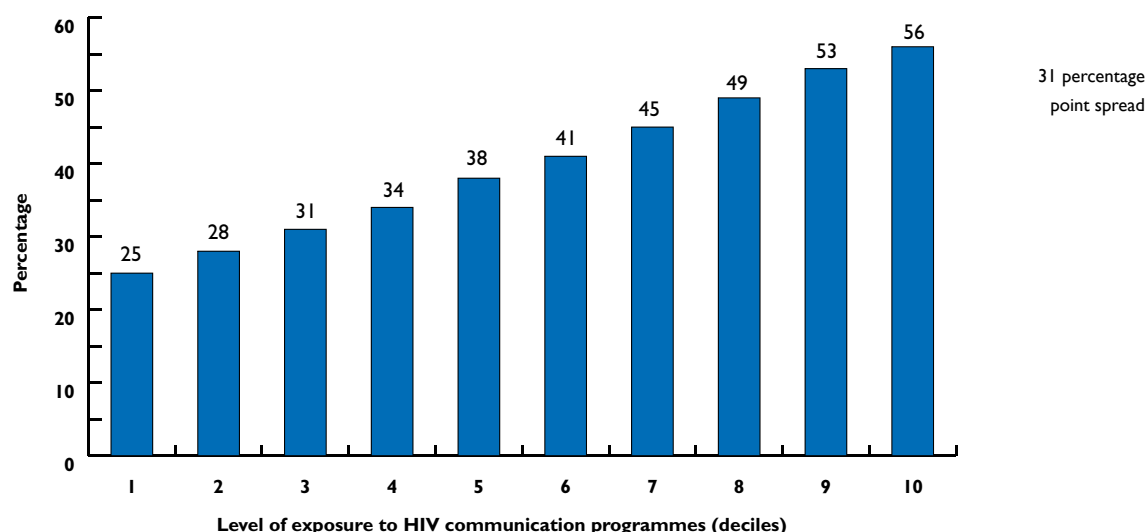
	Medical circumcision	Traditional circumcision	Total
Eastern Cape	13,584	46,766	60,350
Free State	44,445	24,043	68,488
Gauteng	237,519	18,152	255,671
KwaZulu-Natal	220,271	14,205	234,476
Limpopo	73,598	12,943	86,541
Mpumalanga	89,429	9,937	99,366
North West	89,039	7,984	97,023
Northern Cape	22,845	-	22,845
Western Cape	21,827	46,079	67,906
Total	812,557	180,109	992,666

Men who were circumcised or who intended to get circumcised were more likely to: have a Grade 11, matric or tertiary education (AOR: 2.05; AOR: 2.26; AOR: 2.53); be younger (AOR: 2.13); be in a steady relationship (1.73); have used a condom the first time they had sex (AOR: 1.45) and have a high level of exposure to HCPs (AOR: 1.16).

This study found that HCPs had a direct impact on intent to get circumcised in the next 12 months and on actual circumcision. Figure 47 shows that more HCPs men were exposed to, the more likely they were to have been circumcised or to have a high intention to circumcise. For example, 56% of men exposed to all HCPs were either circumcised or had a high intention to circumcise as compared to only 25% of men with the lowest level of exposure to HCPs.



Figure 47: Impact of HIV communication programmes on male circumcision and intention to circumcise



n= 1,647 not circumcised and 127 circumcised the last year=1,774 (16-55 year);
p<0.001; adjusted by logistic regression analysis

Implications for HCPs

- Knowledge of VMMC as a means to reduce the risk of HIV transmission has improved dramatically. However, male circumcision as an HIV prevention method was not top of mind with only 6% of participants mentioning this
- This study found that there was no difference in condom use at last sex between circumcised and uncircumcised men. However, messaging needs to underline the importance of continued use of condoms for HIV prevention during sex even if circumcised. The need for continued messaging is important – particularly to ensure that circumcised men do not regard the use of condoms as irrelevant to them because of their circumcision status
- There has been an increase in medical male circumcision relative to traditional circumcision. This is an area that HCPs have focused on and the improved demand bears testament to these efforts
- Many men intend to get medically circumcised. Accessible, male-friendly clinics are likely to improve uptake

3.3.2 Prevention of mother-to-child transmission of HIV

The vast majority of respondents (92%) knew that all women who become pregnant should be tested for HIV. More women agreed with this statement (95%) than men (89%). The majority of respondents (85%) also knew that a woman living with HIV could have a HIV negative baby. Significantly more women knew this (90%) than men (79%).

Table 15 shows that knowledge of safer feeding practices for HIV positive mothers remains low. Since 2009, knowledge of formula feeding has remained stable amongst men and has decreased slightly amongst women. Knowledge of exclusive breastfeeding has improved amongst both men and women.

Table 15: Percentage of men and women who knew that formula feeding and exclusive breastfeeding could reduce mother-to-child transmission of HIV in 2009 and 2012, weighted data

	2009		2012	
	Males	Females	Males	Females
Formula feeding	10.5	19.1	10.3	14.1
Exclusive breastfeeding	1.1	2.2	8.0	10.7

n= 4,065 men 16-55 & 5,969 women 16-55 (2012); 4,437 men 16-55 and 5,291 women 16-55 (2009)

Implications for HCPs

- There remains considerable room for improvement in improving knowledge about safer feeding of babies born to HIV infected women. Such infections amongst new born babies can be totally avoidable
- There has however been a large increase in knowledge of exclusive breastfeeding. This is a relatively new topic for HCPs and reflects a considerable achievement

4. Sustaining health and wellness

Compared to the other HIV prevention behaviours that only included the sexually active population, the analysis of the information on TB and ARVs used the total sample of 10,034 cases, not just those classified as sexually active in the last 12 months prior to the survey.

4.1 Knowledge of TB

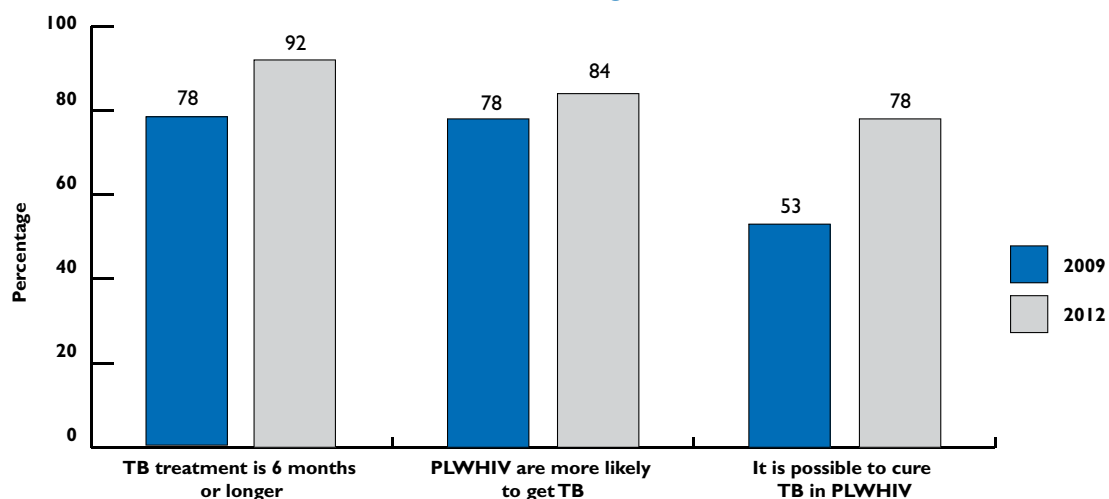
The HIV epidemic exacerbates the burden of TB in South Africa. HCPs have largely focused on increasing knowledge about adherence to TB treatment and TB/HIV co-infection.

Overall respondents demonstrated reasonably good knowledge of the signs and symptoms of TB as well as the relationship between TB and HIV co-infection. For example:

- 82% knew that a person can get TB through the air when a person with TB coughs or sneezes
- 77% knew that having a cough lasting longer than 3 weeks was a possible sign /symptom of TB
- 66% knew that coughing up blood was a possible sign /symptom of TB
- 17% knew all 6 signs /symptoms of TB measured in the survey
- 93% knew that the treatment for TB was drugs, medicine, pills
- 92% knew that it takes 6 months or longer to cure TB
- 84% knew a person with HIV was is more likely to get TB
- 78% knew that it is possible to cure TB in people with HIV

Some knowledge improvements were demonstrated compared to findings from the 2009 survey (Figure 48).

Figure 48: Percentage of men and women correctly answering various questions about TB and TB treatment in 2009 and 2012, weighted data



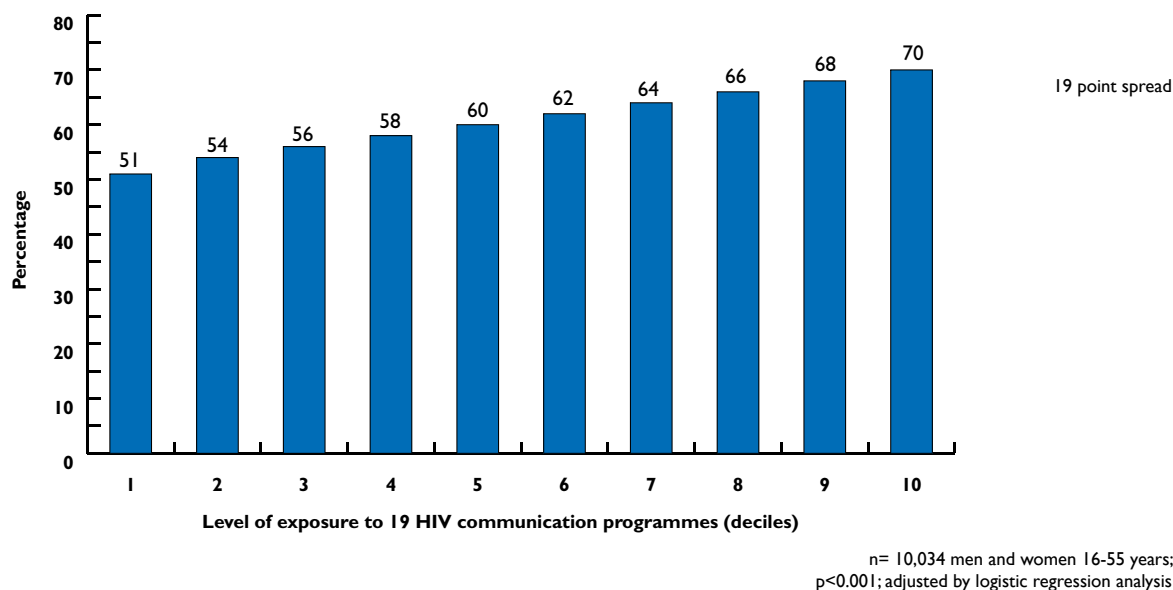
n= 4,065 men 16-55 & 5,969 women 16-55 (2012); 4,437 men 16-55 and 5,291 women 16-55 (2009)

Given the high level of knowledge about the different aspects of TB, the assessment of impact of the HCPs used a binary measure of knowledge (0/1) that classified as correct knowledge only correct responses to each and all of the items measured. The results show that 59% of all respondents in the sample had the correct knowledge to each and all six items. Those with this type of knowledge were more likely to: be exposed to the HCPs (AOR: 1.74); be female (AOR: 1.52); have tertiary education (AOR: 1.28); have attended a community meeting where HIV was discussed (AOR: 1.25); and to read newspapers frequently. One of the factors negatively related to TB knowledge was age. Younger groups 16-24 years and 25-35 years were less likely (AOR: 0.54 and AOR: 0.73, respectively) to have such high knowledge of TB compared to older adults (36-55 years old). Figure 49 shows that after controlling for potential confounders, correct TB knowledge increases with higher exposure to the HCPs (dose response). Among those with the lowest level



of exposure, 51% had correct TB knowledge; this percentage increases to 70% for those with the highest level of exposure to the HCPs, a 19 percentage-point difference.

Figure 49: Impact of HIV communication programmes on knowledge of TB



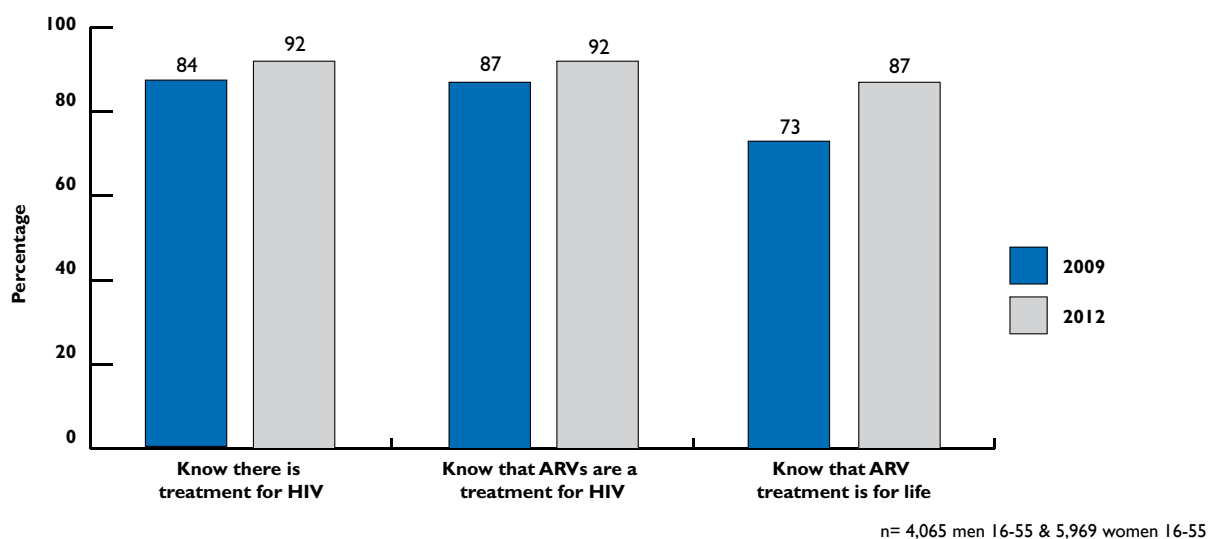
Implications for HCPs

- There is evidence of an improving knowledge base about TB amongst respondents. However, there remains room for improvement about knowledge of HIV and TB in terms of treatment outcomes.

4.2 Knowledge of antiretroviral therapy

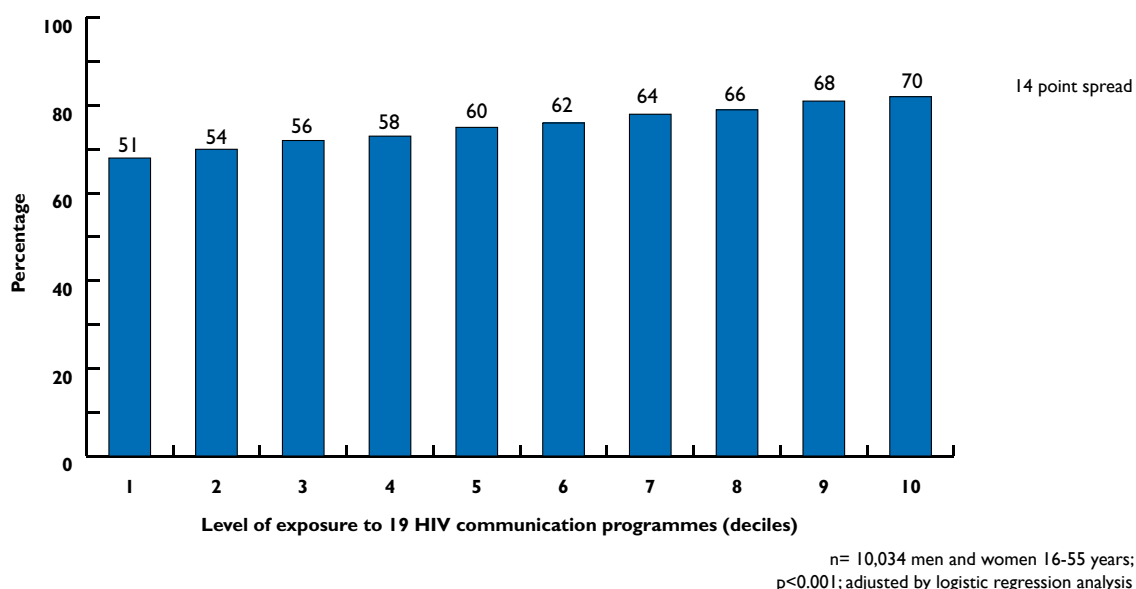
Knowledge about antiretroviral therapy was good. The majority (92%) knew that there is treatment for HIV and AIDS. Although there remained 8% of the sample who either did not know, or said there was no available treatment. The vast majority (92%) of those who knew about treatment also knew that ARV drugs were the treatment, with 87% of people knowing that treatment was for life. Knowledge levels have improved over time, when compared with findings from the 2009 survey. For example, there has been a notable increase in the proportion of people who know that ARVs are a treatment for HIV (Figure 50). In addition, 72% of respondents strongly disagreed with the statement “When you learn you have HIV, your life is over” as compared to 60% in 2009.

Figure 50: Percentage of people who correctly answered various questions about treatment in 2009 and 2012, weighted data



To assess the impact of the HCPs on ARV knowledge a binary outcome variable was created that measured correctly knowing that: there is a treatment for HIV, the treatments consists of ARV drugs, and ARV drugs need to be taken for the rest of one's lives. Overall, 74% of the population reached this level of knowledge, a high percentage as explained before, but still 26% is lacking. Those with correct knowledge were more likely to: be exposed to the HCPs (AOR: 1.63); be female (AOR:1.48); have education higher than primary school (up to Grade 11, AOR: 1.44; Matric AOR: 1.62, tertiary AOR: 1.61); read newspapers frequently (AOR: 1.05); and use Facebook (AOR: 1.47). As with TB knowledge, among factors negatively related to ARV knowledge was age. Younger groups 15-24 and 25-35 were less likely to have high ARV knowledge (AOR: 0.67 and AOR: 0.88, respectively) compared to older adults (36-55 years old). Figure 51 shows that after controlling for potential confounders, high ARV knowledge increases with higher exposure to the HCPs (dose response). Among those with the lowest level of exposure, 68% had high ARV knowledge; this percentage increases to 82% for those with the highest level of exposure to the HCPs, a 14 percentage-point difference.

Figure 51: Impact of HIV communication on knowledge of ARVs



Implications for HCPs

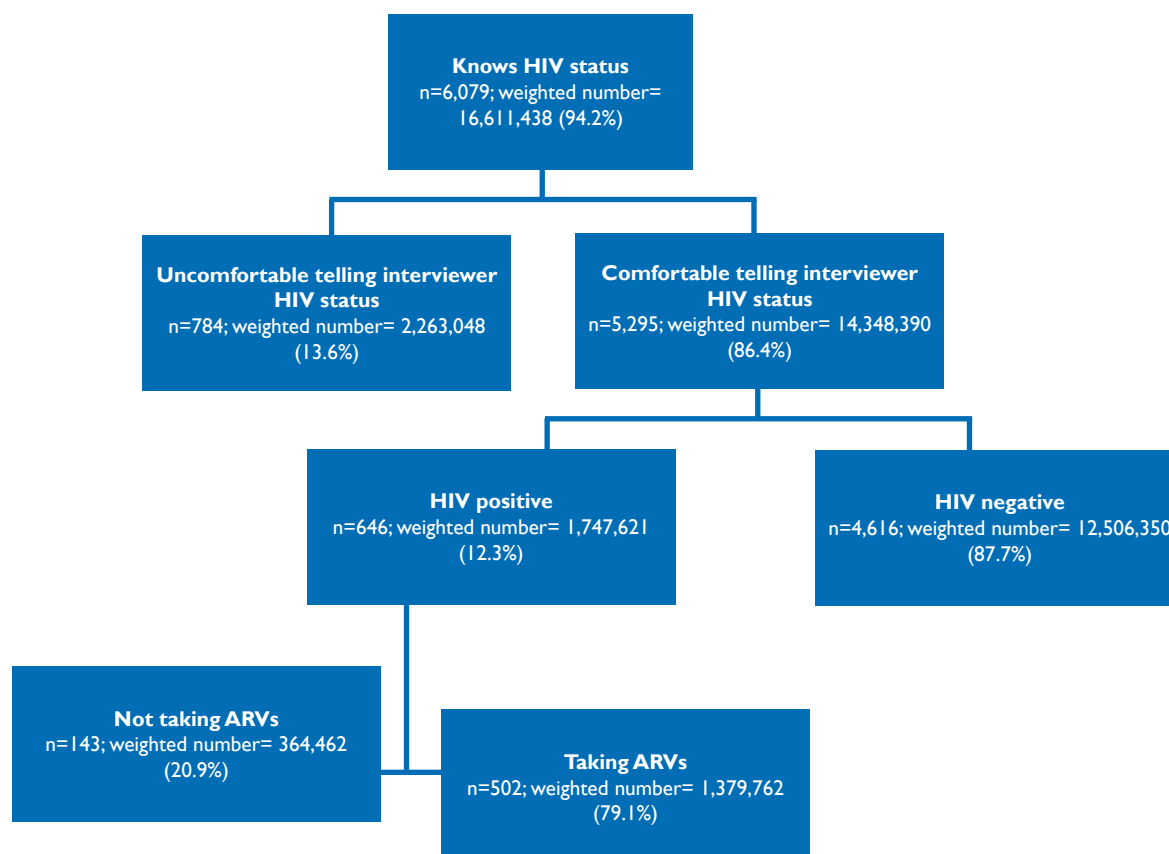
- HCPs should sustain, and even improve upon current levels of knowledge. Repeated 'top up' messaging will be required. This is particularly important for educating younger cohorts of people.

4.3 Proportions knowing their HIV status and taking ARVs

HIV communication programmes and cumulative behaviour change have reduced social stigma substantially in South Africa over the last ten years. Among those sexually active, 48% said that they have talked to others about HIV testing, asked or have been asked by one's partner to get tested and 32% said that they had an HIV test together with their partner in the last 12 months.

Almost all respondents ever tested for HIV (94%) said they knew their HIV status. Most (86%) felt comfortable sharing this information with the interviewer and the majority (88%) of these reported being HIV negative. Twelve percent of respondents said they were HIV positive which is below the 16.9% prevalence for 15- 49 year olds measured by the HSRC survey in 2008. Of those people who identified themselves as HIV positive, 79% reported being on ARV treatment.

Figure 52: Number and weighted percentage of people knowing their status



Implications for HCPs

- The willingness of HIV positive people to reveal their status is possibly indicative of more openness and acceptance. HCPs should reinforce this positive finding.
- This study found lower self-reported levels of HIV infection relative to the HSRC study.

5. Personal experience and community perceptions

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.

A large percentage of people reported having direct experience of HIV with 53% reporting that they know somebody living with HIV and 50% knowing somebody who died of AIDS or an AIDS related illness within the past year. Table 16 shows that more people reported this direct experience in 2012 than in 2009.

Table 16: Percentage of men and women with personal experience of HIV, weighted data

	2009	2012
Personally knew someone who is HIV positive	43.0	52.8
Personally knew someone who died of an AIDS-related illness in the past year	42.9	50.4
Personally helped care for orphans whose parents died of AIDS-related conditions	10.4	26.7
Personally helped take care of someone sick with AIDS	15.7	20.8

n= 4,065 men 16-55 & 5,969 women 16-55 (2012); 4,437 men 16-55 and 5,291 women 16-55 (2009)

Women were most likely to know of someone living with HIV and AIDS than men (46% vs. 50%). They were also more likely to know someone who had died of an AIDS related condition and to have cared for an orphan. Twenty four percent of women reported caring for someone sick with AIDS, indicating that the burden of care is more likely to fall women.

Despite the high levels of personal experience of HIV, a large number of people did not think that their communities took HIV seriously or supported PLHIV. Fifty two percent of respondents reported that people in their community did not take HIV and AIDS seriously. The majority (69%) also reported the people in their community were not joining together to help people with HIV and AIDS, and 57% said that their community does not support them even when people in the community disclose they have HIV or AIDS. Only one fifth of respondents reported trusting people in their community.

Implications for HCPs

- Given the nature and history of the HIV and AIDS epidemic in South Africa, it is worrying that the only half of respondents believe that people in their community take HIV and AIDS seriously. The need for HCPs to reinforce the seriousness of HIV and AIDS would clearly be helpful.





Conclusions and recommendations

This study examined the combined impact of HCPs 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 the impact of HCPs as a strategic enabler of the NSP objectives.

Reach and impact of HIV communication programmes

Reach of HIV communication programmes is impressive, with 82% 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 informal areas. However, reach of HCPs has decreased since 2009, where 90% of those aged 16-55 years were exposed to at least one HCP. As communication is critical to achieving the NSP objectives, reach of HCPs needs to be carefully monitored.

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 behaviour 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 programming have been made throughout this report by thematic area.

Areas of HIV communication programme impact

HIV counselling and testing

The content of many HCPs is designed to encourage its target audience to discuss taking an HIV test with their sexual partners, as well as actually going and getting tested. A large proportion of people have ever tested for HIV – the majority of whom were tested in the past 12 months. Although women were more likely to have tested, there has been an encouraging increase in the number of men getting tested. Exposure to HCPs had a *direct effect* on respondents getting tested for HIV in the past 12 months.

Many people had discussed testing with their sexual partner(s). People who discussed HIV testing 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 sexual partner(s), and with a greater likelihood of actually having been tested for HIV.

Most people who had tested were willing to share their results with the interviewer, possibly indicating an improvement in openness and acceptance. HCPs should build on this encouraging finding.

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.

A large number of people used a condom the first time they had sex. This was particularly apparent amongst those who had sex for the first time in the last three years. Condom use at first sex increased consistently after 1995, which marks the beginning of large-scale HIV communication programmes that promoted the use of condoms to prevent HIV in South Africa.

A large proportion of people used condoms at last sex and this has increased since 2009. Condom use is related to relationship status, with a greater likelihood of use in less stable relationships than in more stable ones. However, HCPs 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.

Multiple sexual partnerships

Knowledge of faithfulness and partner reduction as HIV prevention methods has increased since 2009 although this remains lower than for other methods such as condom use and abstinence. Overall, MSP ideation, comprising attitudes against MSP and being able to resist influences to have them, was high. Over 90% of people also thought that having MSP was unacceptable.

A large proportion of people believed that having more than one sex partner was a norm in their community although this was not borne out by the data. Only 13% of sexually active respondents reported MSP in the past 12 months – with more men reporting this than women. A small percentage but significant percentage of people reported having MSP in the last month.

The level of exposure to the HCPs did not have a significant direct effect on MSP after controlling for the effects of MSP ideation: attitudes that discourage MSP and self-efficacy for resisting MSP. The HCPs did have a positive, significant effect on MSP ideation, however, which means that their impact on MSP occurred indirectly through MSP ideation. This result is consistent with the theory used to design the programmes and evaluate their impact on behaviour. Unfortunately, the observed impact of HCPs on MSP ideation only occurred among women. No impact was found among men after controlling for all other variables. This is especially surprising because the HCPs had about the same, strong impact on MSP ideation among both men and women.

There were important differences in the other predictors of MSP ideation that may be responsible for this outcome. Age was not a statistically significant predictor of MSP ideation among women, but did predict men's level of MSP ideation. On the other hand, level of education had no effect on men's ideation, but was a strong predictor of women's MSP ideation. And finally, having been in a physical fight in the past year had a negative effect on men's MSP ideation (lower if in a fight), but no effect on women's MSP ideation. It's possible that these other differences between men and women affected the statistical relationship between HCPs and MSP ideation. These other differences suggest that other factors mediate the effect of MSP ideation on this important determinant of HIV risk for men and women. This is an important finding that clearly needs further research.

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.

Male circumcision

Although there have been improvements since 2009, levels of knowledge were low in respect of HIV risk-reduction provided by male circumcision. Prevalence of male circumcision was moderate but the percentage of men being circumcised has increased substantially and there has been a shift towards more men being circumcised in a medical setting.

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 and there was no difference in condom use at last sex by circumcision status.

Many men intend to circumcise in the next 12 months and HIV communication interventions have led to this increase in intention: 56% of men with high levels of exposure to communication programmes say that they will definitely get circumcised in the next 12 months, while only 25% of those with low levels of exposure intend to get circumcised.

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. Given that many men intend to be circumcised, male-friendly VMMC facilities are needed to ensure that supply meets the demand created through communication. 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. Few people knew about exclusive breastfeeding as an option for reducing the risk of transmission but knowledge levels have improved since the previous survey and the introduction of messaging around breastfeeding options. There is clearly considerable room for interventions to build on the promising increase in knowledge of safer feeding practices. This is a critical area as new infections amongst babies are almost entirely preventable.

TB Knowledge

Overall, knowledge of TB was high. TB has been a focus of a number of HCPs over the past few years and this survey found that these knowledge improvements are attributable to HCP exposure. There were slightly lower levels of awareness of the links between TB and HIV, especially in relation to TB treatment outcomes in PLHIV. There is room to build upon the strong base and strengthen communication about TB and its link to HIV.



Knowledge of ARVs

Knowledge of ARVs as treatment for AIDS was high and improved since 2009. This increase in knowledge of ARVs is encouraging and is due to messaging on this matter. HCPs should seek to sustain these high levels of knowledge by continuing to feature specific ARV messaging.

Areas not assessed for communication impact

Intergenerational sex

The impact of HCPs on intergenerational sex was not assessed. The greatest concern is the high percentage of young women 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, focusing especially on condom use in these relationships.

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. 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

The impact of HCPs on the relationship between alcohol consumption and risky sexual behaviour was not assessed. Of those men who drink alcohol, many drank heavily often. Communication should focus mainly on men when addressing the link between alcohol and risky sexual behaviour.

Delaying sexual debut

Most people held positive attitudes towards delaying sexual debut. Mean age of sexual debut has not changed since the previous surveys. A significant number of young women – who are particularly vulnerable to HIV infection – continue to start having sex early. Given the young age that some people become sexually active, it is critical that HCPs promote and emphasise condom use from first sexual experience.

Final remarks

In conclusion, the 2012 NCS findings show that communication programmes have a direct effect on behavioural outcomes such as HIV counselling and testing, condom use and male circumcision. Communication programmes also have an indirect impact on these outcomes by addressing norms and attitudes regarding HIV and providing people with information, knowledge, and motivation to exercise decisions that best work for them and that keep them healthy. The findings show that the effect of the communication on people's behaviour resembles a dose-response - the more people are exposed to the HIV communication programmes, the more likely they are to adopt and maintain positive behaviours such as condom use, HIV counselling and testing, and to undergo male circumcision. The evidence presented in this report can be used to customise and 'fine tune' HCPs, including where continued focus and effort is required.



Annexure I

HIV communication programmes

Brothers for Life

Brothers for Life is a collaborative national campaign led by SANAC, the Department of Health, USAID/PEPFAR, JHHESA, Sonke Gender Justice, UNICEF, The Danish Government, IDMT, the United Nations System in South Africa and more than 100 other civil society partners working in the field of HIV prevention and health with creative input provided by Joe Public. The objectives of the campaign were to: reduce the proportion of men reporting having multiple and concurrent partners; decrease the incidence of gender-based violence; increase men's perception of risk and condom usage, promote the uptake of VMMC; promote responsible fatherhood including male involvement in PMTCT; and increase the proportion of men who know their HIV status.

iLife Radio Drama

ABC Ukwazi developed an HIV and AIDS drama for community radio stations called iLife. This was a 14-part drama series that was broadcast on 19 community radio stations in 5 provinces countrywide in 2009. The themes of this radio drama were condom use, HCT, MSP, PMTCT, alcohol and relationships and TB. 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.

Intersexions

Intersexions is a television drama series and is a partnership between JHHESA, SABC Education, SABC 1 and produced by Quizzical Pictures & ANTS Media with research by CADRE. Intersexions is an innovative series of 26 separate but interlinked episodes that examine issues relating to love, sex and relationships – and how they can have heartbreaking and physically devastating consequences. It shows how human lives intersect and criss-cross with others' in ways we don't even know about. As soon as people become sexually active, they are immediately locked into a web/sexual network in which they are sleeping with hundreds, even thousands, of complete strangers. The 26th and final episode was a docu-drama that explains the tangled sexual network that has been created throughout the series, and the hidden dangers that lurk within it.

4-Play: Sex Tips for Girls

4-Play: Sex Tips for Girls is a television drama series produced for JHHESA by Quizzical Pictures. This drama series deals with the realities of life for four middle-aged South African women – Nox, Noma, Amira and Danny - living in Johannesburg. These four women differ in character and socio-economic status but have one thing in common – all searching for love and stability. The drama series shows us how these women encounter challenges, joys and hardships in negotiating relationships with each other and those around them. The objectives of the series were to increase people's awareness of and risk perception of multiple sexual partners, decrease the proportion of people reporting multiple sexual partners, promote and increase condom use, especially among women, promote and increase HIV testing in women and men, promote and increase awareness of gender-based violence, promote and increase awareness and knowledge of TB, promote and increase awareness of the risks associated with alcohol, and promote and increase open and honest discussion within relationships.

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 JHHESA, 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 national television since 1999. It has been broadcast on SABC 1 since 2004 and was on e.tv 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. The methodology of *Siyayinqoba Beat It!* is to illustrate both the application of medical protocol, as well as the vectors of transmission and prevention of the disease through the biographies and personal experiences of people living with HIV and their support networks across the country. Over the fourteen years of its existence, *Siyayinqoba Beat It!* has carried hundreds of inserts on various aspects of HIV prevention and treatment. The show's format centres on documentary inserts created by community journalists, which are discussed by an in-studio host and expert guest. The show 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. 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.

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.

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, to encourage community action for health and to have direct impact on individuals. 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.

Table 17: HIV communication programming matrix

	2009				2010				2011				2012		Target audience					
	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July		Aug	Sept	Oct	Nov	Dec
SOUL CITY																				
Soul City 11: OneLove																				Adults
Soul Buddyz 5																				Children 8-15 and parents
Soul City 10: PhuzaWize																				Adults
Kwanda TV																				Adults
Love Stories in a time of HIV																				Adults
4Play Sex tips for Girls																				
4-Play TV																				Women 25-35 years
Scrutinize TV Spots																				
Scrutinize TV Spots																				16-32 years
Intersexions																				
Intersexions TV																				Men and Women- 18-35 years
Intersexions radio																				
Brothers for Life																				
Brothers for Life																				Men 30+
LOVELIFE																				
lovelife talkshow																				Main target audience: youth aged 12-19years. Fringe audience: up to 24yrs old
Foxy Chix																				
Make your Move TV																				
I am Mzanzi																				
Nakanjani																				
Siyayinqoba Beat It!																				
Siyayinqoba Beat It! TV																				All South Africans, especially marginalised groups. Particular focus on LSM2-4 and 5-8
Siyayinqoba Beat It! Radio																				All South Africans, especially marginal
ilife radio drama																				
ilife radio drama																				Women between the ages of 24-35
We Beat TB																				
We Beat TB																				Black Urban, peri urban and rural

Condom use

Multiple and concurrent partnerships

Alcohol

Male Circumcision

HCT

PMTCT

Risky Sexual behaviours

Perceived risk

Assessing opportunities

Self-worth/Self-esteem

TB

Violence

Sexual debut

Intergenerational sex

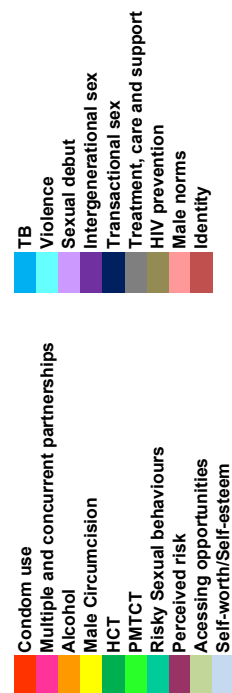
Transactional sex

Treatment, care and support

HIV prevention

Male norms

Identity





Annexure 2

Table 18: Comparison of key findings, NCS 2006, 2009 and 2012

		NCS 2006	NCS 2009	NCS 2012
		%	%	%
General	Mean age (years)	33.3	30.2	31.8
	Male	49.2	48.7	48.3
	Female	50.8	51.3	51.7
	Ever had sex	85.2	88.7	85.1
	Had sex in the past 12 months	82.2	80.3	77.0
Knowledge of methods to prevent HIV transmission (All respondents)	Condom use to prevent HIV transmission	90.7	85.6	89.1
	Faithfulness to prevent HIV transmission	26.0	39.1	40.7
	Abstinence to prevent HIV transmission	40.1	37.4	45.9
	Reduce the number of partners to prevent HIV transmission	6.7	12.2	23.5
Behaviour (Sexually active respondents)	Used condoms to prevent HIV	44.6	40.2	47.4
	Used condoms at last sex	43.3	39.8	47.2
	HIV counselling and testing, % of people who have ever tested for HIV	47.1	61.4	74.1
	HIV counselling and testing, % of people who have tested in the past 12 months	24.1	36.9	45.4
	Multiple partners in the past 12 months	16.5	11.4	12.6
	Multiple partners in the past 12 months (males)	25.9	20.1	18.8
	Multiple partners in the past 12 months (females)	7.2	3.0	6.7
	Multiple partners in the past month	5.4	4.9	9.0

Annexure 3

Table 19: Comparison of the 2012 NCS sample with the 2007 Statistics South Africa Community Survey on selected variables

		2012 National HIV Communication Survey			2007 Stats SA Community Survey
Variables		Unweighted sample percentages	Weighted population percentages ¹	Weighted population frequencies	Weighted population percentages
Sex	Male	40.5	48.3	13,576,269	48.7
	Female	59.5	51.7	14,516,510	51.3
Age group	16-24 years	33.9	31.6	8,876,223	31.9
	25-49 years	57.0	58.9	16,556,880	58.6
	50-55 years	9.1	9.5	2,659,676	9.5
Population Group	African	82.0	78.2	21,955,060	77.6
	Coloured	14.4	9.3	2,605,677	9.5
	White	1.8	10.0	2,806,375	10
	Indian/Asian	1.7	2.5	709,853	2.9
Province	Eastern Cape	12.5	12.01	3,373,473	11.9
	Free State	5.7	5.87	1,649,632	5.9
	Gauteng	20.5	23.89	6,711,830	24.2
	KwaZulu-Natal	20.8	20.48	5,754,675	20.5
	Limpopo	10.3	9.71	2,727,336	9.5
	Mpumalanga	7.2	7.42	2,084,027	7.4
	North West	6.7	6.88	1,931,669	6.9
	Northern Cape	2.3	2.2	617,834	2.2
	Western Cape	14.0	11.54	3,242,303	11.6
Total		100.0	100.0	28,092,779	100.0

¹ Weighted by sex, age, population group, urban/rural residence, and province. Sample weights were corroborated using the 2007 Community Survey conducted by Statistics South Africa.



Annexure 4

Table 20: Socio-economic and other predictor control variables for SEM with weighted frequencies

Variables	Sample who had sex in the last 12 months Percentage
Sex (female)	52.0
Age group (youth)	27.1
Marital status (single)	30.3
Educational level (Grade 11)	37.8
Socio-economic status (mean of 7 household items)	4.5
Poverty (mean of 4 shortages)	3.5
Employment status (employed)	41.4
Community leader for HIV/AIDS	7.4
Discussed HIV/AIDS in a community meeting	17.2
Discussed HIV/AIDS in church or mosque	23.3
Perceived social capital for HIV/AIDS in one's community (mean of 1-4)	2.3
Frequency of sleeping away from home in last 12 months (mean; 2=less than 3-4 times/year)	2.0
Thinks any partner has other sex partner	22.5
Length of time partners are known before first sex (mean; 3=7 weeks to 6 months)	3.1
Expect to have sex again with any of 3 sex partners	91.8
Has any sex partner of the same sex	2.3
Knows President Zuma has been tested for HIV	59.9
Heavy drinking at last visit to shebeen, bar or tavern	6.4
Had sex with someone just met at shebeen/ bar	1.5
Frequency of heavy drinking (mean; 2=hardly ever)	1.9
Heavy drinking at last sex (self and/or partner)	5.1
Frequency of watching SABC 1 TV	2.3
Frequency of watching SABC 2 TV	2.0
Frequency of watching SABC 3 TV	1.8
Frequency of watching e.tv	2.2
Frequency of watching DSTV	1.1
Frequency of watching Top TV	0.1
Frequency of listening to the radio	2.1
Frequency of reading magazines	0.7
Frequency of reading newspapers	1.5
Frequency of internet use (computer/cellphone)	1.1
Watched Generations TV drama last in 12 months	69.6
Watched Takalani Sesame in last 12 months	36.9
Ever used Facebook	22.3
Ever used Twitter	8.8
Population group (African)	79.5
Settlement type (urban formal)	43.3
Province (Gauteng)	25.2

Annexure 5

Table 21: Frequency of accessing various media in 2009 and 2012

	< once a week		1-3 days / week		4-6 days / week		Every day		Total	
	2009	2012	2009	2012	2009	2012	2009	2012	2009	2012
Listen to radio	13.5	11.3	14.4	17.4	11.4	8.2	47.8	32.7	87.1	69.6
Watch SABC 1	12.0	15.5	12.0	17.4	9.5	16.0	48.1	43.4	81.6	92.2
Watch SABC 2	15.6	16.3	19.4	20.3	10.7	16.9	30.1	33.9	75.8	87.4
Watch SABC 3	16.6	18.6	18.7	21.3	9.3	14.0	22.5	27.5	67.1	81.4
Watch e.tv	11.4	14.7	14.5	18.5	10.9	15.4	35.1	39.8	71.9	88.3
Watch DStv	2.9	4.5	2.7	4.8	2.2	4.5	12.0	26.4	19.8	40.3
Watch Top TV	-	1.5	-	1.3	-	0.8	-	3.8	-	7.3
Read a magazine	26.5	13.3	18.2	11.5	5.2	3.4	6.3	3.5	56.2	31.7
Read a newspaper	21.9	17.5	19.3	18.5	8.6	7.0	17.7	15.8	67.5	58.8
Use the internet	5.3	5.1	4.7	7.3	1.8	4.2	6.7	17.5	18.5	34.1



Annexure 6

Table 22: Percentage of people in South Africa who were not exposed to any of the HCPs by socio-demographic factors in 2009 and 2012

		2009	2012
Sex	Male	10.1	18.7
	Female	10.4	17.3
Marital status	Single	8.1	16.7
	Not married or living together but in a steady relationship	5.4	14.1
	Not married but living with sexual partner	11.8	16.9
	Married, living together	14.3	21.1
	Married, not living together	13.6	20.2
	Divorced/ widowed	23.6	27.7
Age group	16-24	5.7	13.3
	25-49	11.1	17.5
	50-55	21.8	36.7
Sexually active	Yes	9.2	15.6
	No	14.7	21.0
Employment status	Unemployed	11.1	18.7
	Employed	11.4	18.9
	Student	5.2	11.5
Education	No schooling	-	54.7
	Up to primary	22.2	36.1
	Up to Grade 11	8.8	16.4
	Matric	6.4	14.0
	Tertiary	5.9	14.7
Socio-economic status	Low	18.9	27.1
	Medium	5.2	11.1
	High	8.0	16.8
Settlement type	Urban formal	8.1	15.2
	Urban informal	6.6	14.0
	Peri-urban	16.8	23.4
	Tribal settlement	11.2	25.4
	Farming	26.2	32.3

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