

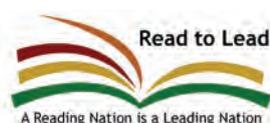
# The Health of Educators in Public Schools in South Africa



basic education  
Department:  
Basic Education  
REPUBLIC OF SOUTH AFRICA



HSRC  
Human Sciences  
Research Council



# The Health of Educators in Public Schools in South Africa 2016



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Basic Education  
REPUBLIC OF SOUTH AFRICA

Prepared by



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## ABBREVIATIONS

ART	Antiretroviral therapy
ARV	Antiretroviral
BCC	Behavioural change communication
DBE	Department of Basic Education
DBS	Dried blood spot
DHS	Demographic and health survey
DOE	Department of Education
DOH	Department of Health
ELRC	Education Labour Relations Council
EMIS	Education Management Information System
EIA	Enzyme immunoassay
FET	Further Education and Training
FWA	Federal Wide Assurance
HIV	Human immunodeficiency virus
HCT	HIV Counselling and Testing
HPLC	High Performance Liquid Chromatography
HSRC	Human Sciences Research Council
LAg-Avidity EIA	Limiting-Antigen Avidity Assay
MMC	Medical Male Circumcision
MOS	Measure of Size
MRM	Multiple Reaction Monitoring
NAAT	Nucleic acid amplification test
NAPTOSA	National Professional Teachers' Organisation of South Africa
NDOH	National Department of Health
NCDs	Non-communicable diseases
NICD	National Institute for Communicable Diseases
NSP	National Strategic Plan (on HIV, STIs and TB)
NTU	National Teachers' Union
PBS	Phosphate buffered saline
PCTA	Prevention, Care and Treatment Access
PEPFAR	United States President's Emergency Plan for AIDS Relief
PEU	Professional Educators Union
PLHIV	People Living with HIV
PMTCT	Prevention of Mother-to-Child Transmission (of HIV)
PPCT-OVC	Prevention, Palliative Care for Teachers Orphans and Vulnerable Children
PSU	Primary Sampling Unit
REC	Research Ethics Committee
RMDC	Research Methodology and Data Centre
SABC	South African Broadcasting Corporation
SANAC	South African National AIDS Council

SADTU	South African Democratic Teachers' Union
SAOU	Suid-Afrikaanse Onderwys Unie
SPSS	Statistical Package for Social Sciences
STIs	Sexually Transmitted Infections
TB	Tuberculosis
UNAIDS	Joint United Nations Programme on HIV and AIDS
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organisation

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# EXECUTIVE SUMMARY

The provision of good quality education in public sector schools in South Africa is intrinsically linked to the health, wellbeing and productivity of educators employed in this sector. The National Department of Basic Education (DBE) commissioned the Human Sciences Research Council (HSRC) to conduct a second national survey to assess the health and wellbeing of public school based educators in South Africa. The goals of the study were to investigate the HIV-related epidemiological profile of educators and school leadership (Principals, Vice Principals and Heads of Departments) in the public education sector and to assess the impact of HIV prevention, care and treatment programs on HIV prevalence. The findings contribute towards strengthening employee related programmes.

Various factors influence the health and wellbeing of educators within the school environment. These include work dissatisfaction and overload, personal health issues – including HIV infection, tuberculosis (TB) and non-communicable diseases – and exposure to violence. Such factors were identified in a similar study conducted in 2004. The present survey updates previous data and provides new information on HIV incidence and exposure to ART, sexually transmitted infections (STIs), and TB, as well as providing insights into the general health and wellbeing of educators in the school environment.

South Africa has the highest burden of HIV globally, with the Joint United Nations Programme on HIV and AIDS (UNAIDS) estimating that 6.8-million people are living with HIV in the country. According to the World Health Organisation (WHO), South Africa also has the highest incidence and prevalence of TB among high burden countries globally. Non-communicable diseases such hypertension and diabetes mellitus also contribute to burden of disease.

Funding was received from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), via the South African National AIDS Council (SANAC) together with the Networking HIV, AIDS Community of South Africa (NACOSA), as well as from the HSRC. The study was supported by the South Africa Democratic Teachers Union (SADTU), the National Professional Teachers Organisation of South Africa (NAPTOSA), the Suid-Afrikaanse Onderwys Unie (SAOU), the Public Servant's Association, the National Teachers Union (NATU), the Professional Educators Union (PEU), the South African Council of Educators (SACE) and the Department of Public Services and Administration (DPSA).

## Study Objectives

The specific objectives were to:

- Estimate the prevalence of HIV among public school educators.
- Establish an HIV incidence baseline among public school educators.
- Estimate the number of educators on ART
- Assess the relationship between behavioural factors and HIV infection among public school educators.
- Compare the HIV prevalence and risk behaviours among public school educators between 2004 and 2015/2016.

Additional objectives included assessing the extent of TB infection and non-communicable diseases including mental health, environmental issues such as violence in schools, and systemic issues such as class sizes and work load.

## Methods

The study followed a cross-sectional approach employing second-generation surveillance methods that combined collection of socio-demographic and behavioural data with Dry Blood Spot (DBS) collection. Ethical approval was obtained from the HSRC Research Ethics Committee. Informed consent was obtained from each educator prior to administering the interviews and DBS collection.

The study included educators and school leadership within the public schooling system who were teaching grades R to 12. Participants were working full-time or part-time and were employed by the state or by school governing bodies. The Education Management Information System (EMIS) Master List for educators in 2013 was used as the sampling frame. This comprised 25,179 schools with 389,044 educators, and a sample size of 27,869 was determined using this sampling frame.

The study was conducted in all nine provinces and 1,380 public schools were identified, including all four school categories (primary, secondary, combined, intermediate). Each educator's HIV test result was anonymously linked to their questionnaire using a barcoding system. All educators who were tested for HIV were offered the option of collecting their HIV test results from a private doctor of their choice. This was paid for by the study using funds provided by the International Labour Organisation (ILO). The aim of returning HIV test results to educators was to increase the number of educators who tested and know their HIV status, and was advocated by educator unions.

Data were converted to Stata statistical package for analyses, accounting for the complex multi-level sampling design and adjusting for HIV-testing non-response.

## Findings

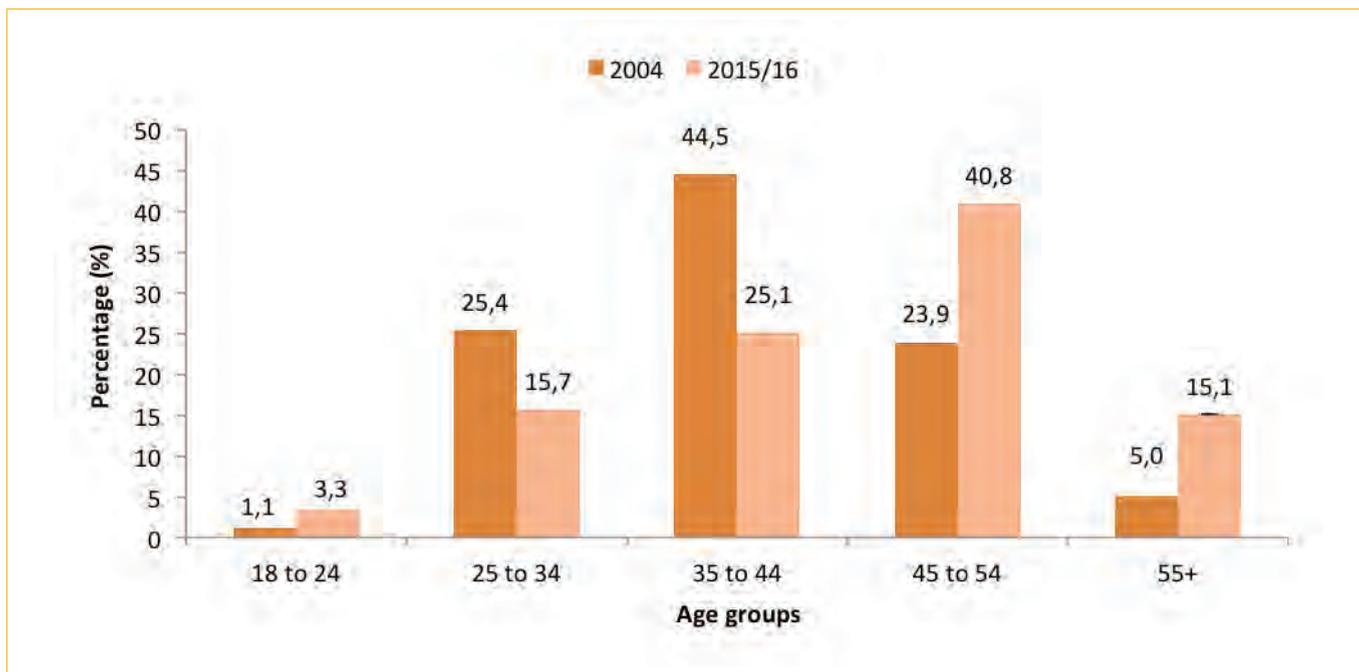
### *Demographics and social characteristics of the sample*

Among the 1,380 schools that were sampled, 98.9% were valid and of these, 96.2% agreed to participate. Among the 3.8% of non-responding schools, 2.6% refused to participate and 1.2% had either not been visited or had closed down.

Of the 25,130 educators eligible to participate in the survey, 85.5% were interviewed and 65.2% also provided blood specimens for HIV testing. This response rate was consistent with the previous educator survey. A fifth of educators who were interviewed (20.3%) refused to provide a specimen for HIV testing.

The final sample consisted of educators who were predominantly female (69.7%), African (80.1%), aged  $\geq 45$  years (55.9%), married (55.4%), qualified at first degree or higher level (74.0%), holding the rank of educator (75.6%), being employed by DBE (93.7%) and teaching in primary schools (56.2%). Nearly one fifth of educators had 20-24 years of teaching experience. The majority of educators were in the older age group in 2015/2016 ( $\geq 45$  years), compared to 2004 where the majority were aged 35-44 years. Most educators (58.3%) were living in the same area, after completing their initial training.

## Age distribution of South African educators 2004 and 2015/2016



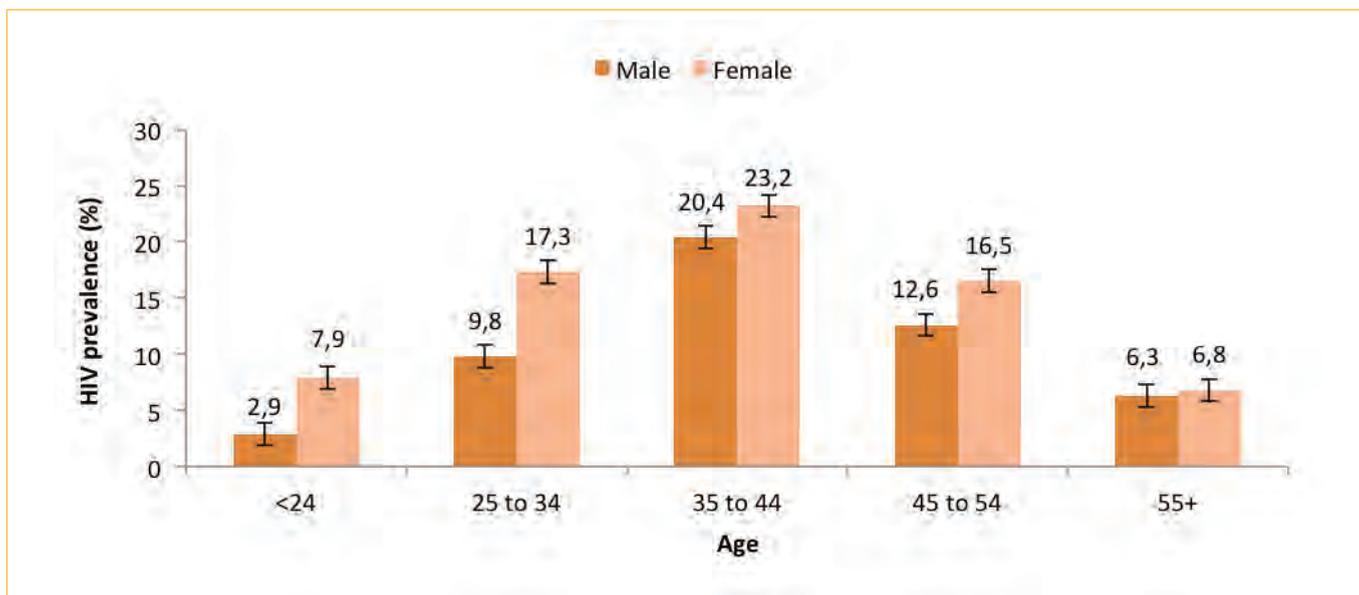
### HIV Prevalence

The cumulative HIV prevalence among educators was 15.3% translating to approximately 58,000 educators living with HIV in 2015. This was 1.2 times higher than was found in the 2004 survey (15.3% vs 12.7%).

HIV prevalence was significantly higher among females compared to males (16.4% vs 12.7%,  $p=0.0001$ ), whereas in 2004 where there was no observable difference in prevalence between the sexes.

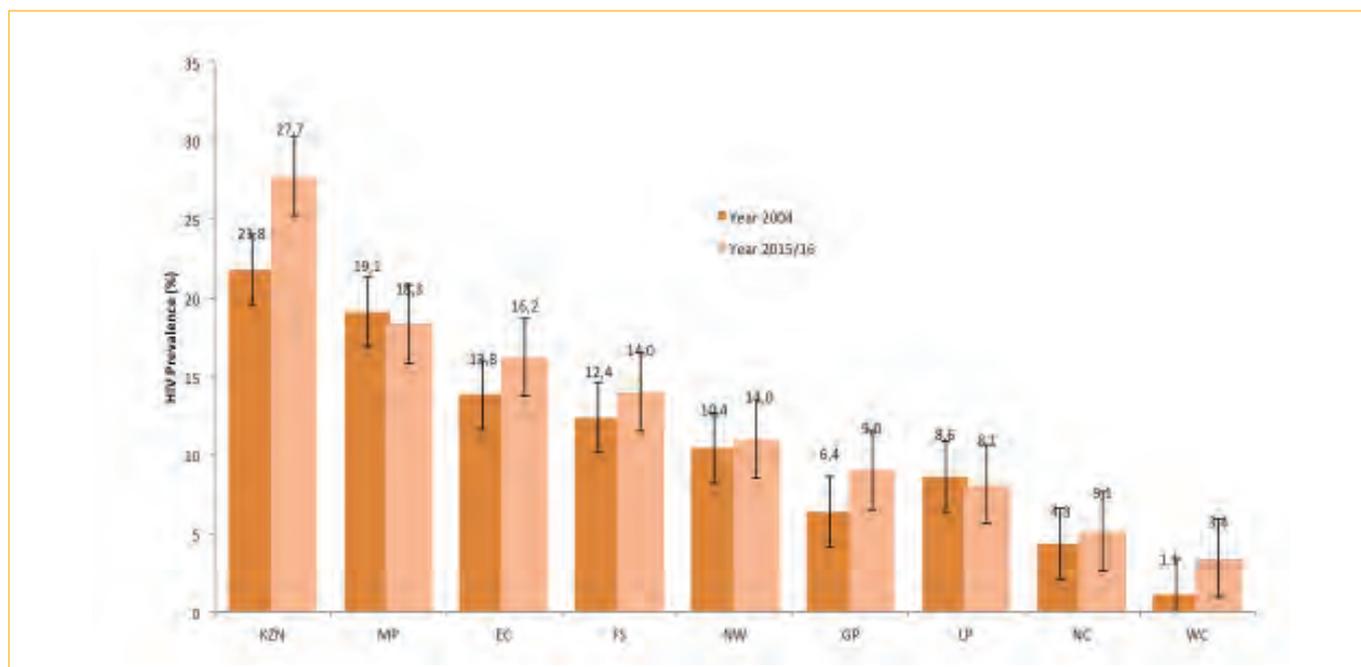
The 2015/16 HIV prevalence peak occurred among educators aged 34-44 years (22.4%), whereas in 2004 the peak occurred in the 25-34-year age group (21.4%). This age shift probably reflects increased survival resulting from improved access to ART. Females had consistently higher HIV prevalence than males across all age groups with the peak being among educators aged 35-44 years being at 20.4% for males and 23.2% for females.

### HIV prevalence by age and sex



Overall, higher HIV prevalence was found among educators who were Africans, those with low education levels, those with low disposable income, those who were unmarried and widowed, and those teaching in rural informal areas. This is consistent with previous national surveys. The observed provincial differences in HIV prevalence are consistent with the 2004 survey findings, with peaks still occurring in Kwazulu-Natal, Mpumalanga and Eastern Cape. Although the Western Cape ranked lowest in terms of HIV prevalence, there was an increase in HIV prevalence – 1.1% in 2004 vs 3.4% in 2015 – which is consistent with findings in for HIV prevalence in the general population. There was minimal, no change or a decline of HIV prevalence in some provinces. For example, in Limpopo the prevalence was 8.6% (2004) vs 8.1% (2015) and in Mpumalanga it was 19.1% (2004) vs 18.3% (2015). In 2015/2016 the prevalence of HIV in Gauteng Province was found to be higher than Limpopo, while in 2004 the prevalence was higher in Limpopo than in Gauteng Province.

**Overall HIV prevalence of South African educators by province, 2004 and 2015/2016**



**HIV incidence**

HIV incidence was estimated at 0.84% translating to an estimated 2,900 new infections in 2015. HIV incidence was 1.3 times higher among females compared to males. Incidence was also higher among younger educators aged 18-34 years (1.92%) compared to those ≥ 35 years (0.67%), reflecting the increased risk in this younger age group – especially among females. In studies of HIV in the general population in South Africa, HIV incidence was higher among young women aged 18-24 years and 25-34 years compared to males. Incidence among unmarried educators was 2.7 times higher than among married educators (1.44% vs 0.53%). KwaZulu-Natal (2.05%) and Eastern Cape (1.23%) had higher incidence rates than the national average of 0.84%.

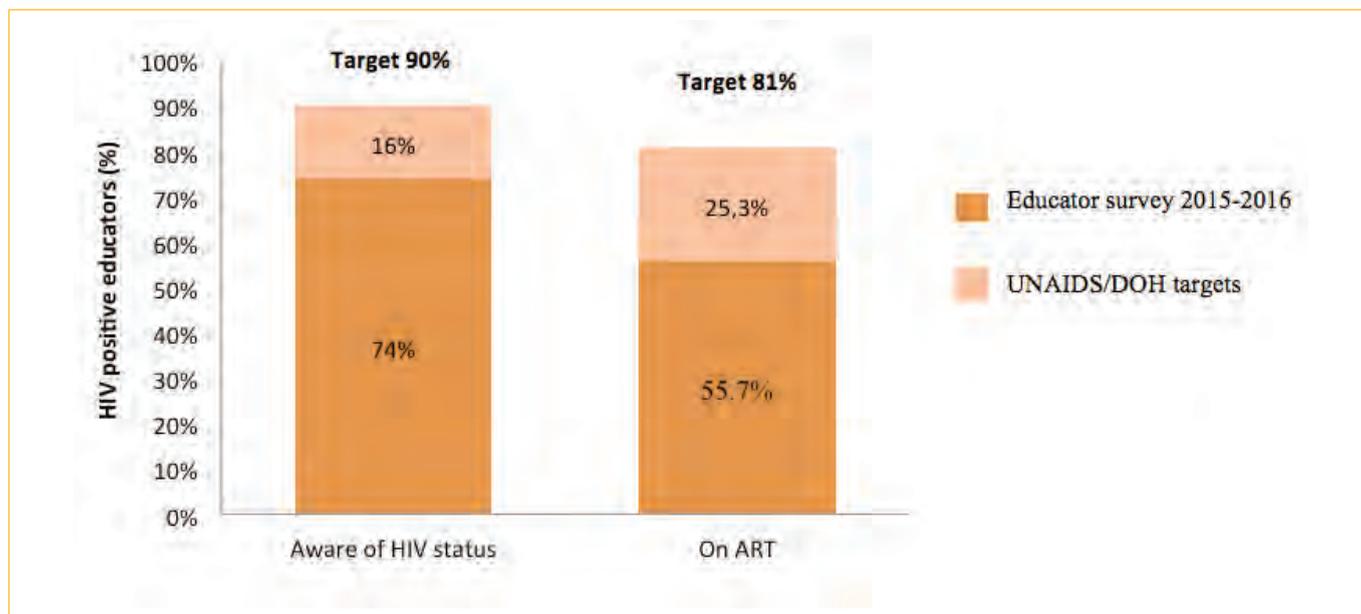
**Antiretroviral treatment exposure**

Among the estimated 58,000 educators living with HIV, 55.7% were exposed to antiretroviral drugs (ARVs). There was no significant difference between the proportions of males (53.8%) versus females (56.4%) who had accessed antiretroviral therapy (ART). Exposure to ARVs was significantly higher among educators aged ≥35 years (59.0%) in comparison to younger educators aged 18-34 years (39.9%, p <0.001). This is consistent with the shift in HIV prevalence towards older age groups. No significant differences were found in exposure to ARVs in the different locality types.

Educators on medical aid were more likely to be on ARVs compared to those who did not have medical aid. Among HIV positive males, those who were on medical aid were 1.4 times more likely to be exposed to ART compared to those that did not have medical aid. This was similar for females.

UNAIDS and the South African Department of Health (DOH) treatment targets are 90% of persons living with HIV knowing their HIV status, and 90% of those living with HIV receiving antiretroviral therapy. Among the HIV positive educators, 74.0% were aware of their status and 55.7% were on ART. There is thus a gap of 16.0% and 25.3% for the first two 90-90 targets, respectively.

**Awareness of HIV and ART exposure: current gaps in meeting UNAIDS/DOH treatment targets**



**Sexual Behaviour**

The majority of educators (71.6%) indicated they had had sex in the 12 months prior to the survey.

Among this group, most educators (84.8%) reported that they had one sexual partner in the past 12 months, and 10.1% reported that they had two or more partners. Consistent with the findings of the previous educator survey, substantially more male educators reported having had two or more partners in the past 12 months (22.0%), compared to their female educators (3.4%).

A high proportion of educators (86.3%) knew of a place in the community where they could obtain a male condom for free compared to two thirds (66.9%) who said the same for female condoms.

Self-reported condom use at last sex among all age groups was low among educators and their regular partners (35.5%), but higher with non-regular partners (75.3%). Similarly, self-reported consistent condom use was lower with regular partners (17.7%) compared with non-regular partners (56.7%). These findings are consistent with the 2004 survey findings.

HIV-related slogans or messages that were recalled the most were those that promoted abstinence (39.2%), use of condoms (27.6%) and need for faithfulness (11.5%). The least remembered communication related to hope (3.4%) and the rights of people living with HIV (2.3%).

## **Male Circumcision**

The majority of male educators (60.0%) indicated that they were circumcised, including higher proportions among Africans (68.4%), men aged 45-54 years (64.9%) and men teaching in rural formal areas (72.0%). Reporting having been circumcised through traditional means was most common in the Eastern Cape and Limpopo (76.3% and 73.3% respectively). Medical male circumcision was highest among educators teaching in Free State, KwaZulu-Natal and North West provinces. Overall, few educators experienced problems during circumcision (7.0%), while higher rates of circumcision-related complications were reported from men teaching in rural areas (14.8%). More than a quarter of uncircumcised men (28%), were willing to consider being circumcised. Most fell within the  $\leq 35$ -years age group.

## **HIV Risk Perception and Awareness**

The HIV risk perception was high among educators, with the vast majority (88.4%) acknowledging that they were susceptible to HIV infection. Although HIV prevalence was high among African educators, only 17.8% perceived themselves as being 'definitely at risk of HIV infection'. Among educators who reported they would 'definitely not get infected with HIV', 26.7% were HIV positive but not aware of their HIV status, 11.8% indicated they had two or more sexual partners and 37.4% reported using condoms with non-regular partners.

Among those that indicated they would 'definitely get infected with HIV', 6.3% were HIV positive but were not aware of their HIV status, 5.7% reported having two or more sexual partners and 27.6% indicated they used condoms with non-regular partners.

The proportion of educators reporting knowing where to obtain HIV testing services increased from 78.7% in 2004 to 92.4% in 2015 for males, and from 80.5% in 2004 to 93.8% in 2015 for females.

Almost all educators (>92%) knew where to obtain HIV counselling and testing (HCT) services. However, HCT availability in schools was low (7.7%), and HCT was more likely to be available in urban areas (8.5%).

Among educators who had ever tested for HIV, the highest levels were found among those aged 35-44 years (91.3%), Africans (87.9%) and those teaching in urban informal localities (87.6%). The majority of the educators (88.3%) indicated they had an intention to test for HIV in the future. Nonetheless, the youngest and oldest educators as well as Whites and Indians/Asians did not test for HIV as much as their counterparts. White educators intending to test for HIV was lowest at 72.0%.

## **HIV knowledge**

Knowledge about risk behaviour and transmission of HIV was high at 89.5% and was consistent across various demographic variables. The highest levels of HIV knowledge were found among educators who were 18-24 years old (94.1%), White (93.0%), Coloured (92.9%), teaching in urban formal areas (90.6%) or rural formal areas (90.1%), and who were based in the Northern Cape (94.8%).

## **Attitudes towards PLHIV**

Most educators across various demographic variables had positive attitudes towards people living with HIV (PLHIV) and were comfortable talking to others about HIV and AIDS. However, concerns about disclosure of a family member's HIV positive status were apparent among both older and younger educators and across provinces, with the majority of these views being held in KwaZulu-Natal and Mpumalanga.

## **DBE Policy and HIV-related stigma**

A higher proportion of educators in 2015 (52.6%) were of the view that the DBE addressed the problem of HIV stigma adequately, compared to 42.4% in 2004. The majority of educators (71.1%) were aware of a school policy on HIV. Awareness was higher among older educators and educators from Mpumalanga (80.9%). Awareness was lower among Indians/Asians (66.3%), among educators teaching in urban formal areas (65.1%) and educators in Gauteng (62.4%) and the Free State (63.3%). Most educators (87.1%) indicated that the DBE supports educators who are ill/sick.

## **TB knowledge**

The level of correct knowledge about behavioural risk, prevention and cure of TB transmission was generally high amongst educators regardless of race and province. However, there were low levels of knowledge regarding the risk of TB transmission through close contact with a person who has untreated TB (29.8%), particularly in the North West, Mpumalanga, and Limpopo provinces.

## **Self-reported TB symptoms**

One in ten educators (10.3%) indicated that they currently had at least one TB-related symptom. Older educators aged  $\geq 45$  years (10.5%-11.5%) as well as African educators (11.2%) were most likely to indicate TB-related symptoms compared to other groups. Among the 31.9% of educators who reported a history of TB screening, a higher proportion (13.7%) had been diagnosed with TB since the previous survey (0.92%) and the majority of these educators had received (96%) and completed (98.2%) TB treatment.

## **Attitudes towards persons with TB**

Most educators were willing to share meals with someone with TB (52.4%), work or study with someone with TB (78.0%) or hug a person with TB (74.9%).

## **Sexually transmitted infections**

The prevalence of STI diagnosis among educators was low. Only 1.2% of educators indicated that they had been diagnosed with a STI in the three months prior to the survey. The proportion of educators who were HIV positive and who indicated an STI diagnosis in the previous three months was higher than in 2004 (36.8% vs 23.1%). Similarly, there was more acknowledgment of genital sores or ulcers (33.0% vs 27.5%), abnormal penile discharge (31.3% vs 28.7%) and genital warts (25% vs 23.5%).

## **Educators' health status and utilisation of health services**

Most educators indicated that they were physically (75%), and mentally/emotionally healthy (71.3%). Only a low proportion of educators were not able to carry out their duties due to emotional and mental distress. Since 2004, there has been a decline in the proportion of educators visiting a health practitioner in the previous six months (75.0% vs 61.1%). Similar portions of educators reported being admitted to hospital in the previous 12 months compared to the 2004 survey (11.8% vs 10.6%). Utilisation of health services was lowest among African educators (59.5%).

## **Non-Communicable Diseases**

The extent of self-reported chronic illnesses has increased since the 2004 educator survey. There were increased reports of hypertension (22.1% vs 15.6%), diabetes (9.0% vs 4.5%), asthma (5.9% vs 3.5%), cataracts (2.7% vs 0.3%), lung or breathing problems (4.3% vs 2.9%), heart disease (3.1% vs 1.1%), arthritis (7.2% vs 6.6%) and cancer (1.3% vs 0.5%).

## **Alcohol, Tobacco and Drug Use**

The majority of educators (74.7%) reported that they had not consumed alcohol in the past 12 months and this is consistent with what was found in the previous study. Results show that a very low proportion (3.7%) of educators may have a high-risk drinking problem, and this was more common among males. A high proportion of non-drinkers were female (82.5%), and older educators were less likely to consume alcohol. Low income earners, those with low socio-economic status and low levels of education had a greater propensity to be high-risk drinkers. A small proportion of educators (4.5%), reported that they used alcohol or drugs the last time they had sexual intercourse.

Overall 9.1% of educators reported currently using tobacco products and tobacco use is lower in older age groups. Younger educators aged 18-34 years represented more than one-quarter (25.8%) of smokers. Tobacco use was four times higher among males in comparison to females, as well as being higher among Coloureds (23.3%) and Whites (23.3%), those teaching in urban formal areas (11.6%) as well as Western Cape (16.8%), Northern Cape (21.9%) and Free State (12.1%). Current tobacco use (16.4%) was found to be lower among educators compared to the general population. The use of illicit drugs or other categories of drugs was low. Overall, 1.4 % of educators reported they had ever smoked dagga and 1.7% indicated that they had used sedatives/sleeping pills.

## **Training of educators**

A high proportion of educators attended life-skills education training (71.2%) and in-service training (67.2%). Attendance at these training activities consistently increased with age and experience of educators but it was lower among African educators compared to other races.

## **Residence, migration and mobility**

Around two fifths of educators (41.7%) indicated that they had moved to a different area from where they studied.

## **Job satisfaction and work stress**

Around half of all educators (51.9%) indicated job satisfaction, while a similar proportion indicated job-related stress (49.7%). The lowest levels of job satisfaction were reported by Whites (23.4%), educators aged 18-24 years (19.4%), those teaching in rural informal areas (18.7%), those teaching in Mpumalanga (18.2%) and KwaZulu-Natal (19.7), those teaching in combined/intermediate schools (20.3%) and those holding the rank of education specialists (15.7%).

The highest stress levels were reported by educators who were Coloured (25.7%), Indian/Asian (24.0%), aged  $\geq 55$  years (22.3%) and teaching in the Western Cape (26.8 %). Stress levels were higher among teaching staff in comparison to non-teaching staff. High levels of intention to leave the profession was reported among educators who had low job satisfaction (57.2%) and high job stress (42.2%).

## **General morale at work**

There was generally high morale among educators (41.9%). Among educators with low morale, a larger proportion were male (14.4%), Indian/Asian (25.3%), aged 45-54 years (14.2%), teaching in urban formal areas (14.7%), teaching in the Free State (20.2%) or North West (20.0%), were qualified with a first degree or higher (13.1%), were teaching at the level of head of department and senior educators (14.9% respectively) and were teaching in special schools (18.7%). Those with more years of teaching experience had lower morale compared to those with fewer years of teaching experience.

## **Responsibilities and workload**

Increased workload in the past three years was reported by 46.8% of educators, while around a third (31.2%) stated that their workload had remained relatively unchanged. Reasons cited by 17% of educators for workload increase included: increase in the number of learners in each class; lack of parental involvement; learners having a limited understanding of the language medium used to teach; ill-discipline among learners; shortage of educators and educator absenteeism.

Class sizes above the recommended maximum of 40 learners were found in Gauteng (42.0%), Eastern Cape (43.4%), North West (43.8%), KwaZulu-Natal (44.0%), Mpumalanga (45.3%) and Limpopo (49.1%). Higher class sizes were found in formal rural areas (45.4% learners), informal rural areas (45.1% learners) and informal urban areas (44.9%).

The majority of educators taught two or more subjects, with the lowest average number of subjects being taught in secondary schools (1.91 subjects). Regarding teaching experience, educators in the North West (19.2 years) and Limpopo (19.4 years) had the most teaching experience, while KwaZulu-Natal educators had the least amount of teaching experience (14.8 years). Coloured (18.9%) and Indian/Asian (18.8%) educators had the most years of teaching experience in comparison to other race groups.

When comparing the training of educators in comparison to what they were teaching, there was good parity for natural sciences (5.0% versus 5.5%) and additional languages (0.8% versus 0.9%). However, the majority of educators who were teaching mathematics, life orientation and social sciences, were not trained in those learning areas. The largest variance was observed for mathematics and mathematics literacy, where 4.7% of educators taught this learning area but only 1.6% of educators were trained to teach these subjects. Most educators were also not teaching at the level they were trained to teach. For example, only 7% of educators who were trained to teach at junior secondary school were actually teaching there.

## **Absenteeism**

Less than one third (24.8%) of educators reported being absent from school during the 2014 school year. Absenteeism of 20 days or more was reported predominately among Whites (21.4%), those aged 18-24 years (39.2%), teaching in urban informal areas (17.1%) and in the Northern Cape (28.4%). The most common type of reported leave was sick leave (66.6%), leave to attend funerals (13.0%), special leave to care for a sick person (9.8%) as well as other special leave (18.8%).

## **Factors influencing retention and attrition**

Intention to leave employment was measured under attrition in general and under workload and responsibilities. The majority of educators (64.0%) indicated that teaching was their first choice and also that they had not considered changing their careers (71.8%). Among those who had considered a career change or expressed an intention to leave, the main reasons were poor salaries, heavy workload, facing too many demands, and increased class sizes.

Around a third of educators (34.5%) indicated intention to leave and this has decreased since 2004 (34.5% vs 55.0%). This was higher among males (40.2%), educators younger than 35 years, teaching in the North West province (46.4%), those who have a first degree or higher qualification (37.9%), those teaching at secondary school level (42.9%), and those holding senior ranks such as education specialists (48.3%). Fewer African educators (33.0%) reported an intention to leave, with levels also being lower among educators teaching in Mpumalanga (26.6%) and Limpopo (26.5%).

Among those who indicated a low salary as their main reason for leaving, high proportions were African (43.6%), male (44.9%), aged 35-44 years (43.7%), teaching in Limpopo province (52.7%) and teaching in an urban informal locality (45.9%). Females (28.8%) and educators from the Free State (32.7%), North West (29.4%) and Mpumalanga (28.8%) as well as those teaching in rural informal areas (28.7%) indicated workload as the primary reason for leaving.

## ***Violence within the school setting***

Violence in schools was found to be fairly common with the most common forms being assault (19.8%) and fights involving weapons (16.0%).

## ***DBE strategy on HIV, STIs and TB***

Regarding the current DBE strategy on HIV, STIs and TB, 51% of educators reported that they were not aware of it. Among educators, high proportions of male (80.6%) and female (84.5%) educators had read the strategy. Among this group, around half of educators found the strategy to be very useful, and female and younger educators were more likely to hold this view.

Regarding unionization, most educators (86.2%) belonged to a union irrespective of race, locality type and province. Unionisation levels were similar in 2004. Levels of knowledge of union HIV and AIDS policy increased with age. Among the 61% of educators who reported that they knew about their union's HIV and AIDS policy, only 46.5% had seen a copy of it and this awareness was higher among older educators, African educators, those teaching in rural formal areas as well as educators from Mpumalanga (64.6%). The majority of educators who had seen the HIV and AIDS policy had also read it.

## ***Recommendations***

The response to HIV in the education sector should be targeted and encompass biomedical, social, economic and behavioural interventions. The following recommendations are made:

### ***HIV and TB prevention***

HIV prevention interventions should be tailored to address educators who are at higher risk of acquiring HIV – younger educators (especially young females), those living in rural areas, high-risk alcohol drinkers and those living in the high HIV burden provinces of KwaZulu-Natal and the Eastern Cape.

HCT and Employee Health and Wellness Programs among educators should increase emphasis on the uptake of ART, including those who are not on medical aid.

Pre-Exposure Prophylaxis (PrEP) should be offered to young female educators at high risk.

Male and female condom use should continue to be promoted as an effective means to prevent HIV transmission.

Reduction of multiple sexual partnerships, especially among educators at higher risk of HIV and those living with HIV, should be promoted.

A contextualised strategy for the promotion of male circumcision should be followed, taking variations in preference between traditional and medical approaches.

TB prevention and treatment should be consciously addressed.

### ***HIV and TB related stigma***

Disclosure of HIV status among educators should be supported with appropriate stigma mitigation strategies – including understanding the need to address concerns of self-stigma.

### ***Sexually Transmitted Infections***

Recent STI levels are very low among educators. Nonetheless, awareness of STIs and links to HIV infection and transmission should continue to be promoted.

### **Substance use**

Promotion of smoking cessation should be emphasised, with specific additional support being considered for the small minority of educators who are high-risk drinkers.

### **Training and workload**

Educators should be placed to teach at the appropriate school levels that they were trained to teach. More educators should be trained to teach mathematics, and training should include continuous professional development for those that are already teaching mathematics.

Workload in relation to larger class sizes should be addressed.

### **Potential Attrition**

The DBE's Employee Health and Wellness Programs should include approaches to support stress management. Educator career pathing should be emphasised to make educators aware of internal career opportunities, especially for younger educators who were more likely to want to leave the profession.

### **Curbing absenteeism**

It is recommended that DBE reinforce accurate record keeping of absenteeism at provincial, district and school levels.

### **Violence**

Resources should be mobilised to deter learners and educators from carrying weapons to school. It is also important to improve monitoring of school premises to contain and eradicate assaults in the school setting.

### **DBE's HIV/AIDS Policies**

Awareness of the DBE Integrated Strategy on HIV, STIs and TB among educators should be improved through active promotion. This should include empowering educators to manage the educational and socio-psychological consequences of HIV in the sector.

# 1. INTRODUCTION

The 2015 survey of the health of educators in public schools follows a similar survey conducted in 2004 (Shisana et al., 2005). The health and wellbeing of educators is globally acknowledged as being integral to the provision of quality education (Acton, & Glasgow, 2015; Roffey, 2012). Surveys in the sector guide policies and strategies that help to improve health and wellbeing of educators. Factors to be considered include the school environment, educators' mental and physical health, and issues such as substance abuse, among other concerns. HIV and TB are serious health concerns in South Africa and also have a bearing on the health and wellbeing of educators (UNAIDS, 2015; Global TB Report, 2015).

South Africa is among a few African countries that routinely conduct HIV incidence, prevalence and behaviour surveys in the general population (Shisana, Rehle, Simbayi et al., 2005, 2009, 2014; Shisana & Simbayi 2002). Surveillance of HIV has been extended from the general population to surveillance of key sectors that have a bearing on the country's economy – for example, health care workers, educators, other civil service sectors, and security personnel.

The population-based survey methodology has evolved from the second-generation HIV-surveillance approach to the third-generation HIV-surveillance approach (Rehle, Hallett, Shisana et al., 2010; Shisana, Zungu & Simbayi 2014). This evolution has been informed by the changing epidemic and the imperative to align research conducted in South Africa with globally recognised best practice for HIV surveillance (Shisana et al., 2014).

The 2004 educators survey contributed to understanding the extent of impact of HIV in the sector including influence on the supply and demand of educators in the South African education system (Shisana, Peltzer, Zungu-Dirwayi, Louw, 2005). With support from the Global Fund to Fight against AIDS, Tuberculosis and Malaria (GFATM) obtained through the South African National AIDS Council (SANAC) and The Networking HIV/AIDS Community of South Africa (NACOSA), the Department of Basic Education (DBE) commissioned the HSRC to conduct this second national HIV survey among educators in South Africa. This survey explores the prevalence of disease among educators, including HIV and tuberculosis (TB), as well as exploring risk factors such as substance use and abuse, environmental factors including staff morale and job satisfaction, violence at schools, knowledge of HIV and AIDS and how the education policy environment responds to educators' health concerns.

The present survey includes new methodologies, technologies and novel laboratory methodologies that have enabled direct estimates of HIV incidence and exposure to antiretroviral drugs (ARVs) (Rehle et al., 2015; UNAIDS/WHO, 2015; see also Shisana et al., 2014). Advances in survey design and methodology have improved data triangulation and enhanced data interpretation and presentation.

HIV-incidence measures are important because they provide insight into the more recent HIV infections and are the most direct means of assessing the impact of HIV-prevention programmes. Increased uptake of antiretroviral therapy (ART) has the potential to reduce infectiousness of persons living with HIV (PLHIV), thereby markedly reducing new HIV infections.

Improved methods of estimating HIV incidence and exposure to ARVs in the 2015 survey allow the DBE and policy makers to review and monitor progress made since the previous 2004 survey. The 2015 survey also assists in strengthening the DBE's own response to HIV and AIDS, targeted to the education sector. The 2015 data also provides baseline data to evaluate the DBE Integrated HIV, Sexually Transmitted Infection (STI) and TB Prevention Strategy, 2012-2016.

## Health of educators

Educators are as vulnerable to contracting HIV and TB as persons in the general population (Amadi-Ihunwo, 2008; Shisana, Peltzer, Zungu-Dirwayi & Louw, 2005; Theron, 2009). The first 2004 survey of HIV prevalence among educators was conducted during a time of analyses that suggested that the South African education system was in crisis and near collapse due to the HIV epidemic as a product of AIDS-related mortality, in combination with absenteeism and attrition due to low morale and job dissatisfaction (Badcock-Walters & Whiteside, 2000; UNESCO, 2000; World Bank Report, 2002). The 2004 study was an opportunity for the Department of Education (DOE) and the Education Labour Relations Council (ELRC) to inform interventions to support the health and wellbeing of educators through evidence-based HIV prevalence data, including identifying 'hotspots' or localities with high HIV prevalence among educators, as well as other relevant information. The 2004 study found that 12.7 % of educators were HIV positive, and that this relatively high prevalence posed a significant challenge for education in the country (Shisana, et al., 2005). At the time, only 22% of educators living with HIV were eligible for antiretroviral therapy (ART) as guidelines at the time required a CD4 cell count of <200 cells/mm<sup>3</sup>. Some 4,000 AIDS-related deaths were estimated to be occurring among educators annually, with the majority of these being among educators aged 35-44 years (Rehle, et al., 2005).

HIV among educators was associated with various socio-economic factors (Zungu-Dirwayi, Shisana, Louw et al., 2007). For example, HIV prevalence was higher among African educators (16.1%), those aged 25-35 years (20%), those with low socioeconomic status and those with lower levels of education. Mobility and migration were a risk factor, particularly for female educators (Shisana, et al., 2005; Zungu-Dirwayi et al., 2007). Marital status was also associated with higher HIV prevalence, while educators who began their teaching profession when single were significantly more likely to be living with HIV (23.3%) than those who were married at the time (14.3%) (Shisana et al., 2005).

One of the key findings from the survey was that HIV and AIDS had a negative impact on the education sector. The study findings established that HIV infection and other chronic health conditions were common reasons for educators to be absent from school (Hall et al., 2005; Shisana et al., 2005). The qualitative findings of the study suggested educators were stressed, overwhelmed and had been forced into occupying multiple roles in an attempt to address HIV within their schools. Some 38% of educators indicated that they had high morale and 15% indicated that they had low morale. It was also found that over half of educators (55.0%) intended to leave the education profession. An estimated 40% of educators cited HIV infection as the reason for considering leaving the profession (Hall et al., 2005).

## HIV in South Africa

South Africa has the highest burden of HIV globally, with the Joint United Nations Programme on HIV and AIDS (UNAIDS) estimating that 6.8-million people are living with HIV in the country. According to the World Health Organisation (WHO), South Africa also has the highest incidence and prevalence of TB among high burden countries globally. Non-communicable diseases such as hypertension and diabetes mellitus also contribute to burden of disease.

With over 400,000 new HIV infections in 2012, South Africa has the highest HIV incidence globally. While overall HIV incidence peaked in South Africa well over a decade ago, the prevalence of HIV has remained high. Moderate recent increases are likely to be related to increased access to ART in combination with vulnerabilities of particular sub-populations (Shisana, Rehle, Simbayi et al., 2009; Shisana, Rehle, Simbayi, et al., 2014). Incidence among younger age groups declined in 2008, and HIV prevalence at the time had peaked among women aged 30-34 at 36%, and men aged 35 -39 at 29% (Gouws 2010; Rehle, Hallett, Shisana et al., 2010; Shisana, Rehle, Simbayi et al., 2009). KwaZulu-Natal had the highest population-level HIV prevalence at 16.9%, with the Western Cape being lowest at 5%. HIV incidence among females aged 15-24 was more than four times higher than males in this same age group – and this disparity was eight times higher among females aged 15-19 in comparison to males the same age.

The South African response to the HIV epidemic has emphasized the implementation of primarily biomedical prevention and treatment strategies. These include the distribution of condoms, intensive HIV testing, scale-up of ART, and the promotion of voluntary medical male circumcision (VMMC). While high levels of condom distribution have been correlated with increased levels of reported condom use at last sex in successive national surveys, in 2012 there was a decline in condom use at last sex (Shisana, Rehle, Simbayi et al., 2005, 2009; Shisana & Simbayi, 2002; Shisana, Rehle, Simbayi, 2014). Around 10-million South Africans are tested for HIV annually, although testing rates remain below 50% of the general population (Motswoaledi, 2016, Shisana, Rehle, Simbayi et al., 2014).

Over the past one and a half decades, South Africa has made considerable progress in the provision of ART to people living with HIV (PLHIV). According to the UNAIDS, ART coverage increased from 25% in 2011 to more than 45% of PLHIV in 2014. Furthermore, an estimated 3.3 million people were reported to be on ART by June 2015 (UNAIDS, 2015). The increase in the number of people on ART has led to a decrease in AIDS-related mortality and an increase in life expectancy (Johnson, Mossong, Dorrington et al., 2013; UNAIDS 2012a). Guidelines for initiating ART have changed to improve coverage, from requirements in the early 2000s for a CD4 cell count of <200 CD4 to the removal of CD4 count criteria for ART in late 2016 – a situation that effectively allows all persons with HIV to access treatment (Motswoaledi, 2016). Widespread access to ART considerably extends health and wellbeing of PLHIV, while also contributing to reduced likelihood of HIV transmission when treatment is sustained (Tanser, Bärnighausen, Newell et al., 2013)

## **HIV and the education sector**

The 2004 educators survey showed that the HIV epidemic was heterogeneous, with wide variations in HIV prevalence by age, race, socioeconomic status and geographical location, with no differences being observed by sex (Shisana et al., 2005). HIV prevalence was estimated at 12.7%, with HIV being most prevalent among educators aged 25-34 (Shisana, Peltzer, Zungu-Dirwayi & Louw, 2005). The 2004 study identified hotspots where HIV prevalence was greater than 20%. These comprised 11 districts located in the KwaZulu-Natal, Eastern Cape and Mpumalanga provinces. AIDS related morbidity and mortality at the time was also high – in part due to limited access to ART and national guidelines requiring a CD4 cell count of <200 cells/mm<sup>3</sup> before ART could be initiated (Hall et al., 2005; Rehle, et al., 2005). The 11 identified districts were prioritized for targeted HIV interventions among the educator population.

Following the study, the Education Labour Relations Council (ELRC) in collaboration with the South African Teachers Union (SADTU), National Professional Teacher's Organization of South Africa (NAPTOSA), National Teacher's Union (NATU) and Suid-Afrikaanse Onderwys Unie (SAOU) initiated a Prevention, Care and Treatment Access I programme (PCTA-I), that was piloted in three provinces highest prevalence provinces – KwaZulu-Natal, the Eastern Cape and Mpumalanga. This programme was later expanded nationally PCTA-II. In 2009/2010, it was reported that 1,467 Peer Educators and 129 Master trainers provided HIV prevention, care and treatment access to 34,332 educators throughout South Africa (ELRC, 2010). SADTU also implemented a concurrent project called the HIV Prevention, Palliative Care for Teachers Orphans and Vulnerable Children (PPCT-OVC) project which aimed to address the effects of HIV on SADTU members and learners who are vulnerable or are orphans in schools.

These interventions were critical in encouraging HIV counselling and testing (HCT), adoption of protective measures and linking educators and their partners to care using a network of general medical practitioners through a consortium called Tshepang Trust. In this instance, the empirical evidence provided by the 2004 educator survey allowed the ELRC and educator unions to take the necessary steps to implement and scale up access to HIV prevention and treatment services for educators in the provinces where HIV prevalence was highest among educators. Unfortunately, the funding for the ELRC intervention programmes was limited to the pilot phases I and II, and at the end of the funding cycle, these sector specific interventions were terminated. Since the 2004 survey, remarkable strides have been made to address the HIV epidemic in the country, including, to some extent, within the education sector. Although the PCTA interventions may have not been sustainable, South Africa as a whole has consistently implemented HIV prevention and treatment programmes, benefiting the general population and educators alike.

## Health and the school environment

The good health and wellbeing of educators is critical for the provision of quality education. Health and wellbeing are in turn influenced by factors such as the school environment, educators' mental and physical health, substance use and abuse and structural barriers. Research shows that factors such as mental and physical health, school environment, substance use, and broader socio-economic factors interact to influence capacities of educators (Bartholomew, Ntoumanis, Cuevas & Lonsdale, 2014; Jackson, Rothmann & van de Vijver, 2006; Peltzer et al., 2005; Price, 2015; van der Bijl & Oosthuizen, 2007). Factors such as burn-out inhibit productivity, and may exacerbate depression and anxiety which, in turn, may contribute to decreased job satisfaction (Maslach et al., 2001; Uzman & Telef, 2015; Radeke & Mahoney, 2000; Tyssen, Vaglum, Grønvold, & Ekeberg, 2001). Similarly, factors contributing to stress, in turn, influence potential for substance abuse (Brady & Sinha, 2005; Drake, O'Neal & Wallach, 2008; Shisana et al., 2005).

The productivity of educators may be negatively affected by challenges that occur within the school environment – for example, violence in schools that victimizes learners or educators inhibits both teaching and learning (Burton & Leoschut, 2013; Peltzer et al, 2005). A study conducted in 2012 found that educators were victims of verbal abuse (52.1%), physical violence (12.4%) and sexual violence (3.3%) perpetrated by learners (Burton and Leoschut, 2013). Systemic challenges such as low educator retention, lead to staff shortages, and result in higher workloads for remaining staff (Arends, 2011; Peltzer et al, 2005) Poor remuneration and limited career growth opportunities within the education sector have also been noted as factors contributing to educator attrition and absenteeism (Price, 2015; Shisana et al., 2005). In such circumstances, role ambiguity and low morale tend to emerge, posing further threats to the quality of education (Hall, Altman, Nkomo, Peltzer & Zuma, 2005; Jackson et al., 2006; Jackson & Rothmann 2006; Peltzer et al., 2005; Phurutse, 2005; Slater-Jones, 2012). Educators' self-reported absenteeism has been associated with HIV infection and related medical conditions (Hall et al., 2015; Shisana et al., 2005). One study found that, on average, between 20 and 24 days per year of regular instructional time is lost by each educator in South Africa (Reddy, Prinsloo, Netshitangani et al., 2010). The estimated leave rate was 10% to 12% which was higher than the rate in high income countries, but lower than the rate in many low income countries.

Apart from HIV and TB, non-communicable diseases (NCDs) also influence educator health and productivity. Peltzer et al., (2005) found that NCDs such as high blood pressure, heart disease, diabetes, cancer, arthritis and rheumatism are additional contributors to absenteeism among educators. The incidence of NCDs appears to be increasing in South Africa (Mayosi, Lawn, Van Niekerk et al., 2012). The South African National Health and Nutrition Survey found high rates of self-reported NCDs, with females having significantly higher rates of high blood pressure (20.6%), heart disease (2.9%) and high blood sugar (6.0%) when compared to males. The prevalence of directly measured hypertension has been found to be 10.2% nationally (Shisana, Labadarios, Rehle et al., 2014). Higher cholesterol levels were found among females (34.6%) compared to males (21.3%), while measures of physical fitness found 45.2% of females found to be unfit in comparison to 27.9% of males.

Such findings illustrate the need for the DBE to monitor the wellbeing and health of educators, and to ensure appropriate Employee Health and Wellness Programmes for all staff.

## Country and DBE HIV and AIDS policies

According to the DBE, prevention and management of HIV, STIs, TB and unintended pregnancy within the Basic Education Sector is the shared responsibility of the Departments of Basic Education, Health and Social Development (DBE Draft National Policy on HIV, STI and TB). Response is informed by the South African National Development Plan, 2030; the National Strategic Plan (NSP) on HIV, STIs and TB, 2012-2016; the Education White Paper 6 (DOE 2001); the Department of Public Service and Administration (DPSA) Strategic Framework for Public Service HIV&AIDS Response, 2012; the Action Plan to 2014: Towards the Realisation of Schooling 2025; the DBE's Care and Support for Teaching and Learning framework, 2008; the Integrated School Health Policy and Programme (ISHP), 2012; and the DBE Integrated Strategy on HIV, STIs and TB, 2012-2016.

The DBE's Integrated Strategy aims to: i) contribute to the reduction of new HIV, STI and TB infections among learners, educators and officials; and ii) improve retention of learners, educators and officials within the education system. The purpose of the strategy is to integrate efforts to address the prevention, diagnosis and treatment of HIV and TB, including care and support in schools and the DBE work environment. This supports the provision of school environments that are caring, safe, conducive to learning, and aligned to the education sector's duty of care in schooling (DBE, 2011). The DBE strategy is aligned with South Africa's NSP 2012–2016, which aims to reduce new infections by 50%. South Africa has shown political will to reduce new infections and eliminate HIV, reflecting global goals. The UNAIDS 2016-2021 Strategy set ten ambitious targets to end the HIV and AIDS epidemic by 2030 (UNAIDS, 2015), and South Africa has also adopted the 90-90-90 strategy – 90% of PLHIV knowing their HIV status, 90% of those living with HIV accessing treatment, and 90% of people on treatment having suppressed viral loads (UNAIDS, 2015).

Among various policies, the DBE's 1999 National policy on HIV and AIDS states: "educators with HIV and AIDS should lead as full a professional life as possible, with the same rights and opportunities as other educators and with no unfair discrimination being practiced against them". In addition to the issues of prevention and care covered by the policy, and there is a specific focus on equality with regard to learners, students and educators living with HIV. The policy also addresses discrimination within schools, prohibiting behaviour that is stigmatizing such as discriminatory testing for the purpose of admission of learners and students and/or the appointment of educators. The policy states that HIV control measures and adaptations must be universally applied and carried out regardless of the known or unknown HIV status of individuals concerned. It also protects learners and students and/or educators from being forced to disclose their HIV status. Lastly, it also protects the rights of learners and students and/or educators living with HIV, in that no one can refuse to study with or teach a learner or student living with HIV, nor refuse to be taught by an educator living with HIV.

The new DBE National Policy on HIV, STIs and TB, which is still in draft form, expands on the 1999 policy to: a) Improve coordination and mainstreaming of Basic Education Sector response to HIV, STIs, TB and unintended pregnancy, to accelerate implementation of a comprehensive strategy for prevention, treatment, care and support; b) increase knowledge, cognitive skills and information about safer sex, life skills in general and HIV, STIs and TB – in particular, to inform the life choices of all learners, educators, school support staff and officials and protect them from infection and disease; c) improve access to HIV, STIs and TB prevention, diagnosis, treatment and care and support services to reduce the incidence and impact of HIV, STIs, TB and unintended pregnancy amongst learners, educators, school support staff and officials; and d) increase retention and reintegration of learners, educators, school support staff and officials in a safe and protective education environment, to improve system efficiency, quality and output.

The Action Plan to 2019, Towards the Realisation of Schooling 2030 draws extensively from the National Development Plan and sees quality education as means to addressing inequalities in the country. The plan has 27 goals, with goals 1-13 dealing with outputs to be achieved in relation to learning and enrolments and goals 14-27 dealing with how the outputs are to be achieved. The present study addresses a number of these goals: a) Goal 14 – attract a new group of young, motivated and appropriately trained teachers to the teaching profession every year; b) Goal 15 – ensure that the availability and utilisation of teachers are such that excessively large classes are avoided; c) Goal 16 – improve the professionalism, teaching skills, subject knowledge and computer literacy of teachers throughout their entire careers; and d) Goal 17 - strive for a teacher workforce that is healthy and enjoys a sense of job satisfaction.

## 2. AIMS AND OBJECTIVES

The aim of this study was to investigate the epidemiological profile of educators and school-based officials (Principals, Vice Principals and Heads of Departments) in the public education sector. This includes HIV, TB and other non-communicable diseases including mental health factors, violence in schools, and systemic issues.

The specific objectives were to:

- Estimate HIV prevalence among educators, and establish baseline data for tracking HIV incidence among educators.
- Estimate the number of educators receiving ART.
- Assess the current levels of HIV knowledge among educators and identify behavioural risk factors for HIV and STIs.
- Assess levels of TB knowledge among educators, and estimate the proportion of educators with TB symptoms.
- Determine the levels of HIV related stigma and TB related stigma among educators.
- Estimate the prevalence of NCDs among educators.
- Assess substance abuse including use of alcohol and tobacco products among educators.
- Determine the health status and use of health services among educators.
- Assess morale and job satisfaction among educators, as well as describe educators' responsibilities and workload.
- Identify factors associated with absenteeism among educators, and assess factors associated with potential attrition.
- Describe experiences of violence within the school setting.
- Assess educators' awareness of DBE HIV policies.

### 3. METHODS

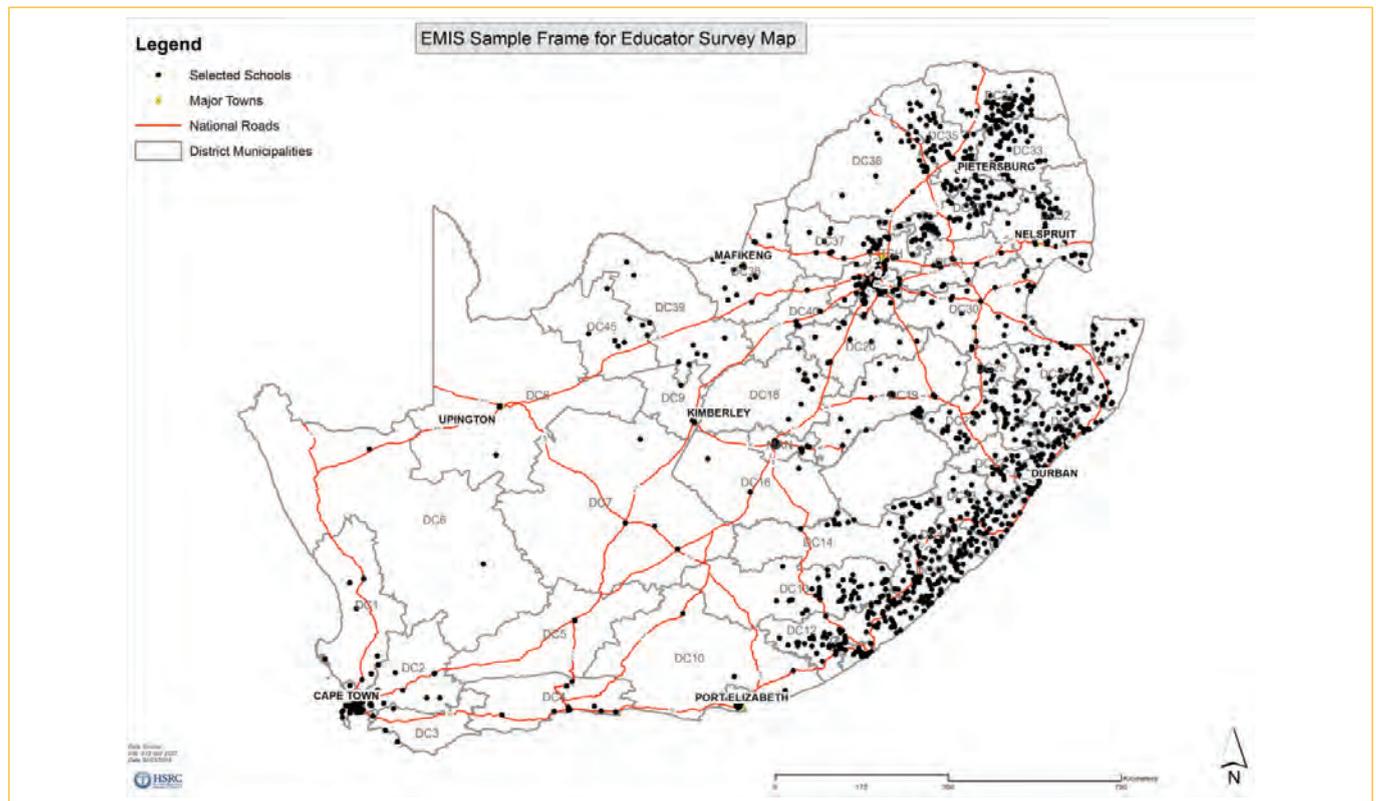
#### Study design

Drawing on the previous national cross-sectional HIV survey among educators in 2004, a second generation surveillance study was carried out, assessing behavioural risk and gathering biomarkers. The study tools included school questionnaires, educator questionnaires and blood specimen collection for HIV testing including HIV incidence-testing and determining presence of ART.

#### Study sites

This study was conducted in all nine provinces of South Africa. Figure 1 shows the distribution of selected schools by municipal district in each province across the country. The number of schools sampled in each province are listed in Table 1. Limpopo, Eastern Cape and KwaZulu-Natal provinces contained the majority of schools in the sample.

**Figure 1: Map showing the distribution of schools in the study**



The sampled schools (1,380), represented the four school categories: combined schools (19%), intermediate schools (1%), primary schools (47%), and secondary schools (32%).

**Table 1: Sample distribution of educators by province**

Province	Number of Public Schools in EMIS	Targeted number of schools	% of total schools targeted	Number of Educators in EMIS	% of total EMIS educators	Targeted number of Educators
Western Cape	1,458	79	5.7	31,855	8.2	2,282
Eastern Cape	5,700	314	22.8	66,604	17.1	4,771
Northern Cape	608	24	1.7	8,617	2.2	617
Free State	1,661	79	5.7	22,969	5.9	1,645
KwaZulu-Natal	5,959	376	27.2	87,251	22.4	6,250
North West	1,753	52	3.8	25,016	6.4	1,792
Gauteng	2,068	95	6.9	57,293	14.7	4,104
Mpumalanga	1,917	111	8.0	33,189	8.5	2,377
Limpopo	4,055	250	18.1	56,250	14.5	4,029
<b>Total</b>	<b>25,179</b>	<b>1,380</b>	<b>100</b>	<b>389,044</b>	<b>100</b>	<b>27,869</b>

## Study Population

The study included educators in the public schooling system, including those teaching in grades R to 12 who were working full-time or part-time, employed by the state or by school governing bodies.

## Inclusion and exclusion criteria

Those educators who were present at their school on the first day of the survey at that particular school were considered as eligible for inclusion in the study. Administrative and support staff including clerks, cleaners and gardeners were not interviewed/surveyed.

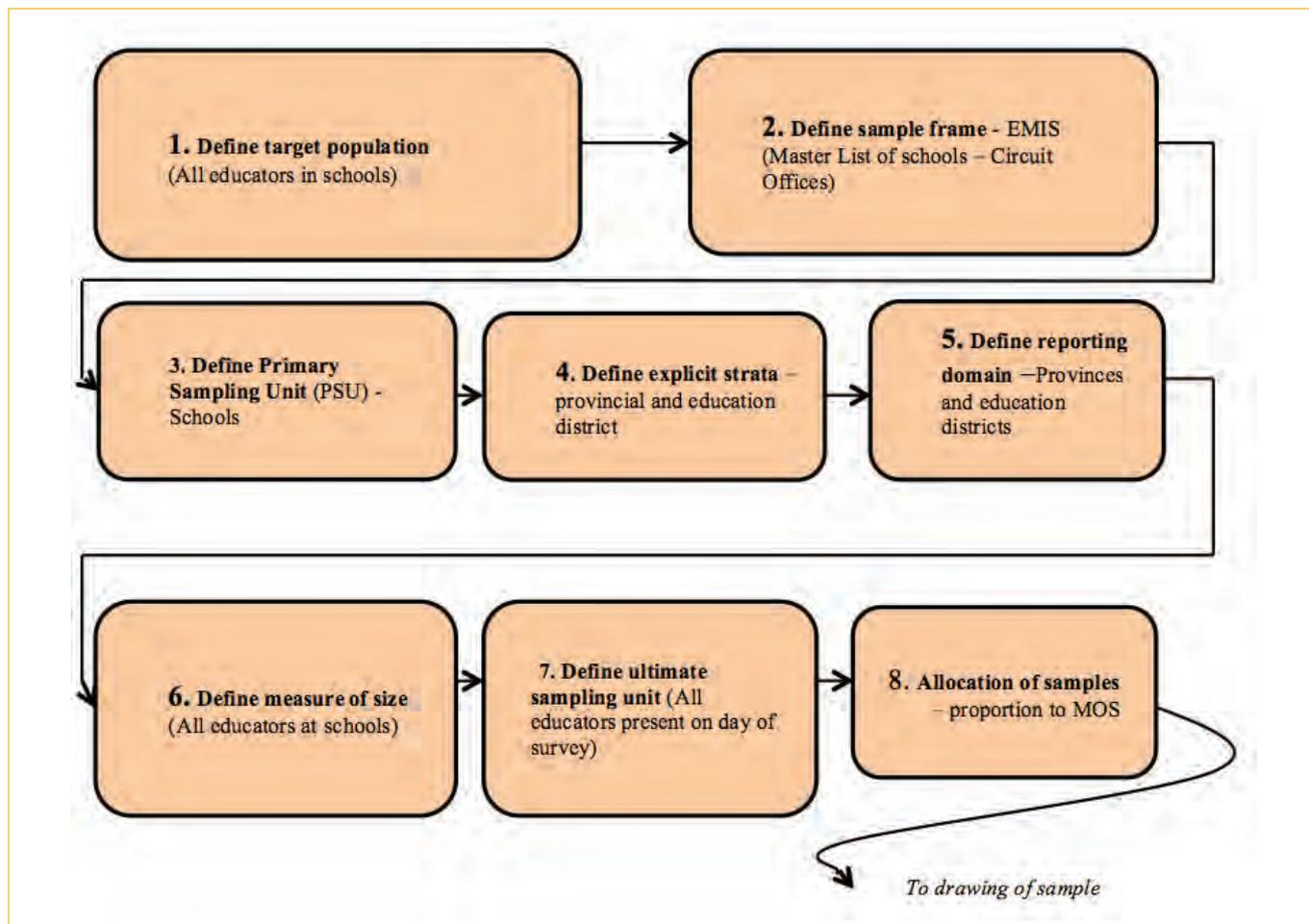
## Sampling and sample estimation

The Education Management Information System (EMIS) Master List of educators from the DBE for 2012 was used as the sampling frame to identify the schools and number of educators at each school. There are 101 educational districts in South Africa with 25,179 public schools (School Realities, 2012). In 2012, there were 389,044 educators in public schools based on the survey conducted on the 10<sup>th</sup> school day of the year. In the sampling frame, schools were classified according to their districts and province.

A multi-stage stratified cluster design with probability proportional to size sampling was used to draw a random sample of schools and all educators (Figure 2). The number of educators within each school was used as a measure of size. This implies that schools with a larger number of educators had a higher chance of being selected. The sample was stratified by the 101 educational districts. The stratification by educational districts is critical since districts have an important responsibility in terms of provision of education services.

In each district a sample of schools was randomly selected with probability proportional to size. In each selected school, all educators present on the day of the survey were eligible to participate in the study.

**Figure 2: Steps in drawing the sample of educators**



The estimation of sample size required careful exploration of the expected prevalence, expected response rate, the achievable response rates at individual level, and the requirement for measuring change in HIV prevalence of at least 5% from 2004 in each of the main reporting domains –gender, race, province and municipal districts. HIV prevalence among educators in South Africa was estimated at 12.7% (Shisana et al 2005). Assuming an HIV testing response rate of 73%, a minimum sample size of 27,869 educators was estimated to be sufficient to enable the detection of a minimum of 5% change in HIV prevalence in each reporting domain with 80% power at 5% level of significance and assuming a design effect of two due to potential clustering at school level.

The EMIS data were used to determine the number of schools required to be sampled to achieve the required estimated sample size of 27,869. The sample distribution was proportionally allocated per province. As can be seen in Table 1, above, the majority of educators were sampled from KwaZulu-Natal (22.4%).

## Study Procedures

The survey was administered by trained interviewers, and a number of steps were undertaken to ensure that the survey was efficiently conducted.

### Training

The HSRC recruited and trained interviewers and supervisors prior to data collection. Training dealt with completion of educator questionnaires, school questionnaires, dry blood spot (DBS) collection, coordinators’ roles and responsibilities, data collectors’ and field supervisors’ roles and responsibilities, geographic map skills to locate the schools, interviewing skills and role play for interviews, and general project administration. During training the fieldwork staff also received an overview of research ethics.

Training included measures to ensure that voluntary informed consent was obtained for all participants and that confidentiality was maintained at all times. Blood specimen collection training was carried out by Global Clinical and Viral Laboratories together with trained HSRC personnel. Universal precautions were observed during collection and handling of blood specimens. This included handling of the pre-packed specimen collection kit, mastering the technique for drawing blood from a finger prick on filter paper cards, filter paper storage in the field, and transportation of specimens to the laboratory. Candidates who successfully completed the DBS training were issued with certificates from Global Clinical and Viral Laboratories.

Role play was used to familiarise data collectors with administering the questionnaire to educators. Training also included approaches to making telephonic appointments in advance of visiting the schools and interacting with school principals. Interviews were conducted at the convenience of educators to minimise any potential disruption of teaching time and school activities. Educators were typically interviewed during their free periods or after school teaching hours. As fieldwork carried over to the 2016 academic year, refresher training was conducted in early January 2016.

### **Field work**

The HSRC appointed study co-ordinators to oversee field work activities and HSRC project personnel held regular progress meetings to monitor field work progress. Field work for the main survey commenced in August 2015 and was concluded in February 2016. Fieldwork teams were distributed across all nine provinces, and were managed by supervisors. A total of 67 team supervisors and 290 fieldworkers were employed.

Provincial and national representatives from the DBE assisted with disseminating information about the study via their networks and also assisted in facilitating entry to the schools. Assistance in accessing educators was also provided by educator labour unions including SADTU, NAPTOSA, SAOU, NTU and PEU. Permission from school principals was required before school entry.

## **Data collection tools**

There were two questionnaires – a school questionnaire and an educator questionnaire. Each was administered in English. Interviews were only conducted with educators who were present at the school on the first day of the survey. Follow-up visits to the school were carried out to interview educators who were recorded as present on the first day, but who could not be interviewed during the first day. Questionnaires were coded as 'refusal' when educators who were present refused to participate in the survey.

- **School Questionnaire:** The head of the school or other designated person completed the questionnaire including information such as the number of staff employed, resignations and transfer of staff, deaths among staff and reasons for staff losses. Information was also obtained about the number of learners at different grades across three year periods and the total number of educators present or absent at the school on the day of the interviews.
- **Educator Questionnaire:** Drawing on the 2005 educator survey and the results of the 2015 pilot study, a 21 section questionnaire was developed to address priorities contained in the DOE HIV, STI and TB Strategy, 2012-2016. Closed and open-ended questions were included and the questionnaire included: biographical data; residence and mobility data; socio-economic status data; information on teaching responsibilities and work load of the educator; perspectives on the impact of HIV on educators; data on workplace absenteeism, morale and job satisfaction; HIV knowledge and sexual behaviour; data on HCT; TB risk and knowledge; information on exposure to HIV and TB programmes; use of tobacco products, alcohol and other substances; perspectives on gender roles; the extent of workplace violence; and, the use of medical services.

## Laboratory methods

### *Specimen collection*

DBS specimens were collected from educators who consented to provide blood specimens using kits provided by the HSRC. Whole blood was obtained from each educator using a finger-prick method, by spotting a maximum of five circles onto a Whatman grade 903 Guthrie card. Once the spots were completely dry, the cards were packaged into gas impermeable zip-lock bags containing desiccant packs and humidity indicator cards. Specimens were always stored in a cool space. Bags were dispatched weekly by the field supervisor to the laboratory for testing.

### *Specimen tracking*

Batches of specimens that were sent to the central laboratory were tracked through waybills and specimen tracking sheets that accompanied each shipment. The tracking sheets included barcodes and demographic details for all specimens in the shipment. On arrival at the laboratory, laboratory managers performed a quality control step (matching study bar-codes on the DBS cards to specimen tracking sheets and examining specimen quality) and signed-off the tracking sheets and specimens for laboratory processing. Unique laboratory tracking bar-codes were also generated and affixed on the DBS cards.

### *HIV antibody testing*

Six millimeter DBS were punched into a test-tube pre-labelled with the corresponding laboratory testing bar-code number. The puncher was decontaminated by punching 4 blank spots after each DBS spot to ensure no carryover. Each filter paper disc was eluted overnight at 4 degrees Celcius with a phosphate buffered saline, 0.1 %Tween 20 (PBS, pH 7.3-7.4). An aliquot of the eluted sample was then used for performing the HIV testing assays, which were internally validated for DBS testing, following the manufacturer's instructions. Two fourth-generation HIV-1 enzyme immunoassays (EIAs) – the Vironostika HIV Uniform II Ag/Ab assay (EIA 1) and Roche Elecys HIV 1 Ag/Ab assay (EIA 2) – were used to test for HIV antibodies. All samples were tested using EIA 1. All samples that tested positive using EIA 1 were re-tested using EIA 2. In addition, ten percent of the samples that tested HIV-negative using EIA 1 were re-tested for QA purposes using EIA 2. Any samples producing discordant results with the first two EIAs were submitted to a nucleic acid amplification testing (NAAT), comprising a third EIA for a final interpretation of discordant samples. HIV-antibody testing was performed at the Global Clinical and Viral Laboratories in Durban.

### *Antiretroviral testing*

Exposure to ARVs was conducted to estimate the proportion of HIV positive educators on treatment. The detection of ARVs in HIV positive samples is a critical component in the proposed HIV incidence testing algorithm in order to reduce misclassification and improve assay-based HIV incidence estimates. The presence of ARVs in HIV-positive DBS samples was determined by means of High Performance Liquid Chromatography (HPLC) coupled to Tandem Mass Spectrometry. Qualitative detection of Nevirapine, Efavirenz, Lopinavir, Atazanavir and Darunavir was carried out using a validated method that was developed in-house. Three 3.3 mm punches were taken from each DBS spot and extracted using deuterated internal standards for each analyte in question. Detection was carried out using an Applied Biosystems API 4000 tandem mass spectrometer in the Multiple Reaction Monitoring (MRM) detection mode for each drug using appropriate MRM transitions. Blank and quality control cut-off samples were included with each run. Due to the high specificity of this technology and the high degree of validation testing, no observable interference in the detection of one drug by the others was envisaged. The limit of detection was set at 0.02µg/ml for each drug. The qualitative determination of ARVs in DBS specimens was carried out at the Division of Clinical Pharmacology in the Department of Medicine at the University of Cape Town.

## **HIV Incidence Testing**

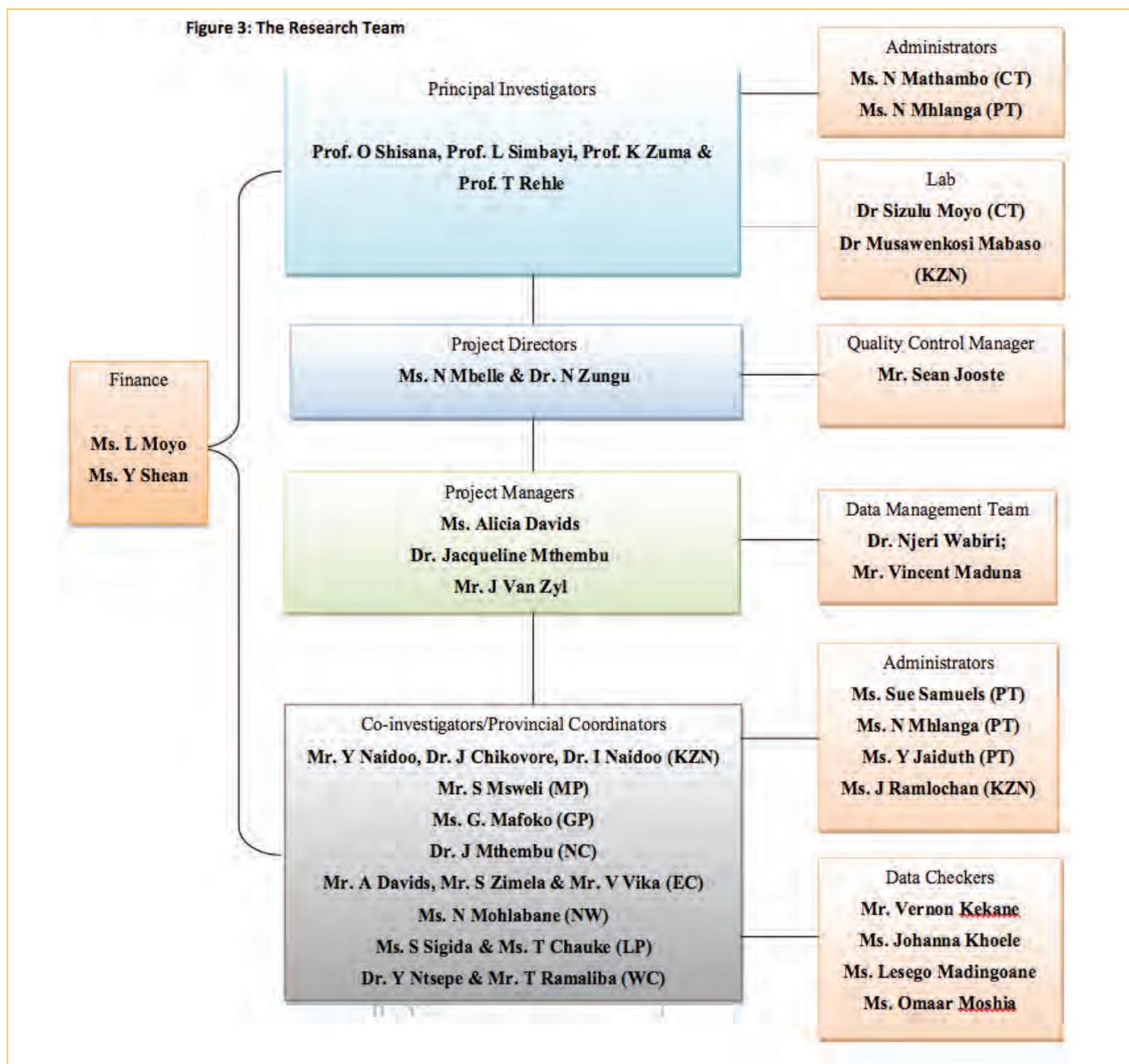
The detection of recent infections was performed on confirmed HIV-positive samples from survey participants. HIV incidence testing took into account the most recent recommendations for HIV incidence estimation using blood specimens from cross-sectional studies. The HIV incidence testing algorithm was based on the Limiting-Antigen Avidity Assay (LAg-Avidity EIA) in combination with additional information on ARV treatment exposure and HIV viral load (Rehle et al, 2015). HIV incidence testing was carried out at the National Institute for Communicable Diseases (NICD) in Johannesburg, South Africa.

## **Survey management**

### **Management structure**

Each field team consisted of 3-8 fieldworkers; one of whom was the supervisor who led the team. The supervisor reported to the Coordinator who was the HSRC researcher and managed all teams in their allocated province. All data collectors collected data using questionnaires and also collected dried blood spots. Data collectors report to the supervisor on all issues. The roles of the study team and names of study team members are indicated in Figure 3.

**Figure 3: The Research Team**



**Field work quality Control**

Close supervision was necessary throughout the study to prevent errors. Before and during the survey, a range of quality control measures were put into place to ensure that analysis was based on data of a required high scientific standard. Measures implemented before the start of the fieldwork included:

- Checking of fieldwork kits and materials sent to field supervisors for completeness and correctness.
- Keeping of rigorous records and tracking of questionnaires and other study material/
- Training of fieldwork staff and assessing the training outcomes. (Training manuals were compiled by the investigators prior to training the fieldwork staff).

Provincial coordinators were responsible for ensuring that teams in a specific province adhered to the overall principles of the study by:

- Checking that teams follow the stipulated fieldwork procedures;
- Checking that teams followed fieldwork plans to ensure progress of fieldwork;
- Conducting periodic checks in the field.

As part of additional quality control measures, ad hoc training sessions were conducted by the HSRC research team with fieldworkers in the field as and when required. This was to ensure that the protocol was strictly adhered to.

## **Data management, weighting and analysis**

### ***Data Management***

All questionnaires were couriered weekly to the HSRC's Research Methodology and Data Centre (RMDC) in Pretoria, where data capturers coded and double entered the data into CSPro electronic database. The database was designed with validation and consistency checks to highlight discrepancies in the data itself as well as to document variances between the two data entries. After the cleaning and verification processes, data were coded and converted to Statistical Package for Social Sciences (SPSS) for further data processing.

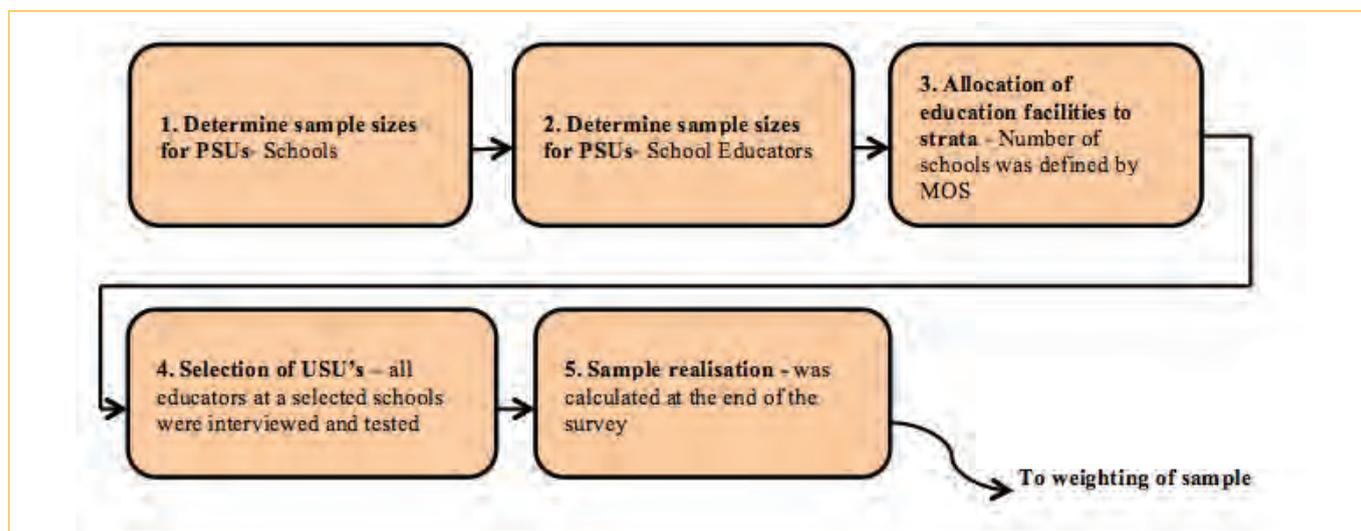
### ***Weighting of the sample***

Districts with more schools had a higher representation of schools in the sample. At the same time the sample had to reflect a minimum required sample of schools in each district to enable reporting of key results by district. Weighting procedures were undertaken to correct for potential sampling biases and to ensure generalisability of results to the population of educators in the South African public education sector. Weighting was done before analysis of the data as follows – the data file of drawn schools contained sampling probabilities as well as the sampling weights of schools, with these weights reflecting the disproportionate allocation of schools according to the stratification variables and the measure of size.

Not all schools agreed to participate in the survey. Furthermore, a total of ten schools were not visited due to financial constraints and delayed appointment confirmation from the schools. Of the 1,365 realised schools, a total of 25,130 were eligible to participate. Sampling weights were adjusted by the calculated non-response adjustment factor. In each school, all educators present on the day of the survey were eligible to participate. No sampling was conducted within a school. Not all educators agreed to be interviewed. An educator interview adjustment factor was computed and the school sampling weight adjusted according to this interview adjustment factor to give an educator interview sampling weight. Furthermore, some of the eligible educators agreed to be interviewed but refused to provide a blood specimen. The educator testing weight was computed as a product of the final school weight and the testing response adjustment factor. Two weights were thus computed: one for agreeing to be interviewed only and another for educators who further agreed to provide blood specimen.

The final interview and testing response weights were benchmarked to the general population of educators in 2015, which represents the period within which the bulk of data was collected. These weights were benchmarked by province and sex as these were the only available population distribution totals. Thus, all educators within the same school had the same weight (Figure 4).

**Figure 4: Steps in sample weighting**



### Construction of scales and indices

Indices were constructed using well developed scales (Saunders et al., 1993). Table 2 provides a list of indices and number of items used to construct these indices. The indices were developed using items from existing scales based on the questionnaire. Factor analysis with varimax rotation was used to reduce the number of items to find the most appropriate factor solutions. Eigenvalues which identifies factors that account for most variance within the items, and Cronbach’s Alpha which assesses the reliability of factor loadings are reported in detail in Appendix 1A to 1G. A Cronbach’s Alpha of 0.60 or greater was considered sufficient to determine reliability.

**Table 2: Summary of scales and their reliability Cronbach’s Alpha**

Indices	Items	Mean core	SD	Alpha
Job satisfaction index	16	19.64	2.22	0.70
Job stress index	6	7.26	1.92	0.56
Education support index	9	14.52	3.36	0.87
HIV and Sexuality communication comfort index	5	2.99	0.81	0.60
HIV knowledge index	14	8.98	1.21	0.60
HIV risk behaviour index	4	7.55	1.27	0.84

\*Constructed using Principal Component Analysis

## Data Analysis

Weighted data was converted to the Stata statistical package for analysis that took into account the complex multi-level sampling design and adjusting for HIV-testing non-response. Data analysis was carried out by three HSRC researchers supported by expert biostatisticians. To control for the quality of results, every table was generated independently by at least two different statisticians and the outputs compared to verify the results. Descriptive and inferential analysis was conducted with estimates of HIV prevalence, p-values and 95% confidence intervals (95% CIs) reported. Design-based chi-squared tests were used to test for association and comparison of proportions. A p-value of 5% or less was used to indicate statistical significance.

Tables and figures in the results section of the report present weighted percentages and unweighted counts. The sum of individual unweighted counts might not equal the overall total because of missing data for certain demographic characteristics.

## Ethical Considerations

Ethical approval was obtained from the HSRC Research Ethics Committee (REC: 6/21/05/14). All educators who agreed to participate provided written consent. Individual educator interviews were conducted in private on the school premises in areas designated by the school principal or deputy principal. All data were anonymised for analyses and not linked to any individual schools when reporting. All study tools including questionnaires and laboratory request forms were linked by unique barcodes. For those educators who opted to receive their blood test results, identity numbers were recorded on a laboratory request form which only the collaborating laboratory had access to, for the sole purpose of being able to link the respondent to their correct blood result. These data were kept strictly confidential by the laboratory. The laboratory request form consisted of two sections that were separated by a perforated line. The first section was attached to the DBS and sent to the laboratory, and the second section was handed to the participant to produce at their general practitioner's rooms when collecting their test result.

## 4. RESULTS

### Response analysis

#### *School response*

Out of the 1,380 schools sampled, 1,365 were valid (Table 3). Of the valid schools, 96.2% agreed to participate in the study. The proportion of non-response was 3.8% which included refusals (2.6%) and schools not visited or closed down (1.2%).

**Table 3: School Response Rates**

School Interviews	%	Total
Schools sampled		1,380
Valid schools: Denominator		1,365
Questionnaire completed :Numerator		1,329
Refusal to take part in the survey	2.6	35
Schools not visited or closed down	1.2	16
<b>Total non-response</b>	<b>3.8</b>	<b>51</b>
<b>School response rate</b>	<b>96.2</b>	

### **Educator and school official response rates**

There were 25,130 educators who were eligible to participate in the survey (Table 4). Among these, 85.5% were interviewed. The reasons for non-response were educators who refused to be interviewed (5.9%), educators present at school but not available for an interview (8.0%) and educators absent at school (0.6%).

**Table 4: Educator Response Rates**

<b>Educator Interviews</b>	<b>%</b>	<b>Total</b>
Number of eligible educators :Denominator		25,130
Number of eligible educators interviewed: Numerator		21,495
Refused to be interviewed	5.9	1,481
Present at school but not available for interview	8.0	2,013
Absent from school	0.6	141
<b>Total non-response</b>	<b>14.5</b>	<b>3,635</b>
<b>Interview response rate</b>	<b>85.5</b>	

### **HIV testing response rates**

Of the 25,130 eligible educators, 16,391 (65.2%) agreed to provide a blood specimen for HIV testing. The proportions of HIV testing non-response included educators who were interviewed but refused to provide a blood sample (20.3%), educators who refused to be interviewed or to provide a blood sample (5.9%), educators who were present at school but not available (8.0%), and educators who were absent from school on the day of data collection (0.6%).

**Table 5: HIV testing response rates**

<b>HIV testing response</b>	<b>%</b>	<b>Total</b>
Number of eligible educators for HIV testing: Denominator		25,130
Number of eligible educators for HIV testing that have been tested: Numerator		16,392
Interviewed but refused to HIV testing	20.3	5,103
Refused both interview and HIV testing	5.9	1,481
Present at school but not available for interview	8.0	2,013
Absent from school	0.6	141
<b>HIV testing response rate</b>	<b>65.2</b>	

## **Survey Validity**

The survey validity was ascertained by comparing the demographic and sexual behaviour of educators who were interviewed and tested compared to those who were interviewed and not tested. Table 6 shows that generally there was no difference between educators who were interviewed and tested compared to those who were interviewed and not tested, for example perceived risk of getting HIV and number of partners in the last 12 months. Locality types refer to localities where the schools are based.

**Table 6: Interview and HIV testing response rates by selected demographic and HIV behavioural risk characteristics**

Variable	Interviewed and Tested		Interviewed and not Tested		p-value
	Total	%	Total	%	
<b>Sex</b>					
Male	4613	28.2	1,624	32.0	0.004
Female	11773	71.8	3,451	68.0	<0.001
<b>Race</b>					
African	13,203	80.7	4,053	79.7	0.160
White	1,374	8.4	555	10.9	0.084
Coloured	1,294	7.9	315	6.2	0.306
Indian/Asian	489	3.0	160	3.1	0.949
<b>Age group</b>					
18-24	531	3.2	120	2.4	0.646
25-34	2,619	16.0	763	15.0	0.505
35-44	3,988	24.3	1,480	29.1	<0.001
45-54	6,780	41.4	2,020	39.7	0.173
55+	2,466	15.1	703	13.8	0.392
<b>Locality type</b>					
Urban formal	5,544	35.7	1,868	38.2	0.052
Urban informal	1,898	12.2	553	11.3	0.567
Rural formal	4,426	28.5	1,325	27.1	0.320
Rural informal	3,641	23.5	1,139	23.3	0.889
<b>Position in the school</b>					
Teacher/educator	12,336	76.4	3,915	77.4	0.198
Senior teacher	949	5.9	367	7.3	0.348
Head of department	1,665	10.3	466	9.2	0.485
Education specialist	46	0.3	12	0.2	0.954
Deputy principal/Principal	1,159	7.2	301	5.9	0.429
<b>Marital status</b>					
Married	9,015	55.8	2,805	55.2	0.576
Not Married	5,230	32.4	1,660	32.7	0.820
Divorced/Separated	964	6.0	326	6.4	0.794
Widower/Widow	955	5.9	290	5.7	0.899
<b>Perceived Risk of getting HIV</b>					
I will definitely get infected	3,541	22.1	1,198	24.1	0.153
I probably get infected	4,507	28.1	1,393	28.0	0.942
Could possibly get infected	6,147	38.4	1,827	36.7	0.189
Will probably not get infected	1,216	7.6	373	7.5	0.949

Variable	Interviewed and Tested		Interviewed and not Tested		p-value
	Total	%	Total	%	
Will definitely not get infected	605	3.8	185	3.7	0.950
<b>Ever had an HIV test</b>					
Yes	13,839	86.3	4,128	82.9	<0.001
No	2,203	13.7	850	17.1	0.017
<b>Awareness of HIV status in the past 12 month</b>					
Yes	6,897	71.5	2,006	66.5	<0.001
No	2,753	28.5	1,010	33.5	0.003
<b>Sexual activity</b>					
Not sexually active in past year	4,299	26.7	1,580	31.7	<0.001
Sexually Active	11,793	73.3	3,397	68.3	<0.001
<b>Number of partners in last 12 months</b>					
No partner	564	4.8	259	7.5	0.120
One partner	10,057	85.3	2,854	82.7	0.001
Two partners	708	6.0	193	5.6	0.835
More than 2 partners	464	3.9	144	4.2	0.872

## Generalisability of the survey results

We compared the socio-demographic characteristics of the survey sample to the data from the DBE personnel salary (PERSAL) database. As shown in Table 7, there is less than 4% difference between the weighted survey sample and the PERSAL data. Therefore, the 2012 survey sample is representative of the South African public school educators.

**Table 7: Comparison of the weighted sample against the DBE PERSAL database**

Variable	Weighted Sample		PERSAL data 2015	
	Total	%	Total	%
<b>Sex</b>				
Male	114,971	30.3	120,878	30.9
Female	264,675	69.7	269,730	69.1
<b>Age group</b>				
18-24	12,623	3.3	7,235	1.9
25-34	59,583	15.7	46,853	12.6
35-44	95,108	25.1	94,550	25.4
45-54	154,640	40.8	162,719	43.8
55+	57,302	15.1	60,445	16.3
<b>Province</b>				
Western Cape	32,895	8.7	32,237	8.5
Eastern Cape	61,158	16.1	61,260	16.1
Northern Cape	8,827	2.3	8,880	2.3

Variable	Weighted Sample		PERSAL data 2015	
	Total	%	Total	%
Free State	22,634	6.0	23,631	6.2
KwaZulu-Natal	81,645	21.5	90,497	23.8
North West	24,129	6.4	25,004	6.6
Gauteng	61,612	16.2	60,782	16.0
Mpumalanga	53,311	14.0	54,704	14.4
Limpopo	33,469	8.8	33,613	8.9

## Demographic and social characteristics of educators

### Demographic characteristics of study participants

Study participants were predominantly female, African, older than 45 years of age, married, held a first degree and above, held the position of educator, were employed by DBE, and were working in primary schools (Table 8). The largest proportions of participants were from households that either had 'most of the important things, but few luxury goods' or 'with money for food and clothes, but short of many other things'. Almost one fifth educators had 20-24 years of teaching experience. The majority of educators had a housing subsidy and belonged to a medical aid fund.

**Table 8: Selected characteristics of the Educator sample**

Variable	Total	%
Total	21,428	100
<b>Sex</b>		
Male	6,224	30.3
Female	15,204	69.7
<b>Race</b>		
African	17,209	80.1
White	1,926	9.7
Coloured	1,604	7.9
Indian/Asian	647	2.3
<b>Age group</b>		
18-24	651	3.3
25-34	3,379	15.7
35-44	5,453	25.1
45-54	8,773	40.8
55+	3,153	15.1
<b>Marital status</b>		
Married	11,793	55.4
Not Married	6,878	32.9
Divorced/Separated	1,282	6.1
Widower/Widow	1,239	5.7

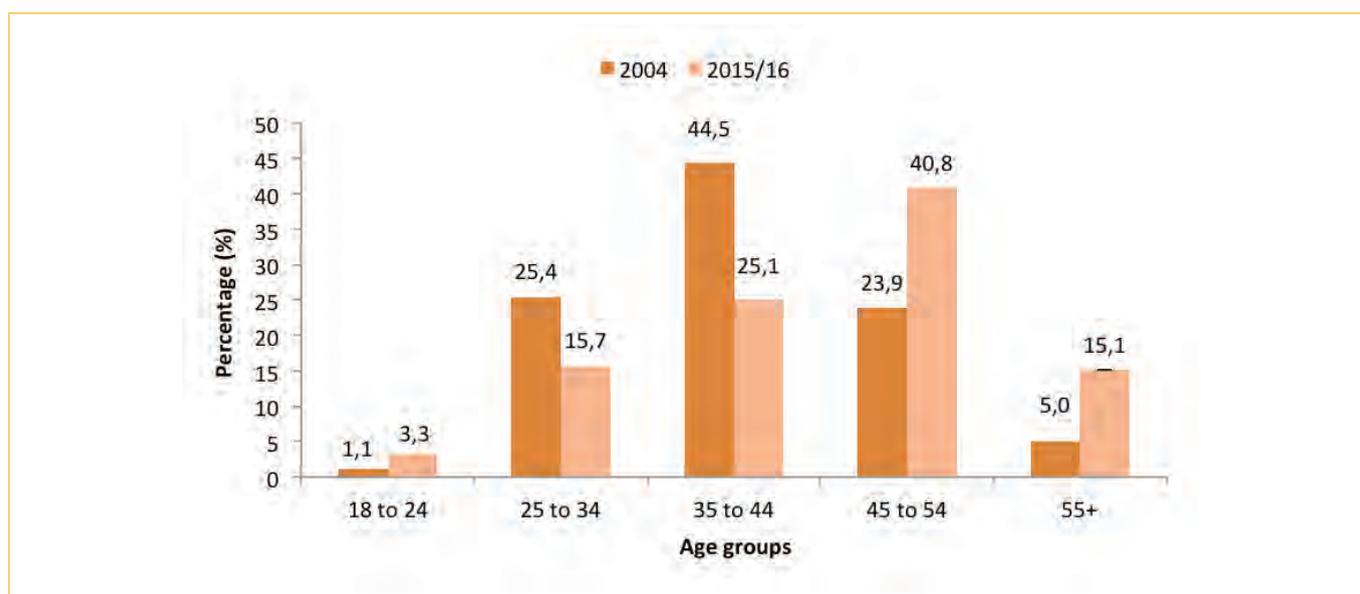
Variable	Total	%
<b>Province</b>		
Western Cape	1,642	8.7
Eastern Cape	2,836	16.1
Northern Cape	423	2.3
Free State	1,799	6.0
KwaZulu-Natal	6,052	21.5
North West	733	6.4
Gauteng	2,395	16.2
Mpumalanga	2,093	14
Limpopo	3,455	8.8
<b>Highest educational qualification</b>		
First degree and above	15,616	74.0
Diplomas	4,856	22.7
Grade 12 and under	632	3.3
<b>Description of household situation</b>		
Not enough money for basic things like food and clothes	1,562	7.5
Have money for food and clothes, but short of many other things	8,632	41.2
Have most of the important things, but few luxury goods	9,020	42.9
Some money for extra things such as going away for holidays and luxury goods	1,692	8.4
<b>Position in school</b>		
Educator	16,214	75.6
Senior teacher	1,311	5.9
Head of department	2,125	10.3
Education specialist	58	0.4
Deputy principal/Principal	1,454	7.9
<b>Employer</b>		
DBE	19,659	93.7
SGB	1,111	6.0
Don't know	49	0.2
<b>Type of school</b>		
Primary school	11,190	56.2
Secondary/high school	7,822	34.3
Combined/intermediate	1,955	9.0
Special school	14	0.1
Other (specify)	76	0.5
<b>Years of teaching experience</b>		
0-4	3,062	14.9
5-9	3,306	15.3

Variable	Total	%
10-14	3,049	13.7
15-19	2,489	12.2
20-24	4,117	19.7
25-29	2,596	11.9
30+	2,584	12.3
<b>Have housing subsidy</b>		
Yes	8,556	62.8
No	5,205	37.2
<b>Member of a medical aid fund</b>		
Yes	13,491	63.6
No	7,518	36.4

## Age profile of educators in the 2004 and 2015/2016 surveys

Figure 5 shows comparisons of the age profile between educators in the 2004 and 2015/2016 survey. In 2004 the majority of the study sample comprised of 34-44 year olds (44.5%) and the 2015 sample consisted mainly of 45-54 year olds. Furthermore, the 2004 sample had a much lower proportion of educators 18-24 years old (5.0%) compared to the 2015 sample of the same age group.

**Figure 5: Age distribution, South African educators 2004-2015/2016**



## Residence, migration and mobility

Upon completion of initial training, educators either obtain posts in the area closest to their family or move to other areas. Of the 12,627 educators that responded to the question, 41.7% indicated that they moved to a different area. Males (46.5%) were significantly more likely to have moved than females (39.7%, [p <0.001]). Africans were more likely to have moved to a different area (44.1%), followed by Whites (35%), Indians/Asians (26.2%) and Coloureds (22.6%). Most of the educators who moved were posted to a non-urban area (55.4%), and most were single at the time. Those who were single, were more likely to have moved (67.8%) and there were larger proportions among Coloureds, Whites and Africans compared to Indians/Asians.

**Table 9: Racial profile of migration and mobility**

Variable	Total %	Educator's Race (%)			
		African	White	Coloured	Indian/Asian
<b>After completing your initial training, got post in the same area closest to family or moved to different area</b>					
Stayed in same area	58.3	55.9	65.0	77.4	73.8
Moved to a different area	41.7	44.1	35.0	22.6	26.2
<b>Where was the posting?</b>					
Urban	44.6	36.3	89.6	81.4	83.7
Non-urban	55.4	63.7	10.4	18.6	16.3
<b>When you started teaching were you...?</b>					
Married	25.3	25.9	20.3	20.8	37.8
Engaged	6.9	6.3	10.2	8.6	9.5
Single	67.8	67.8	69.5	70.6	52.7
<b>In the past 20 years, (since January 1994) were you transferred or re-deployed?</b>					
Yes	21	22.6	13.3	10.5	15.4
No	79	77.4	86.7	89.5	84.6
<b>How many times did you move to different area in the past 20 years?</b>					
Never	26.2	24.5	38	43.9	32
Once	41.6	42.1	37.2	38	40.2
Twice	15.3	15.4	16.6	9.8	15.2
Three or more times	16.9	18	8.1	8.3	12.6
<b>In the one move since 1994, did the members of your own family move with you?</b>					
Moved with me	24.6	24.4	27.3	22	29.4
Stayed behind	49.4	51.1	26.4	41	39.2
No family of my own at the time	26	24.4	46.3	37	31.4
<b>In the first move since 1994, did the members of your own family move with you?</b>					
Moved with me	31.2	30.3	41.4	48.7	31.3
Stayed behind	62	63.3	43.3	36.7	68.7
I did not have a family of my own at the time	6.9	6.4	15.2	14.6	0
<b>In the second move since 1994, did the members of your own family move with you?</b>					
Moved with me	38.9	38.3	35.8	63.2	49.1
Stayed behind	56.5	57.4	52.6	28.3	50.9
I did not have a family of my own at the time	4.6	4.3	11.6	8.5	0
<b>In the most recent move since 1994, did the members of your own family move with you?</b>					
Moved with me	39.4	39.4	34.3	42.2	48.6
Stayed behind	57.0	57.6	50.4	40.6	51.4

Variable	Total %	Educator's Race (%)			
		African	White	Coloured	Indian/Asian
I did not have a family of my own at the time	3.7	3.1	15.3	17.2	0

In the past two decades (since 1994), only 21% of educators have been transferred or re-deployed to posting positions that required them to work in an area other than the one closest to their families. In all race groups, the most common number of times an educator was transferred was only once, ranging from 37% among Whites to 42% among Africans. Of the educators that moved, Coloureds were more likely to have moved with their families in their first move. In the last move that educators had to undertake, only 39.4% moved with their families. Most of those that moved with their families were Indians/Asians.

Considering the places where the educators currently lived, 57.9% of educators were in urban areas. The predominant housing type in the areas where educators lived was formal brick structure (92.7%). Most (58%) lived within 10 km of the school.

## HIV prevalence

### *HIV prevalence by selected sociodemographic characteristics*

The overall HIV prevalence among educators in South Africa was 15.3%, translating to approximately 58,000 educators living with HIV in South Africa. Female educators had a significantly higher HIV prevalence when compared to males (16.4% vs 12.7%) [p=0.0001]. HIV prevalence was lowest among the youngest (18-24 years) and oldest ( $\geq$  55 years) age groups of educators at 6.7% and 6.6%, respectively. The prevalence of HIV peaked at 22.4% amongst educators aged 35-44 years. African educators had the highest prevalence (18.9%) in comparison to levels below 1% among White and Indian/Asian educators. HIV prevalence was highest among educators in rural informal areas (24.9%) with the lowest proportions found among those in urban formal areas (8.8%). HIV prevalence was higher in rural areas than urban areas.

**Table 10: HIV prevalence by selected socio-demographic characteristics**

Variable	Total tested	HIV prevalence	95% CI
Total	16,392	15.3	14.4-16.2
<b>Sex</b>			
Male	4,613	12.7	11.5-14.1
Female	11,773	16.4	15.3-17.6
<b>Age group</b>			
18-24	531	6.7	4.0-10.9
25-34	2,619	14.8	13.1-16.7
35-44	3,988	22.4	20.5-24.4
45-54	6,780	15.3	14.0-16.7
55+	2,466	6.6	5.6-7.9
<b>Race</b>			
African	13,203	18.9	17.9-20.0
White	1,374	0.2	0.11-0.9
Coloured	1,294	1.2	0.6-2.4

Variable	Total tested	HIV prevalence	95% CI
Indian	489	0.7	0.2-2.7
<b>Locality type</b>			
Urban formal	5,544	8.8	7.6-10.1
Urban informal	1,898	15.3	12.7-18.4
Rural formal	4,426	15.6	13.8-17.4
Rural informal	3,641	24.9	23.0-27.0

Figure 6 shows differences in HIV prevalence among males and females by age categories. The observed gender differences between males and females were consistent across the different age groups with 2.9% vs 7.9% among 18-24 year olds; 9.8% versus 17.3% among 25-34 year olds; 20.4% vs 23.2% among 35-44 year olds and 12.6% vs.16.5%, among 45-54 year olds.

**Figure 6: HIV prevalence by age and sex, South Africa 2015/2016**

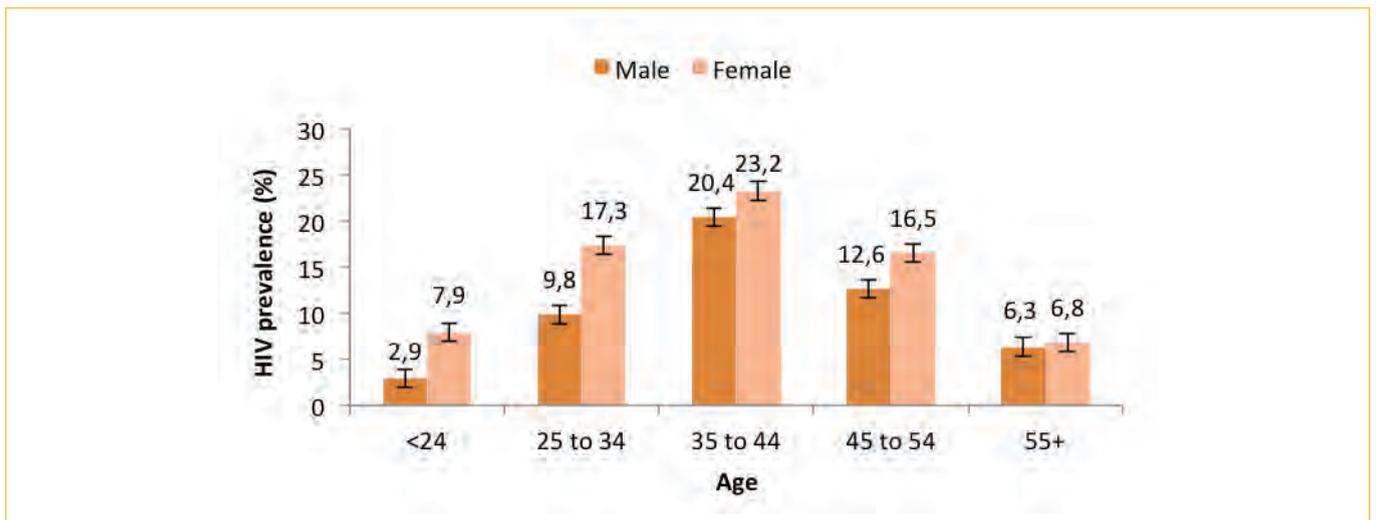
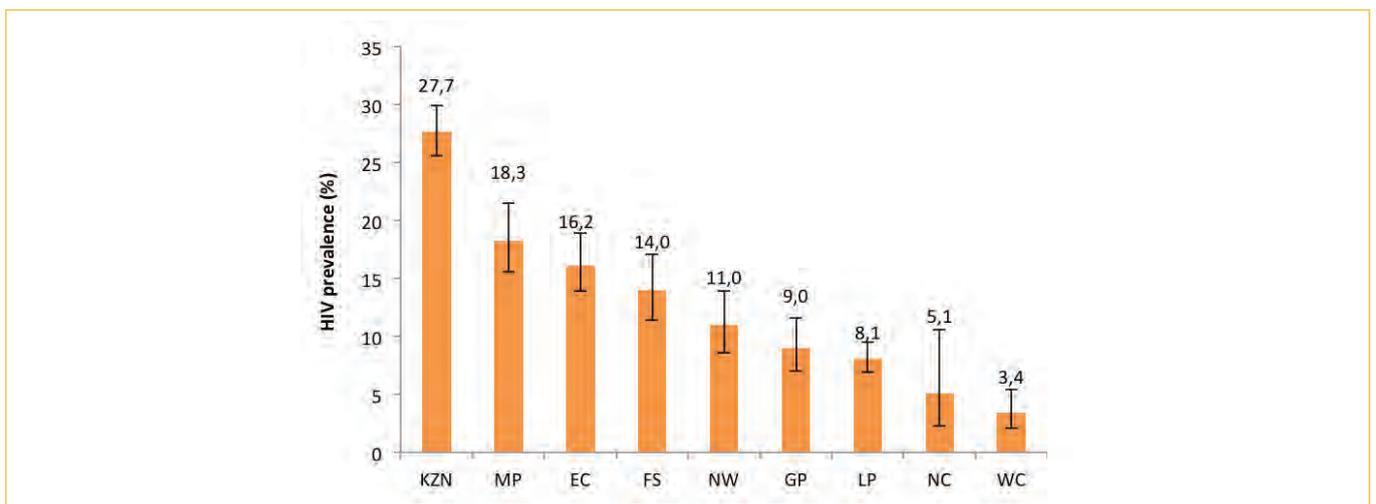


Figure 7 shows the provincial distribution of HIV prevalence amongst educators. The highest prevalence was observed in KwaZulu-Natal (27.7%) followed by Mpumalanga (18.3%) and Eastern Cape (16%), with Free State and North West provinces at 14% and 11% respectively. The remaining provinces had HIV prevalence levels below 10% with the lowest prevalence observed in Northern Cape (5.1%) and Western Cape (3.4%).

**Figure 7: HIV prevalence by province among South African educators, 2015/2016**



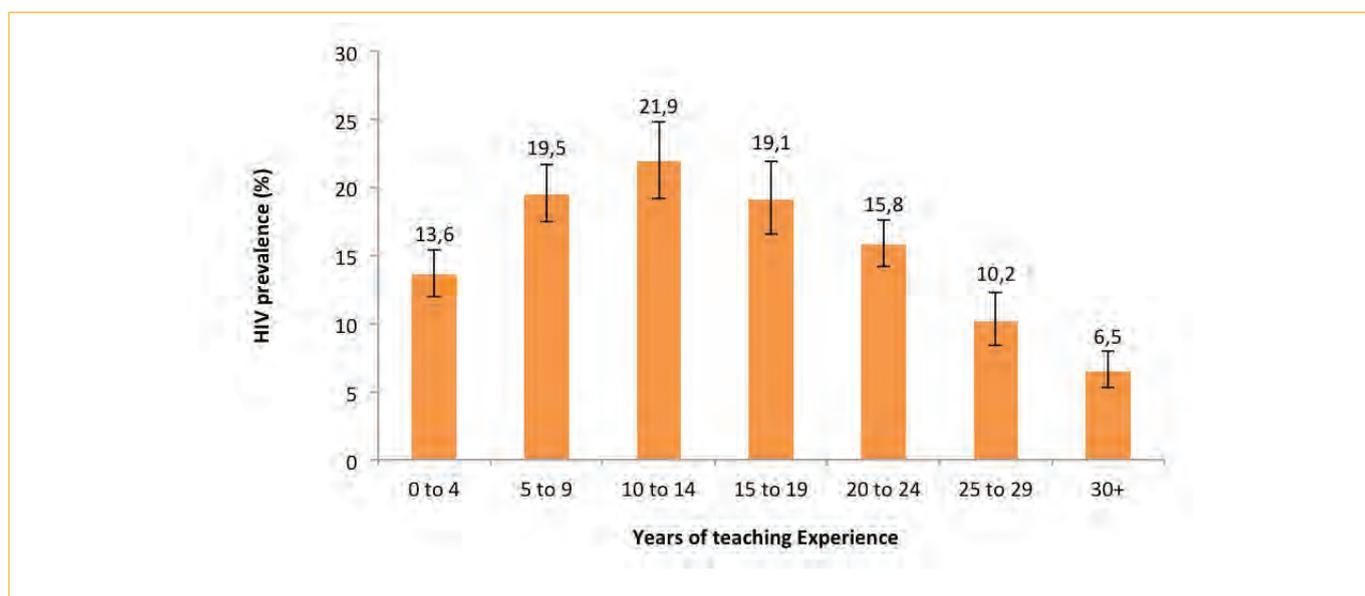
Single and widowed educators had the highest HIV prevalence compared to those who were married or separated (Table 11). HIV prevalence was higher among educators with a college diploma education and lower compared to those with higher educational qualifications of a Bachelor’s degree or above (20.0% versus 13.6%). HIV prevalence was higher among educators with lower disposable income who reported that they had insufficient money for basic items (18.8%), as well as among those who had enough money for food and clothes (18.6%). There was no difference in the HIV prevalence among educators with and without medical aid fund membership at 15.0% and 15.9%, respectively.

**Table 11: HIV prevalence by selected socio-demographic characteristics**

Variable	Total tested	HIV prevalence	95% CI
<b>Marital status</b>			
Married	9,015	10.1	9.2-11.0
Not married	5,230	23.1	21.5-24.9
Divorced/Separated	964	14.0	11.5-17.1
Widower/ Widow	955	25.6	22.0-29.5
<b>Highest educational qualification</b>			
Bachelor’s university degree & above	11,808	13.6	12.7-14.6
Diploma & Lower	4,299	20.0	18.3-21.9
<b>Description of household situation</b>			
Not enough money for basic things	1,214	18.8	16.0-22.0
Enough money for food and clothes	6,602	18.6	17.2-20.0
Enough money for most of the important things, and few luxuries	6,885	13.6	12.4-14.9
Some money for extra things and luxuries	1,253	5.7	4.3-7.5

Figure 8 shows HIV prevalence by educator’s teaching experience. HIV prevalence was highest among educators with 10-14 years of teaching experience (21.9%) and lowest among those with 30 or more years of teaching experience (6.5%).

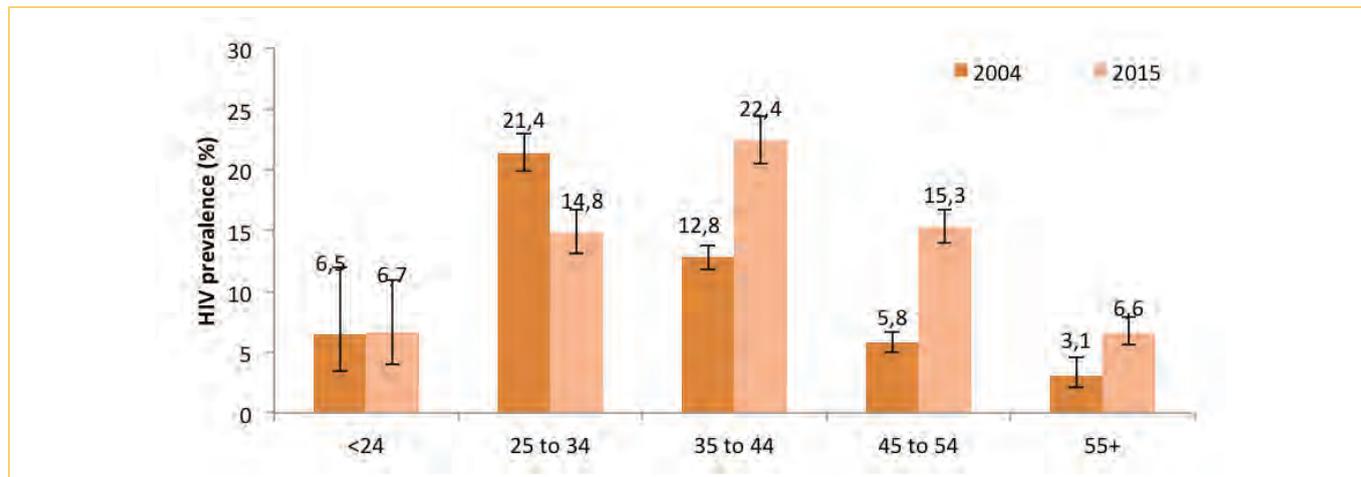
**Figure 8: HIV prevalence by years of teaching experience**



## Comparing 2004 and 2015 HIV prevalence

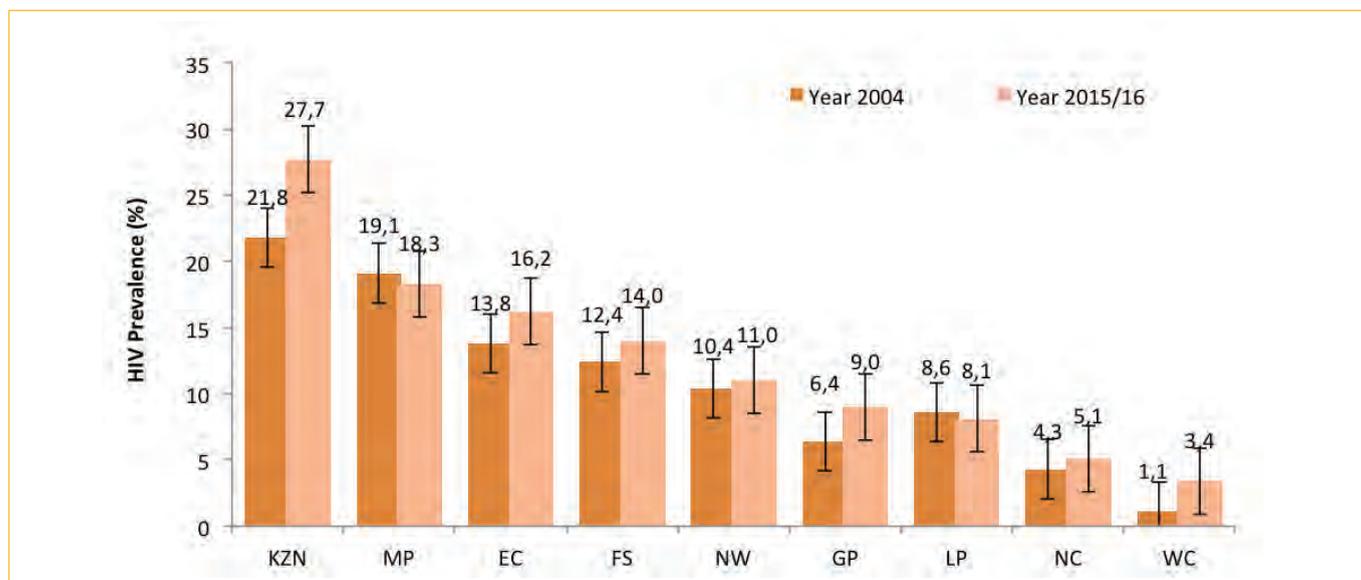
HIV prevalence in 2015 was 1.2 times higher than what was found in the 2004 survey (15.3% vs 12.7%). The age stratified HIV profile changed between 2004 and 2015. In 2004, HIV prevalence peaked at 21.4% among educators aged 25-34 years, whereas in 2015 the peak (22.4%) has shifted to the older 35-44 year age group.

**Figure 9: HIV prevalence by age group, South Africa 2004 and 2015/2016**



The provincial profile has remained similar in the two survey periods with KwaZulu-Natal reporting the highest HIV prevalence and Western Cape the lowest. Comparing the observed prevalence in 2004 and 2015, there were increases in some provinces (Figure 10). For example, HIV prevalence was 1.1% (2004) vs 3.4% (2015) in the Western Cape, 13.8% (2004) vs 16.2% (2015) in the Eastern Cape and 21.8% (2004) vs 27.7% (2015) in KwaZulu-Natal (where the change was significant). There was minimal, no change or a decline in some provinces. For example, in Limpopo, HIV prevalence was 8.6% (2004) vs 8.1% (2015) and in Mpumalanga it was 19.1% (2004) vs 18.3% (2015).

**Figure 10: Overall HIV prevalence of South African educators by province, 2004 and 2015/2016**



## HIV incidence among South African Educators 2015/2016

HIV incidence was estimated at 0.84%. This incidence translates to 2 900 new infections among educators in 2015/2016 (Table 12). HIV incidence among females was 1.3 times higher than that for males.

**Table 12: HIV incidence (number of new infections) by sex**

Variable	Incidence (%) (95% CI)	Estimated number of new infections* 95% CI
Total	0.84 (0.77-0.90)	2,900 (2,656-3,105)
<b>Sex</b>		
Male	0.76 (0.67-0.85)	800 (656-844)
Female	0.99 (0.90-1.07)	2,100 (1,947-2,315)

\*Rounded up to the nearest 100

Table 13 shows that HIV incidence was higher among educators aged 18-34 years (1.92%), compared to educators aged 35 years and above (0.67%). HIV incidence was significantly higher among educators in rural areas (1.38%) compared to urban areas (0.53%). KwaZulu-Natal and Eastern Cape had the highest HIV incidence rates among the provinces – 2.05% and 1.23% respectively. HIV incidence was slightly higher among educators in secondary schools in comparison to primary schools – 1.14% vs 0.92%. Educators who were married had a lower HIV incidence than those who were not married. Female educators aged 18-34 years in KwaZulu-Natal had the highest HIV incidence rate at 2.45%.

**Table 13: HIV incidence by selected demographic characteristics**

Variable	Incidence (%) (95% CI)
<b>Age group</b>	
18-34	1.92 (1.73-2.11)
35+	0.67 (0.61-0.73)
<b>Locality type</b>	
Urban	0.53 (0.47-0.59)
Rural	1.38(1.26-1.50)
<b>Province*</b>	
<i>Eastern Cape</i>	1.23 (1.07-1.38)
<i>KwaZulu-Natal</i>	2.05 (1.85-2.26)
<b>Type of school</b>	
Primary	0.92 (0.83-1.00)
Secondary	1.14(1.03-1.26)
<b>Marital status**</b>	
Married	0.53 (0.47-0.58)
Not married	1.44 (1.30-1.58)

\*These provinces had sufficient sample sizes for incidence calculation

\*\*Marital status as reported by educators, excludes those who are divorced, or widowed

## ARV use

Among the estimated 58,000 educators living with HIV, 55.7% [95% CI: 53.2-58.3] were exposed to treatment. This translates to 32,000 HIV positive educators on antiretroviral treatment at the time of the survey. The proportions of males and females who had accessed treatment were 53.8% [95% CI: 48.5-59.0] and 56.4% [95% CI: 53.5-59.0], respectively [ $p=0.83$ ]. Exposure to ART was significantly higher among educators aged 35 years and older compared to younger educators 18-34 years (59.0 vs. 39.9%) [ $p<0.001$ ]. Among all educators who were on ART, almost all were African. Of African educators living with HIV, more than half (55.7%) were on ART. No significant differences were found in exposure to ART in the different locality types.

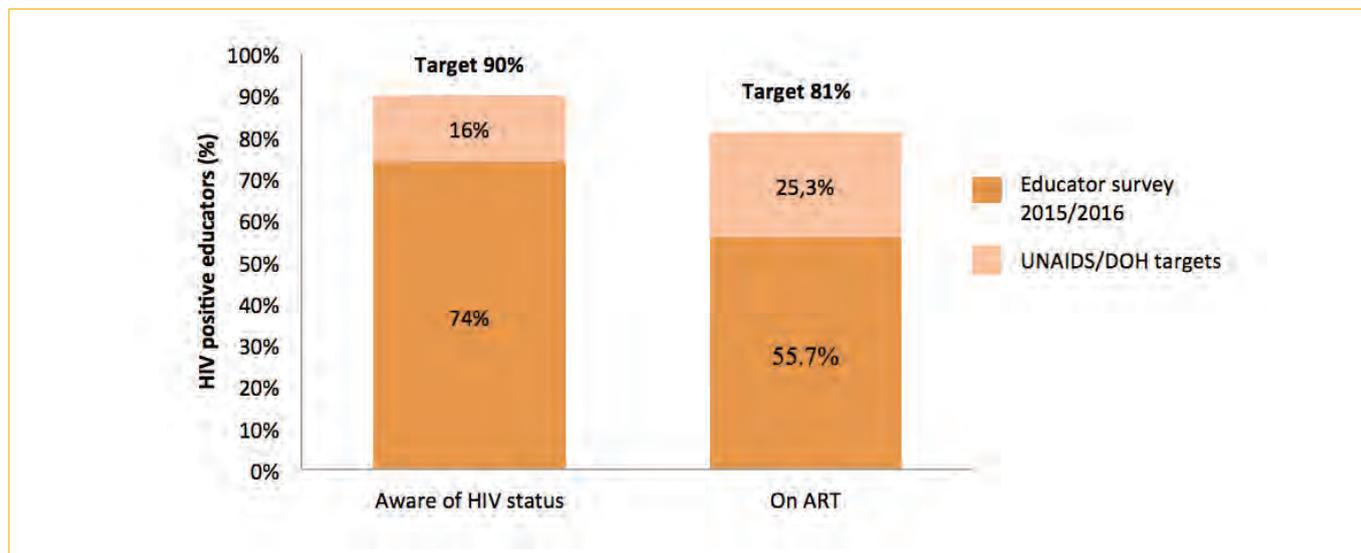
**Table 14: Profile of educators who were exposed to antiretroviral treatment**

Variable	Estimated number of educators living with HIV (n)	Estimated number of educators on ART* (n)	Proportion of educators living with HIV on ART (%) 95% CI
Total	58,000	32,000	55.7(53.2-58.3)
<b>Sex</b>			
Male	15,000	8,000	53.8 (48.5-59.0)
Female	43,000	24,000	56.4 (53.5-59.3)
<b>Age group</b>			
18-34	10,000	4,000	39.9 (34.2-46.0)
35+	48,000	28,000	59.0 (56.1-61.8)
<b>Race</b>			
African	57,000	30,000	55.7 (53.1,58.2)
Other	500	300	60.5 31.5-83.6
<b>Locality type</b>			
Urban settlements	12,000	7,000	56.9 (51.9-61.7)
Urban informal	7,000	4,000	58.7 (50.2-66.7)
Rural formal	13,000	7,000	52.8 (47.4-58.1)
Rural informal	23,000	13,000	56.5 (52.4-60.5)

Numbers are rounded off to the nearest 1,000

Figure 11 shows the proportions of educators aware of their HIV status and ART exposure among educators living with HIV in the context of the first and second UNAIDS treatment targets. Among the HIV-positive educators, 74.0% were aware of their status and 55.7% were on ART. Comparing these findings with the postulated UNAIDS targets (also adopted by the DOH); there are gaps of 16.0% and 25.3% respectively, for the first two 90-90 targets (UNAIDS, 2014).

**Figure 11: Awareness of HIV and ART exposure: current gaps in meeting UNAIDS/NDOH treatment targets**



Educators on medical aid were more likely to be on ART compared to those who did not have medical aid. Furthermore, among HIV positive males, those who were on medical aid were 1.4 times more likely to be on ART compared to those that did not have medical aid. Similar findings were made for females.

## Behavioural factors and HIV infection

### Sexual behaviour

The majority of educators (71.6%), indicated that they were sexually active during the 12 months prior to the survey. A higher proportion of male educators (84.2%) reported that they were sexually active in comparison to females (66.1%). A higher proportion of educators aged 25-34 and 35-44 were sexually active over the 12 months prior to the survey (80.5% and 79.0% respectively), in comparison to other age groups.

### Multiple sexual partnerships

The majority of educators (84.8%) reported that they had one sexual partner and only 10.1% reported that they had two or more partners (Table 15). Those who were not married were two times more likely to have two or more partners compared with those who were married (15.7% vs 7.3%). More male educators reported two or more partners (22.0%) compared to females (3.4%). More educators aged 25-34 years reported multiple sexual partners (15.4%) compared to other age groups. A higher proportion of educators residing in rural informal areas reported that they had two or more partners (12.0%) compared to other localities, while more educators in the Free State reported that they had two or more partners (13.0%). The proportion of educators having had two or more partners in the past 12 months was lowest in the Western Cape (4.6%).

**Table 15: Number of sexual partners in the previous 12 months by selected demographic characteristics**

Variable	No partner* (%)	One partner (%)	Two partners (%)	More than 2 partners (%)	Total
<b>Sex</b>					
Male	4.9	73.1	13.2	8.8	5,215
Female	5.3	91.3	2.3	1.1	10,008
Total	5.2	84.8	6.2	3.9	15,223
<b>Race</b>					
African	5.1	83.1	7.3	4.4	12,197
White	6.1	91.4	1.5	1	1,345
Coloured	4.8	90.7	2.2	2.4	1,191
Indian/Asian	4.2	92.5	1.3	2	489
<b>Age group</b>					
18-24	3.4	83.4	6.6	6.6	436
25-34	3.9	80.7	8.5	6.9	2,692
35-44	4.9	84.5	6.8	3.8	4,289
45-54	5.3	86.1	5.6	2.9	6,140
55+	7.3	87.9	3.1	1.8	1,676
<b>Locality type</b>					
Urban formal	4.2	87.9	4.5	3.4	5,357
Urban informal	5.2	84.4	6.3	4.1	1,705
Rural formal	5.9	83.4	6.8	4	4,174
Rural informal	5.8	82.2	7.9	4.1	3,332
<b>Province</b>					
Western Cape	4.2	91.2	1.8	2.8	1,185
Eastern Cape	6.1	84.7	6.6	2.6	1,765
Northern Cape	5.8	82.1	8.9	3.3	300
Free State	3.9	83.1	7.7	5.3	1,275
KwaZulu-Natal	5.7	83	6.4	4.9	4,312
North West	7.9	82.6	6.8	2.7	496
Gauteng	2.9	88.4	5.3	3.4	1,761
Mpumalanga	6.5	81.7	7.1	4.7	1,518
Limpopo	4.2	84.1	7.5	4.1	2,631

\*Sexually active but did not consider person as a sexual partner

## Access to condoms

Male condoms were more accessible than female condoms (68.8% vs 52.7%). A high proportion of educators (86.3%) knew of a place in the community where they could obtain a male condom for free compared to two thirds (66.9%) who said the same for female condoms. However, a high proportion did not know of a place in their school where they could obtain both male (83.7%) and female condoms (85.5%). When asked if a condom container was available at your school and “would you take female or male condoms for personal use”, just over half of educators (52.1%) indicated that they would collect male condoms. With regards to the female condoms less than half of educators indicated that they would.

## Self-reported condom use

### Condom use with regular sexual partner at last sex

Condom use at last sexual act with regular partners among all age groups was low at 35.5%. Condom use was almost two times higher among Africans (39.8%) compared to the other race groups. Condom use was highest among 18-24 year olds and lowest among educators aged 55 years and older. Reported condom use was higher among educators from rural informal areas compared to those from other locality types. Reported condom use was higher in KwaZulu-Natal and lowest in Western Cape. Educators earning low and medium annual incomes were more likely to report condoms use (40.0% and 37.3% respectively), than those with high income (2.8%). Educators who had some money for extra things were less likely to use condoms (24.1%) than those from all the other household situations.

**Table 16: Condom use at last sexual act by selected demographic characteristics**

Variable	Total	%	95% CI
Total	13,371	35.5	34.2-36.8
<b>Sex</b>			
Male	4,662	33.7	31.8-35.5
Female	8,709	36.5	35.0-38.1
<b>Race</b>			
African	10,743	39.8	38.4-41.2
White	1,197	19.0	15.9-22.6
Coloured	979	16.9	13.6-20.8
Indian/Asian	454	20.7	16.4-25.8
<b>Age group</b>			
18-24	373	59.2	53.3-64.8
25-34	2,371	45.3	42.4-48.2
35-44	3,785	36.6	34.5-38.8
45-54	5,417	32.7	30.9-34.6
55+	1,434	20.8	18.0-24.0
<b>Locality type</b>			
Urban formal	4,736	29.6	27.3-31.9
Urban informal	1,482	33.6	29.9-37.4
Rural formal	3,647	35.7	33.5-38.0

Variable	Total	%	95% CI
Rural informal	2,940	45.7	43.2-48.4
<b>Province</b>			
Western Cape	944	20.9	16.9-25.5
Eastern Cape	1,528	37.3	33.5-41.3
Northern Cape	269	21.5	15.2-29.5
Free State	1,180	31.8	27.7-36.2
KwaZulu-Natal	3,792	45.0	42.1-47.8
North West	427	36.2	30.8-42.0
Gauteng	1,563	32.7	29.9-35.6
Mpumalanga	1,348	37.3	33.6-41.1
Limpopo	2,336	31.7	29.4-34.1
<b>Type of school</b>			
Primary	6,598	34.7	32.8-36.5
Secondary/high	5,239	36.2	34.0-38.4
Combined/intermediate	1,481	36.3	32.6-40.1
Special school	69	51.4	34.3-68.1
<b>Annual Income</b>			
High	3,213	27.8	25.7-29.9
Medium	8,138	37.3	35.7-39.0
Low	1,902	40.0	36.9-43.0
<b>Position in school</b>			
Teacher/educator	10,136	38.3	36.8-39.8
Senior teacher	789	27.0	23.3-31.1
Head of department	1,403	29.2	26.3-32.4
Education specialist	30	25.7	11.4-48.2
Deputy principal/Principal	995	25.0	21.7-28.6
<b>Description of household situation</b>			
Not enough money for basic things like food and clothes	838	41.4	37.0-45.9
Have money for food and clothes, but short of many other things	5,284	38.6	36.9-40.4
Have most of the important things, but few luxury goods	5,938	34.3	32.4-36.3
Some money for extra things such as going away for holidays and luxury goods	1,148	24.1	21.0-27.4

## Condom use with non-regular partner at last sex

Condom use at last sex with non-regular partners was high at 75.3%. Condom use was higher among male educators (80.2%) compared to females (66.7%). The use of condoms was lowest among White educators (32.7%) and among those with not enough money for basic things like food and clothes (67.1%). The highest levels of condom use were among 18-24 year old educators (80.3%), those teaching in rural formal areas (78.2%) and among as teachers/educators (76.7%) and school principals (76.5%).

**Table 17: Condom use at last sexual act by selected demographic characteristics**

Variable	Total	%	95% CI
Total	1,657	75.3	72.2-78.2
<b>Sex</b>			
Male	1,030	80.2	76.9-83.1
Female	627	66.7	61.2-71.8
<b>Race</b>			
African	1,531	76.8	73.5-79.8
White	39	32.7	18.3-51.2
Coloured	66	68.4	55.6-78.9
Indian/Asian	22	61	38.4-79.6
<b>Age group</b>			
18-24	80	80.3	69.6-87.9
25-34	453	79.6	74.9-83.5
35-44	489	77.9	72.4-82.5
45-54	539	72.9	67.1-78.0
55+	98	50.7	38.0-63.3
<b>Locality type</b>			
Urban formal	483	72	66.2-77.2
Urban informal	191	69.1	58.3-78.1
Rural formal	503	78.2	73.1-82.5
Rural informal	418	77.1	71.2-82.0
<b>Province</b>			
Western Cape	62	73.9	59.2-84.7
Eastern Cape	188	72.6	62.5-80.7
Northern Cape	35	59.8	36.2-79.6
Free State	181	79.9	73.0-85.4
KwaZulu-Natal	526	78.4	73.8-82.4
North West	44	71.8	54.5-84.4
Gauteng	149	70	55.9-81.1
Mpumalanga	204	80.2	73.4-85.7
Limpopo	272	71.3	64.3-77.4
<b>Type of school</b>			

Variable	Total	%	95% CI
Primary	709	73.2	68.5-77.4
Secondary/high	769	76.3	71.2-80.6
Combined/intermediate	178	79.8	71.6-86.1
Special school	5	75.8	24.4-96.8
<b>Annual Income</b>			
High	335	72.2	66.1-77.6
Medium	1,038	77	73.2-80.3
Low	254	72.4	64.2-79.3
<b>Position in school</b>			
Teacher/educator	1,316	76.7	73.4-79.7
Senior teacher	62	56.4	39.4-72.1
Head of department	145	72.2	61.7-80.6
Education specialist	6	11.8	1.5-54.3
Deputy principal/Principal	127	76.5	67.4-83.7
<b>Description of household situation</b>			
Not enough money for basic things like food and clothes	117	67.1	54.4-77.7
Have money for food and clothes, but short of many other things	739	76.2	71.7-80.2
Have most of the important things, but few luxury goods	692	75.9	71.5-79.9
Some money for extra things such as going away for holidays and luxury goods	87	72	59.2-82.0

### Consistent condom use with regular partners

Consistent condom use with regular partners was low (17.7%). Higher proportions of African educators reported consistent condom use with a regular partner (19.6%), as did those teaching in rural informal localities (22.5%). Educators from both low and medium income groups reported higher consistent condom use with regular sexual partners (19.3% and 18.1% respectively), than those from the high income group (15.0%). Consistent condom use was also high among teachers/educators (18.8%) compared to those who held more senior positions in the schools. It was lowest among educators who had some money for extra things such as going away for holidays and luxury goods (12.1%) and those had most of the important things, but few luxury goods (16.5%).

**Table 18: Consistent condom use with regular partners by selected demographic characteristics**

Variable	Total	%	95%CI
Total	13,186	17.7	16.7-18.7
<b>Sex</b>			
Male	4,592	16.4	15.0-17.9
Female	8,594	18.4	17.3-19.6
<b>Race</b>			
African	10,625	19.6	18.6-20.8
White	1,167	10.7	8.5-13.4

Variable	Total	%	95%CI
Coloured	947	8.8	6.7-11.4
Indian/Asian	448	9.2	6.5-12.8
<b>Age group</b>			
18-24	362	23.8	19.2-29.0
25-34	2,329	21.5	19.3-23.9
35-44	3,739	17.5	16.0-19.2
45-54	5,351	17.4	16.0-18.9
55+	1,412	11.2	8.8-14.0
<b>Locality type</b>			
Urban formal	4,660	15.4	14.0-16.9
Urban informal	1,449	18.9	15.7-22.4
Rural formal	3,610	16.0	14.3-17.8
Rural informal	2,906	22.5	20.6-24.6
<b>Province</b>			
Western Cape	902	9.9	8.0-12.3
Eastern Cape	1,506	18.3	15.8-21.0
Northern Cape	265	11.6	7.8-17.0
Free State	1,165	17.3	14.3-20.8
KwaZulu-Natal	3,769	20.9	18.9-23.1
North West	428	21.2	17.4-25.7
Gauteng	1,566	16.5	14.5-18.7
Mpumalanga	1,316	19.8	16.6-23.6
Limpopo	2,283	14.4	12.7-16.3
<b>Type of school</b>			
Primary	6,532	17.3	16.0-18.6
Secondary/high	5,149	18.3	16.6-20.0
Combined/intermediate	1,451	17.9	15.4-20.8
Special school	68	14.6	7.3-27.2
<b>Annual Income</b>			
High	3,147	15.0	13.5-16.8
Medium	8,033	18.1	16.9-19.3
Low	1,886	19.3	17.2-21.6
<b>Position in school</b>			
Teacher/educator	10,001	18.8	17.7-20.0
Senior teacher	766	14.1	11.5-17.2
Head of department	1,376	14.4	12.2-17.0
Education specialist	30	23	9.7-45.4
Deputy principal/Principal	992	14	11.5-16.9

Variable	Total	%	95%CI
<b>Description of household situation</b>			
Not enough money for basic things like food and clothes	836	25.1	21.2-29.5
Have money for food and clothes, but short of many other things	5,227	19.3	18.0-20.7
Have most of the important things, but few luxury goods	5,840	16.5	15.2-17.8
Some money for extra things such as going away for holidays and luxury goods	1,128	12.1	9.8-14.9

### **Consistent condom use with non-regular partners**

Consistent condom use with non-regular sexual partners among educators was high (56.7%). Consistent condom use with non-regular sexual partner was highest among male (61.3%) and African (58.3%) educators, with lowest proportions reported among educators aged 55 years and older. There were no differences in consistent condom use with non-regular sexual partners by locality types and provinces.

**Table 19: Self-reported consistent condom use with non-regular partners by selected demographic characteristics**

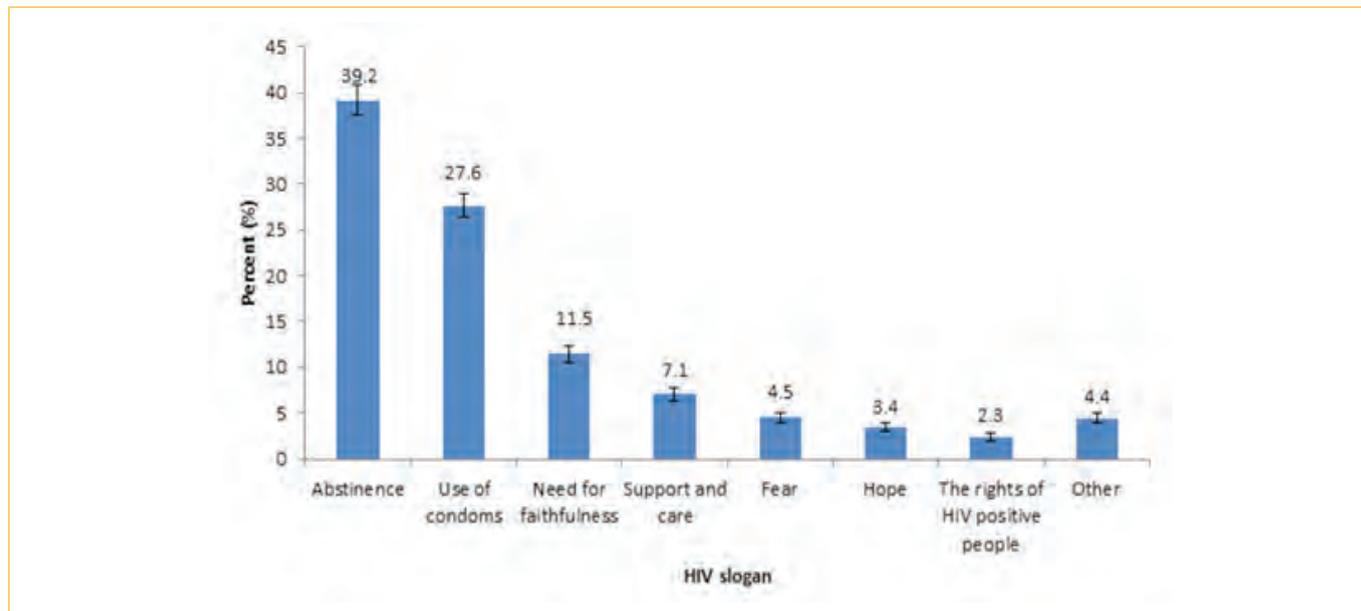
Variable	Total	%	95% CI
<b>Sex</b>			
Male	1,008	61.3	57.6-64.9
Female	607	48.2	43.3-53.2
<b>Race</b>			
African	1,488	58.3	55.1-61.4
White	41	17.6	9.1-31.3
Coloured	66	49.0	37.9-60.2
Indian/Asian	20	33.2	13.8-60.8
<b>Age group</b>			
18-24	77	57.2	45.5-68.2
25-34	446	59.6	53.6-65.3
35-44	465	61.6	55.9-67.0
45-54	536	52.5	47.1-57.8
55+	92	39.1	27.7-51.8
<b>Locality type</b>			
Urban formal	477	51.7	46.4-57.0
Urban informal	179	51.9	44.4-59.2
Rural formal	492	59.2	53.8-64.4
Rural informal	406	59.6	53.1-65.8
<b>Locality type where educator resides</b>			
Urban	799	53.9	49.7-58.1
Non-urban	804	59.3	54.9-63.5
<b>Province</b>			

Variable	Total	%	95% CI
Western Cape	65	48.3	36.1-60.8
Eastern Cape	177	60.3	50.1-69.7
Northern Cape	36	51.1	29.2-72.6
Free State	175	53.6	46.5-60.5
KwaZulu-Natal	506	53.8	48.2-59.4
North West	43	69.1	53.9-81.0
Gauteng	142	49.0	41.1-57.0
Mpumalanga	203	63.6	55.5-71.1
Limpopo	271	56.6	49.4-63.5
<b>Type of school</b>			
Primary	690	52.1	47.7-56.4
Secondary/high	745	59.4	55.0-63.7
Combined/intermediate	177	65.1	54.6-74.2
Special school	6	23.4	4.9-64.2
<b>Annual Income</b>			
High	321	57.4	51.1-63.5
Medium	1,012	57.1	53.3-60.8
Low	251	54.0	45.8-61.9
<b>Position in school</b>			
Teacher/educator	1,286	57.7	54.3-61.0
Senior teacher	61	41.1	27.3-56.4
Head of department	139	53.4	42.5-64.0
Education specialist	6	23.2	3.3-73.0
Deputy principal/Principal	121	58.2	47.7-68.0
<b>Description of household situation</b>			
Not enough money for basic things like food and clothes	116	49.1	37.4-61.0
Have money for food and clothes, but short of many other things	724	60.9	56.3-65.3
Have most of the important things, but few luxury goods	668	55.1	50.4-59.6
Some money for extra things such as going away for holidays and luxury goods	85	48.4	35.8-61.2

## HIV communication

HIV-related slogans or messages that were recalled the most by educators were related to abstinence (39.2%), use of condoms (27.6%) and need for faithfulness (11.5%). The least remembered slogans or messages were about hope (3.4%) and the rights of people living with HIV (2.3%).

**Figure 12: Best remembered HIV-related slogans or messages**



## Male circumcision

More than 60% of male educators reported that they were circumcised. Africans were much more likely to report having ever been circumcised compared to all other race groups. A higher proportion of men aged 45-54 years (64.9%) reported having been circumcised compared to all other age groups. Male educators from rural formal areas reported the highest rates of male circumcision while their urban formal counterparts reported the lowest rates. Eastern Cape and Limpopo had the highest rates of circumcision, while Northern Cape reported the lowest.

**Table 20: Demographic characteristics of males who self-reported being circumcised**

Variable	Total	%	95% CI
<b>Race</b>			
African	5,137	68.4	66.5-70.3
White	411	20.0	15.4-25.5
Coloured	481	27.7	22.4-33.7
Indian/Asian	190	25.0	17.8-33.9
<b>Age group</b>			
18-24	150	59.0	49.6-67.7
25-34	1,061	54.4	50.1-58.6
35-44	1,560	61.8	58.5-64.9
45-54	2,592	64.9	62.3-67.5
55+	867	54.3	49.5-58.9
<b>Locality type</b>			
Urban formal	2,039	51.6	47.7-55.4
Urban informal	640	61.2	55.9-66.2
Rural formal	1,843	72.0	68.3-75.5
Rural informal	1,400	63.5	59.6-67.2
<b>Province</b>			
Western Cape	457	38.1	30.1-46.8
Eastern Cape	766	78.7	73.2-83.4
Northern Cape	119	36.9	28.3-46.4
Free State	509	47.9	40.3-55.5
KwaZulu-Natal	1,644	45.7	42.5-49.0
North West	183	58.3	46.5-69.2
Gauteng	621	61.5	55.9-66.7
Mpumalanga	627	63.3	56.8-69.3
Limpopo	1,311	85.1	82.5-87.4
<b>Type of school</b>			
Primary	2,263	59.1	56.0-62.0
Secondary/high	3,212	61.9	58.7-64.9
Combined/intermediate	675	66.3	59.9-72.1
Special school	38	65.3	42.5-82.7

## Circumcision settings

Among circumcised educators, most had been circumcised either in hospital/clinics (50.6%) or in traditional settings (46.4%). The majority of male educators in the Free State, KwaZulu-Natal and North West reported having been circumcised in a hospital/clinic, while the majority in the Eastern Cape and Limpopo indicated they underwent traditional circumcision (Table 21). Few educators experienced problems during circumcision (7.0%). Africans were slightly more likely to experience more complications (7.3%) followed by Indians/Asian (4.3%), Whites (3.9%) and Coloureds (2.9%). High rates of complications were reported amongst educators teaching in rural areas (14.8%). Complications did not vary much in relation to place of circumcision, with 6.8% of those that were circumcised in hospitals experiencing complications, home (7.4%) and in traditional settings (7.8%).

**Table 21: Circumcision settings by province and locality**

Variable	Total	Home		Hospital/clinic		Traditional setting*	
		%	95% CI	%	95% CI	%	95% CI
<b>Total</b>	3,869	2.9	2.3-3.6	50.5	47.9-53.1	46.6	44.0-49.2
<b>Province</b>							
Western Cape	172	2.5	1.0-6.1	49.2	34.8-63.7	48.3	33.6-63.2
Eastern Cape	632	4.4	2.7-7.0	19.3	14.7-25.0	76.3	70.4-81.3
Northern Cape	42	4.4	1.2-15.4	64.7	45.6-80.0	30.9	16.0-51.1
Free State	259	2.9	1.3-6.3	84.4	79.6-88.3	12.7	9.2-17.4
KwaZulu-Natal	764	5.1	3.5-7.5	83	78.8-86.5	11.8	8.9-15.6
North West	103	1.6	0.4-5.9	84.5	77.9-89.5	13.9	8.9-21.0
Gauteng	383	3.4	2.0-5.8	57.9	51.0-64.5	38.7	32.3-45.5
Mpumalanga	388	1.5	0.6-3.8	55.7	47.8-63.4	42.7	35.3-50.5
Limpopo	1126	0.5	0.2-1.1	26.1	22.8-29.8	73.3	69.6-76.8
<b>Locality type</b>							
Urban formal	1061	2.9	2.0-4.2	56.7	51.6-61.8	40.4	35.3-45.7
Urban informal	377	0.9	0.3-2.8	67.9	59.4-75.4	31.2	23.5-40.0
Rural formal	1384	1.5	0.9-2.5	39.3	35.3-43.4	59.2	55.1-63.1
Rural informal	880	5.7	4.0-8.0	49.6	44.4-54.9	44.6	39.6-49.8

\*Traditional settings refer to initiation schools, mountain or bush

## Demand for male circumcision among those not circumcised

More than a third (37.4%) of male educators who were not circumcised indicated that they would consider being circumcised. Almost 80% of uncircumcised African educators indicated that they would consider being circumcised. The majority of other races showed little or no interest in undergoing circumcision. The youngest and oldest educators were the least interested in being circumcised. Over a third of those who indicated interest in circumcision were teaching in urban formal areas, and almost 90% were in primary and secondary schools.

**Table 22: Demographics of uncircumcised males who indicated that they would like to be circumcised**

Variable	Total	%	95% CI
<b>Race</b>			
African	1,657	79.3	75.5-82.7
White	321	4.6	3.0-7.0
Coloured	337	13.9	11.1-17.2
Indian/Asian	142	2.2	1.3-3.7
<b>Age group</b>			
18-24	82	4.5	3.0-6.7
25-34	473	23.8	20.5-27.5
35-44	602	28	24.7-31.6
45-54	935	35.1	31.4-39.0
55+	367	8.6	6.6-11.1
<b>Locality Type</b>			
Urban formal	1,026	36	31.4-41.0
Urban informal	275	13.2	10.0-17.2
Rural formal	500	20.3	16.6-24.7
Rural informal	570	30.4	25.8-35.4
<b>Type of school</b>			
Primary	958	41.3	36.1-46.6
Secondary/high	1,245	47.9	42.6-53.3
Combined/intermediate	249	10.7	7.9-14.2
Special school	10	0.1	0.0-0.7

## HIV risk perception

The HIV risk perception was high, with most educators (88.4%) indicating that they were susceptible to HIV infection (Table 23). In total 22.3% of educators reported that they would definitely get infected with HIV, while 29.0% believed that they would probably get infected with HIV. Although HIV prevalence is high amongst African educators, only 17.8% of them perceived themselves as being at risk of HIV infection. HIV risk perception was also lower among educators 25-44 years of age (17.6%), those residing in rural informal areas (14.7%), in the Eastern Cape (18.3), in combined/intermediate schools (18.5%). Risk perception was highest among educators who had some money for extra things (35.6%).

**Table 23: Perceived risk of getting infected with HIV**

Variable	I will definitely get infected		I probably get infected		Could possibly get infected		Will probably not get infected		Will definitely not get infected	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>Total</b>	22.3	21.2-23.4	29.0	27.9-30.1	37.2	36.0-38.4	7.8	7.2-8.5	3.7	3.3-4.2
<b>Sex</b>										
Male	21.1	19.6-22.6	29.2	27.6-30.8	38.0	36.3-39.7	8.0	7.1-9.1	3.8	3.1-4.5
Female	22.8	21.6-24.0	28.9	27.6-30.2	36.8	35.4-38.2	7.8	7.1-8.5	3.7	3.2-4.3
<b>Race</b>										
African	17.8	16.8-18.8	26.7	25.6-27.9	42.2	41.1-43.4	9.0	8.3-9.8	4.2	3.7-4.8
White	42.7	38.7-46.8	37.9	34.3-41.7	13.9	11.7-16.3	3.1	2.0-4.9	2.4	1.2-4.7
Coloured	34.5	30.5-38.6	40.8	36.5-45.2	20.4	17.7-23.3	3.3	2.4-4.5	1.1	0.6-1.9
Indian/Asian	51.5	46.6-56.3	30.4	26.2-35.1	15.4	12.4-19.1	1.4	0.7-2.8	1.2	0.6-2.8
<b>Age group</b>										
18-24	28.3	22.0-35.5	34.9	29.8-40.3	28.1	23.3-33.3	5.5	3.8-7.9	3.3	1.9-5.7
25-34	20.3	18.1-22.6	31.4	29.1-33.7	38.1	35.5-40.7	7.5	6.3-8.9	2.8	2.2-3.6
35-44	17.6	16.3-19.0	27.8	26.2-29.6	41.1	39.3-43.1	9.2	8.0-10.4	4.3	3.3-5.6
45-54	21.6	20.3-23.0	28.3	26.9-29.8	38.1	36.6-39.7	8.3	7.6-9.2	3.6	3.1-4.2
55+	32.7	30.4-35.0	28.8	26.5-31.3	29.1	26.9-31.3	5.1	4.2-6.2	4.3	3.3-5.5
<b>Locality type</b>										
Urban formal	29.0	27.0-31.1	32.5	30.5-34.4	29.2	27.3-31.3	7.0	6.0-8.1	2.3	1.9-2.9
Urban informal	20.6	17.9-23.6	29.2	26.0-32.6	37.5	34.1-41.0	8.3	6.7-10.2	4.4	2.6-7.6
Rural formal	20.3	18.3-22.3	27.7	25.7-29.7	38.4	36.5-40.5	8.4	7.2-9.7	5.3	4.4-6.3
Rural informal	14.7	13.3-16.3	24.7	22.7-26.7	48.0	46.0-50.1	8.6	7.3-10.0	4.0	3.3-4.8
<b>Province</b>										
Western Cape	30.2	26.8-33.8	44.4	40.6-48.3	20.0	17.0-23.3	3.6	2.6-5.1	1.8	1.1-2.8
Eastern Cape	18.3	15.7-21.3	31.6	28.5-34.9	38.7	35.5-42.0	7.7	6.2-9.6	3.6	2.7-4.8

Variable	I will definitely get infected		I probably get infected		Could possibly get infected		Will probably not get infected		Will definitely not get infected		
	Total	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Northern Cape	403	28.0	20.0-37.6	32.5	25.9-39.9	33.1	25.7-41.4	5.1	2.8-9.0	1.3	0.4-4.0
Free State	1,755	23.6	19.7-28.1	25.3	22.6-28.1	41.3	37.5-45.2	8.1	6.4-10.1	1.8	1.2-2.5
KwaZulu-Natal	5,988	20.7	18.6-23.0	24.4	22.7-26.1	42.5	40.2-44.9	8.5	7.3-9.9	3.9	3.2-4.7
North West	734	19.1	15.2-23.7	27.9	22.4-34.1	43.0	37.4-48.8	8.3	6.6-10.3	1.7	1.0-3.1
Gauteng	2,365	26.5	23.3-30.0	29.2	26.3-32.2	33.7	30.1-37.5	7.9	6.4-9.8	2.6	1.4-4.8
Mpumalanga	2,043	20.1	17.3-23.2	30.3	26.8-34.0	34.1	30.8-37.5	9.1	7.1-11.6	6.4	4.9-8.4
Limpopo	3,398	21.0	18.9-23.3	20.5	18.7-22.5	43.4	41.0-45.8	8.6	7.2-10.2	6.5	5.1-8.3
<b>Type of school</b>											
Primary	10,916	22.8	21.3-24.4	28.6	27.1-30.2	37.2	35.5-38.9	7.7	6.9-8.5	3.7	3.0-4.4
Secondary/high	7,566	22.6	20.8-24.6	29.2	27.3-31.1	36.5	34.5-38.5	8.4	7.4-9.6	3.3	2.7-4.0
Combined/intermediate	2,388	18.5	15.8-21.6	30.6	27.8-33.7	38.5	35.3-41.8	7.1	6.0-8.5	5.2	3.9-6.9
Special school	121	25.1	18.1-33.7	21.3	11.8-35.4	45.6	32.0-59.8	4.1	1.5-10.4	3.9	1.4-10.5
<b>Position in the school</b>											
Teacher/educator	16,047	21.4	20.3-22.6	29.0	27.8-30.2	37.5	36.2-38.7	8.2	7.6-9.0	3.8	3.3-4.4
Senior teacher	1,299	28.0	24.9-31.4	31.3	27.6-35.3	31.8	28.6-35.2	5.2	3.7-7.2	3.6	2.5-5.3
Head of department	2,100	23.3	21.1-25.8	28.5	26.2-31.0	37.9	35.0-40.9	6.8	5.6-8.3	3.5	2.6-4.6
Education specialist	58	24.5	13.5-40.3	25.9	14.7-41.5	31.8	16.1-53.2	15.5	6.7-31.8	2.3	0.5-9.5
Deputy principal/Principal	1,437	24.5	21.5-27.8	27.8	24.3-31.7	37.6	34.2-41.0	6.7	5.1-8.8	3.4	2.3-4.9
<b>Description of household situation</b>											
Not enough money for basic things like food and clothes	1,546	19.4	16.8-22.4	30.0	26.4-33.9	34.1	31.0-37.5	11.6	9.4-14.1	4.8	3.7-6.3
Have money for food and clothes, but short of many other things	8,532	18.6	17.4-19.9	26.9	25.3-28.5	41.2	39.7-42.8	9.0	8.1-10.0	4.3	3.5-5.2
Have most of the important things, but few luxury goods	8,932	23.7	22.2-25.3	30.4	29.0-31.9	36.3	34.7-37.9	6.8	6.1-7.6	2.8	2.4-3.4
Some money for extra things such as going away for holidays and luxury goods	1,689	35.6	32.0-39.3	31.0	27.9-34.3	24.9	21.6-28.5	4.0	3.0-5.3	4.6	3.3-6.3

## HIV risk perception and HIV status

HIV prevalence was highest among those who believed that they would definitely not get infected with HIV (28.7%) followed by those who believed they would probably not get infected (22.7%). Educators who perceived themselves at high risk of contracting HIV were least likely to be HIV positive (8.6%).

**Table 24: HIV risk perception by HIV status**

How likely is it that you will become infected with HIV?	Total	HIV prevalence (%)	95%CI
Will definitely get infected with HIV	3,541	8.6	7.4-10.0
Will probably get infected with HIV	4,507	12.3	11.0-13.8
Could possibly get infected with HIV	6,147	18.5	17.2-20.0
Will probably not get infected with HIV	1,216	22.7	19.3-26.6
Will definitely not get infected with HIV	605	28.7	22.7-35.6
<b>Total</b>	<b>16,016</b>	<b>15.3</b>	<b>14.4-16.2</b>

A high proportion of those that are younger than 35 years indicated that they will definitely get infected with HIV (48.6%). A slightly higher proportion (59%) of educators that said they will definitely get infected with HIV did not know their HIV status, while among educators that said they will definitely not get infected with HIV did not know their HIV status.

Among educators that said they will definitely not get infected with HIV, 35% were HIV positive and were aware of their HIV status while 26.7% were HIV positive and were not aware of their HIV status. Among those that said they will definitely get infected with HIV and who were aware of their HIV status, 13.0% were HIV positive while among those that were not aware of their HIV status, 6.3% were HIV positive.

Considering the number of sexual partners in the previous 12 months by risk perception, 5.7% of those that said they will definitely get infected with HIV reported two or more partners compared to 11.8% that reported two or more partners among those that said they will definitely not get infected with HIV. However, 37.4% of educators that said they will definitely not get infected with HIV were using condoms with non-regular partners, compared to only 27.6% reporting condom use among those that said they will definitely get infected with HIV.

## HIV Counselling and testing

### Availability of HCT and ever testing for HIV

HCT allows PLHIV to manage their HIV status. Almost all educators – 93.8% of females and 92.4% of males – indicated that they knew where to obtain HCT services with little or no difference by type of school, province, race and locality type.

Overall, a low proportion of educators (7.7%) indicated that HCT was available at schools.

Among educators who ever tested for HIV (85.9%), the highest proportions were found among educators aged 35-44 years (91.3%), African (87.9%) and urban informal localities (87.6%). Educators who have ever tested for HIV do not necessarily know their current HIV status.

**Table 25: Self-reported ever testing for HIV among educators**

Variable	Ever tested for HIV		
	Total	%	95% CI
Total	21,008	85.9	85.1-86.6
<b>Age group</b>			
18-24	638	73.4	68.5-77.8
25-34	3,311	86.4	84.7-87.9
35-44	5,357	91.3	90.4-92.2
45-54	8,609	86.5	85.5-87.6
55+	3,093	77.1	75.0-79.1
<b>Race</b>			
African	16,916	87.9	87.1-88.6
White	1,874	72.5	69.8-75.0
Coloured	1,562	85.0	82.1-87.5
Indian/Asian	641	74.8	69.5-79.4
<b>School locality</b>			
Urban formal	7,295	84.5	83.1-85.8
Urban informal	2,427	87.6	85.6-89.3
Rural formal	5,681	83.6	82.1-85.1
Rural informal	4,731	88.5	87.1-89.7
<b>Annual Income</b>			
High	4,856	86.7	85.4-87.9
Medium	12,632	86.2	85.3-87.0
Low	3,275	83.7	81.9-85.4
<b>Position in the school</b>			
Teacher/educator	16,060	85.9	85.0-86.7
Senior teacher	1,299	84	81.4-86.3
Head of department	2,109	85.9	84.0-87.7
Education specialist	58	86.8	74.8-93.6
Deputy principal/Principal	1,443	87.4	85.2-89.4
<b>Locality type</b>			
Urban	11,606	85.8	84.8-86.8
Non-urban	9,164	85.8	84.8-86.9
<b>Province</b>			
Western Cape	1,593	81.8	78.8-84.5
Eastern Cape	2,712	85.1	83.0-86.9
Northern Cape	405	82.4	73.7-88.6
Free State	1,768	81.8	78.6-84.6
KwaZulu-Natal	5,963	90.4	89.3-91.4

Variable	Ever tested for HIV		
	Total	%	95% CI
North West	735	85.8	81.0-89.5
Gauteng	2,367	86.9	84.9-88.7
Mpumalanga	2,059	84.5	81.9-86.7
Limpopo	3,418	83.9	82.2-85.5
<b>Type of school</b>			
Primary	10,917	85.5	84.3-86.5
Secondary/high	7,589	86.5	85.3-87.6
Combined/intermediate	2,395	85.4	83.4-87.2
Special school	118	95.3	88.6-98.2
<b>Description of household situation</b>			
Not enough money for basic things like food and clothes	1,538	88	85.4-90.2
Have money for food and clothes, but short on many other things	8,559	86.5	85.4-87.5
We have most of the important things, but few luxury goods	8,940	85.5	84.5-86.5
Some money for extra things such as going away for holidays	1,686	83	80.3-85.4

### Intention to test for HIV

The majority of the educators (88.3%) indicated that they intend to be tested for HIV in the future. The lowest proportion intending to test for HIV were among White educators (72%) as compared to other races. There were no differences by school locality, type of school, and annual income.

**Table 26: Educators' Intention to test for HIV in the future by selected demographic characteristics**

Variable	Total	%	95% CI
Total	20,915	88.3	87.5-89.0
<b>Age group</b>			
18-24	635	91.8	87.4-94.8
25-34	3,294	90.5	89.0-91.8
35-44	5,340	91.3	90.3-92.3
45-54	8,572	88.5	87.6-89.4
55+	3,074	79.3	77.2-81.2
<b>Race</b>			
African	16,842	90.7	90.0-91.3
White	1,858	72	69.0-74.8
Coloured	1,556	85.8	83.3-87.9
Indian/Asian	643	79	73.6-83.6
<b>Locality type</b>			
Urban formal	7,268	86	84.5-87.4
Urban informal	2,426	89.5	87.8-91.1
Rural formal	5,657	88.2	86.7-89.5

Variable	Total	%	95% CI
Rural informal	4,693	91.2	89.9-92.3
<b>Annual Income</b>			
High	4,825	86.7	85.2-88.1
Medium	12,583	88.6	87.8-89.4
Low	3,260	89.2	87.7-90.5
<b>Position in the school</b>			
Teacher/educator	15,993	88.7	87.9-89.4
Senior teacher	1,295	85.3	82.6-87.7
Head of department	2,106	86.5	84.5-88.3
Education specialist	57	89.4	78.2-95.2
Deputy principal/Principal	1,426	88	85.8-90.0
<b>Locality type where educator resides</b>			
Urban	11,577	87.4	86.3-88.4
Non-urban	9,102	89.4	88.5-90.3
<b>Province</b>			
Western Cape	1,583	84.9	82.1-87.3
Eastern Cape	2,683	88.9	87.1-90.4
Northern Cape	403	87.5	83.1-90.9
Free State	1,743	85.4	82.3-88.1
KwaZulu-Natal	5,997	89.2	87.9-90.3
North West	733	90.9	88.0-93.1
Gauteng	2,365	89.5	86.9-91.6
Mpumalanga	2,043	87.4	84.8-89.6
Limpopo	3,376	87.3	85.5-88.8
<b>Type of school</b>			
Primary	10,891	88.3	87.3-89.3
Secondary/high	7,543	88.2	86.9-89.4
Combined/intermediate	2,375	87.9	85.6-89.8
Special school	116	93.8	85.8-97.4
<b>Description of household situation</b>			
Not enough money for basic things like food and clothes	1,536	90	88.2-91.6
Have money for food and clothes, but short on many other things	8,506	90	89.1-90.8
We have most of the important things, but few luxury goods	8,915	87.6	86.6-88.6
Some money for extra things such as going away for holidays	1,676	81.6	79.0-84.0

## HIV knowledge

A knowledge index that classified educators as having either high or low knowledge was created based on the knowledge statements using factorial analysis (see Appendix 1). HIV knowledge was overall high (89.5%) with no difference by sex. Generally the highest levels of HIV knowledge were found amongst educators who were 18-24 years old (94.1%), White (93.0%) and Coloured (92.9%), teaching in urban formal areas (90.6%) and rural formal areas (90.1%) and who were based in the Northern Cape (94.8%).

**Table 27: HIV knowledge levels by demographic characteristics**

		Low level of knowledge		High level of knowledge	
Variable	Total	%	95% CI	%	95% CI
<b>Total</b>	20,664	10.5	9.9-11.1	89.5	88.9-90.1
<b>Sex</b>					
Male	5,989	11	9.9-12.2	89	87.8-90.1
Female	14,650	10.3	9.6-11.0	89.7	89.0-90.4
<b>Race</b>					
African	16,618	11.2	10.5-11.9	88.8	88.1-89.5
White	1,848	7	5.8-8.5	93	91.5-94.2
Coloured	1,536	7.1	5.5-9.1	92.9	90.9-94.5
Indian/Asian	636	11.9	8.9-15.8	88.1	84.2-91.1
<b>Age group</b>					
18-24	630	5.9	4.1-8.3	94.1	91.7-95.9
25-34	3,250	8.4	7.3-9.6	91.6	90.4-92.7
35-44	5,247	10.5	9.4-11.6	89.5	88.4-90.6
45-54	8,473	11.1	10.3-12.1	88.9	87.9-89.7
55+	3,052	12.1	10.6-13.7	87.9	86.3-89.4
<b>Race</b>					
African	16,618	11.2	10.5-11.9	88.8	88.1-89.5
White	1,848	7	5.8-8.5	93	91.5-94.2
Coloured	1,536	7.1	5.5-9.1	92.9	90.9-94.5
Indian/Asian	636	11.9	8.9-15.8	88.1	84.2-91.1
<b>Locality type</b>					
Urban formal	7,166	9.4	8.5-10.5	90.6	89.5-91.5
Urban informal	2,378	10.3	8.7-12.1	89.7	87.9-91.3
Rural formal	5,584	9.9	8.8-11.0	90.1	89.0-91.2
Rural informal	4,677	12.8	11.6-14.2	87.2	85.8-88.4
<b>Province</b>					
Western Cape	1,566	6.9	5.2-9.1	93.1	90.9-94.8
Eastern Cape	2,688	9.3	7.9-11.0	90.7	89.0-92.1
Northern Cape	399	5.2	2.8-9.5	94.8	90.5-97.2
Free State	1,716	9.9	8.3-11.7	90.1	88.3-91.7
KwaZulu-Natal	5,903	14	12.8-15.3	86	84.7-87.2
North West	717	10.5	8.3-13.2	89.5	86.8-91.7
Gauteng	2,317	9.8	8.3-11.4	90.2	88.6-91.7
Mpumalanga	2,012	10.5	8.7-12.6	89.5	87.4-91.3
Limpopo	3,346	10.6	9.1-12.3	89.4	87.7-90.9

## Attitudes towards PLHIV

The majority of educators had positive attitudes toward people living with HIV. For example, 88.6% of educators would be willing to buy food from a shopkeeper who they know had HIV and 92.5% were willing to care for a family member with HIV (Table 28). Positive attitudes toward PLHIV did not differ considerably by age group. The overwhelming majority of educators across all age groups agreed that they would be “comfortable talking to at least one member of their family about HIV/AIDS” (Range: 92.6%-93.8%). However, concerns about disclosure of a family member’s HIV positive status were apparent among both older and younger educators and generally across provinces, with majority of these responses arising from KwaZulu-Natal and Mpumalanga (Range 65.9% - 71.9%).

**Table 28: HIV stigma related attitudes**

Variable	Total	%	95% CI
If you knew that a shopkeeper or food seller had HIV, would you buy food?	21,138	88.6	87.8-89.3
Would you be willing to care for a family member with AIDS?	21,125	92.5	91.9-93.1
If a teacher has HIV but is not sick, he or she should be allowed to continue teaching?	21,116	94.7	94.3-95.2
Is it a waste of money to train or give a promotion to someone with HIV/AIDS?	21,103	10.4	9.8-11.1
Would you want to keep the HIV positive status of a family member a secret?	21,077	63.1	62.1-64.1
Are you comfortable talking to at least one member of your family about HIV/AIDS?	21,097	92.9	92.4-93.3
A person would be foolish to marry a person who is living with HIV/AIDS.	21,080	18.3	17.5-19.2

\*multiple responses were allowed

## Sexually transmitted infections

Only a small proportion of educators reported having been diagnosed with an STI three months prior to the survey (1.2% [95% CI: 1.1-1.4]). The most commonly reported symptoms were genital sores/ulcers – 1.5% [95% CI: 1.3-1.8] reported sores or ulcers on genital organs, 0.6% [95% CI: 0.5-0.7] reported genital warts, and 0.9% [95% CI: 0.7-1.1] reported abnormal penile discharge (among males).

Over one third (36.8%) of those who indicated that they had an STI in the last three months were HIV positive (Table 29). Among this group, 33.0% reported an ulcer, 31.3% male urethral discharge and 25.0% genital warts. Compared to the 2004 Educator survey results, all categories of STI infection among those who are HIV positive have increased. For example, in 2004, 23.1% compared to 36.8% were diagnosed with an STI in the last 3 months. The data shows that the likelihood of reporting having had an STI is higher among HIV positive educators.

**Table 29: Nature of reported STI and HIV status among educators reporting having had an STI in the past 3 months (1.2%)**

Variable	Total	HIV+ %	95% CI
Diagnosed with STI in the last three months			
Yes	238	36.8	28.4-46.0
No	15,814	15.0	14.1-16.0
Sores/ulcers on genital organs in the last three months			
Yes	257	33.0	24.3-43.1
No	15,626	15.0	14.2-16.0
Abnormal penile discharge			
Yes	83	31.3	20.0-45.4
No	9,670	14.6	13.6-15.7
Genital warts			
Yes	104	25.0	16.8-35.6
No	15,709	15.2	14.3-16.2

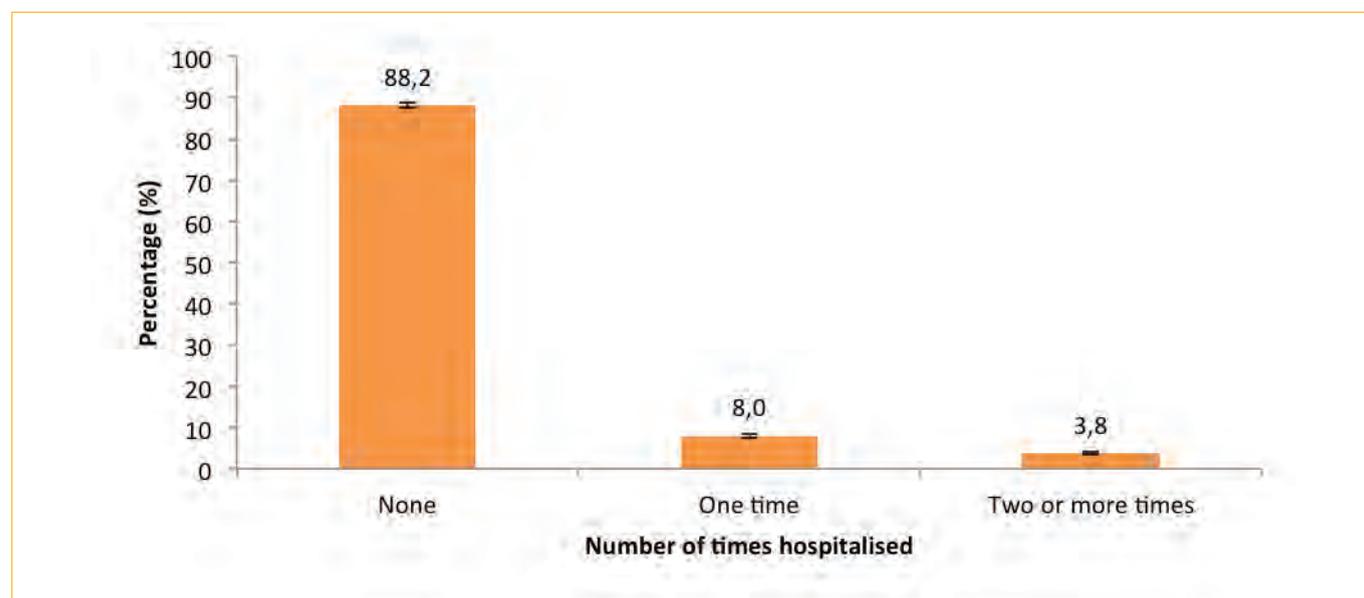
## Health Status of South African educators

### General health

More than half of educators (57.3% [95% CI: 56.3-58.3]) rated their health as good or excellent, (20.8% [95% CI: 19.9-21.7]) and 20.8% (95% CI: 19.9-21.7) rated themselves as being in fair health.

Only 11.8% of the educators indicated that they had been hospitalised in the past 12 months. Among all educators, 8.0% had been admitted once, while 3.8% were admitted two or more times (Figure 13).

**Figure 13: Number of times admitted to hospital during the past 12 months**



Among educators who had been hospitalized (11.8%), the majority (64.4%, [95% CI: 61.8-66.9]) spent a week or less in hospital, while just more than one in ten spent about 2 weeks (11%, [95% CI: 9.6-12.6]), and a further 5.7%, [95% CI: 4.6-6.9] said they spent more than two weeks.

### **Physical and mental health**

The majority of educators (75% [95% CI: 73.7-75.8]) reported having been physically well in the past year, while 22.8% reported having been unwell for 1-7 days, and almost 3.0% had been ill for 2 or more weeks. Most educators (71.3% [95% CI: 70.2-72.3]) reported that their emotional and mental health was not a problem. A lower proportion reported that they had not been well for one week or more (25.8%). A high proportion of educators (83.8% [95% CI: 83.0-84.7]) said poor physical or mental health did not keep them from doing daily activities, whereas 14% (95% CI: 13.3-14.9) said they could not carry out their normal tasks for 1- 7 days because of poor health. A low proportion (1.1% [95% CI: 0.9-1.4]) reported not being able to carry out their tasks for two weeks and more.

### **Utilization of health services**

Overall, 61.1%, of educators reported visiting a health practitioner in the last 6 months (Table ). Utilization of health services was lower amongst African (59.5%) as compared to other race groups. The utilization was highest amongst educators aged 55 years and above as compared to other age groups. Utilization was highest in North West (72.8%) and lowest in Mpumalanga (53.1%).

**Table 30: Profile of educators' health seeking behaviour over time**

Variable	Total	Within the past six months		More than six months but not more than a year ago		More than one year ago		Never	
		%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>Total</b>	20510	61.1	60.0-62.3	20.8	19.9-21.7	13.6	12.9-14.3	4.5	4.0-5.0
<b>Sex</b>									
Male	5961	53.7	51.9-55.6	23.1	21.6-24.6	17.3	15.9-18.7	5.9	5.2-6.8
Female	14549	64.3	63.1-65.6	19.8	18.8-20.8	12.0	11.2-12.8	3.9	3.4-4.5
<b>Race</b>									
African	16492	59.5	58.2-60.8	21.0	20.0-22.0	14.2	13.3-15.0	5.3	4.8-5.9
White	1832	67.6	64.3-70.8	21.2	18.6-24.0	10.6	8.8-12.7	0.6	0.3-1.2
Coloured	1545	67.2	63.9-70.3	18.3	16.0-21.0	12.6	10.6-14.9	1.9	1.3-2.8
Indian/Asian	637	67.8	61.1-73.8	20.4	16.0-25.7	9.9	7.1-13.8	1.9	0.9-3.8
<b>Age</b>									
18-24	625	60.0	54.6-65.1	20.8	17.3-24.8	15.8	12.6-19.5	3.5	2.1-5.6
25-34	3252	56.6	54.2-59.0	21.2	19.5-23.1	16.5	14.8-18.4	5.6	4.6-6.9
35-44	5229	57.1	55.1-59.1	22.9	21.3-24.7	15.1	13.9-16.5	4.8	4.1-5.7
45-54	8391	63.1	61.5-64.6	20.3	19.1-21.5	12.0	11.1-13.0	4.6	3.9-5.3
55+	3022	67.3	64.9-69.7	18.3	16.3-20.4	11.6	10.1-13.4	2.8	2.0-3.7
<b>Province</b>									
Western Cape	1580	65.6	62.4-68.7	19.7	17.0-22.8	12.8	10.6-15.4	1.9	1.2-2.9
Eastern Cape	2659	59.9	56.9-62.8	22.1	19.8-24.6	15.4	13.4-17.6	2.6	1.9-3.6
Northern Cape	396	66.2	58.4-73.2	20.5	15.5-26.7	12.3	8.7-17.3	0.9	0.4-2.1
Free State	1719	72.4	69.6-75.1	19.4	16.7-22.3	6.6	5.5-7.8	1.6	1.1-2.4
KwaZulu-Natal	5914	59.1	56.7-61.4	23	21.1-25.0	13.6	12.2-15.1	4.4	3.5-5.4
North West	701	72.8	68.1-76.9	15.4	12.4-19.0	9.9	7.4-13.0	1.9	1.2-3.1

Variable	Total	Within the past six months		More than six months but not more than a year ago		More than one year ago		Never	
		%	95% CI	%	95% CI	%	95% CI	%	95% CI
Gauteng	2316	62.7	59.6-65.8	19.7	17.6-22.0	12.0	10.5-13.7	5.6	4.3-7.3
Mpumalanga	1965	53.1	48.9-57.2	19.5	17.1-22.1	19.5	17.0-22.2	7.9	6.0-10.4
Limpopo	3280	56.4	53.8-59.0	23	21.0-25.1	12.5	11.1-14.1	8.1	6.7-9.8
<b>Locality type</b>									
Urban formal	7188	63.9	62.1-65.7	20.3	19.0-21.8	11.9	10.9-13.0	3.9	3.1-4.8
Urban informal	2369	60.8	57.1-64.3	20.9	18.6-23.5	12.9	10.8-15.5	5.4	4.0-7.2
Rural formal	5498	59	56.5-61.4	21.5	20.0-23.1	14.1	12.7-15.6	5.4	4.4-6.7
Rural informal	4628	59	56.8-61.1	21	19.3-22.9	16	14.4-17.6	4.1	3.3-5.1
<b>Type of school</b>									
Primary	10693	62.9	61.3-64.4	19.5	18.4-20.7	13	12.1-14.1	4.6	3.9-5.4
Secondary/high	7364	59	57.1-60.9	22.1	20.7-23.5	14.2	13.1-15.5	4.7	3.9-5.6
Combined/intermediate	2353	59.9	56.6-63.1	22.1	19.7-24.8	14.3	12.2-16.6	3.7	2.6-5.2
Special school	119	42.6	33.3-52.5	43.8	33.7-54.4	12.4	6.3-22.9	1.2	0.3-4.9
<b>Locality type</b>									
Urban	11375	63.1	61.6-64.5	20	18.9-21.1	12.6	11.8-13.5	4.3	3.7-5.0
Non-urban	8917	58.6	56.9-60.3	21.7	20.5-23.0	14.9	13.8-16.0	4.8	4.1-5.6

## Non-communicable diseases

One of the growing silent epidemics in South Africa is that of non-communicable diseases (NCDs). Most of the educators reported being diagnosed with high blood pressure (22.1%), diabetes (9.0%), and stomach ulcers (9.1%).

**Table 31: Prevalence of self-reported non-communicable diseases and other ailments**

Diagnosed with the disease in past 5 years	%	95 % CI
High blood pressure	22.1	21.3-23.0
Stomach ulcer	9.1	8.5-9.8
Diabetes	9.0	8.4-9.5
Arthritis	7.2	6.7-7.7
Asthma	5.9	5.5-6.3
Lung or breathing problems	4.3	3.9-4.7
Anaemia	3.3	3.0-3.6
Heart disease	3.1	2.8-3.4
Cataracts	2.7	2.3-3.1
Tuberculosis	1.7	1.5-2.0
Cancer	1.3	1.1-1.5

## Tuberculosis

### Knowledge about TB

High proportions of educators (87.6%) correctly identified TB as an airborne infection which is transmitted by a person with TB, while only 29.8% knew that TB is transmitted through close contact with a person who has untreated TB. The level of correct knowledge about behavioural risk, prevention and cure of TB transmission was generally high amongst educators regardless of race and province.

Although the majority of educators knew that TB is an airborne disease, low proportions of educators in all provinces acknowledged that TB is transmitted through close contact with a person who has untreated TB. The proportions were particularly low for (less than 25%) those in the North West, Mpumalanga, and Limpopo provinces.

The majority of educators (82.0%) had correct knowledge that TB can be prevented when an infected person covers their mouth when coughing or sneezing. A high proportion of educators (94%) were aware that anybody could get TB and there was no difference by sex, race and province. Notably, only a small proportion of educators (6.9%) reported that people with TB were always HIV positive. Knowledge that TB can be cured was near-universal (97% [95% CI: 96.5-97.0]). In addition, the majority of educators had correct knowledge about TB treatment: 94.5% knew that TB can be cured by specific drugs obtained from a health center.

### Prevalence of TB symptoms among Educators

Overall, 10.3% [95% CI: 9.7-11.0] had at least one current self-reported TB related symptom. The prevalence of TB-related symptoms amongst all age groups ranged between 8.3% and 11.5%, and there was no major difference by age. Older educators aged  $\geq 45$  years (10.5% - 11.5%) as well as African educators (11.2%) self-reported the most TB related symptoms compared to other groups.

**Table 32: Prevalence of at least one self-reported TB symptom by sex, age and race**

Variable	Total	%	95% CI
Total	20,171	10.3	9.7-11.0
<b>Sex</b>			
Male	5,820	9.7	8.7-10.8
Female	14,327	10.6	9.8-11.5
<b>Age group</b>			
18-24	609	9.4	6.7-12.9
25-34	3,158	8.3	7.1-9.6
35-44	5,141	9.7	8.6-10.9
45-54	8,292	11.5	10.4-12.7
55+	2,961	10.5	9.0-12.2
<b>Race</b>			
African	16,235	11.2	10.4-12.0
White	1,803	6.0	4.5-8.1
Coloured	1,494	7.8	6.1-9.8
Indian/Asian	613	8.8	6.5-11.8

In this survey, 31.9% [95% CI: 30.8-32.9%] of educators reported having been screened or examined for TB in the past. Among these 13.7% [95% CI: 12.7-14.9] indicated that they had been diagnosed with TB, with 96% of those diagnosed reporting that they were treated for TB. Nearly all of those who reported receiving TB treatment [98.2%, 95% CI: 96.9-98.9] indicated that they had completed their treatment.

### **TB Related Stigma**

Educators were asked to respond to a 5-item social distance scale, which assessed their intention to engage in social and physical interaction with a person who has TB (see Appendix 1). In general, educators were willing to share meals with someone with TB (52.4%; [95% CI: 51.3-53.4]), work or study with someone who has TB (78.0%; [95% CI: 77.0-79.0]), hug a person with TB (74.9%; [95% CI: 73.8-75.9]), kiss someone with TB (21.7% [95% CI: 20.8-22.7]) and have sex with someone who has TB (33.2%; [95% CI: 32.1-34.2]).

Results show that there is no difference between males and females in their attitude towards people with TB. However, a higher proportion of White and Indian educators reported that they would not share a meal with someone with TB, (54.2 % and 49.8% respectively), compared to African (39.2%) and Colored (33.1%) educators. Similarly, a higher proportion of White and Indian educators reported that they would not work with or hug a person who has TB compared to African and Coloured educators.

**Table 33: Profile of TB stigma related attitudes stratified by sex and race**

Variable	%	95% CI
<b>Share meals with someone with TB</b>		
<b>Sex</b>		
Males	52.4	50.7-54.2
Females	52.3	51.1-53.6
<b>Race</b>		

Variable	%	95% CI
African	53.9	52.7-55.0
White	37.8	34.5-41.2
Colored	57.3	53.2-61.3
Indian/Asian	43.8	38.9-48.8
<b>Work or study with someone who has TB</b>		
Males	77.9	76.3-79.4
Females	78.0	76.9-79.2
<b>Race</b>		
African	79.6	78.6-80.6
White	66.3	63.0-69.4
Colored	80.9	77.8-83.5
Indian/Asian	60.4	55.4-65.2
<b>Hug a person with TB</b>		
<b>Sex</b>		
Males	74.3	72.7-75.9
Females	75.1	73.9-76.3
<b>Race</b>		
African	77.0	75.9-78.1
White	59.5	56.0-62.9
Colored	77.4	74.2-80.3
Indian/Asian	55.5	49.7-61.0
<b>Have sex with someone who has TB</b>		
Males	35.2	33.5-36.8
Females	32.3	31.1-33.5
<b>Race</b>		
African	36.7	35.5-37.8
White	17.1	15.0-19.5
Colored	22.1	19.3-25.2
Indian/Asian	14.3	10.5-19.1

## Substance use

### Alcohol

Most educators (74.7%) reported that they had consumed not alcohol in the past 12 months. The majority of non-drinkers were female (82.5%), compared to males (56.1%). Not consuming alcohol increased with age from 48% among 18-24 year olds, to 78.9% among educators aged 55 years and older.

While fewer White educators (41.7%), had not consumed alcohol in the past 12 months, those who did so were mostly low risk (56.0%) alcohol drinkers. A lower proportion of widows or widowers (10.3%) were low risk drinkers. Among educators who had consumed alcohol in the past 12 months, lower income earners were more likely to be to high risk drinkers (11.2%) in comparison to other income groups. A similar pattern was observed for level of education and household situation. Educators with low socio-economic status were more likely to be high-risk drinkers.

**Table 34: Self-reported Alcohol use by selected demographic characteristics**

		Non-drinkers		Low-risk drinkers*		High-risk drinkers*	
Variable	Total	%	95% CI	%	95% CI	%	95% CI
<b>Sex</b>							
Male	5,448	56.1	54.1-58.0	34.4	32.5-36.3	9.6	8.5-10.7
Female	13,739	82.5	81.1-83.8	16.3	15.0-17.7	1.2	0.9-1.5
<b>Age group</b>							
18-24	562	48.0	41.1-55.1	47.9	40.9-55.0	4.0	2.6-6.3
25-34	2,933	63.3	60.6-65.9	31.5	28.9-34.2	5.2	4.2-6.4
35-44	4,918	75.8	73.9-77.7	19.8	18.1-21.7	4.3	3.6-5.2
45-54	7,900	78.6	77.2-79.9	18.1	16.9-19.5	3.3	2.8-3.8
55+	2,864	78.9	76.5-81.1	19.0	16.8-21.2	2.1	1.6-2.9
<b>Race</b>							
African	15,546	79.9	78.8-81.0	16.1	15.1-17.2	4	3.6-4.4
White	1,667	41.7	37.7-45.9	56	51.8-60.2	2.3	1.2-4.2
Coloured	1,380	61.9	57.6-66.0	35.2	31.2-39.4	2.9	2.0-4.1
Indian/Asian	570	66.0	59.6-71.9	31.9	26.1-38.4	2.1	1.0-4.2
<b>Marital status</b>							
Married	10,708	75.1	73.6-76.6	21.3	19.9-22.8	3.5	3.1-4.1
Not married	6,175	72.5	70.6-74.4	23.2	21.5-25.1	4.2	3.6-4.9
Divorced / separated	1,137	69.8	65.9-73.3	27.1	23.6-30.9	3.2	2.2-4.5
Widower / Widow	1,134	87.2	84.6-89.4	10.3	8.3-12.8	2.5	1.3-4.6
<b>Annual Income</b>							
High	1,806	58.7	55.5-62.0	34.3	31.2-37.5	7.0	5.7-8.6
Medium	3,092	54.7	52.2-57.1	34.4	32.0-36.8	10.9	9.5-12.5
Low	503	53.8	48.4-59.1	35.0	30.2-40.2	11.2	8.4-14.9
<b>Highest qualification</b>							
First degree and above	4,194	56.3	54.1-58.5	34.4	32.3-36.6	9.3	8.1-10.6
Diplomas	1,128	55.7	51.9-59.5	33.7	30.0-37.6	10.6	8.6-12.9
Grade 12 and under	99	46.9	35.3-58.8	41.7	30.9-53.4	11.4	5.4-22.5
<b>Description of household situation</b>							
Not enough money for basic things like food and clothes	330	64	57.0-70.4	25.4	19.6-32.3	10.6	6.9-15.9
Have money for food and clothes, but short on many other things	2,182	57.3	54.5-60.0	32.3	29.6-35.0	10.5	8.9-12.3
We have most of the important things, but few luxury goods	2,435	55.6	52.8-58.3	34.8	32.2-37.6	9.6	8.2-11.2
Some money for extra things such as going away for holidays	424	44.5	38.5-50.7	50.1	44.0-56.1	5.4	3.4-8.5

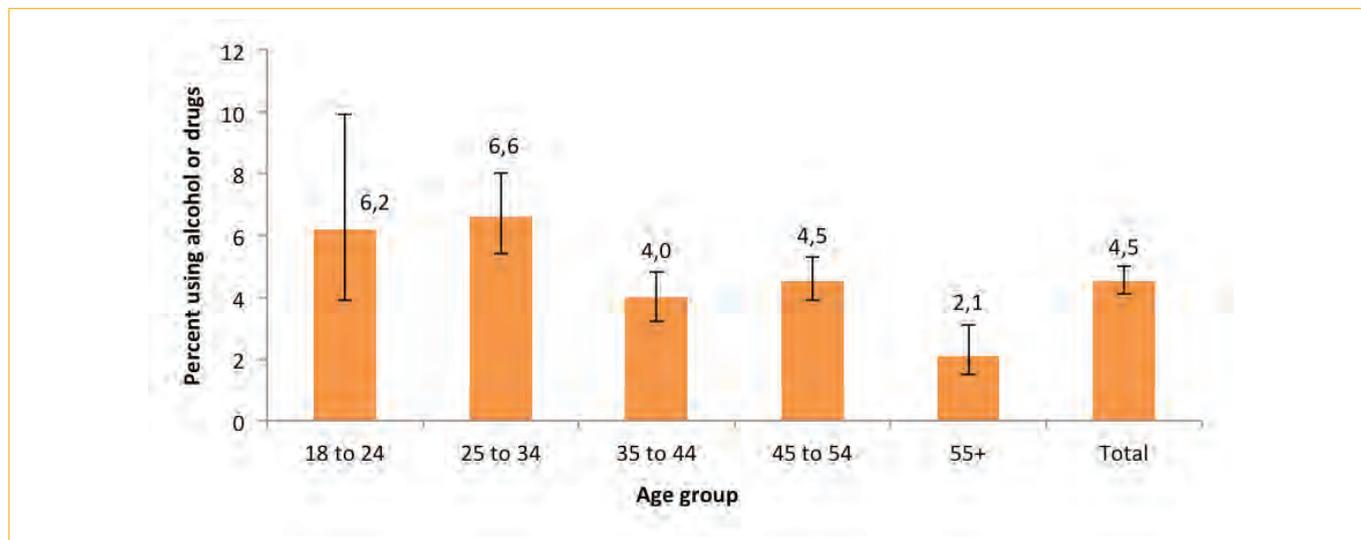
\* The Alcohol use risk score is based on a questionnaire for Alcohol Use Disorder Identification Test (AUDIT). On this scale low risk drinkers scored between 1 to 7 and high risk drinkers scored  $\geq 8$ .

### Use of alcohol or drugs during sex

A low proportion of educators (4.5%, 95%CI: 4.1-5.0) reported that they used alcohol or drugs the last time they had sexual intercourse and among this group, males (8.0% [95% CI: 7.1-9.0]) were more likely to report that they did so in comparison to females (2.6% [95% CI: 2.2-3.1]).

Alcohol or drug use at last sexual intercourse appeared to decrease with age, and the proportion was higher among educators younger than 35 years of age compared to older educators.

**Figure 14: Use of alcohol or drugs during last sexual intercourse, South Africa 2015/2016**



### Current Use of Tobacco products

Less than 10% of educators indicated that they were current users of tobacco products (Table 35). Males were almost four times more likely to use tobacco in comparison to females. Tobacco use appeared to decrease with age and the proportion was higher among educators younger than 35 years of age compared to older educators. Coloured educators (23.3%) followed by Whites (17.1%) had a higher proportion of tobacco use compared to Africans and Indians. The use of tobacco products higher in urban formal areas than any other locality type (11.6. %). The Western Cape, Northern Cape and Free State provinces had a higher proportion of current tobacco users in comparison to other provinces.

**Table 35: Self-reported current tobacco use by selected demographic characteristics**

Variable	Total	%	95% CI
Total	20,511	9.1	8.5-9.8
<b>Sex</b>			
Male	5,949	18.1	16.8-19.4
Female	14,550	5.2	4.6-5.9
<b>Age group</b>			
18-24	628	14.9	9.7-22.2
25-34	3,212	10.9	9.5-12.5
35-44	5,251	8.2	7.2-9.4
45-54	8,388	8.4	7.7-9.2

Variable	Total	%	95% CI
55+	3,032	9.3	8.0-10.8
<b>Race</b>			
African	16,534	6.7	6.2-7.3
White	1,819	17.1	14.5-20.1
Coloured	1,520	23.3	20.4-26.4
Indian/Asian	622	9.9	7.4-13.2
<b>Locality type</b>			
Urban formal	7,150	11.6	10.5-12.7
Urban informal	2,372	9.8	8.4-11.5
Rural formal	5,529	7.1	6.2-8.2
Rural informal	4,605	6.0	5.2-7.0
<b>Province</b>			
Western Cape	1,579	16.8	14.3-19.6
Eastern Cape	2,641	7.4	6.0-9.1
Northern Cape	404	21.9	14.3-32.0
Free State	1,710	12.1	10.2-14.2
KwaZulu-Natal	5,832	6.1	5.3-7.0
North West	717	10.3	8.0-13.1
Gauteng	2,310	9.7	8.0-11.6
Mpumalanga	2,009	7.3	5.7-9.4
Limpopo	3,320	7.5	6.4-8.8

## Drug use

Consistent with previous national surveys, the reported use of illicit drugs together with prescribed drugs was very low. Overall, 1.4 % of educators reported they had ever smoked marijuana.

### Sedative use

Only 1.7% indicated that they had used sedatives/sleeping pills.

## Educators' responsibilities and workload

The majority of educators (64.0%) indicated that teaching was their first choice of career, with 71.8% also indicating that they had not considered changing their careers. Among those who had considered a career change,<sup>1</sup> the main reasons were: poor salaries (32.1%), facing too many demands (20.0%) and an increased number of learners in the class (10.8%).

<sup>1</sup> A question to assess the intention to leave the profession and the reasons was asked twice in the survey. We asked this question in the contexts of attrition in general and again when we assessed attrition as it relates to the workload and responsibilities. Although in the majority of cases the proportions were similar we also noted differences and these are reported in the respective sections.

With regard to workload during the past 3 years, 46.8% indicated that their workload had increased, while around a third (31.2%) stated that the workload had remained relatively unchanged. Some 17% of educators indicated the following reasons for their workload increase: increase in the number of learners in each class; lack of parental involvement; learners having a limited understanding of the language medium used to teach; ill-discipline among learners; shortage of educators, and; educator absenteeism.

**Table36: Educator career choices, career changes and workload**

Variable	Total	%	95% CI
<b>Career choice (n = 21,192)</b>			
Teaching was first choice	13,636	64.0	62.9-65.0
Teaching was not first choice	7,556	36.0	35.0-37.1
<b>Career change (n = 21,177)</b>			
Had considered changing career	5,827	28.2	27.2-29.2
Had not considered changing career	15,350	71.8	70.8-72.8
<b>Reasons for considering career change (n = 9,778)</b>			
Class size	1,058	10.8	10.2-11.5
Too many demands on educators	1,958	20.0	19.2-20.8
Ability to teach effectively compromised by numerous curriculum changes	907	9.3	8.7-9.9
Educators have less time for preparation and marking	555	5.7	5.2-6.2
Status of profession has declined	767	7.8	7.3-8.4
Educators teach subjects for which they are not trained	462	4.7	4.3-5.2
Educators feel depressed	930	9.5	8.9-10.1
Salaries are poor	3,142	32.1	31.2-33.1
<b>Workload in past three years (n = 20,382)</b>			
Increased a lot	9,169	46.8	45.7-48.0
Increased a little	2,856	13.8	13.2-14.4
Remained the same	6,596	31.2	30.1-32.2
Decreased	1,579	7.3	6.8-7.8
Do not know	182	0.9	0.8-1.1
<b>Reasons for change in workload (n = 70,945)*</b>			
Increase in class size	11,902	16.8	16.5-17.1
Learners limited understanding of the language used to teach	11,849	16.7	16.4-17.0
Lack of parental involvement in children's education	11,861	16.7	16.4-17.0
Shortage of educators	11,809	16.6	16.4-16.9
Absenteeism among colleagues	11,717	16.5	16.2-17.8
Lack of discipline amongst learners	11,807	16.6	16.4-16.9

\*Multiple responses were allowed. Confidence intervals are based on the assumption that the responses are independent.

According to the South African Schools Act, a maximum of 40 learners is the recommended class size for learners in Grades 1 to 12, while for Grade R the recommendation is 30 learners per class (Government Gazette, 2013). Large class sizes of above 40 learners were found in Gauteng (42.0%), Eastern Cape (43.4%), North West (43.8%), KwaZulu-Natal (44.0%), Mpumalanga (45.3%) and Limpopo (49.1%) while those in the Northern Cape (36.0%), Western Cape (37.9%) and Free State (39.4%) were more likely to have fewer than 40 learners each. All school localities had average class sizes of over 40 learners, with higher class sizes being found in formal rural areas (45.4 learners), informal rural areas (45.1 learners) and informal urban areas (44.9).

The majority of educators taught two or more subjects, with the lowest average number of subjects being taught being in secondary schools (1.91 subjects). Educators in Western Cape, Eastern Cape and Northern Cape provinces taught the highest number of subjects. The average number of subjects taught by educators in rural schools was slightly higher compared to the number of subjects taught by educators teaching in urban areas.

Educators in the North West and Limpopo provinces had the most teaching experience (19.2 years and 19.4 years respectively). KwaZulu-Natal educators had the least amount of teaching experience (14.8 years). Coloured (18.9%) and Indian/Asian (18.8%) educators had the most years of teaching experience among all the races.

**Table 37: Average class sizes, average number of subjects taught and teaching experience by selected demographic characteristics**

Variable	Average class size		Average number of subjects taught		Average number of years of teaching experience	
	Mean (n)	95% CI	Mean (n)	95% CI	Mean (years)	95% CI
<b>Race</b>						
African	45.3	44.7-45.8	2.6	2.5-2.6	16.4	16.2-16.7
White	31.2	30.3-32.0	2.3	2.3-2.4	16.5	15.6-17.3
Coloured	37.9	36.9-39.5	2.7	2.5-2.9	18.9	18.0-19.9
Indian/Asian	38.8	37.2-40.4	2.3	2.1-2.5	18.8	17.5-20.0
<b>Province</b>						
Western Cape	37.9	36.6-39.0	2.7	2.5-2.9	17.9	17.0-18.8
Eastern Cape	43.4	41.8-45.00	2.7	2.6-2.8	17.6	17.0-18.2
Northern Cape	36.0	32.7-39.3	2.7	2.4-3.0	16.0	14.3-17.2
Free State	39.4	37.8-41.0	2.4	2.3-2.5	17.0	16.2-17.8
KwaZulu-Natal	44.0	42.9-45.2	2.6	2.6-2.7	14.8	14.3-15.2
North West	43.8	42.1-45.5	2.6	2.3-2.8	19.4	18.2-20.6
Gauteng	42.0	40.4-43.5	2.4	2.3-2.5	15.7	15.0-16.4
Mpumalanga	45.3	43.6-47.0	2.3	2.2-2.4	16.2	15.5-16.9
Limpopo	49.1	47.8-50.4	2.6	2.5-2.7	19.2	18.7-19.8
<b>Locality Type</b>						
Urban formal	40.0	39.1-40.9	2.5	2.4-2.6	16.7	16.3-17.1
Urban informal	44.9	43.8-46.1	2.4	2.3-2.6	16.8	16.0-17.6
Rural formal	45.4	44.4-46.4	2.7	2.6-2.7	17.6	17.1-18.1
Rural informal	45.1	44.0-46.2	2.7	2.7-2.8	15.8	15.3-16.2

Variable	Average class size		Average number of subjects taught		Average number of years of teaching experience	
	Mean (n)	95% CI	Mean (n)	95% CI	Mean (years)	95% CI
<b>School Type</b>						
Primary school	41.7	41.0-42.4	3.0	2.9-3.0	17.3	16.9-17.6
Secondary school	45.3	44.3-46.3	1.9	1.9-2.0	15.7	15.3-16.1
Combined/intermediate	44.5	42.8-46.2	2.6	2.6-2.7	16.8	16.2-17.4
Special school	46.0	38.5-53.5	2.3	1.9-2.8	17.7	14.2-21.1

Subjects taught were grouped according to ten learning areas as indicated in Table 38. The highest proportion (61.1%) of educators taught foundation languages, which consisted of 33 languages, while the lowest proportion (0.8%) of educators taught additional languages, which consisted of 28 languages. There were low proportions of educators teaching mathematics (4.7%), natural sciences (5.0%) and technology (5.5%) learning areas. The proportions of educators teaching social sciences (6.9%) and economics and management (7.2%) were also relatively low.

**Table 38: Subjects taught within each learning area**

Learning Areas	Subjects (n=20750)	Total	%	95% CI
Additional languages	Arabic Second Additional Language ; German Home Language; German Second Additional Language; Gujarati First Additional Language; Gujarati Home Language; Gujarati Second Additional Language ; Hebrew Second Additional Language ; Hindi First Additional Language ; Hindi Home Language; Hindi Second Additional Language; Italian Second Additional Language; Latin Second Additional Language; Modern Greek Second Additional Language Portuguese First Additional Language; Portuguese Home Language; Portuguese Second Additional; Serbian Home Language ; Serbian Second Additional Language; Spanish Second Additional Language; Tamil First Additional Language; Tamil Home Language ; Tamil Second Additional Language ; Telegu First Additional Language; Telegu Home Language; Telegu Second Additional Language; Urdu First Additional Language; Urdu Home Language ; Urdu Second Additional Language	179	0.8	0.7-1.0
Arts and culture	Arts and Culture; Dance Studies; Design; Dramatic Arts; Music; Visual Arts	248	1.1	1.0-1.3
Life orientation	Life Skills; Life Orientation; Sport and Exercise Science; Religion Studies	785	3.6	3.3-3.9
Mathematics	Mathematics; Mathematical Literacy	1,040	4.7	4.4-5.1
Natural science	Natural Sciences; Agricultural Management Practices; Agricultural Sciences; Physical Sciences ; Equine Studies; Nautical Science	1,086	5.0	4.7-5.4
Technology	Natural Sciences and Technology; Technology; Agricultural Technology; Civil Technology; Electrical Technology; Mechanical Technology; Engineering Graphics and Design; Computer Applications Technology; Information Technology; Consumer Studies	1,086	5.5	5.1-6.1
Social science	Social Sciences; Geography; History	1,453	6.9	6.4-7.4
Economic and management science	Economic and Management Sciences; Accounting; Business Studies; Economics; Hospitality Studies; Tourism	1,606	7.2	6.6-7.7
Foundation languages	Afrikaans First Additional Language; Afrikaans Home Language; Afrikaans Second Additional Language; English First Additional Language ; English Home Language; English Second Additional Language; IsiNdebele First Additional Language; IsiNdebele Home Language; IsiNdebele Second Additional Language; IsiXhosa First Additional Language ; IsiXhosa Home Language; IsiXhosa Second Additional Language; IsiZulu First Additional Language; IsiZulu Home Language; IsiZulu Second Additional Language; Sepedi First Additional Language; Sepedi Home Language; Sepedi Second Additional Language; Sesotho First Additional Language; Sesotho Home Language; Sesotho Second Additional Language; Setswana First Additional Language; Setswana Home Language; Setswana Second Additional Language ; SiSwati First Additional Language; SiSwati Home Language; SiSwati Second Additional Language; Tshivenda First Additional Language; Tshivenda Home Language; Tshivenda Second Additional Language; Xitsonga First Additional Language ; Xitsonga Home Language; Xitsonga Second Additional Language	12,387	61.1	59.7-62.4
Other	All other subjects not covered in other categories	880	4.0	3.7-4.5

A comparison was made of the proportion of educators teaching these learning areas versus the proportion of educators who reported that they were trained to teach the learning areas. With the exception of natural sciences (5.0% versus 5.5%) and additional languages (0.8% versus 0.9%) more educators were teaching mathematics, life orientation and social sciences, compared to those that were actually trained in those learning areas. The largest variance was observed for mathematics and mathematics literacy, where 4.7% of educators taught this learning area but only 1.6% of educators were trained to teach therein. The proportion of educators teaching arts and culture (1.1%), economics and management (7.2%) and foundation languages (61.1%) were similar to the proportion of educators trained to teach these learning areas (1.0%, 7.1%, 61.1% respectively).

**Table 39: Learning areas currently teaching versus learning areas trained to teach**

Learning Areas	Learning Areas Teaching (n=20750)			Learning Areas Trained to Teach (n=20750)		
	Total	%	95% CI	Total	%	95% CI
Mathematics	1,040	4.7	4.4-5.1	352	1.6	1.4-1.9
Life orientation	785	3.6	3.3-3.9	345	1.7	1.5-2.0
Natural sciences	1,086	5.0	4.7-5.4	1134	5.5	5.1-5.9
Technology	1,086	5.5	5.1-6.1	703	3.5	3.1-3.8
Social sciences	1,453	6.9	6.4-7.4	1055	5.3	4.8-5.8
Arts and culture	248	1.1	1.0-1.3	204	1.0	0.8-1.3
Economics and management	1,606	7.2	6.6-7.7	1568	7.1	6.5-7.7
Foundation languages	12,387	61.1	59.7-62.4	12423	61.1	59.9-62.3
Additional languages	179	0.8	0.7-1.0	196	0.9	0.7-1.0
Other	880	4.0	3.7-4.5	2590	12.4	11.7-13.1

We compared the level of training versus teaching at school level (Table 40). Most educators were not teaching at the level they were trained to teach. For example, only 7% of educators trained to teach at junior secondary school were actually teaching there.

**Table 40: Teaching level versus level trained to teach**

Variable	Level Teaching (n=20392)			Level Trained to Teach (n=19301)		
	Total	%	95% CI	Total	%	95% CI
Junior primary	3,760	20.4	18.9-21.9	3028	17.6	16.3-19.1
Senior primary	3,312	16.6	15.5-17.7	3429	17.9	16.9-19.0
Junior secondary	1,305	6.5	5.9-7.3	1199	6.6	6.0-7.2
Senior secondary	6,910	30.7	28.2-33.4	7840	37.9	35.5-40.3
Foundation	2,790	13.5	12.6-14.5	2124	10.7	35.5-40.3
Intermediary	2,315	12.5	11.3-13.3	1681	9.4	8.6-10.2

## Potential Attrition from the Public Education System<sup>2</sup>

Overall, over one third (34.5%) of educators indicated they had an intention to leave the education profession. A higher proportion of males (40.2%) indicated their intention to leave compared to females (32.1%). Fewer African educators (33.0%) reported an intention to leave compared to educators from other race groups. Educators who were younger than 35 years were more likely to intend to leave the profession in comparison to older educators. Most educators from the North West province (46.4%) indicated their intention to leave, with Mpumalanga (26.6%) and Limpopo (26.5%) reporting the lowest proportions intending to leave.

Most educators at secondary school level (42.9%) reported their intention to leave compared to other school types. More educators who were at senior ranks at schools indicated their intention to leave compared to others, for example education specialists (48.3%). Over a third of educators with a first degree or higher qualification (37.9%) indicated an intention to leave.

**Table 41: Intention to leave by selected demographic characteristics**

Variable	Total	%	95% CI
Total	21,077	34.5	33.4-35.7
<b>Sex</b>			
Male	6,124	40.2	38.4-41.9
Female	14,953	32.1	30.8-33.4
<b>Race</b>			
African	16,990	33.0	31.7-34.3
White	1,875	39.2	35.3-43.4
Coloured	1,563	41.6	37.5-45.8
Indian/Asian	647	43.3	38.4-48.2
<b>Age group</b>			
18-24	642	35.4	29.6-41.6
25-34	3,314	41.6	39.3-44.0
35-44	5,386	38.8	36.8-40.8
45-54	8,645	33.9	32.3-35.4
55+	3,103	21.6	19.6-23.8
<b>Province</b>			
Western Cape	1,596	39.7	36.0-43.5
Eastern Cape	2,740	30.6	27.4-34.1
Northern Cape	409	36.7	27.9-46.5
Free State	1,763	42.4	38.2-46.7
KwaZulu-Natal	5,995	29.6	27.5-31.8
North West	738	46.4	41.2-51.6
Gauteng	2,381	45.4	42.2-48.7
Mpumalanga	2,059	26.6	23.9-29.6
Limpopo	3,421	26.5	24.0-29.1

<sup>2</sup> A question to assess the intention to leave the profession and the reasons was asked twice in the survey. We asked this question in the contexts of attrition in general and again when we assessed attrition as it relates to the workload and responsibilities. Although in the majority of cases the proportions were similar we also noted differences and these are reported in the respective sections.

Variable	Total	%	95% CI
<b>Type of School</b>			
Primary school	1,1140	30.8	29.2-32.4
Secondary/high school	7,779	42.9	41.0-44.8
Combined/intermediate	1,943	27.9	24.5-31.6
Special school	14	18.8	5.5-48.0
Other (specify)	73	22.7	10.6-42.2
<b>Position in School</b>			
Teacher/educator	16,123	34.4	33.1-35.7
Senior teacher	1,309	35.1	31.8-38.7
Head of department	2,113	37.9	35.3-40.6
Education specialist	57	48.3	30.8-66.2
Deputy principal/Principal	1,449	30.2	27.2-33.4
<b>Highest Educational Qualification</b>			
First degree and above	15,535	37.9	36.6-39.2
Diplomas	4,826	27.0	25.2-28.8
Grade 12 and under	629	12.4	9.8-15.4

With regard to intention to leave, the main reasons cited were low salary (40.0%), followed by workload (25.6%). In addition, among those who indicated low salary as their main concern, high proportions were African (43.6%), male (44.9%), aged 35-44 years (43.7%), from Limpopo province (52.7%), and teaching in an urban informal locality (45.9%). Females (28.8%) and educators from the Free State (32.7%), North West (29.4%) and Mpumalanga (28.8%) as well as those teaching in rural informal areas (28.7%) indicated workload as the primary reason for intending to leave.

**Table 42: Reasons cited for intending to leave the education profession by selected demographic characteristics**

	Inability to cope with CAPS		Workload		Low salary		Violence at school		Ill-discipline of learners/students		HIV/AIDS		Other		Total
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	
<b>Total</b>	7.2	6.3-8.1	25.6	23.9-27.3	40.0	38.0-41.9	1.2	0.9-1.6	11.8	10.7-13.1	0.1	0.0-0.1	14.2	13.0-15.5	5900
<b>Sex</b>															
Male	6.4	5.1-8.0	19.8	17.6-22.2	44.9	42.0-47.8	1.2	0.8-1.9	10.7	9.1-12.5	0.1	0.0-0.2	17.0	14.9-19.2	2039
Female	7.6	6.6-8.8	28.8	26.7-30.9	37.3	34.8-39.8	1.2	0.8-1.7	12.4	11.0-14.1	0.1	0.0-0.2	12.7	11.2-14.3	3861
<b>Age group</b>															
<24	5.4	2.4-11.5	25.2	18.5-33.4	33.8	25.8-42.9	1.3	0.4-4.3	18.1	12.8-24.8	0.0		16.3	10.6-24.1	197
25-34	4.6	3.5-6.2	20.1	17.4-23.1	40.7	36.6-44.8	2.0	1.3-3.1	14.6	12.1-17.5	0.1	0.0-0.4	17.9	15.3-20.8	1191
35-44	6.9	5.6-8.5	25.8	23.0-28.8	43.7	40.1-47.3	1.1	0.6-2.1	9.3	7.7-11.2	0.0	0.0-0.2	13.2	11.3-15.3	1626
45-54	8.3	6.9-9.9	27.4	24.8-30.2	40.2	37.3-43.3	0.7	0.5-1.2	10.4	8.9-12.2	0.1	0.0-0.2	12.9	11.3-14.7	2334
55+	9.1	6.5-12.6	28.6	23.7-34.1	29.0	24.7-33.7	1.6	0.7-3.5	16.9	13.0-21.6	0.2	0.1-0.7	14.6	11.1-18.9	550
<b>Race</b>															
African	8.0	7.0-9.1	25.8	23.8-27.8	43.6	41.3-45.9	1.1	0.8-1.6	8.9	7.8-10.2	0.1	0.0-0.1	12.6	11.4-13.8	4481
White	3.2	2.0-5.1	25.4	20.7-30.8	29.6	25.2-34.4	1.0	0.4-2.3	20.4	16.0-25.8	0.2	0.1-0.8	20.1	16.2-24.8	611
Coloured	6.0	4.0-8.8	23.8	19.5-28.8	26.2	20.2-33.3	1.8	1.0-3.3	23.0	19.0-27.6	0.1	0.0-0.6	19.1	15.3-23.5	558
Indian/Asian	4.6	2.8-7.6	27.4	21.4-34.3	28.8	22.5-36.1	2.1	0.8-5.0	19.2	13.6-26.5	0.0		17.9	13.0-24.2	242
<b>Locality type</b>															
Urban formal	6.2	5.2-7.5	24.6	22.3-27.1	35.9	32.9-38.9	1.3	0.9-1.9	15.0	13.1-17.1	0.1	0.0-0.2	16.9	14.9-19.2	2489
Urban informal	5.6	3.8-8.3	23.0	19.0-27.4	45.9	39.5-52.5	1.0	0.4-2.2	12.4	9.4-16.3	0.0		12.1	9.5-15.2	762
Rural formal	8.3	6.5-10.5	27.3	23.8-31.0	41.7	37.9-45.6	1.4	0.7-2.7	9.3	7.0-12.1	0.1	0.0-0.3	12.0	9.9-14.4	1349
Rural informal	9.2	6.9-12.2	28.7	25.0-32.7	43.0	39.0-47.1	1.0	0.5-1.8	6.8	5.0-9.0	0.1	0.0-0.4	11.3	9.3-13.7	1050
<b>Province</b>															
Western Cape	6.5	4.2-10.0	27.7	23.1-32.8	22.1	16.4-29.1	1.4	0.7-2.8	23.3	18.6-28.7	0.1	0.0-0.6	18.9	15.0-23.5	505
Eastern Cape	9.2	6.5-13.0	24.8	20.0-30.3	41.8	36.3-47.5	0.6	0.2-1.8	10.2	7.5-13.8	0.0		13.4	9.6-18.4	743

	Inability to cope with CAPS		Workload		Low salary		Violence at school		Ill-discipline of learners/students		HIV/AIDS		Other		Total
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	
Northern Cape	7.8	3.8-15.2	28.3	19.3-39.5	23.0	14.7-34.2	1.8	0.5-6.7	24.5	16.5-34.8	0.0		14.5	9.5-21.5	132
Free State	9.9	7.8-12.5	32.7	27.2-38.7	31.8	26.5-37.7	1.0	0.4-2.5	8.7	6.2-12.1	0.3	0.1-1.1	15.6	12.4-19.5	576
KwaZulu-Natal	7.3	5.8-9.2	20.6	18.1-23.4	44.9	41.5-48.3	2.3	1.4-3.8	10.7	8.8-13.1	0.2	0.1-0.6	13.9	11.8-16.4	1533
North West	5.0	3.0-8.3	29.4	22.0-38.2	45.2	36.5-54.2	0.0		10.4	6.3-16.6	0.0		9.9	7.1-13.7	258
Gauteng	5.9	4.4-7.8	24.9	21.4-28.8	40.1	35.6-44.7	1.0	0.5-1.8	13.1	10.5-16.4	0.0		15.1	12.6-18.0	951
Mpumalanga	8.7	5.9-12.6	28.8	23.1-35.1	41.4	35.5-47.6	1.1	0.4-2.9	6.5	3.6-11.5	0.0		13.5	10.1-17.7	425
Limpopo	4.6	3.0-7.0	22.4	18.9-26.5	52.7	48.6-56.8	1.5	0.8-2.7	6.8	5.0-9.2	0.1	0.0-0.6	11.9	9.4-15.0	779

### **Job satisfaction and stress at work**

Around half of educators (51.9%) expressed a moderate degree of satisfaction with their jobs. Educators who reported the lowest job satisfaction were White (23.4%), aged 18-24 years (19.4%), teaching in rural informal areas (18.7%), from Mpumalanga (18.2%) and KwaZulu-Natal (19.7), teaching in combined/intermediate schools (20.3%) and holding the rank of education specialists (15.7%).

**Table 43: Job satisfaction index**

Variable	Low		Medium		High		
	%	95% CI	%	95% CI	%	95% CI	
<b>Total</b>	25.2	24.0-26.3	51.9	50.7-53.0	23	21.9-24.0	15,809
<b>Sex</b>							
Male	24.8	23.0-26.7	50.4	48.3-52.4	24.8	23.1-26.7	4,450
Female	25.3	24.0-26.7	52.5	51.1-53.9	22.2	21.0-23.3	11,359
<b>Race</b>							
African	24.8	23.6-26.1	51.4	50.0-52.7	23.8	22.6-25.0	12,776
White	23.4	20.0-27.3	54.7	50.8-58.6	21.8	18.3-25.8	1,303
Coloured	27.1	23.6-30.9	55.5	51.5-59.4	17.4	15.0-20.2	1,236
Indian/Asian	36.4	29.1-44.3	45.5	38.5-52.6	18.2	13.3-24.3	483
<b>Age group</b>							
18-24	19.4	15.5-24.0	59.5	53.8-65.0	21.1	17.0-25.8	512
25-34	24	21.7-26.5	52.1	49.4-54.8	23.9	21.6-26.4	2,532
35-44	26.5	24.6-28.6	49.7	47.4-52.0	23.8	21.7-25.9	3,864
45-54	25.4	23.8-27.2	52.5	50.7-54.2	22.1	20.7-23.6	6,533
55+	24.8	22.3-27.5	51.7	49.0-54.3	23.6	21.4-25.9	2,369
Total	25.2	24.0-26.3	51.9	50.7-53.0	23	21.9-24.0	15,810
<b>Locality type,</b>							
Urban formal	30.3	28.5-32.1	51	49.4-52.6	18.8	17.4-20.2	7,216
Urban informal	30	26.3-33.9	50.4	47.1-53.8	19.6	17.1-22.3	2,372
Rural formal	22.8	20.8-25.0	52.2	50.3-54.0	25	23.0-27.1	5,596
Rural informal	18.7	16.9-20.7	52.7	50.5-54.8	28.6	26.6-30.7	4,685
<b>Province</b>							
Western Cape	25.2	21.6-29.2	56.5	52.4-60.6	18.2	15.1-21.9	1,237
Eastern Cape	22.7	19.6-26.1	54.7	51.6-57.7	22.7	19.9-25.7	1,966
Northern Cape	23.7	17.2-31.6	61.3	53.2-68.8	15	10.1-21.7	301
Free State	40.3	36.1-44.6	44.4	41.1-47.8	15.3	12.7-18.4	1,368
KwaZulu-Natal	19.7	17.5-22.1	50.1	48.0-52.3	30.2	27.8-32.6	4507
North West	37.9	33.2-42.9	48.1	44.1-52.0	14	10.7-18.1	579
Gauteng	31.9	29.2-34.8	48	44.9-51.0	20.1	17.8-22.7	1796
Mpumalanga	18.2	15.4-21.4	56.7	52.6-60.6	25.1	21.8-28.7	1521
Limpopo	22.3	19.9-24.9	51.8	49.2-54.4	25.9	23.3-28.8	2536
<b>Type of school</b>							
Primary	22.9	21.5-24.4	53.3	51.6-54.9	23.8	22.4-25.2	8364
Secondary/high	30.3	28.3-32.5	49	47.0-51.0	20.7	18.9-22.6	5491
Combined/intermediate	20.3	17.2-23.7	53.9	50.8-57.1	25.8	22.5-29.4	1867
Special school	35.9	18.5-57.9	43.5	27.4-61.2	20.6	11.3-34.8	89

Variable	Low		Medium		High		
	%	95% CI	%	95% CI	%	95% CI	
<b>Position in the school</b>							
Teacher/educator	25.2	24.0-26.5	51.9	50.6-53.1	22.9	21.8-24.1	12061
Senior teacher	30	25.3-35.2	48.7	43.5-54.0	21.3	17.6-25.5	930
Head of department	26.4	23.4-29.8	52.3	48.8-55.9	21.2	18.7-24.0	1608
Education specialist	15.7	7.9-28.8	69.8	52.3-82.9	14.5	6.4-29.8	45
Deputy principal/Principal	19.7	16.7-23.1	53.1	49.0-57.2	27.2	24.0-30.7	1135

### Job-related stress

Overall, 49.7% of educators expressed a moderate degree of job related stress. The highest stress levels were reported by educators who were Coloured (25.7%), Indian/Asian (24.0%), 55 years and above (22.3%) and teaching in the Western Cape (26.8 %). Stress levels are high among teaching staff compared to non-teaching staff.

**Table 44: Profile of job stress by selected demographic characteristics**

Variable	Low		Medium		High		Total
	%	95% CI	%	95% CI	%	95% CI	
<b>Total</b>	30.9	29.7-32.1	49.7	48.5-50.9	19.4	18.3-20.5	15,822
<b>Sex,</b>							
Male	34.1	32.0-36.3	46.4	44.4-48.4	19.5	17.9-21.2	4,430
Female	29.5	28.2-30.9	51.1	49.7-52.5	19.3	18.1-20.6	11,392
<b>Race</b>							
African	32.5	31.1-33.9	49.1	47.8-50.4	18.4	17.3-19.6	12,771
White	26.4	23.2-29.8	52.7	48.9-56.5	20.9	17.2-25.2	1,319
Coloured	22.2	19.0-25.7	52.1	48.3-55.9	25.7	22.7-28.9	1,238
Indian/Asian	25.9	20.6-32.1	50.1	43.4-56.8	24	18.4-30.6	484
<b>Age group</b>							
18-24	31.4	26.3-37.0	52	45.1-58.8	16.6	12.9-21.2	506
25-34	34	31.3-2436.7	49.2	46.6-51.8	16.9	15.0-18.9	2,543
35-44	30	27.9-32.2	49.9	47.8-52.1	20	18.4-21.7	3,866
45-54	31.2	29.4-33.0	49.7	47.9-51.5	19.1	17.5-20.8	6,534
55+	28.4	26.1-30.8	49.3	46.4-52.2	22.3	19.9-24.9	2,374
<b>Locality type</b>							
Urban formal	28.4	26.4-30.6	51.6	49.6-53.6	20	18.3-21.8	5,443
Urban informal	31.1	28.0-34.5	49.5	46.7-52.4	19.3	16.9-22.0	1,839
Rural formal	32	29.7-34.4	48.6	46.4-50.8	19.4	17.1-21.9	4,313
Rural informal	33.6	31.1-36.3	47.7	45.1-50.4	18.6	16.8-20.6	3,561
<b>Province</b>							
Western Cape	20.7	17.8-23.9	52.5	48.9-56.1	26.8	23.9-30.0	1,237

Variable	Low		Medium		High		Total
	%	95% CI	%	95% CI	%	95% CI	
Eastern Cape	35.9	32.2-39.8	45.4	42.1-48.8	18.7	15.7-22.0	1,968
Northern Cape	36.3	29.6-43.5	50.4	42.6-58.2	13.3	9.2-18.9	301
Free State	22.6	19.7-25.7	57	53.6-60.4	20.4	17.5-23.6	1,375
KwaZulu-Natal	24.9	22.7-27.3	52	49.8-54.2	23	20.9-25.3	4,506
North West	27.7	23.5-32.4	51.6	46.3-56.8	20.7	14.9-28.0	577
Gauteng	34.3	31.1-37.6	50.6	47.6-53.5	15.2	13.1-17.5	1,799
Mpumalanga	36.3	32.6-40.2	48.4	44.8-52.0	15.3	12.3-18.8	1,515
Limpopo	38.7	36.0-41.6	42.8	40.3-45.3	18.5	16.5-20.6	2,546
<b>Type of school</b>							
Primary	29.9	28.3-31.6	50.4	48.8-52.0	19.7	18.2-21.3	8,358
Secondary/high	31.1	29.1-33.1	49	47.2-50.9	19.8	18.2-21.6	5,513
Combined/intermediate	35.2	31.3-39.3	47.8	44.1-51.6	17	14.6-19.6	1,865
Special school	27.6	16.0-43.2	59.5	42.8-74.3	12.9	7.3-21.9	88
<b>Position in the school</b>							
Teacher/educator	30.7	29.4-32.0	50.4	49.1-51.7	18.9	17.8-20.1	12,068
Senior teacher	27.8	23.8-32.2	50	44.9-55.1	22.2	18.6-26.2	933
Head of department	29.6	26.4-33.1	48.5	44.9-52.1	21.9	18.9-25.1	1,622
Education specialist	20.4	10.1-36.8	65.4	45.6-81.1	14.2	4.9-34.6	40
Deputy principal/Principal	37.7	33.5-42.1	44.2	40.3-48.1	18.1	15.3-21.3	1,129

With regard to intention to leave, educators who had low job satisfaction expressed a higher intention to leave the profession (57.2%), while educators who had high job stress had higher intention to leave the profession (42.2%).

## General morale at work

Around two fifths of educators (41.9%) reported high morale. Low morale was reported by a smaller proportion of educators, including among males (14.4%), Indian/Asian educators (25.3%), educators aged 45-54 years (14.2%), those teaching in urban formal locales (14.7%), those in the Free State (20.2%) and North West (20.0%), those who were qualified with a first degree or higher (13.1%), at the level of head of department and senior educators (14.9% respectively) and teaching in special school (18.7%). Those with more years of teaching experience had lower morale compared to those with fewer years of teaching experience.

Table 45: Profile of morale among educators by selected demographic characteristics

	High		Low		Neither high nor low		Varies sometimes low, sometimes high		
	Total	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>Total</b>	21,121	41.9	40.6-43.3	12.2	11.5-13.1	22	21.1-22.9	23.8	22.8-24.8
<b>Sex</b>									
Male	6,135	41.2	39.3-43.2	14.4	13.2-15.7	22.2	20.6-23.9	22.1	20.7-23.6
Female	14,961	42.2	40.7-43.7	11.3	10.5-12.2	21.9	20.9-22.9	24.6	23.4-25.8
<b>Race</b>									
African	16,993	41.3	39.9-42.7	11.8	11.0-12.7	23.7	22.7-24.8	23.2	22.1-24.3
White	1,881	56.4	51.9-60.8	8	6.1-10.6	13.2	11.0-15.8	22.3	19.2-25.8
Coloured	1,572	33.6	29.7-37.9	17.8	15.0-20.9	16.6	14.4-19.0	32	28.8-35.4
Indian/Asian	648	33.4	26.7-40.9	25.3	19.3-32.4	16.6	13.2-20.6	24.7	20.4-29.5
<b>Age group</b>									
18-24	641	52.9	47.0-58.7	4.9	3.1-7.7	19.5	15.8-23.9	22.7	18.8-27.1
25-34	3,321	50.1	47.5-52.8	8.7	7.6-10.1	19.6	17.8-21.5	21.5	19.7-23.5
35-44	5,390	39.5	37.6-41.5	12.1	10.9-13.5	23.3	21.7-24.9	25.1	23.4-26.9
45-54	8,650	39.5	37.9-41.2	14.2	13.1-15.4	22.1	20.7-23.5	24.2	23.0-25.5
55+	3,107	41.6	38.9-44.4	12.5	11.0-14.1	22.8	20.9-24.8	23.1	20.7-25.6
<b>Locality type</b>									
Urban formal	7,361	38.8	36.3-41.3	14.7	13.2-16.4	19.6	18.2-21.2	26.9	25.2-28.6
Urban informal	2,431	36.7	33.1-40.4	13.6	11.2-16.4	23.2	20.7-25.9	26.5	23.2-30.2
Rural formal	5,692	43.9	41.1-46.6	10.6	9.3-12.1	24.7	22.8-26.7	20.8	19.0-22.8
Rural informal	4,745	47.2	44.9-49.6	9.5	8.4-10.8	22.4	20.7-24.3	20.8	19.1-22.5
<b>Province</b>									
Western Cape	1,605	35.9	31.0-41.0	14.7	12.2-17.6	16.5	14.0-19.5	32.9	29.8-36.2
Eastern Cape	2,743	43.4	39.8-47.1	9.1	7.5-10.8	19.2	16.9-21.8	28.3	25.7-31.0

	High		Low		Neither high nor low		Varies sometimes low, sometimes high		
	Total	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Northern Cape	408	41.9	30.3-54.4	12.3	8.1-18.2	18.3	13.2-24.8	27.6	20.7-35.7
Free State	1,767	32.4	27.0-38.3	20.2	16.2-24.8	20.8	18.3-23.6	26.6	23.5-30.0
KwaZulu-Natal	6,007	49.8	47.3-52.4	10.4	9.0-11.9	22.3	20.7-24.0	17.5	15.9-19.2
North West	733	31.3	26.7-36.4	20	15.9-24.7	21.1	18.7-23.8	27.6	23.5-32.0
Gauteng	2,383	33.6	30.1-37.4	14	11.6-16.9	21.8	19.3-24.4	30.5	28.0-33.2
Mpumalanga	2,057	46.7	43.1-50.5	7.5	5.9-9.4	29	25.7-32.5	16.8	13.9-20.2
Limpopo	3,418	47.5	44.4-50.7	13.5	11.7-15.5	23.1	20.9-25.5	15.9	14.1-17.8
<b>Highest educational qualification</b>									
First degree & above	15,553	41.5	40.0-43.0	13.1	12.2-14.0	21.3	20.3-22.3	24.2	23.1-25.3
Diplomas	4,828	42.6	40.4-44.8	10.3	9.2-11.5	24.4	22.7-26.1	22.8	21.1-24.6
Grade 12 and under	629	49.1	43.0-55.2	6.2	4.3-8.7	23.2	18.7-28.4	21.5	17.6-25.9
<b>Position in the school</b>									
Teacher/ educator	16,144	43.4	42.0-44.8	11.6	10.8-12.4	22	21.0-23.1	23	22.0-24.1
Senior teacher	1,310	38.8	35.0-42.7	14.9	12.5-17.6	20.3	17.6-23.3	26	22.6-29.7
Head of department	2,111	36.8	33.9-39.8	14.9	13.0-17.0	22.1	19.6-24.8	26.2	23.6-29.0
Education specialist	56	39.8	24.7-57.0	9.4	4.1-20.3	31.4	14.9-54.4	19.4	10.7-32.6
Deputy / Principal	1,448	37.5	34.0-41.2	13.3	11.3-15.6	22.7	19.2-26.7	26.4	23.5-29.7
<b>Type of school</b>									
Primary school	11,158	45.1	43.2-47.0	10	9.1-11.0	21.7	20.5-22.9	23.2	21.8-24.7
Secondary/high	7,785	37.4	35.1-39.8	16	14.4-17.7	22.2	20.5-23.9	24.4	22.9-26.1
Combined/intermedia	1,941	40.7	37.1-44.5	11.9	9.9-14.2	22.4	19.5-25.5	25	22.1-28.1
Special school	14	20.2	6.4-48.7	18.7	5.7-46.7	32	11.7-62.6	29.1	10.8-58.3
<b>Years of teaching experience</b>									
0 to 4	3,022	49.3	46.6-52.0	7.6	6.5-8.9	20.9	19.0-22.9	22.1	20.0-24.4

	Total		High		Low		Neither high nor low		Varies sometimes low, sometimes high		
		%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
5 to 9	3,295	45.6	43.2-48.0	9.1	7.9-10.5	22.5	20.6-24.5	22.8	20.9-24.8		
10 to 14	3,034	41.9	39.4-44.5	11.9	10.4-13.7	22	20.0-24.1	24.1	21.8-26.6		
15 to 19	2,474	39.4	36.7-42.3	13.3	11.6-15.1	22.6	20.5-24.9	24.7	22.5-27.0		
20 to 24	4,102	38.4	36.3-40.5	14.6	13.1-16.2	22.9	20.9-24.9	24.2	22.4-26.0		
25 to 29	2,595	38.3	35.7-41.0	16.4	14.6-18.4	21.7	19.7-23.8	23.6	21.7-25.7		
30+	2,572	40.1	37.0-43.3	13.4	11.7-15.2	20.8	18.7-23.1	25.7	23.1-28.5		

### Absenteeism among educators

Only 24.8% of educators reported being absent from school in the 2014 school year. Absenteeism of 20 days or more was highest among Whites (21.4%), those aged 18-24 years (39.2%), those teaching in urban informal areas (17.1%) and those in the Northern Cape (28.4%). The most common types of reported leave were sick leave (66.6%), leave to attend funerals (13.0%), special leave to care for a sick person (9.8%) as well as other special leave (18.8%).

**Table 46: Self-reported absenteeism rates among educators**

	Total	5-19 days absent		20 days and more	
		%	95% CI	%	95% CI
Total	10,946	75.7	74.2-77.2	14.2	12.9-15.6
<b>Sex</b>					
Male	3,130	75.5	73.3-77.5	13.5	11.9-15.3
Female	7,799	75.9	74.1-77.5	14.5	13.0-16.1
<b>Race</b>					
African	8,854	78.4	76.7-80.0	12.7	11.3-14.3
White	747	53.4	48.9-57.8	21.4	16.7-27.1
Coloured	895	72.1	67.2-76.5	18.8	15.0-23.5
Indian/Asian	413	78.7	73.2-83.2	15.2	10.7-21.1
<b>Age categories</b>					
18-24	229	52.8	44.4-61.0	39.2	30.4-48.7
25-34	1,656	72.4	69.0-75.5	17.8	15.1-20.9
35-44	2,886	79.7	77.6-81.6	11.0	9.3-12.6
45-54	4,610	77.2	75.3-79.0	13.1	11.5-14.9
55+	1,550	72.2	69.1-75.1	14.8	12.4-17.5
<b>Locality</b>					
Urban formal	3,759	72.2	69.8-74.4	14.4	12.4-16.8
Urban informal	1,252	75.7	70.9-79.9	17.1	13.5-21.5
Rural formal	2,705	79.4	77.1-81.6	9.5	8.1-11.1
Rural informal	2,600	84.4	82.6-86.1	9.1	7.8-10.6
<b>Province</b>					
Western Cape	912	70.3	65.0-75.1	18.0	13.9-23.0
Eastern Cape	1,573	78.8	73.6-83.1	12.3	8.6-17.3
Northern Cape	204	59.1	48.8-68.7	28.4	17.9-41.8
Free State	887	72.1	67.7-76.0	16.0	13.2-19.3
KwaZulu-Natal	3,411	82	79.9-84.0	11.7	10.0-13.6
North West	348	79.4	74.5-83.6	10.7	7.8-14.5
Gauteng	1,155	68.8	63.9-73.3	18.4	13.9-24.1
Mpumalanga	892	75.1	70.9-78.8	12.7	9.8-16.2
Limpopo	1,564	75.2	71.6-78.6	13.3	10.7-16.4

## Violence in educational institutions

The extent to which educators perceived violence to have occurred in their schools in the past 12 months included persons being assaulted (19.8%), and a fight involving weapons (16%). One in five educators (20.3%) recalled situations where a person had been found in possession of weapons.

**Table 47: Reported acts of violence in educational institutions in the previous 12 months**

Type of violent acts in schools	Total	%	95% CI
Students and/or educators have been found carrying weapons onto your school	20,979	20.3	18.9-21.7
A person was assaulted at your school or on the way to the school	4,389	19.8	18.4-21.2
A fight involving weapons took place on your schools premises	3,753	16.0	14.8-17.4
You are aware of gangs operating at your school	2,698	12.3	11.2-13.5
You/someone else was sexually harassed at your school	1,230	5.4	4.9-6.0
A person was raped at your school	672	3.0	2.6-3.5
A person was shot at your school or on the way to the school	411	2.3	1.8-3.0
A person was killed at your school	309	1.6	1.3-2.0

## Perspectives on DBE policies

### Adequacy of DBE's HIV/AIDS policy

A high proportion of educators (52.6%) reported that DBE addresses the problem of HIV/AIDS stigma adequately. The proportion of educators who felt that the policy was adequate was higher among those aged 55 or older (56.9%) and among those who were teaching in Mpumalanga (69.9%). The response was lower among Indian/Asians (38.5%), those teaching in urban formal schools (46.0%) and Northern Cape (38.8%),

**Table 48: Public educator's beliefs about the adequacy of the DBE's HIV/AIDS policy in addressing the problem of HIV/AIDS stigma in schools**

	Total	%	95%CI
<b>Sex</b>			
Male	6,086	52.3	50.3-54.2
Female	14,843	52.8	51.5-54.1
<b>Age group</b>			
18-24	634	47.4	42.3-52.6
25-34	3,285	50.6	48.2-52.9
35-44	5,351	51.6	49.6-53.7
45-54	8,593	52.9	51.2-54.5
55+	3,079	56.9	54.3-59.5
<b>Race</b>			
African	16,883	53.4	52.0-54.7
White	1,840	53.3	49.9-56.7
Coloured	1,560	48.3	43.9-52.8
Indian/Asian	643	38.5	33.9-43.4
<b>Locality Type</b>			
Urban formal	7,275	46	44.1-48.0
Urban informal	2,403	57.2	53.3-60.9
Rural formal	5,661	54.8	52.2-57.3

	Total	%	95%CI
Rural informal	4,726	57.9	55.6-60.1
<b>Province</b>			
Western Cape	1,596	52.5	48.2-56.9
Eastern Cape	2,737	49.1	46.1-52.2
Northern Cape	393	38.8	30.0-48.5
Free State	1,759	39.9	36.0-44.0
KwaZulu-Natal	5,959	56.8	54.5-59.1
North West	729	52.2	46.9-57.4
Gauteng	2,357	47.8	44.7-51.0
Mpumalanga	2,027	69.9	66.0-73.5
Limpopo	3,396	42.6	40.0-45.3

### Awareness of a school policy

A large proportion of educators (71.1%) were aware of the existence of a school policy. Awareness of an existing school policy increased with age. Awareness was lower among Indians/Asians (66.3%) and educators teaching in urban formal areas (65.1%). Awareness was higher among educators from Mpumalanga (80.9%) and lower in Gauteng (62.4%) and Free State (63.3%).

**Table 49: Profile of educators who were aware of the existence of an HIV/AIDS policy in schools**

Variable	Total	%	95% CI
<b>Sex</b>			
Male	6,115	71.8	70.0-73.4
Female	14,890	70.4	69.1-71.6
<b>Age group</b>			
18-24	640	49.4	43.9-54.9
25-34	3,302	59.2	56.8-61.6
35-44	5,364	69.2	67.3-71.0
45-54	8,627	75	73.6-76.4
55+	3,085	79	76.8-81.1
<b>Race</b>			
African	16,922	71	69.7-72.2
White	1,859	69.9	66.1-73.4
Coloured	1,574	72	67.1-76.3
Indian/Asian	647	66.3	59.6-72.4
<b>Locality type</b>			
Urban formal	7,310	65.1	62.9-67.2
Urban informal	2,414	71.2	67.9-74.3
Rural formal	5,693	74.6	72.6-76.5
Rural informal	4,725	75.3	73.4-77.0

Variable	Total	%	95% CI
<b>Province</b>			
Western Cape	1,603	73.2	67.9-77.8
Eastern Cape	2,729	71	67.8-74.0
Northern Cape	409	69.3	60.0-77.3
Free State	1,763	63.3	58.6-67.7
KwaZulu-Natal	5,958	72.4	70.2-74.5
North West	734	72.5	67.4-77.1
Gauteng	2,378	62.4	59.1-65.6
Mpumalanga	2,042	80.9	78.3-83.3
Limpopo	3,413	68.1	65.4-70.7

### Support for Educators who are ill/sick

A high proportion of educators (87.1%) indicated that DBE supports educators who are ill/ sick. No differences were found when stratified by sex, age, or race. When analysed by location, a greater proportion of educators from rural informal schools indicated that DBE supports educators who are ill/sick (89.8%) compared to educators from urban formal (85.0%) and urban informal areas (85.1%). A greater proportion of educators from Mpumalanga indicated that DBE was supportive (93.0%), whereas a lesser proportion of educators from Free State (83.2%), Limpopo (83.1%), and North West (80.4%) indicated that DBE supported educators who are ill/sick.

**Table 50: Educators perceived support from DBE for those who are ill/ sick by locality and province**

Variable	Total	%	95% CI
<b>Location of the school</b>			
Urban formal	7,295	85	83.7-86.3
Urban informal	2,420	85.1	82.3-87.6
Rural formal	5,691	88.4	87.1-89.5
Rural informal	4,736	89.8	88.4-91.0
<b>Province</b>			
Western Cape	1,602	86.8	84.4-89.0
Eastern Cape	2,735	87.4	85.0-89.5
Northern Cape	400	88.8	83.0-92.7
Free State	1,759	83.2	80.7-85.4
KwaZulu-Natal	5,975	88.7	87.5-89.9
North West	732	80.4	75.4-84.6
Gauteng	2,364	85.8	84.0-87.5
Mpumalanga	2,043	93	91.5-94.2
Limpopo	3,417	83.1	81.1-84.8

### Awareness of the DBE Integrated Strategy on HIV, STIs and TB 2012- 2016

Around half of educators (51%) indicated that that they are not aware of the DBE integrated strategy on HIV, STIs and TB. Comparable proportions of males (49.3%) and females (48.9%) were aware of the strategy Younger educators accounted for almost two thirds (64.6%) of those who are aware of the department's strategy. However, the smallest proportion of those who were aware of the strategy was among Indian/Asians (41.7%). Most educators

in urban formal areas (45.2%) indicated they were aware of the policy. Awareness was high in Mpumalanga (62.5%) and lowest in Northern Cape (42.8%).

**Table 51: Profile of educators who indicated their awareness of the DBE Integrated Strategy on HIV/AIDS, STIs and TB 2012 - 2016**

Variable	Total	%	95% CI
<b>Sex</b>			
Male	6,153	49.3	47.5-51.0
Female	15,012	48.9	47.5-50.2
<b>Age group</b>			
18-24	643	32.3	27.9-37.0
25-34	3,333	38.5	36.2-40.8
35-44	5,401	47.6	45.5-49.6
45-54	8,681	53.1	51.5-54.6
55+	3,120	55.1	52.6-57.5
<b>Race</b>			
African	17,057	49.2	48.0-50.5
White	1,885	49.4	45.8-53.0
Coloured	1,574	48.2	43.8-52.6
Indian/Asian	647	41.7	37.7-45.7
<b>Locality type</b>			
Urban formal	7,368	45.2	43.4-47.0
Urban informal	2,441	52.1	48.9-55.4
Rural formal	5,724	52.2	49.8-54.6
Rural informal	4,763	50.1	48.0-52.2
<b>Province</b>			
Western Cape	1,607	49.5	44.9-54.1
Eastern Cape	2,746	47.8	44.8-50.9
Northern Cape	410	42.8	36.5-49.5
Free State	1,774	45.2	41.5-48.9
KwaZulu-Natal	6,017	44	42.2-45.8
North West	738	54.2	48.6-59.7
Gauteng	2,390	45.7	43.3-48.1
Mpumalanga	2,070	62.5	58.5-66.3
Limpopo	3,438	47.8	45.3-50.4

Educators who knew of the strategy were asked if they had read the strategy. Among those that read the strategy, 84.5% were female and 80.6% were male educators. The majority who had read the strategy were aged 55 and above (86.2%). Africans constituted the highest proportion that had read the strategy. The highest proportion of educators that read the report was from Limpopo and the least was from Northern Cape.

**Table 52: Profile of educators who had studied or read the DBE Integrated Strategy on HIV, STIs and TB 2012-2016**

Variable	Total	%	95% CI
<b>Sex</b>			
Male	1,751	80.6	77.1-83.8
Female	4,125	84.5	82.9-86.0
<b>Age group</b>			
18-24	92	72.3	58.7-82.8
25-34	632	80.5	76.5-84.0
35-44	1,405	82.9	80.1-85.3
45-54	2,738	83.4	80.7-85.8
55+	1,014	86.2	83.0-88.9
<b>Race</b>			
African	4,902	84.7	82.8-86.4
White	466	74.5	69.0-79.2
Coloured	384	77.5	72.5-81.7
Indian/Asian	124	81.1	70.4-88.6
<b>Locality type</b>			
Urban formal	1,790	78.2	75.1-81.1
Urban informal	732	82.2	77.8-85.9
Rural formal	1,744	87	84.4-89.1
Rural informal	1,366	85.9	81.9-89.1
<b>Province</b>			
Western Cape	429	77.5	72.6-81.8
Eastern Cape	675	80.1	74.9-84.4
Northern Cape	84	70.9	59.3-80.2
Free State	419	78.8	75.3-81.9
KwaZulu-Natal	1,515	86.5	84.1-88.6
North West	226	83.8	76.6-89.1
Gauteng	625	78.4	74.2-82.0
Mpumalanga	917	87.5	81.8-91.6
Limpopo	992	88.7	86.2-90.8

Just over half of educators who knew of the strategy (54.1%, [95% CI: 52.3-55.9]) found the strategy to be very useful, 42.5%, (95% CI: 40.6-44.1), whereas a small proportion (3.6%, [95% CI: 3.0-4.2]) found it to be of no use. Females (55.3%) were more likely than males (44.5%), to find the strategy to be of value. Younger educators found the strategy to be of more use than other age groups. Over half of educators in each race group found the strategy to be useful. Educators in KwaZulu-Natal and Northern Cape (57.4% and 57.1% respectively) found the strategy to be very useful. Among educators who said they found the strategy to be of no use, 5% were in located in urban formal areas, followed by urban informal areas at 3.8%. The highest percentage among educators who said they found it to be of no use were in Free State province (6.9%, [95% CI: 4.6-10.2])

## Educator unions

The majority of educators (86.2%; [95% CI: 85.4-87.0]) reported that they were members of educator unions. There were no differences between males and females. Educators were largely unionized, irrespective of race, locality type and province.

**Table 53: Union membership rates amongst educators**

	Total	%	95% CI
<b>Sex</b>			
Male	6,146	86.9	85.7-88.1
Female	14,982	85.9	84.9-86.8
<b>Age group</b>			
18-24	641	46.9	40.0-53.8
25-34	3,320	72.8	70.5-75.0
35-44	5,397	86.9	85.6-88.1
45-54	8,668	92.4	91.5-93.2
55+	3,115	90.8	89.2-92.2
<b>Race</b>			
African	17,031	88.3	87.5-89.0
White	1,875	77.9	74.1-81.2
Coloured	1,572	74.7	70.9-78.2
Indian/Asian	647	86.4	80.9-90.5
<b>Locality type</b>			
Urban formal	7,359	82.2	80.6-83.8
Urban informal	2,433	87.8	85.9-89.5
Rural formal	5,714	89.9	88.5-91.1
Rural informal	4,754	88.2	86.7-89.5
<b>Province</b>			
Western Cape	1,606	74.6	71.2-77.8
Eastern Cape	2,743	87.3	85.3-89.0
Northern Cape	408	77.5	65.7-86.2
Free State	1,772	87.9	85.7-89.7
KwaZulu-Natal	6,005	89.8	88.5-91.0
North West	738	88.4	84.6-91.4
Gauteng	2,387	81.8	79.1-84.2
Mpumalanga	2,064	88.3	85.9-90.3
Limpopo	3,429	91	89.4-92.4

Two thirds of male educators who were union members knew their unions' HIV policy. The proportion of educators who indicated that they knew the policies increased by age. Educators who were African (64.7%) were more likely to know their unions HIV policy, in comparison to other race groups. Knowledge of HIV policy was high in rural areas; highest in Mpumalanga (78.6%) and lowest in the Western Cape (49.5%).

**Table 54: Profile of union members who had knowledge of their union's HIV policy**

	Total	%	95% CI
<b>Sex</b>			
Male	5,396	66.8	65.1-68.5
Female	12,960	58.5	57.0-60.0
<b>Age group</b>			
18-24	313	27	21.5-33.2
25-34	2,449	45.6	42.9-48.4
35-44	4,752	59.4	57.3-61.5
45-54	8,017	65.9	64.3-67.4
55+	2,839	67	64.4-69.4
<b>Race</b>			
African	15,132	64.7	63.5-66.0
White	1,445	42	38.4-45.6
Coloured	1,200	46.6	41.6-51.7
Indian/Asian	579	42.4	36.8-48.3
<b>Locality Type</b>			
Urban formal	6,082	50.5	48.4-52.6
Urban informal	2,121	64.1	60.6-67.6
Rural formal	5,174	67.9	65.8-69.9
Rural informal	4,219	67.2	65.1-69.2
<b>Province</b>			
Western Cape	1,196	49.5	45.0-54.0
Eastern Cape	2,370	62.7	59.2-66.1
Northern Cape	339	50.2	42.3-58.0
Free State	1,554	51.1	47.7-54.5
KwaZulu-Natal	5,422	60.2	58.0-62.2
North West	644	60.9	55.0-66.4
Gauteng	1,929	50.6	46.8-54.4
Mpumalanga	1,811	78.6	75.3-81.6
Limpopo	3,113	68.9	66.4-71.4

Among the 61% of educators who said they knew their union's policy, only 46.5% said they had seen a copy of the policy. A high proportion of educators who reported that they had seen the policy were male (53.3%), African (50.1%), located in rural formal (53.5%) and from older age groups. There were considerable variations by province who have seen the HIV and AIDS policy with Mpumalanga (64.6%) being the highest and Western Cape (32.2%) the lowest.

Among educators who have seen the HIV policy (88.8%), a higher proportion reported having read their union's policy, with most (89.4%) being male. The number of educators who read the policy was generally high by, age, race, locality type and province.

**Table 55: Profile of Educators who had seen and read their union's HIV policy**

	Seen union's HIV/AIDS policy			Read union's HIV/AIDS policy		
	Total	%	95% CI	Total	%	95% CI
<b>Sex</b>						
Male	5,374	53.3	51.4-55.1	2875	89.4	87.0-91.4
Female	12,907	43.5	42.0-44.9	5636	88.5	87.4-89.6
<b>Age group</b>						
18-24	314	20.3	15.7-26.0	65	80.1	66.4-89.1
25-34	2441	32.7	30.1-35.4	786	86.1	82.5-89.1
35-44	4731	45.6	43.5-47.7	2162	87.7	85.8-89.4
45-54	7,976	50.5	48.9-52.2	4076	89.5	87.7-91.1
55+	2,833	51	48.4-53.6	1432	90.3	88.1-92.2
<b>Race</b>						
African	15,061	50.1	48.8-51.5	7541	89.6	88.4-90.7
White	1,441	28.8	25.7-32.1	424	82	76.5-86.4
Coloured	1,201	30.2	26.5-34.2	368	83.7	78.5-87.9
Indian/Asian	578	29.2	24.5-34.3	179	83.8	77.3-88.7
<b>Locality type</b>						
Urban formal	6,060	36.4	34.5-38.4	2320	85.7	83.7-87.5
Urban informal	2,123	50.6	46.6-54.5	995	89.8	87.0-92.0
Rural formal	5,130	53.5	51.2-55.8	2747	91.8	90.2-93.1
Rural informal	4,207	51.6	49.2-54.0	2104	88.5	85.6-91.0
<b>Province</b>						
Western Cape	1,197	32.2	28.9-35.8	403	82.5	77.0-86.9
Eastern Cape	2,364	45.4	42.2-48.6	1069	88.4	85.0-91.1
Northern Cape	339	36.2	30.1-42.8	114	89.1	81.0-94.0
Free State	1,556	39.8	36.5-43.3	608	86.6	82.4-90.0
KwaZulu-Natal	5,412	43.5	41.2-46.0	2379	88.7	86.8-90.3
North West	640	46.1	39.8-52.5	300	87.6	82.0-91.6
Gauteng	1,927	39.3	35.8-43.0	726	87.6	85.1-89.8
Mpumalanga	1,813	64.6	60.8-68.3	1154	89.8	85.9-92.8
Limpopo	3,055	57.5	54.5-60.5	1771	94	92.6-95.2

\*These represent the overall total number of educators who had seen the policy and who had read the policy

Most educators (70%) said that their unions provided HIV and AIDS support. A higher proportion of educators aged 25 years and older reported that their unions provided such support. Perception of support was lowest among Indians/Asian (48.6%).

**Table 56: Profile of educators who indicated that their union provides HIV/ AIDS support to its members**

Variable	Total	%	95% CI
<b>Sex</b>			
Male	5193	73.0	71.1-74.7
Female	12435	68.8	67.2-70.2
<b>Age group</b>			
18-24	294	54.0	47.3-60.6
25-34	2310	62.1	59.2-64.8
35-44	4569	69.9	67.9-71.7
45-54	7722	71.8	70.0-73.6
55+	2747	73.6	71.2-75.9
<b>Race</b>			
African	14553	72.1	70.7-73.5
White	1373	62.6	58.4-66.6
Coloured	1146	60.8	55.3-66.1
Indian/Asian	555	51.4	45.9-56.9
<b>Locality type</b>			
Urban formal	5761	61.4	59.1-63.6
Urban informal	2047	70.2	66.1-73.9
Rural formal	4992	76.1	73.8-78.2
Rural informal	4093	75.5	73.4-77.5
<b>Province</b>			
Western Cape	1153	61.9	56.8-66.8
Eastern Cape	2326	74.8	71.4-77.9
Northern Cape	319	62.1	52.9-70.5
Free State	1495	64.4	59.9-68.7
KwaZulu-Natal	5174	67.7	65.4-70.0
North West	612	66.6	60.3-72.5
Gauteng	1842	57.5	53.8-61.0
Mpumalanga	1755	87	83.9-89.7
Limpopo	2973	76.2	73.7-78.5

## Training of educators

A high proportion of educators attended life-skills education training (71.2%), followed by in-service training (67.2%). All other trainings were attended by less than 60% of educators. A considerable proportion of educators had seen information related to these trainings.

**Table 57: Training attendance among educators, for those who ever attended any training**

Type of training	Attended training			Variable		
	Total	%	95%CI	Total	%	95% CI
Life-skills education	16,020	71.2	69.9-72.5	15730	84.4	83.5-85.3
In service training	15,947	67.6	66.3-68.8	15704	79.8	78.8-80.8
HIV/AIDS education	15,884	57.0	55.7-58.3	15823	81.0	80.0-82.0
Dealing with and caring for young people suffering from HIV/AIDS	15,873	46.5	45.1-47.8	15883	73.2	72.1-74.3
HIV counselling and testing	15,846	40.9	39.6-42.2	15876	68.7	67.5-69.9
Universal precautions taken to prevent the spread of	15,801	47.7	46.4-49.0	15838	75.0	73.9-76.1
Handling and management of sexual abuse	15,806	41.7	40.4-43.0	15844	70.3	69.1-71.5
The legal rights of people living with HIV and	15,837	45.0	43.7-46.3	15885	72.9	71.8-74.0
The rights and responsibilities of educators in terms of HIV and AIDS	15,854	45.3	43.9-46.6	15885	73.0	71.9-74.1
Supporting the terminally ill	15,829	35.7	34.5-37.0	15886	63.0	61.8-64.2
Handling and management of sexual harassment	15,851	37.3	36.1-38.6	15869	66.5	65.2-67.7
Handling and management of violent students	15,855	40.4	39.1-41.6	15870	68.1	66.9-69.3

A substantial proportion of educators (82.9%, [95% CI: 81.9 – 83.8]) have attended at least one training activity. A higher proportion of females than males reported such attendance. Even though educators had attended at least one training activity, a higher proportion of races other than Africans reported such attendance. Attendance consistently increased with age and experience of educators. There were no marked variations by province and type of school. Educators, senior educators and heads of department constituted more educators that attended at least one of these trainings compared to subject specialists.

**Table 58: Training attendance rates among educators, for those who reported attending at least one training activity**

Variable	Total	(%)	95% CI
<b>Sex</b>			
Male	4,494	80.7	78.9-82.4
Female	11,493	83.8	82.7-84.8
<b>Race</b>			
African	12,923	81.6	80.5-82.7
White	1,315	89	86.0-91.4

Variable	Total	(%)	95% CI
Coloured	1,251	87.1	84.1-89.6
Indian/Asian	488	84.6	80.5-87.9
<b>Age group</b>			
18-24	518	78	73.0-82.3
25-34	2,561	80.6	78.5-82.6
35-44	3,899	82.2	80.4-83.8
45-54	65,99	83.3	81.9-84.7
55+	2,411	86.1	84.2-87.8
<b>Province</b>			
Western Cape	1,253	89.9	87.2-92.2
Eastern Cape	1,994	78.5	75.3-81.4
Northern Cape	303	76.2	67.2-83.4
Free State	1,399	80.3	77.2-83.1
KwaZulu-Natal	4,558	85.2	83.6-86.8
North West	586	86.6	82.6-89.9
Gauteng	1,790	90.9	89.2-92.4
Mpumalanga	1,543	78.7	75.4-81.7
Limpopo	2,563	70	67.1-72.8
<b>Type of school</b>			
Primary	8,466	85.7	84.5-86.9
Secondary/high	5,539	80.6	78.9-82.3
Combined/intermediate	1,893	76.1	73.1-78.9
Special school	91	77.5	61.6-88.1
<b>Years of teaching experience</b>			
0 to 4	2,423	77.7	75.4-79.8
5 to 9	2,488	81.2	78.8-83.3
10 to 14	2,251	82	79.9-84.0
15 to 19	1,800	86.6	84.5-88.4
20 to 24	3,075	83.6	81.4-85.6
25 to 29	1,964	84.2	81.9-86.2
30+	1,969	86.5	84.3-88.4
<b>Position in the school</b>			
Teacher/educator	12,192	81.8	80.8-82.8
Senior teacher	934	84.7	81.5-87.3
Head of department	1,638	86.6	84.5-88.4
Education specialist	46	74.1	55.9-86.5
Deputy principal/Principal	1,148	86.7	82.5-89.9

## 5. DISCUSSION AND LIMITATIONS

### HIV prevalence

Several differences may be noted between the current survey and the 2004 survey. Overall, the HIV prevalence of 15.3% found in the present study was higher than the 12.7% found in the previous survey of 2004 (Shisana et al., 2005). Some of these differences could be attributed to the expansion and scale up of HIV testing and access to ART during the past decade in South Africa. This has had a major impact on the survival of people living with HIV in South African (Evans, 2013).

In this study, gender was shown to be an important factor in understanding the HIV epidemic amongst educators. Unlike in 2004, no marked gender differences were observed in HIV prevalence (12.8% among females versus 12.7% among males). The present findings of 16.4% among females vs 12.7% among males, now show gender differences. A similar pattern is found in the general population (Shisana et al., 2005, 2012), and the disproportionate risk for HIV infection among young females has also been demonstrated (Chersich & Rees, 2008). The observed difference in HIV prevalence by gender may also be attributable to various social-structural and biological factors (Dunkle, 2004). The prevalence of HIV peaked among educators aged 34-44 years, whereas in 2004 it peaked in the 25-34 year age group.

In the present study, high HIV prevalence was found among Africans, those with low education levels, low disposable income, unmarried and widowed and among those teaching in rural informal areas. This finding is consistent with evidence that suggests shows HIV to be more prevalent among those with low social economic status (Pascoe, et al., 2015). Marital status has previously been highlighted as a risk factor for HIV with higher HIV prevalence being notable higher among unmarried people (Shisana et al., 2015, Kposowa, 2013). This suggests that marriage is a protective factor for HIV in South Africa (Pilgrim et al., 2014).

HIV prevalence was found to be highest in KwaZulu-Natal, Mpumalanga and the Eastern Cape provinces. Although the Western Cape ranked lowest in terms of HIV prevalence, there has been an increase in HIV prevalence over time (1.1% in 2004 vs 3.4% in 2015). This finding is consistent with findings in the general population (Shisana et al., 2012).

### HIV Incidence

The analysis shows that approximately 3,000 new HIV infections occurred among educators in 2015. Female educators had a higher incidence than males – a finding similar to that observed among adults aged 25 years and older in the general population in 2012 (Shisana et al., 2014). HIV incidence was also higher in younger educators, those who were not married and those living in rural areas. This is consistent with the 2012 National HIV Household survey. HIV incidence was higher among those who were not married, and those living in urban informal areas. Although HIV prevalence is lower amongst younger educators, HIV incidence is higher in this age group. KwaZulu-Natal and Eastern Cape continue to have the highest HIV incidence, and this is higher than the national average (0.84%). Due to data limitations, only the HIV incidence for KwaZulu-Natal and Eastern Cape could be calculated.

## Antiretroviral treatment exposure

The benefits of ART in South Africa are well documented and include reduction in AIDS mortality as well as declines in HIV acquisition at community level (Johnson, Mossong, Dorrington, et al., 2014; Tanser, Barnighausen, Grapsa et al., 2014). Overall, 55.7% of educators living with HIV were on ART. There were not any significant differences by sex (males 53.8% and females 56.4%). This finding is not consistent with what has been observed nationally, where females predominate in ART enrolment (Johnson, 2012; Shisana et al., 2014). The differences that were observed in this study are explained by access to medical aids in this population. For example, educators on medical aid were more likely to be on ART when compared to those who did not have medical aid. Furthermore, among HIV positive males, those who were on medical aid were 1.4 times more likely to be on ART compared to those that did not have medical aid. These findings suggest that among educators, men are more willing to access ART if that care is private and convenient. The findings could also be attributed to policy decisions to increase access to medical aid among civil servants and also the role of the Prevention, Treat and Care programme that was implemented by the ELRC following the 2005 survey. This programme aimed to encourage educators to test for HIV and access treatment and care through its network of private doctors.

A high proportion of educators have tested for HIV. When assessing these findings against the postulated UNAIDS 90-90-90 targets; a gap of 16% still remains. The treatment gap was greater, with 25.7% of HIV infected educators being aware of their status not yet on treatment. This could be partly attributed to treatment initiation thresholds during the time of this survey. This is expected to decline with the planned adoption of the WHO's test and treat guidelines for HIV infected people (WHO, 2015) from September 2016 in South Africa.

## Condom use

Condom use at last sexual act and consistent condom use was higher with non-regular sexual partners compared to regular partners as well as among males. This suggests that there is wide acceptance of condoms as a protective measure among educators and is similar to findings on condom use within the general population. It also suggests that there is acceptance that everyone is susceptible to HIV infection in South Africa (SANAC, 2011; Shisana et al., 2014). Consistent condom use at all sexual contacts is still a challenge that is possibly contributing to persistent incidence among younger educators.

## HIV counselling and testing

Since the last survey in 2004, the proportion of educators reporting knowing where to obtain HIV testing services have increased from 78.7% to 92.4% for males and from 80.5% to 93.8% for females. These increases are similar to those found at general population level (Shisana et al., 2012). This indicates that most educators belonging to medical aid schemes that provide HIV management programmes

In 2015, the proportion of educators that reported having ever had an HIV test increased by 27% from 59% reported in 2004. This may be related to HCT campaign impact that DPSA, DOH and SANAC intensified with the aim of reaching 1.2 million public servants and the resources that were invested (UNAIDS 2012). It is of concern that the youngest and oldest educators as well as Whites and Indians/Asians did not test for HIV as much as their counterparts, especially given that the policy guidelines for HCT, encourages HIV testing. It should however be taken into account that HIV prevalence in these race groups is very low.

## Male circumcision

Circumcision is increasing among educators, with 60.6% levels being found in 2015. The current findings show that male circumcision was high among African male educators 45-54 years old, mainly from rural formal areas in Limpopo and the Eastern Cape. This is influenced by the prevalence of traditional circumcisions in these provinces. On the other hand, medical male circumcision (MMC) was highest in Free States, KwaZulu-Natal and Northwest.

Traditional and medical male circumcision is practiced in all nine provinces of South Africa, and proportions between these methods vary between provinces. MMC is generally considered safer, less painful, hygienic and quicker to heal compared to circumcision conducted in traditional settings which are increasingly viewed with skepticism due to deaths, hospitalisation of initiates, penile amputations, and complications resulting in gangrene and sepsis are frequently reported (Douglas & Nyembezi 2015; SABC online, 2015). In relation to demand for MMC, the majority of uncircumcised male African educators (80%) indicated they would consider being circumcised. Over a third of those who indicated interest in circumcision were teaching in urban formal areas. Tailored messages focusing the HIV preventive benefits of VMMC should be promoted to contribute further uptake of VMMC among educators.

## Attitudes towards PLHIV

It was found that the majority of educators did not hold negative attitudes towards people living with HIV. They were also comfortable talking to others about HIV. This was consistent across demographic characteristics. However, a substantial number showed some ambivalence about disclosing a family members' HIV positive status. This might be an indication of respect for the privacy of an affected family member – although is potentially also related to fear of stigma and prejudice directed towards PLHIV and their families. Previous studies have shown that stigma and discrimination against PLHIV continues to be a major challenge in South Africa (Kalichman and Simbayi, 2003; Simbayi et al., 2005; SANAC, 2015). There is evidence of stigma and discrimination within school settings directed towards educators and learners living with HIV or those suspected to be living with HIV (Chao, et al., 2010; Conde & Cabahug, 2016; Simbayi et al., 2005).

Fear of stigma reduces the likelihood of disclosure of HIV status and may inhibit uptake of ART (Maughan-Brown, 2010). Chao et al., (2010) found that educators' levels of HIV-related stigma in KwaZulu-Natal were associated with the type of HIV training they received and their levels of HIV knowledge. When educators are more knowledgeable about HIV, they were less inclined to show attitudes of stigma. Educators are in a prime position to teach fellow educators, learners and communities about sensitive issues. As such, educator attitudes about social issues have a bearing on how and whether information on HIV, is communicated appropriately and without bias or prejudice toward PLHIV (Conde & Cabahug, 2016). HIV and TB stigma and discrimination must be adequately addressed within schools.

## Sexually transmitted infections

Although self-reported prevalence of STIs was low among educators, the slight increase found between the two studies indicates continued risky sexual behaviour. Compared to the 200r Educator survey results, all categories of STI infection among those who are HIV positive have increased. For example, in 23.1% of educators were diagnosed with an STI in the last 3 months compared to 36.8% in the present study. These findings are consistent with other South African studies (Lewis et al., 2012).

## Health Status of Educators

Self-reported health of educators was generally good (57.3%). In 2015, visiting a health practitioner in the last 6 months was lower (61.1%) than the previous survey (72%).

## Non-communicable diseases

There was an increase in educators reporting NCDs including high blood pressure (15.6% in 2004 to 22.1% in 2015), and diabetes mellitus (4.5% in 2004 to 9.0% in 2015). There was no change in the reported proportion of stomach ulcers between 2004 and 2015. The increase in NCDs is consistent with data from a national survey (Shisana, et al., 2013). NCDs such as obesity, diabetes and cardiovascular disease account for 20% of mortality in South Africa (Levitt et al., 2011).

## Tuberculosis

Knowledge about TB transmission and prevention among educators was generally high across races and provinces in this survey. These findings are consistent with those observed in the South African National Health and Nutrition Examination Survey conducted in 2012 (Shisana, et al., 2013). Despite high levels of correct knowledge about TB treatment and prevention, there are still misconceptions, with only around a third of educators (29.8%) indicating awareness that TB can be transmitted through close contact with a person who has untreated TB, and about a quarter reporting the misconception that TB could be prevented by washing hands or improved hygiene. These and other gaps in TB knowledge could be attributed to, and addressed, by improved messaging around TB (Naidoo, et al., 2016).

In this study, 13.7% of educators who had ever been screened for TB reported that they had been diagnosed with TB, while 10.3% of the educators reported that they currently had at least one TB symptom. The proportion of educators who reported being diagnosed with TB is higher in this study than in the previous survey (0.92% vs 13.7%) (Shisana, et al., 2005). Although not based on verified clinical records, these data suggest a high burden of TB among South African educators, with some alignment with the TB burden in the South African population as a whole (STATSSA, 2014).

There were low levels of TB related stigma found for some variables in this study. Most educators were willing to share meals with someone with TB, work or study with someone with TB and hug a person with TB. However, there were differences by race with mostly White and Indian/Asian educators indicating they would neither share a meal nor work with or hug a person with TB. This should be addressed through communication.

## Substance use

Overconsumption of alcohol can have devastating effects on people's jobs as well as influencing marital breakdown, delusional jealousy, and a downward trend in social status (Odejide, 2006). Prolonged excessive alcohol leads to poor job performance and eventual job loss (Rukundo & Magambo, 2013). This survey found that almost three-quarters of educators (74.7%) in South Africa had not consumed alcohol in the previous 12 months and is consistent with the 75% level found in the previous study (Shisana et al., 2005).

Among those who drink alcohol, 21.7% of educators were low-risk drinkers, and 3.7% were found to be high-risk drinkers according to the AUDIT scale. A higher proportion of male educators were found to be high-risk drinkers compared to their female counterparts (9.6% and 1.2% respectively). Similar to the 2004 study, the results show that a low proportion of educators may have a high-risk drinking problem, which decreased from 5.3% in 2004 to 3.7% in 2015. It was also found that low income earners had a higher propensity to be high-risk drinkers compared to other income groups. Being male and having a low socio-economic status has been shown to be associated with high-risk drinking (Bonevski, et al., 2014; Iwamoto et al., 2011). A study exploring patterns of leave taking amongst educators found that alcohol and drug use were some of the reasons for extended leave taking (Olivier & Venter, 2003). A higher proportion of high risk-drinkers was found among young educators aged 25-34 years (5.2%) and educators in lower socio economic positions. According to Kalichman et al., (2007) alcohol consumption among educators is linked to coping with stress, suggesting that educators' consumption of alcohol is partly related to their social circumstances.

## Use of Tobacco products

Less than 10% of educators reported currently using tobacco products. Current tobacco use was lower among educators compared to the 16.4% level found in the general population (Shisana, Labadarios, Rehle, et al., 2014). The present survey found that males were four times more likely to use tobacco products than females and Coloured educators and those from the Western Cape were more likely to smoke tobacco. Of particular concern is that the younger age cohort of educators aged 18-34 years represent more than one-quarter (25.8%) of smokers.

## Drug use

Consistent with previous national surveys, use of illicit drugs together with prescribed drugs was low. The survey found that only 1.4% of educators ever smoked cannabis and 1.7%. Among educators who indicated that they used injectable drugs for non-medical purposes, some had used them recently (in the previous three months). Although use levels are low, the use of illicit drugs have a negative social impact (Rehm, Taylor & Room, 2006).

## Educators Responsibilities and Work load

The majority of educators indicated that teaching was their first choice of career and that they would not consider changing careers. Among the minority that reported that they would consider a career change, the main reasons were poor salary followed by too many demands and increased number of learners. Similar findings have been made in other studies (Kruger, 2002; Hall, Altman, Nkoma, Peltzer and Zuma, 2005; Bush, Joubert, Kiggundu & van Rooyen, 2010; Iwu, Gwija, Benedict & Tengeh, 2013; Naidoo, Botha & Bisschoff, 2013; Legotlo, 2014). Large class sizes – above 40 learners – were found in KwaZulu-Natal followed by Northwest, Eastern Cape and Gauteng Province. Most educators taught two or more subjects. The average number of subjects taught by educators was higher in rural schools, especially in the Western Cape, Eastern Cape and Northern Cape. The provinces and locality types with the largest class sizes remain Limpopo and Mpumalanga as was found in another study (Phurutse, 2005). The current findings are contrary to the view that workload has been alleviated with the introduction of the Curriculum Assessment Policy Statements (CAPS), which reduced administrative duties so that educators could focus on teaching and learning (SACE, 2013). The School Monitoring Survey has been able to provide more accurate reporting of class sizes and vacant posts at school level, so that DBE can act timeously to improve the situation at schools (Action Plan, 2015).

It was found that the largest number of educators taught foundation languages while very low proportions taught mathematics, natural sciences and technology learning areas. Most educators who taught mathematics, natural sciences and technology learning areas were not trained in these learning areas. In the case of mathematics, 4.7% of educators who taught mathematics even though only 1.1% were trained to teach this subject. Furthermore, most educators were not teaching the level that they were trained to teach. Other studies confirm shortages of mathematics educators in intermediate and secondary phases in South Africa (Centre for Development and Enterprise, 2015). Mathematics and science scores among South African learners remain low compared to international standards (Reddy, et al., 2011) and there is evidence that mathematics and science learners who have been taught by educators with advanced degrees score higher than those learners taught by teachers with a diploma (Arends, 2012). A study in primary and secondary public schools in Mpumalanga and Limpopo, found that educators felt that they could benefit from additional training, especially if they taught subjects outside their area of initial training (Bush, Joubert, Kiggundu & van Rooyen, 2010).

The DBE is committed to ensuring that all schools offer mathematics to learners, and is promoting the professional development of educators in mathematics and physical science (DBE, 2015). One example is the Dinaledi school intervention programme, which aims to improve Mathematics, Science and Technology in schools. School level information obtained via the School Monitoring Survey has shown that half of educators spend 12 or fewer hours on professional development per year. This may be due to the fact that some schools do take this activity seriously, but also that there may be a "lack of available external training and guidance on how schools can initiate their own training" (Action Plan, 2015, p 34).

## Potential Attrition from the Public Education Systems

The current common causes of attrition are resignation and retirement (see Appendix 2). The overall number of educators, who indicated that they intend to leave the education profession in the present study – 34.5% – decreased from 55.0% in 2004. Males, Indian/Asians, young educators, and those who were divorced were more likely to intend to leave and these were mostly from the North West province. Education specialists and those with a first degree were also most likely to leave. Potential attrition was higher among educators who have access to employee benefits, compared to those who do not. Low salaries and work load were reasons given for leaving, and similar reasons were given by educators considering a career change. These factors influence educators' job satisfaction and contribute to high job stress, in turn potentially affecting attrition (Bartholomew, Ntoumanis, Cuevas & Lonsdale, 2014). Bull (2005) suggests that in concurrence with teachers' commitment to the education sector, their general level of job satisfaction is known to have an influence on their work conduct and performance.

Most of the educators were found to have experienced a moderate degree of job stress, and a fifth of educators reported high stress levels. More Coloured and Indian/Asian educators reported high levels of job stress. Educators in the Western Cape seemed to be generally more stressed than other provinces. There was generally low morale among Indian/Asians and Coloureds compared to other races. Educators receiving a housing subsidy, and those on a medical aid fund, had higher morale than those without these benefits. The proportionately low morale levels in Gauteng and Western Cape may reflect the largely urban context of these two provinces. However, no clear explanation can be drawn with respect to the comparatively lower morale seen in the largely rural North West and Northern Cape provinces. A higher proportion of educators in the present study than in 2004 (42% vs 38%) indicated high morale. The high morale reported by White teachers may be related socio-economic inequalities that also affect the education sector, yet the relatively higher morale among African teachers compared to Indian/Asians requires further analysis. The same applies for the higher morale reported for rural settings compared to urban areas, given that it is often held that rural settings are poorer and lack amenities in comparison to urban settings. Clearly, systemic factors influence educator morale (Shalem & Hoadley, 2009), while also being related to job satisfaction, job stress, workload, attrition and experiences around HIV (Hall et al., 2005).

## Absenteeism

According to Finalyson (2009), when the educator is not at school, the process of teaching and learning becomes disrupted. When educators spend more than ten days away from school in a year, learners are more likely to score lower in their standard tests. In the present study, it was found that 14.4% of educators had been absent from school for 20 days or more. These findings are similar to that reported by Minister Angie Motshekga in 2013, noting: "We have the highest rate of absenteeism in [Southern African Development Community. We're at 19 days [average per teacher] a year. It's huge. An average of 10% nationally" (News 24, 26 February 2013). In the present study, the most commonly reported leave was, sick leave (66.6%) followed by other special leave (18.8%) and leave to attend funerals (13%). In 2004 it was established that HIV infection and other chronic health conditions were common reasons for educators' absenteeism from school (Hall et al., 2005; Shisana et al., 2005). An increase in self-reported NCDs is now evident, suggesting an increased level of morbidity in this population. However, as shown by Mampame (2013), educators' personal problems, also influence absenteeism.

## Violence in educational institutions

Zulu, Urbani and van der Merwe (2006) suggest that violence in South Africa has a long standing history that impacts negatively on learning and teaching. School-based violence is a problem that contributes to fear and anxiety among both learners and educators (Burton & Leoschut, 2012; Marais & Meier, 2010). The three most common forms of violence experienced at schools in the 2004 study were the same in 2015/2016. Compared to the 2004 study, perceived possession of weapons by students and educators in school decreased slightly (22.0% vs 20.3%) decreased while perceptions of assault (18.0% vs 19.8%) and fights involving weapons (14% vs 16.0%) increased slightly. Burton and Leoschut in their 2012 study of school-related violence, suggest that even though statistics do not show dramatic fluctuations, school-related violence should be considered as a factor contributing to school drop-out amongst learners (See also Shisana, et al., 2005).

Educators' perceptions of gangs operating within the school increased from 9.0% to 12.3% between 2004 and 2015/16. This suggests that the school environment may reflect the community context in which the school is located. While perpetrators of school-based violence are typically learners and staff from the school, community members or local gangs may, on occasion, enter school to victimize learners and staff (Gevers & Flisher, 2012). Mncube and Madikizela-Madiya, (2014) suggest that school violence mirrors violence in the broader community. Multifaceted and community-contextualised programmes are necessary to address violence in schools.

## DBE's HIV Policies

A large number of educators indicated that they were aware of the existence of the HIV and AIDS policy in schools. However, just below half of the educators reported that they were aware of the DBE Integrated Strategy on HIV, STIs and TB 2012-2016. It was noted that among those who were aware of the DBE strategy, the majority indicated that they had read it. Most educators affirmed support from DBE for ill/sick educators but only about half of educators reported that the DBE HIV/AIDS policy addressed the problem of stigma adequately. This is a challenge, given the fact that the DBE Integrated Strategy on HIV, STIs and TB 2012-2016 was introduced with the intention of being more holistic, including seeking to ensure that the education system is free of discrimination and stigma.

One of the aims of the strategy is raising awareness and training of educators on the strategy and HIV, STIs and TB (DBE, 2011). However, Ncube (2014) shows that although DBE provided HIV training workshops for educators and school officials during the two years prior to that study, findings from the two participating Johannesburg schools showed that training had not occurred at these schools during that period. It was further found that educators were uncomfortable with providing HIV education – potentially reflecting concerns about sexual contact (Wood 2011; 2013).

## Union HIV policies

Educator union membership has moderately declined from 89% in 2004 to 86.2% in 2015/2016. As in 2004, more male than female educators reported being members of unions. There are slight increases of membership in the age groups of 18-24 years and 55 and above, with decreases in the other age groups. Compared to 2004, there has been a small increase among White educators who are unionized (80% vs 82%). Union membership among Africans has remained the same, with Coloured and Indian/Asian union membership being lower than found in the previous study. There is a concerted effort among unions to increase awareness of the effects of HIV through formal education activities. Regarding knowledge of union HIV policies, lower levels were found among White and Indian/Asian educators, educators in the 18-24 year age group, and educators teaching in the Western Cape. More than half of unionized educators had not seen a copy of the HIV policy of their union. For those who were aware of the policy, however, readership was high (80%). While other races felt that their unions provided support for their members in relation to HIV, a higher proportion of Indian educators, especially those in the younger group in Gauteng did not feel that their unions provided it.

## Study limitations

A few limitations of this study should be noted when interpreting results. Only sampled educators who were present on the day of the survey were interviewed. It is possible that some educators who were not present on the day of the survey could have been absent due to HIV-related factors. This potential influences the HIV prevalence estimate, although it cannot be established to what extent. It was found that there was no marked difference between educators who tested for HIV and those who refused to be tested, which provides some reassurance that absence of educators did not bias the HIV prevalence findings.

The questionnaires were provided in English only and they were interviewer administered. While language was not found to be a barrier in the administration of the questionnaires, there were instances where interviewers conversed in the language spoken by the educator.

A number of indicators relied on self-reports from educators, or perceptions of their school environment. Recall bias may influence the proportions achieved, although this would not unduly influence the findings made.

## 6. RECOMMENDATIONS

### HIV Prevalence and incidence

HIV prevalence has increased among educators. This increase is related to increased uptake of ARVs among educators who are PLHIV as well as high incidence among younger educators. The response to HIV in the education sector should be comprehensive encompassing biomedical, social, economic and behavioural interventions.

### Risk reduction

To mitigate the risk of HIV infections and related mortality, it is recommended that the DBE implement an evidence based comprehensive and multi-sectorial response to address HIV in this sector. Promotion of condoms, VMMC, and ARV uptake – including among those not on medical aid – and reducing multiple sexual partnerships, should be emphasised. Improved uptake of ART usefully reduces the likelihood of HIV transmission.

Tailored interventions for high risk segments of the educator population are necessary, namely females, younger educators, those living in rural areas, and those living in KwaZulu-Natal and the Eastern Cape where HIV burden is higher. Interventions could include promotion of more stable family units – in particular, addressing relocation of educators without their families as a risk factor.

Consistent condom use was low and male condoms were more accessible compared to female condoms and this should be addressed.

Although there was a high prevalence of self-reported male circumcision in some provinces – mostly traditional – it is recommended that VMMC be promoted as a complementary option.

### HIV testing services

HIV testing levels were high, although lower among younger educators. There is a need to continue promoting HCT and workplace Employee Health and Wellness Programs – in particular to ensure that educators are aware of their current HIV status through recent HIV testing.

## **HIV and TB related stigma**

Educators held overall positive attitudes towards people living with HIV and or TB. Educators are, however, still ambivalent about disclosing HIV status. The DBE should foreground the importance of positive attitudes toward PLHIV among educators and learners, as a means to encourage tolerance in the school setting and the surrounding community.

## **Sexually transmitted infections**

Recent STI levels are very low among educators. Nonetheless, awareness of STIs and links to HIV infection and transmission should continue to be promoted.

## **Non-communicable diseases**

It is necessary to strengthen integrated Employee Health and Wellness Programmes, including partnerships with private health providers, and this should include screening for non-communicable diseases.

## **Substance use**

Most educators have not used alcohol in the last 12 months. Nevertheless, some educators had high-risk drinking problems, especially among males, junior educators and educators in the low socio economic scale. There were low proportions of educators using tobacco products. It is recommended that DBE implements a workplace substance use prevention programme which includes alcohol, tobacco and drug use. Furthermore, it is recommended that DBE, investigate the plausibility of developing an integrated mHealth mobile applications system to provide educators with a platform where they can access information for referral mechanisms for high-risk substance use.

## **Training and workload**

A large number of educators were teaching subjects that they were not trained to teach. This was particularly prevalent in mathematics and mathematics literacy. Educators should be placed to teach at the appropriate school levels that they were trained to teach. More educators should be trained to teach mathematics, and training should include continuous professional development for those that are already teaching mathematics.

The average class sizes in most schools were higher than the recommended 40 learners per class. Workload in relation to larger class sizes should be addressed.

## **Potential Attrition**

High workload and job stress were highly associated with high intentions to leave the profession. It is recommended that DBE implements workplace programs that assist educators to manage high stress levels. Strategies around educator career pathing within DBE should be emphasized to make educators aware of internal opportunities, especially for younger educators who were more likely to want to leave the profession.

## **Curbing absenteeism**

It is clear that absenteeism has been a problem for quality education and therefore DBE. It is recommended that DBE reinforce accurate record keeping of absenteeism at provincial, district and school levels.

## Violence

The National School Safety Framework (2015) is embedded in international, regional, national and educational policies and Acts. Activities set out in the framework, guides the implementation of anti-violence programmes and monitoring systems that have been initiated by DBE to curb school-based violence (Burton & Leoschut, 2012). Resources should be mobilised to deter learners and educators from carrying weapons to school. It is also important to improve monitoring of school premises to contain and eradicate assaults in the school setting.

## DBE's HIV/AIDS Policies

There was generally low awareness of the DBE Integrated Strategy on HIV, STIs and TB (2012-2016) among educators. It is recommended that awareness of the DBE Integrated Strategy on HIV, STIs and TB among educators be improved through active promotion. This should include empowering educators to manage the educational and socio-psychological consequences of HIV in the sector. This could include making the strategy available using different formats to improve accessibility such as distributing hard copies, leaflets and posters, placing information on internet portals and making information available in braille. By extension, these programmes should endeavour to make educators aware of their own HIV-related prejudices and empower them to manage the educational and socio-psychological consequences of HIV in the sector.

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# APPENDIX 1

## Appendix 1A: Items and factor loading Job satisfaction index

	Eigenvalues	Alpha	Loading
Factor 1: Collegiality	2.91	0.77	
I get along well with my colleagues			0.64
My colleagues and I support each other			0.88
My colleagues and I are united in our dedication towards teaching			0.61
Factor 2: Career advancement	1.12	0.74	
Teaching provides possibilities for promotion			0.67
Teaching provides ample career development opportunities			0.80
Factor 3: Community enhancement	0.84	0.67	
Teaching provides me with opportunities to assist in shaping the future of young people			0.76
Teaching provides me with opportunities to empower people with meaningful knowledge and information			0.57
Factor 4: Respect and discipline	0.79	0.61	
My learners respect me as a teacher			0.71
Most of my learners are well disciplined			0.68
Factor 5: Teaching workload and content	0.37	0.43	
My workload is not too high			0.43
I am satisfied with the content of the policies that affect my job			0.56

## Appendix 1B: Items and factor loading Job stress index

	Eigenvalues	Alpha	Loading
Factor 1: Problems with workload and reporting systems	1.59	0.84	
I experience stress arising from the implementation of new curricula, pass requirements and reporting systems			0.84
I experience stress with the reparation/assessment involved in applying the Curriculum and assessment Policy Statements (CAPS)			0.85
Factor 2: Problems job description and education system	0.66	0.48	
Performing tasks not in my job description			0.66
I experience negative attitudes towards the education department			0.45
Factor 3: Status and respect	0.26		
The teaching profession needs more status and respect from the community			0.53

## Appendix 1C: Items and factor loading education support index

	Eigenvalues	Alpha	Loading
Factor 1: Support educator aids work	4.0	0.88	
I have the support of the Department of Basic Education for AIDS work/education			0.66
I have the support of the school governing body for AIDS work/education			0.79
I have the support of religious groups in the community for AIDS work/education			0.78
I have the support of my union for AIDS work/education			0.73
I have the support of my union in my role as an educator			0.69
Factor 2: Support of educator role	0.72	0.72	
I have the support of the Department of Basic Education in my role as an educator			0.64
I have the support of the school governing body in my role as an educator			0.73
I have the support of the students' parents in my role as an educator			0.55
I have the support of my union in my role as an educator			0.43

## Appendix 1D: Items and factor loading HIV and Sexuality communication comfort index

	Eigenvalues	Alpha	Loading
Factor 1: Communication with family and staff	1.46	0.54	
I am comfortable talking to at least one member of my family about HIV/AIDS			0.55
I am comfortable talking to at least one member of staff at my educational school about HIV/AIDS			0.60
Factor 2: Communication with family and partner	0.67	0.41	
I am comfortable talking to at least one family member about sex			0.50
I am comfortable talking to my partner about sexual matters			0.42
Factor 3: Communication with students	0.14		
I am comfortable talking to students about sexual matters			0.47

## Appendix 1E: Items and factor loading HIV and Sexuality communication comfort index

	Eigenvalues	Alpha	Loading
Factor 1: Communication with family and staff	1.46	0.54	
I am comfortable talking to at least one member of my family about HIV/AIDS			0.55
I am comfortable talking to at least one member of staff at my educational school about HIV/AIDS			0.60
Factor 2: Communication with family and partner	0.67	0.41	
I am comfortable talking to at least one family member about sex			0.50
I am comfortable talking to my partner about sexual matters			0.42
Factor 3: Communication with students	0.14		
I am comfortable talking to students about sexual matters			0.47

## Appendix 1F: Items and factor loading HIV knowledge index

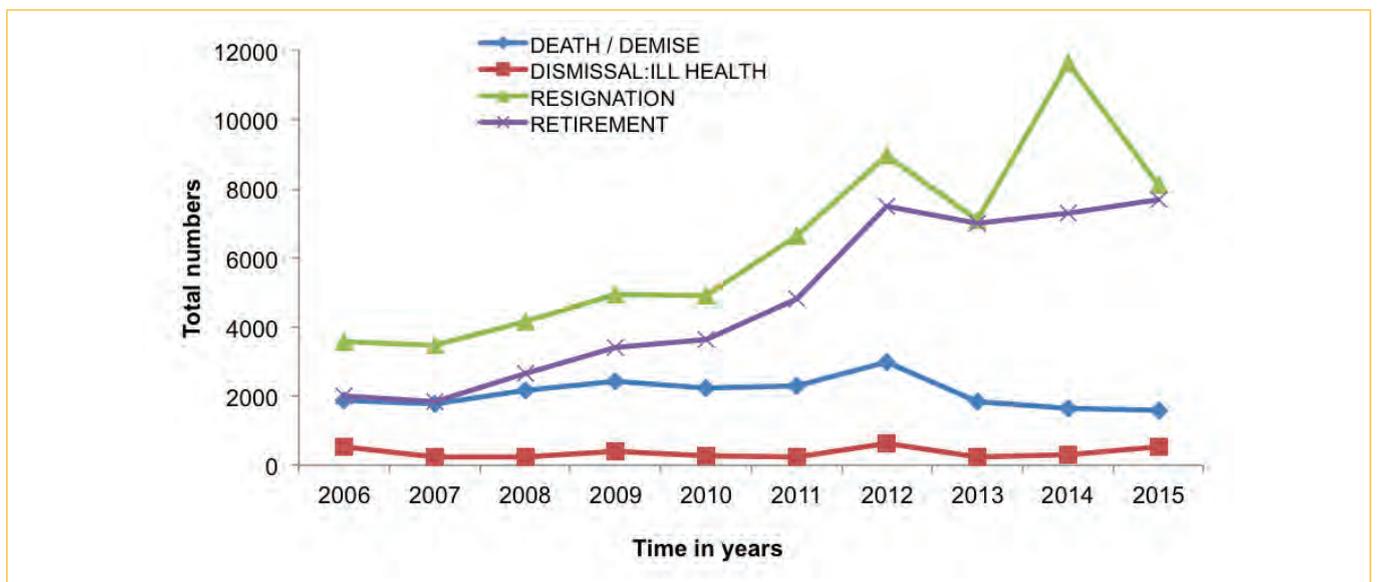
	Eigenvalues	Alpha	Loading
Factor 1: Correct knowledge	1.84	0.57	
Having sex with more than one partner can increase a person's chance of being infected with HIV			0.49
A person can be infected with HIV and still look healthy			0.52
People can protect themselves from HIV by using a condom correctly every time they have sex			0.51
You can get HIV through contact with infected blood			0.42
Factor 2: Anal and oral sex	0.97	0.63	
A woman can get HIV if she has anal sex with a man who is HIV positive			0.55
A woman who has been raped has the right to receive immediate HIV-preventive treatment			0.81
Factor 3: Myth	0.81	0.64	
A person can get HIV by using a cup or plate that has been used by a person with HIV/AIDS			0.67
A person can get HIV by sitting in a hot tub or a swimming pool with a person who has HIV			0.71
Factor 4: Rape	0.48		
A woman who has been raped has the right to receive immediate HIV-preventive treatment			0.77
Factor 5: HIV and TB	0.42	0.40	
Patients with TB also have HIV			0.46
HIV-positive persons tend to get TB more easily			0.53

## Appendix 1G: Items and factor loading HIV risk behaviour index

	Eigenvalues	Alpha	Loading
Factor 1: Confidence in condom use	2.44	0.81	
You feel it is important to use a condom. How sure are you that you could tell that person that you want to use a condom?			0.72
How sure are you that you could use a condom correctly or explain to your partner how to use a condom correctly?			0.71
Factor 2: Access to condoms	0.15	0.7234	
If you need condoms, how sure are you that you could get hold of them?			0.68
If you decide to have sex, how sure are you that you would have a condom with you when you need it?			0.63

## APPENDIX 2:

### Reasons for attrition





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