

A survey of grade 10 learners in a high school in Gauteng South Africa and review of the HIV and sex education curriculum, as to its relevance to the learners declared needs.

by  
Clive Whelan

Assignment presented in partial fulfilment of the requirements for the degree of Master of  
Philosophy (HIV/AIDS Management) at Stellenbosch University



Supervisor: Professor JCD Augustyn  
Africa Centre for HIV/AIDS Management  
Faculty of Economic and Management Sciences  
March 2013

## **DECLARATION**

By submitting this assignment electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the sole author thereof (save to the extent explicitly otherwise stated), that reproduction and publication thereof by Stellenbosch University will not infringe any third party rights and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

Signed:

C WHELAN

Date: 07 February 2013

## ACKNOWLEDGEMENTS

The author is aware that the completion of this study was far from a solo effort and with this would wish to acknowledge the following establishments and individuals:

The staff of Africa Centre for HIV and AIDS Management, Stellenbosch University, for your tireless work and special thanks to Arlene Willets for all your assistance. The Gauteng Department of Education for granting approval to conduct the research. Hoërskool Eldoraingne: The Principle Mr. F. Roos for permission to conduct the research. A debt of gratitude to Tina Myburgh, Head of Department, Life Orientation and her staff, who kindly administered the survey. Special thanks to all participants of Grade10, (2012), without whom there would be no research, thanks for your honesty. Thank you to my colleagues Andrea Vorster and André Parsons for your encouragement throughout. My sincere gratitude to the gentleman behind the scenes- Professor JCD Augustyn, thank you for your encouragement, direction and for always being there.

For the long-distance support of my children overseas- Sián, Clare and Quintin, thank you. To the greatest 'home' support team any one could have wished for. My wife Marina and daughters Danica and Angelique, although effectively abandoned for the past two years, they notionally wrote every page with me. I thank you for your unwavering love, support and encouragement without which this last page would not have been written.

## **SUMMARY**

The aim of this research was to conduct a quasi 'market-research' study of grade 10 learners (the consumer) in a high school in South Africa, to obtain their views on the relevance of the HIV and sex education curriculum (the product) in terms of their consumer needs. Quantitative data was generated by 202 learners who completed a self administered questionnaire. Supporting qualitative data was acquired through a review of the HIV and sex information within the Life Orientation curricula for grade 7-10 learners.

The results confirmed that the HIV and sex education provided for grade 10 learners did not meet their needs and had minimal effect on their behaviour. The knowledge level of learners in terms of critical HIV issues was of concern. A result that had not been sought or expected, found that there is no HIV and sex education curriculum, neither do HIV and sex education feature as a stand-alone subject in the life orientation curriculum.

Recommendations have been made to establish a HIV and sex education curriculum within the life orientation curricula in high schools.

## OPSOMMING

Die doel van hierdie navorsing was om 'n “kwasi” marknavorsing-studie van graad 10-leerders (die verbruiker) in 'n hoërskool in Suid-Afrika uit te voer en om hulle menings oor die toepaslikheid van die MIV en seksonderrig kurrikulum (die produk) in terme van hul verbruikers se behoeftes te bepaal. Kwantitatiewe data is gegenereer deur 202 leerders wat 'n self-gedadministreerde vraelys voltooi het. Ondersteunende kwalitatiewe data is verkry deur 'n oorsig van die MIV en seks-onderwys inligting binne die Lewensoriëntering-leergange vir graad 7-10 leerders.

Die resultate het bevestig dat die MIV en seks opvoeding wat voorsien was vir graad 10-leerders, nie aan hul behoeftes voldoen het nie en dat dit 'n minimale uitwerking op hul gedrag gehad het. Die kennisvlak van die leerders in terme van kritiese MIV kwessies was kommerwekkend. Resultate het daarop gedui dat daar geen MIV en seks-kurrikulum is nie, en dat MIV en seksonderrig nie as 'n vak in die Lewensoriëntering-kurrikulum verskyn het nie.

Aanbevelings word gemaak om 'n MIV en seks kurrikulum binne die Lewensoriëntering-kurrikulums in hoërskole te vestig.

**TABLE OF CONTENTS**

	<b>PAGE</b>
<b>CHAPTER 1: INTRODUCTION</b>	
1.1 Rationale	1
1.2 Background	1
1.3 Research problem	4
1.4 Research question	5
1.5 Aim of the Study	5
1.6 Objectives of the study	5
1.7 Significance of study	5
<b>CHAPTER 2: LITERATURE REVIEW</b>	
2.1 Introduction	7
2.2 Life orientation curriculum	7
2.3 Delivering life orientation	8
2.4 Unheeded concerns	8
2.5 Unheeded-the result	9
2.6 Standardisation	10
2.7 Collaborative interventions	11
<b>CHAPTER 3: RESEARCH DESIGN AND METHODS</b>	
3.1 Introduction	13
3.2 Research design	13
3.3 Quantitative research	13
3.3.1 Participants	13
3.3.2 Sample size	13
3.3.3 Measuring instrument	14
3.3.4 Procedure	15
3.3.5 Ethical considerations	17
3.4 Qualitative research	17
3.4.1 Procedure	17
3.5 Limitations	18

**CHAPTER 4: RESEARCH ANALYSIS AND RESULTS**

4.1	Introduction	19
4.2	Quantitative data capture	19
4.2.1	Section 1: results	19
4.2.2	Section 2: results	21
4.2.3	Section 3: results	24
4.2.4	Section 4: results	26
4.2.5	Section 5: results	28
4.2.6	Section 6: results	30
4.3	Qualitative data capture	32
4.3.1	Grade 7 analysis and results	34
4.3.2	Grade 8 analysis and results	34
4.3.3	Grade 9 analysis and results	35
4.3.4	Grade 10 analysis and results	35
4.3.5	Grade 10 life orientation textbook	37
4.3.6	Natural Science curriculum	37

**CHAPTER 5: DISCUSSION OF RESEARCH RESULTS**

5.1	Introduction	39
5.2	Comparison male/female response	39
5.3	Assessing information	39
5.4	Standardised information	40
5.5	Opinions of peer knowledge	41
5.6	HIV and sex information combined	42
5.7	Influence on behaviour	42
5.8	Personal response and risk	42
5.9	Learner comments	44
5.10	Curriculum overview grade 7-10	44
5.11	Conclusions of research discussion	45

**CHAPTER 6: CONCLUSION AND RECOMMENDATIONS**

6.1	Introduction	46
6.2	Conclusion	46
6.3	Recommendations-education	47

6.4	Recommendations - research	48
	<b>REFERENCES</b>	50
	<b>ADDENDA</b>	
ADDENDUM A	HIV and sex education curricula research survey	54

**LIST OF TABLES**

Table 2.1	Level of education attended and HIV outcome status of survey participants 2010.	10
Table 4.1	Section 1: Missing responses	19
Table 4.2	Section 1: Learner responses	20
Table 4.3	Section 2: Missing responses	12
Table 4.4	Section 2: Comments from learners	22
Table 4.5	Section 3: Comments from learners	24
Table 4.6	Section 3: Missing responses	24
Table 4.7	Section 4: Missing responses	26
Table 4.8	Section 5: Missing responses	27
Table 4.9	Section 5: Comments from learners	28
Table 4.10	Section 6: Missing responses	28
Table 4.11	HIV and sex related content of the grade 7-9 Life Orientation curricula	30
Table 4.12	Weighting of topics grade 7-9 Life Orientation	31
Table 4.13	HIV and sex related content of the grade 10 Life Orientation curriculum	33

## **LIST OF FIGURES**

Figure 4.1	Section 1: Male/Female response congruence for questions 1-5	20
Figure 4.2	Section 2: All responses to questions 2.1-2.6	21
Figure 4.3	Section 3: All responses to questions 3.1-3.6	23
Figure 4.4	Section 4: All Responses to questions 4.1-4.7	25
Figure 4.5	Section 5: All responses to questions 5.1-5.5	27
Figure 4.6	Section 6: Male/female response congruence for questions 6.2-6.8	28

## **CHAPTER 1: INTRODUCTION**

### **1.1 Rationale**

Businesses spend vast amounts of money on market-research, to ensure the products they offer are appealing and that they meet the customer's needs thus securing the customer's purchase of the product. Although having declined for the previous five years, the market research industry's revenue in 2012 was still \$15.1 billion, projected to rise to \$17.5 in 2017. (IBISWorld 2012) In 2011 South Africa's spend on research and development for all sectors was US\$3.7 billion. (Battelle 2011) How much do we spend on educational market research? The focus of this study is to conduct quasi- market research in relation to Human Immunodeficiency Virus (HIV), sex education and 15-16 year old learners.

The product: HIV and sex education curricula. The consumer: grade 10 learners in a South African high school. Agreed, the consumer in this case is not buying; equally within the school environment they do not have a market alternative. However, there is still a need for the product to be appealing and effective for the consumer. As business requires sales to maintain future profits, South Africa requires the 'buy-in' to maintain the future economy.

There have been a considerable number of studies in the field of HIV measuring the knowledge of "consumers" pre and post interventions, there have been a plethora of data collected and statistics produced to measure the effectiveness of the 'products'. (Kirby 1995, Peltzer et al 2005, Adenuga 2009, Tarkang 2010), There appears to have been far fewer market research studies to ask the consumer if the product being produced fits the market needs and is effective for the consumer?

### **1.2 Background**

The estimated global total of people living with the HIV is 33.3 million. Sub Saharan Africa with only 12% of the world's population houses an estimated 60% of the worlds HIV population. (UNAIDS 2010). South Africa is the custodian of the largest HIV treatment programme in the world (DOH 2009), the current infected population stands at 5.6 million (DOH 2010); this is almost 25% of the sub-Saharan Africa total and is 16.8% of the global total. In the past three years 926,578 South Africans have died of AIDS related illness. The country has 2,138,909 AIDS orphans, (DOH) who have lost their parents to HIV, many for who the situation increases their vulnerability to the same outcome.

To understand the criticality of educating and protecting the youth of South Africa, consider, the country has a total population of 50.6 million of which 31.3% are under the age of 15 years. (Statssa 2011). When we consider education and protection there has to be concern that the antenatal survey of South Africa is inclusive of 10-14 year old women. (DOH) - “*children.*”

Demographic, geographical and socio-economic factors all have a part to play in the spread of the HIV epidemic. Gauteng Province, where this study was conducted, is the smallest province in South Africa with a landmass of 16,500sqm, only 1.45% of country’s total landmass. Populating this limited space are approximately 11.3 million people. Added to the mix is an estimated 367,100 net inflow to Gauteng of inter-provincial migrants; through the period 2006-2011. Of the provincial total of 11.3 million, 3,07 million are younger than 15 years. (Statssa).

New infections continue in Gauteng with an estimated 48,000 in 2010, a HIV prevalence of 17% and an antenatal prevalence of 30.4% (15-49 years). Of the total antenatal participants in Gauteng: 887 were 15-19 years old with a HIV prevalence of 20.8%. In the age group 10-14 years there were 12 participants with a prevalence of 8.3%. (DOH 2010). Is the product we are producing meeting the consumers needs?

Some progress is being made in South Africa, with increased access to treatment and antiretroviral medication, in turn, improving the quality of life and extending expectancy for many whilst reducing AIDS related deaths. But all of this comes at a cost. In managing the epidemic in the next four years, the South African Government will commit ZAR130, 711 billion, to the National Strategic Plan (NSP) 2012-2016; in the prevention and treatment of HIV, Tuberculosis & Sexually Transmitted Infections. (DOH 2011) Antiretroviral treatment will account for 60% of the total NSP budget, whilst HIV screening, condoms and youth prevention together, totals less than 20%. Is enough being spent on prevention? And what interventions will provide the highest return on investment?

Whilst the general trend of the HIV epidemic, globally, suggests a reduction in HIV prevalence (UNAIDS 2010); new infections continue and despite three decades of awareness of the epidemic and over a two decades of HIV prevention communications programmes and education, South Africa has successively attained >300,000 new infections annually, for the

past three years. (DOH 2009/10/11). Are the programmes and the education ineffectual or are they simply too small a part of a much larger picture, are they relevant? The HIV epidemic is not driven solely by individuals who choose to participate in sexually risky behaviour; it is not just a medical problem that can be managed by dissemination of information, condoms and medication.

This study clearly recognises that education programmes alone are not the solution. The course of the epidemic is intimately related to socio-economic factors, cultural beliefs and practices, politics and poverty. Include transit populations, income and gender inequalities and we increase vulnerability, promoting increased risk behaviour, increasing susceptibility to infection. This situation affects not just the adult population of a country, but presents a similar environment in which the youth need to grow, develop, create a future and ultimately survive the rigours of the 21<sup>st</sup> century and the epidemic.

The next generation of South Africa's workforce are the current school learners. From an economic perspective alone it is imperative that HIV infection in this group is reduced and prevented. In 2011 a total of 496,090 candidates age 18 (DBE 2012) sat the matriculation exams in South Africa and subsequently left school. It is acceptable to approximate that a similar number of grade 10, 15-16 year olds, are currently in the education system. In considering the potential impact of infection to the group- in 2009 Bennish and Han estimated that "15 year olds account for 34% of all new HIV infections and have a HIV prevalence of 10.3%". Applying these estimates to the group of school leavers in 2011 approximately 51,097 of these teenagers may already be HIV positive. A percentage of the current 15-16; year old learners could well be undiagnosed; are most likely are not aware of their infection and may continue to re-infect or newly infect others, exacerbating the problem.

At age 18 some learners may well be 3-4 years post infection and a percentage will enter the symptomatic phase of HIV infection. If left undiagnosed, ill health could see a number of these individuals drop out of tertiary education or become too ill for employment.

With or without detection of their condition they will add to the queues of an already overburdened South African health care system. Their possible exit from education or the workforce will have an effect, on the collective economic development of South Africa. Whilst this effect may not be that substantial now, consider the next 20 years, if the incidence

remains as is; with 31.3% of the country's population under 15 years of age. There is an urgent need to manufacture the right product for the market. Concurrently, there is the need for further discussion with regards to the current dilemma of the provision of access to HIV testing and condoms for school learners.

HIV education has been included in the South African Schools curriculum for well over a decade however, any positive effect this education may have had, has not reflected an aligned success in reduction of HIV infections in the group. Both the UNAIDS Global Report and the South African National Antenatal Sentinel HIV and Syphilis Prevalence Survey determine HIV prevalence based on the age group 15-49 years. This would infer the current accepted global benchmark or starting point for fully sexually active adolescents is age 15 years. Suggesting, therefore, that this age group may represent the latest point of entry for effective HIV prevention and relevant sex education.

"The effects of HIV/AIDS genocide will cripple the South African economy... The epidemic is slowly, but surely, robbing us of the young, beautiful minds and able bodied" Nomvula Mokonyane, Gauteng Provincial Premier, South Africa. (SAPA 2012).

### **1.3 Research Problem**

Accepting then that 15 year olds are considered fully sexually active, there is a need to ensure appropriate and effective HIV and sex related education at this point if not before, to ensure these adolescents understand the risks of infection, prevention measures and adjust or maintain their behaviour patterns accordingly; thereby protecting themselves and collectively reducing the prevalence within the group. A study of 'HIV/AIDS Knowledge and Sexual Behaviour Among Junior Secondary School Students in South Africa'; concluded "that knowledge of HIV/AIDS was poor in some areas and more satisfactory in other areas, but generally was not satisfactory enough to sustain adequate HIV/AIDS response in the context of high and wide spread HIV/AIDS prevalence" (Peltzer et al 2005).

In 2006, 11% of young men and 3% of young women reported having had sex before turning 15, while in 2009 these figures were 14% and 5% respectively. By 16 years of age, 31% of girls and 17% of boys had ever had sex. (Johnson et al 2009). These figures and the estimated prevalence rate of 15 years olds (Bennish) would suggest HIV and sex education in schools is not reducing risk behaviour and may simply be maintaining the *status-quo*.

#### **1.4 Research Question**

The research question that has been formulated for this research project is:

Are the current HIV and sex education curriculum in South Africa's high schools relevant to the declared needs of Grade 10 learners?

#### **1.5 Aim of the study**

The aim of the study was to firstly, conduct a survey of grade 10 learners in a high school in Gauteng, South Africa to ascertain if the current HIV and sex education curriculum meets their needs. Secondly, conduct a review of the curriculum and to confirm its relevance, primarily with regard to the responses of the learners. The conclusion of the study being to determine to what extent the curriculum meets the learner's needs and to make any recommendations.

#### **1.6 Objectives of the study**

The objectives to be achieved through research were:

- To determine the relevance of the HIV and sex education curriculum to the needs of grade 10 learners, 15-16 year olds, through use of a self administered questionnaire. .
- To review the content of the HIV and sex education curriculum of grade 7-10 learners attending high school in South Africa.
- To identify any 'gaps' between the content of the HIV and sex education curriculum and the needs of grade 10 learners.
- To make recommendations that could improve alignment of the HIV and sex education curriculum for Grade 10 learners, to their identified needs.
- Provide any additional information that could improve the content and /or the delivery of such information.

#### **1.7 Significance of study**

The significance of the study is to identify the needs of 15-16 year old learners in respect of the HIV and sex education they are currently receiving; to ascertain if the curriculum is relevant to the group. Such research may enable recommendations that could assist the Department of Basic Education in updating and aligning the curricula in any future review.

Any subsequent changes to the curricula, to better meet the needs of the group, could have an added positive effect on the prevention of HIV infection and the reduction of HIV incidence within future such age groups. The study may encourage further research of this and other related topics.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Introduction**

The youth of South Africa are the country's future. A standard statement that could be applied to many countries; but particularly pertinent to South Africa at this time- with a total population of 50.3 million, of which 40.9% (20.5 million) are under the age of 20 years. (Statssa 2012). It is critical that this substantial proportion of the country's population are protected, educated and adequately prepared to enter the work environment and to take their place as healthy, socially able and responsible citizens. Beyond parental guidance, unfortunately not always available to all; school is the institution most likely to reach the majority, with a total of 15.6 million of school age and an attendance level of 88.2% in 2011. (Statssa).

There is concern for the >1.8 million children not attending school. Failure to receive a standard education may also mean they are not in receipt of important HIV and sex related information; leaving them vulnerable. This lack of education could translate into a future of unemployment and poverty further increasing their vulnerability, particularly in the case of young women. Just what education or information is available within communities for these children may warrant research.

### **2.2 Life orientation curriculum**

The Government Department of Basic Education (DBE) is responsible for the content and delivery of education in schools. The South Africa Schools National Curriculum Statement, (NCS) Grades R-12 (age 5-18 years) is the overarching policy for education. For each subject there is a Curriculum and Assessment Policy Statement. (CAPS). Life Orientation (LO) is one of the compulsory subjects within the National curriculum.

LO is the study of the self in relation to others and to society. It addresses skills, knowledge, and values about the self, the environment, responsible citizenship, a healthy and productive life, social engagement, recreation and physical activity, careers and career choices. These include opportunities to engage in the development and practice of a variety of life skills to solve problems, to make informed decisions and choices and to take appropriate actions to live meaningfully and successfully in a rapidly changing society.

(DBE 2011).

LO is an excellent vehicle for creating awareness of and preparing adolescents for the adult world. Included in the LO programme is related HIV and sex education. For teenagers receiving no additional input of these two subjects, the curricula may be the only source of information and so is critical in terms of its content, relevance and effectiveness.

### **2.3 Delivering life orientation**

LO is a broad and complex subject dealing with issues such as -morale values, acceptable and non acceptable societal behaviour, human rights, substance abuse and personal decision making. Ideally, it requires the person(s) delivering the subject to be a 'role model' for the content and intent of the curriculum. "Principals [of schools] were concerned that many teachers were not exemplary role models. Some teachers were guilty of many of the misdemeanours mentioned under negative influences of community life. They set a poor example..." in contrast "...None of the principals of the former Model-C schools had complaints in this regard.". (Prinsloo 2007).

Prinsloo suggests that the character, values and example set by teachers determines the outcomes of LO and effect on learners. A survey conducted for the Education Labour Relations Counsel on the impact of HIV on educators in South Africa reported that "...12.7% of educators who gave a specimen for HIV testing were HIV positive...highest for those aged 25–34 years (21.4%) followed by those aged 35–44 (12.8%). Older educators (>55 years) had the lowest HIV prevalence (3.1%)...There were areas of knowledge, where a few of the educators did not have accurate information or did not know about certain issues related to HIV."(ELRC 2004/5). This survey although revised in 2008, is dated and should be repeated.

### **2.4 Unheeded concerns**

Sub-Saharan Africa is the epicentre of the global HIV epidemic; the scarcity of published research articles related to prevention of HIV/STI's and school interventions in the region does not reflect the scale of the problem. In a systematic review of such articles 1986-2006, results showed "Knowledge and attitude-related outcomes were the most associated with statistically significant change. Behavioural intentions were more difficult to change and actual behaviour change was least likely to occur" (Paul-Ebhohimhen et al 2008).

As early as 1995, a study addressed sex and HIV education in schools, with concern that “...Most school teaching is evaluated by assessing its impact on knowledge and not on behaviour outside the classroom.” (Kirby 1995). Research in 2000 explored sexual dynamics and decision-making among young people aged 11-24 years in KwaZulu-Natal Province, recommending strategies for HIV intervention programs, such as “...life skills improvement, acceptability and de-stigmatisation of condom use, consistent condom use, and responsible sexual practice.” (Varga 2000). In 2002, Kirby again, reviewed school programmes in South Africa commenting “... most youth receive some amount of sex or HIV education. However, important topics are not covered in many schools.”

Research in relation to HIV education in South African schools and the dilemma and conflict experienced by educators concluded “The impact of broader socioeconomic factors on education was noted, such as the dysfunctional homes of learners, poor role models, inadequate life-skills, violence, and crime. The findings highlight the need for a comprehensive approach towards sexual health intervention programmes that is sensitive to the cultural and social context in which it is developed and implemented”. (Ahmed et al 2009). Prinsloo, stated similar concerns from Principles and LO teachers. Bringing into question the ability to or effectiveness of standardising interventions.

## **2.5 Unheeded-the result**

Since 1986 research has indicated that educational HIV prevention interventions in schools have been both successful and not. Success has seen an increase in knowledge and awareness but little in terms of risk behaviour change. Failure to heed these concerns has added to the situation that South Africa now finds itself in.

Over decade on from Varga’s research, KwaZulu-Natal has the highest HIV infection rate of all provinces in South Africa at 21.4%, with antenatal HIV prevalence in the age group 15-19 at 29.2%. (DOH 2011). The age group involved in Varga’s research was 11-24 years at the time and are now 23-36 years of age; the antenatal HIV prevalence in the age groups 25-29, 30-34 and 35-39 is 50.9%, 57.8% and 52.7% respectively. (DOH).

Attendance at school has not produced a significant reduction in risk exposure. 76.4% of the participants of the antenatal HIV survey had secondary school qualifications 30.2% of them being HIV positive. (DOH) (Table 2.1)

**Table 2.1.****Level of education attended and HIV outcome status of survey participants 2010.**

	<b>Level</b>	<b>Sample size</b>	<b>% HIV Positive</b>
<b>Level of Education</b>	None	562	33.5%
	Primary	3786	33.3%
	Secondary	24627	30.2%
	Tertiary	2576	22.7%

The South Africa, General Household Survey 2011 reports that 4.5% of all girls in South Africa age 13-19 years are, or were pregnant in 2010. (Statssa 2012). “Across school grades 10-12 the percentage rises with age, from age 16 (3.1%), age 17 (7%) and age 18 (8.7%).” The very fact that these percentages of teenage girls are pregnant assumes these and an equal number of male partners indulged in unprotected sexual intercourse and may have been exposed to HIV infection.

In a survey of 500 teenagers from schools across East London, 70% of grade 11 and 12 learners indicated they were sexually active and 72% of those were not practicing ‘safe sex’. 18% of respondents felt pressurized to have sex. (SAPA 2012).

## **2.6 Standardisation**

The South African DBE has embarked on the implementation of the CAPS programme, of which LO is a part. In a statement, the Director for Schools Curriculum, General Education and Training stated “There will be one orientation manual for each subject...as well as to ensure that the same policies and materials are used in schools....There will be no localisation of these manuals.”(DBE 2011). Standardisation of education across the country is commendable. Can a multifarious subject such as LO, much of which is personalised by the learner and can affect behaviour, be standardised across eleven official languages, a similar number of cultures and vastly varying socio-economic backgrounds?

Research into 83 sex and HIV educational programmes for youths, from all countries, both developed and developing found that “...Effective curricula commonly incorporated 17 characteristics... Programs were effective across a wide variety of countries, cultures... Replications of studies also indicate that programs remain effective... provided all the

activities are implemented as intended in similar settings”.(Kirby et al 2006). Similar to the 1986-2006 review (Paul-Ebhohimhen). Kirby finds evidence that the programmes had “...positive effects on relevant knowledge, awareness of risk, values and attitudes, self-efficacy, and intentions”. Based on this evidence it is suggested it is highly likely that these factors would contribute to changes in behaviour.

Successes in behavioural change were reported from a HIV education intervention in high schools in Nigeria in 1996. (AFY 1996). The total contact time over a six week period for learners was 12-36 hours, delivered by a physician and two teachers. As school curricula have expanded and developed, the time and resources of this Nigerian intervention have not become standard. Total time allocation to LO (5 topics) is 70 hours over the 40 week school year.

The standard inclusion of HIV with sex education, within education programmes, is emphasised throughout the International Technical Guidance on Sexuality Education (UNESCO 2009) and cites the importance of HIV education. Conversely-“Globally, comprehensive and correct knowledge about HIV among both young men and women 15-24 years old is only 34%... Less than half of young people living in 15 of the 25 countries with the highest HIV prevalence can correctly answer five basic questions about HIV and its transmission” (UNAIDS 2011). This included South Africa.

## **2.7 Collaborative interventions**

The DBE and schools alone cannot be responsible for the HIV and sex education of the youth. Learners, after the school day ends are the community. The knowledge levels, the practices, the values, the beliefs, the culture of their community become the influence-the standard. There is a requirement for collaborated and continuous education and interventions in the community, for the community. Without this, the very limited exposure to HIV and sex education per year in schools will have little effect. “Public health agencies, in conjunction with families, educators, and health-care practitioners, must educate youths about HIV” (Whitemore et al 2012) Youths, particularly those at highest risk, need effective school-based, school-linked, and community-based interventions. (CDC 2012). On the issues of HIV and sex there is a void between the youth and parents in terms of knowledge and communication, which reflects through the community. In attempting to affect behaviour change in adolescents consideration should be given to educating the community to the same level.

## **CHAPTER 3: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter provides information of the research design of the study and the methods used, including participants, instruments, procedure, ethical considerations and limitations. The detail will allow for evaluation of the adequacy of the research and the reliability and validity of the results.

### **3.2 Research design**

Both quantitative and qualitative methods of research were applied in the study. The quantitative data was generated through the use of a self administered questionnaire to grade 10 learners, designed to enable learners to indicate the extent to which they believed the HIV and sex education met their needs.

The qualitative data was acquired from a comprehensive review, of the HIV and sex education curricula currently presented in South Africa's schools for grade 7-10 learners.

### **3.3 Quantitative research**

A previously utilised measuring instrument could not be located for the purposes of this research and was therefore designed by the researcher.

#### **3.3.1 Participants**

In terms of the quantitative data collection, the target population was grade 10 learners of 2012, in daily attendance at Hoër School Eldoraigne in Gauteng Province, South Africa. The language of education in the school is Afrikaans. The total number of grade 10 learners attending the school at the time of the survey was 333; consisting of 167 (50.1%) male and 166 (49.9%) female. All learners were within the age group 15-16 years. 98.4% of the group were white.

#### **3.3.2 Sample size**

All 333 grade 10 learners were considered eligible and invited to participate; this allowed for non participation and incomplete questionnaires and increased the prospect of achieving the recommended sample size. (Krejcie et al 1970). Whilst sample size was not critical to a representative sample, selecting a number of teenagers from a large group could have placed

unnecessary pressure on them and their personal security of confidentiality may have been placed in doubt, possibly affecting their responses. Inviting all learners provided a comprehensive overview from the group. The study can be considered to be cross-sectional as it facilitated all types (within the grade).

### **3.3.3 Measuring Instrument**

The measuring instrument used for the collection of the quantitative data was a self administered questionnaire. A number of survey instruments were available to measure the knowledge, attitudes, behaviour and perceptions of teenagers in relation to HIV. A survey instrument designed to support this particular research could not be found; and was therefore constructed. (Addendum A). Christensen et al, 2011 was particularly helpful in this regard. The questionnaire was designed prior to the review of the curricula, avoiding any influence on the construction of the questions and removing any personal bias from the researcher's considerations of the curricula. The questionnaire was first constructed in English and translated into Afrikaans, the first language of the target group/school.

Completion of the questionnaire required 38 responses and provided three opportunities for comment. It was presented in six sections and contained both unstructured and structured response formats.

Section 1, Titled: Your opinion.

This section contained six close-ended questions each providing mutually exclusive and exhaustive response categories. This was an 'ease-in' introduction to the questionnaire for the participants. It was non-threatening, in that it simply asked the learner's opinion on a number of broader issues of the HIV epidemic in relation to their own age group and asked the learner to select one of the estimated percentages provided in relation to each question. The responses provided an insight into the perceptions of the learners in respect of their peers knowledge.

Sections 2, 3, 4 and 5 all contained a multichotomous response format of a 4-point rating scale. The centre (neutral) point was excluded from the scale, with consideration that, a teenager may well take the easy option of neutral or uncertain, if available, thus removing the need to commit.

Section 2. Titled: The Sex Education Curriculum.

and

Section 3. Titled: The HIV Education Curriculum.

These two sections each contained six similar statements relating to relevance of the specific subject and offered four response categories for each statement. An open ended question was presented at the end of each section with a text box in which the learner could record any comment(s).

Section 4. Titled: General Information:

This section sought to explore the link between the two curriculums, HIV and sex education, their applicability to the learner and explored subject teacher support. Seven statements were provided for response.

Section 5. Titled: Influence on Behaviour:

The section contained five statements, of which the learners considered the influence the HIV and sex education curriculum have on their personal behaviour. An open ended question was presented at the end of the section with a text box in which the learner could record any comment(s).

Section 6. Titled: Personal Information.

Containing eight questions with a dichotomous response format, the section enquired of knowledge and the sexual conduct of the learner. In the design of the questionnaire this section was purposely presented last. The personal nature of the questions may have deterred some learners from completing any further sections. In this design 85% is completed at this point.

### **3.3.4 Procedure**

An application to conduct the study was submitted to the Research Ethics Committee (Human Research: Humanities), Division of Research Development, Stellenbosch University. In the interim, a request to the Principle of HoërSkool Eldoraigue provided an initial agreement for the survey to be conducted at the school; pending permission from the relevant office of the Gauteng Department of Basic Education (DBE). Written permission was required and received from all three offices.

The researcher requested and met with the grade 10 learner group, this provided the opportunity to explain to the whole group, at one time, the nature and aim of the research, the relevance to the learners and the importance of their input. They were assured of the confidentiality of their participation and the fact that the questionnaire would be anonymous, unlinked and non-aligned. The procedure and process that the research would follow was explained. Whilst it cannot be confirmed that this personal introductory briefing influenced participation, it is strongly recommended that future researchers consider this type of face to face introduction and briefing.

All grade 10 learners were requested to volunteer to complete the questionnaire. Those who volunteered were provided with a 'Child Assent Letter' which explained in detail the research, and the process to completion of the questionnaire. Learners who indicated their intention to participate signed this letter and received a second letter requesting the parents/guardians signed permission for their child to participate in the survey. Only learners who returned the letter of consent from the parent/guardian, with signed permission, were allowed to participate in the survey.

Response bias was minimized by informing the participants that the data would be anonymous. Learners were directed not to write their name or any other indicator on the questionnaire that could possibly link the questionnaire to an individual.

The initial aim was for the questionnaire to be presented to all learners to complete on one day, during a Life Orientation subject period. The school was extremely supportive, providing a second session for completion of questionnaires, in order to accommodate late entries! The Head of Life Orientation studies at the school secured all completed questionnaires until collected by the researcher.

A note for future researchers, who consider conducting research in schools. School schedules are extremely time restrained, teachers and learners have very little room for manoeuvre within the daily time table. The researcher's envisaged ideal plan of execution may not be achievable. Providing the activities and procedures remain within that which was approved by the Research ethics committee (REC) and the DBE – "remain flexible!"

### **3.3.5 Ethical consideration**

All proposals for research, conducted at Stellenbosch University, are submitted for review to the REC, before any such research can commence. “Special attention is given to research that includes certain individuals or categories of participants who may be vulnerable to undue influence.”(SU. 2011) This includes children, *vis á vis* adolescents under the age of 17.

In applying for clearance for this research the level of risk of the procedure- the questionnaire, was declared as possibly causing the participating learners some “discomfort”. In that, post completion of the questionnaire the learner may have a concern about having provided personal information. A certain statement or question may have prompted a need for the learner to obtain additional information of that particular subject area.

To mitigate any discomfort experienced by a learner; all were provided with toll-free telephone numbers of local organisations, such as the AIDS Helpline. The Life Orientation subject teachers were available to provide advice and support during school hours. The researcher was and remains available on a 24 hour basis, contactable by land line, mobile phone and email to provide support. Learners had access to all contact details. At the time of reporting the researcher was not aware of any learners having declared any discomfort or concerns.

## **3.4 Qualitative research**

The qualitative data was obtained from a comprehensive review of the HIV and sex education curriculum, contained within the CAPS Life Orientation programme for grade 10 learners. It was decided that the grade 10 curriculum could not be reviewed in isolation. In order to understand what learners had previously been taught, where some or all of this information may not appear in the grade 10 objectives, the review included the HIV and sex education curricula from grade 7, 8 and 9.

### **3.4.1 Procedures**

A general review of the grade 7-9 curricula was conducted to explore the:

- Logical development of the curricula from grade 7-10.
- The link and alignment of the sex education and HIV education content.

On completion of the questionnaires by learners and the data capture process, the responses and declared needs of the learners were considered in relation to the applicability and relevance of the content of the grade 10 CAPS for LO.

### **3.5 Limitations**

The limitations of this study are recognised. The study was conducted in only one school in an urban setting. The selected school and sample group was predominantly white, with a first language of Afrikaans. The influence of a single race, language and the associated culture may have created a bias within the results. Schools that are more closely representative of the composite population of the country were approached, but were unable to assist with this study.

## **CHAPTER 4: RESEARCH ANALYSIS AND RESULTS**

### **4.1 Introduction**

The data capture process, analysis of the data and results of the analysis are presented in this chapter. The information regarding the quantitative and qualitative processes are each afforded their own section.

### **4.2 Quantitative data capture**

Quantitative data was captured from questionnaires completed by grade 10 learners. The total learners in grade 10 amounted to 333, consisting of 166 (49.9%) female, and 167 (50.1%) male. All available learners were invited to participate; a total of 202 (60.7%) attempted the questionnaire, with 104 (51.5%) female and 98 (48.5%) male participants. This was a satisfactory representation of the total group composition. Not all learners completed all sections/questions, details of which are provided in the results section.

Data spread sheets for each of the six sections of the questionnaire were created, the 202 respondents were listed with the split of 98 males and 104 females enabling analysis by sex and overall, for each question. The same design for data presentation in the 'Figures', has been used throughout, for consistency and ease of comparison. The data of missed responses for all questions are provided to assist future researchers designing similar questionnaires. All question numbers as per the questionnaire are provided after the response (Q2.2), for ease of reference. The questionnaire is at Addendum A.

#### **4.2.1 Section 1: results**

All the questions presented in Section 1 of the questionnaire related to the learners own age group of 15-16 years. Learners were asked to consider each question and based on their opinion; to select one of the percentage ranges in which their answer lay. Table 4.1 provides the detail of questions not attempted by learners.

The combined group responses to questions in Section 1 of the questionnaire indicated that the majority; believe 25% of 15-16 year olds do not know enough to have a safe sexual relationship or to prevent pregnancy.

**Table 4.1****Section 1: Missing Responses**

	<b>Male</b>	<b>Female</b>	<b>Total</b>
Question 1.3	2	3	5
Question 1.4		2	2
Question 1.5		5	5
Question 1.6	2	3	5
<b>Total</b>	<b>4</b>	<b>13</b>	<b>17</b>

The group believe only 50% know enough about HIV to prevent becoming infected and that the same percentages do not know how to correctly use a male condom. 76% of the group do not believe adolescents use the internet to seek information on HIV and sexual relationships.

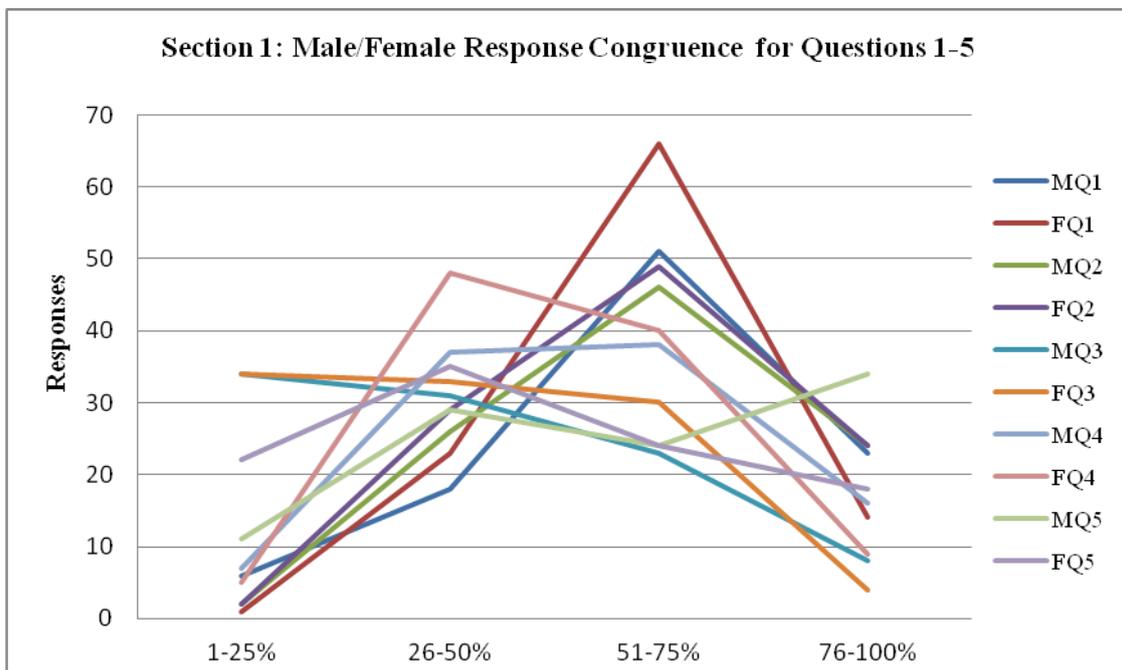
**Table 4.2****Section 1: Learner responses**

	<b>Question</b>	<b>Response</b>			
		<b>1-25%</b>	<b>26-50%</b>	<b>51-75%</b>	<b>76-100%</b>
	<b>What percentage of 15-16 year olds.....</b>				
<b>1.1</b>	know enough about sex to have a safe sexual relationship?	<b>7</b> *(3%)	<b>41</b> (20%)	<b>117</b> (58%)	<b>37</b> (18%)
<b>1.2</b>	know how to prevent pregnancy?	<b>4</b> (2%)	<b>55</b> (27%)	<b>95</b> (47%)	<b>48</b> (24%)
<b>1.3</b>	seek information about HIV and sexual relationships on the internet?	<b>68</b> (34%)	<b>64</b> (32%)	<b>53</b> (26%)	<b>12</b> (6%)
<b>1.4</b>	know enough about HIV to prevent them becoming infected	<b>12</b> (6%)	<b>85</b> (42%)	<b>78</b> (39%)	<b>25</b> (12%)
<b>1.5</b>	Know how to correctly use a male condom?	<b>33</b> (16%)	<b>64</b> (32%)	<b>48</b> (24%)	<b>52</b> (26%)
	<b>What percentage of 15-16 year olds.</b>	<b>1-5%</b>	<b>6-10%</b>	<b>11-15%</b>	<b>-</b>
<b>1.6</b>	in South Africa are HIV positive	30 (15%)	111 (55%)	56 (28%)	-

\*(%) Percentage of total responses

Percentage responses of the two groups' male/female, were generally congruent as can be seen from Figure 1. Two exceptions: Female response FQ1 to question 1 differs by 15% to the male response MQ1, but total 'accept' percentage for female and male was 76% and 74% respectively. MQ5 sees the male response rise 16% above the female response FQ5 in the 76-100% option.

Question 6, (not depicted in Figure 4.1) produced corresponding responses, with 51% male and 59% females indicating the HIV prevalence of 15-16 year olds at 6-10%.



**Figure 4.1. Section 1: Male/Female response congruence for questions 1-5**

(M): Male, (F): Female, (Q): Question.

#### 4.2.2 Section 2: results

Section 2 offered six statements related to the LO sex education curriculum and asked the respondents to indicate their agreement or disagreement with the statement on a rating scale of 1-4. 1= Strongly Disagree, 2= Disagree, 3=Agree, 4= Strongly Agree. Based on these values, the sum of each learner's responses was calculated and divided by the number of variables. Values were calculated for the three groups' male/female and total group:

- The sum of males responses = 2.7653.
- The sum of female responses = 2.8942.
- The sum of the total responses = 2.7747.

- The median for all three groups = 3

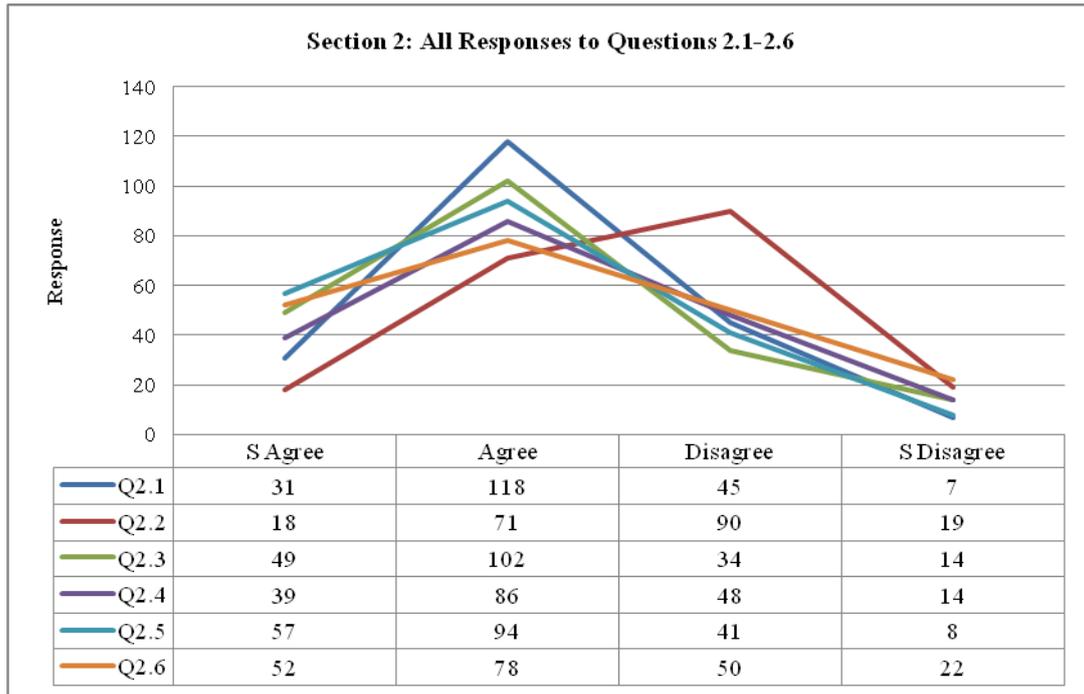
Percentages given are based on accept or reject, providing a view of the division in the group between agree or disagree. 74% of learners agreed that the information contained in the text books was easily understood(Q2.3), however, 54% suggested it was not easily located. (Q2.2). 62% felt that teachers provided additional useful information not found in the text books(Q2.4), with 75% indicating that more was learnt from teachers and from fellow learners 65%, than from the textbook.(Q2.5, Q2.6). Conversely, 73% of learners agreed that the curriculum provided them with all the relevant information they need.(Q2.1). Figure 2. displays the total responses per variable/question.

**Table 4.3**

**Section 2: Missing Responses**

	<b>Male</b>	<b>Female</b>	<b>Total</b>
Question 2.1	-	1	1
Question 2.2		4	4
Question 2.3	2	1	3
Question 2.4*	5	10	15
Question 2.5	2	-	2
<b>Total</b>	<b>9</b>	<b>16</b>	<b>25</b>

\*2.4 Teachers provided additional useful information not found in the text books. 15 learners did not respond. Assumption; that these learners may have wanted to 'protect' their teachers? Concerned if it was acceptable for teachers to be providing additional information?



**Figure 4.2 Section 2: All responses to questions 2.1-2.6**

Question 2.7 was an open ended question which asked learners if there were any subjects related to sex and sex education not included in the curriculum, that the learner believed should be included? Comments of relevance / value are provided in Table 4.4. Of the total of 32 comments, 13 learners simply wrote “*Biology*” or commented with regards to sex and HIV information being provided in biology. This was investigated further, detailed at 4.3.

**Table 4.4****Section 2: Comments from learners**

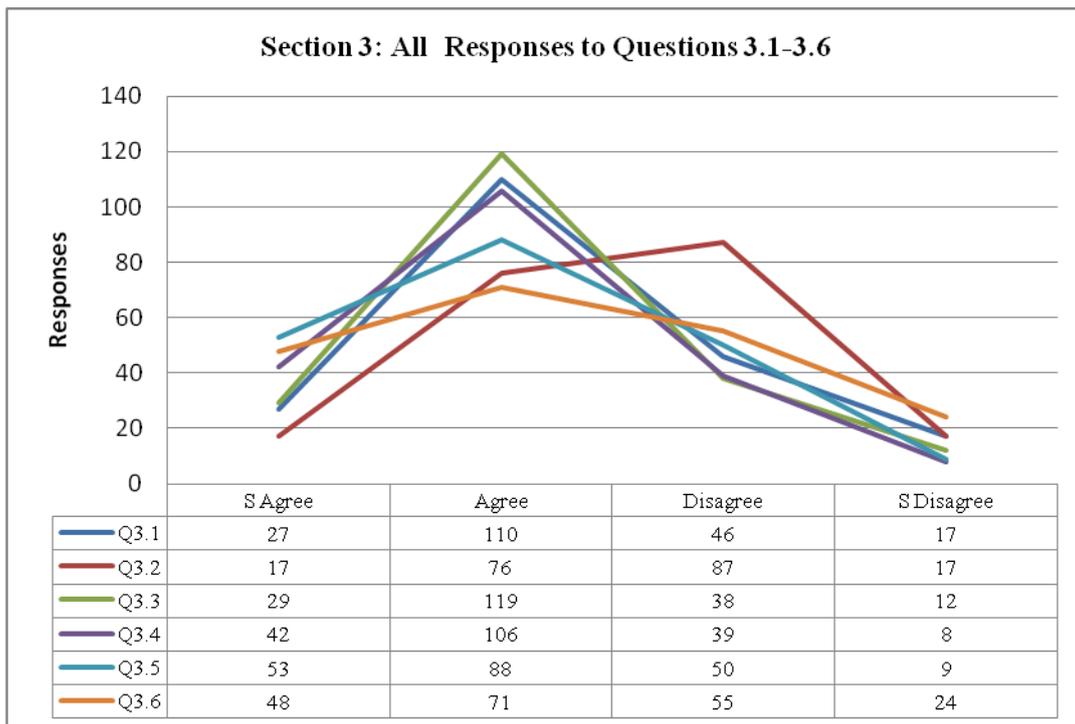
<b>Male Comments:</b>	<b>Female Comments:</b>
<p>“LO concentrates partially, but not enough”</p> <p>“No, we are doing it (the subject) too long now”</p> <p>“It is right the way it is done now”</p> <p>“Covered in biology”</p> <p>“LO and biology covers it”</p> <p>“Biology teaches you a lot about the subject”</p> <p>“LO and biology covers it enough”</p> <p>“No just LO sometimes Maths and Afrikaans”</p> <p>“Biology, Natural Science, LO”</p> <p>“It covers everything”</p> <p>“LO is there and it is enough”</p> <p>“I think learners must be aware of the pros and cons of what it is about”</p> <p>“No there should be more sources available for those who want to know more”</p> <p>“No but the school can help the children with their rights-were they are unsure”</p> <p>“Definitely, we don’t have text books”</p>	<p>“There is no subject, most of the subjects discuss everything”</p> <p>“No, LO covers it”</p> <p>“Biology, we learn more about HIV and sex than in LO”</p> <p>“What do you do if you are pregnant?”</p> <p>“Children should be more informed about sex and HIV because HIV infections rise every year”</p>

**4.2.3. Section 3: results**

Section 3 offered six statements, similar in construct to Section 2. This section related to the LO HIV education curriculum and asked the respondents to indicate their agreement or disagreement with the statements on a rating scale of 1-4. The sum of each learner’s responses was calculated and divided by the number of variables. Values were calculated for the three groups’ male/female and total group:

- The sum of male responses = 2.7653.
- The sum of female responses = 2.8942.
- The sum of the total responses = 2.8300.
- The median for all three groups = 3

Reflecting the accept/reject principle- 70% of learners felt they learnt more from other learners and 61% from teachers, than from the text book (Q3.5,Q3.6). Additional useful information, not found in the text book, but provided by teachers (Q3.4), was agreed by 73%. For 73%, information contained in the text book is easily understood (Q3.3), however, 51% suggested the information was not easily located (Q3.2). 67% of the group agreed that the curriculum provided them with all the relevant information they need.(Q2.1). Figure 3 displays the total responses for each variable/question.



**Figure 4.3 Section 3: All responses to questions 3.1-3.6**

Question 3.7 was an open ended question which asked learners if there were any subjects related to HIV, not included in the curriculum, that the learner believed should be included? Comments of relevance / value are provided at table 4.5

**Table 4.5****Section 3: Comments from learners**

Male comments	Female comments
<p>“LO and biology gives us necessary information”</p> <p>“Subjects should be replenished, with more information and examples to show us how we could use the information in real life”</p> <p>“The working of the virus has not been discussed fully”</p> <p>“LO and natural science”</p> <p>“HIV should be more included in biology”</p> <p>“Most topics get discussed in biology ,not in LO”</p>	<p>“Exactly how can I get HIV (all the ways)? What are the symptoms?”</p> <p>“LO and biology is there and that is enough”</p> <p>“We learn more in biology than in LO and not everyone has got Biology”</p>

**Table 4.6****Section 3: Missing Responses**

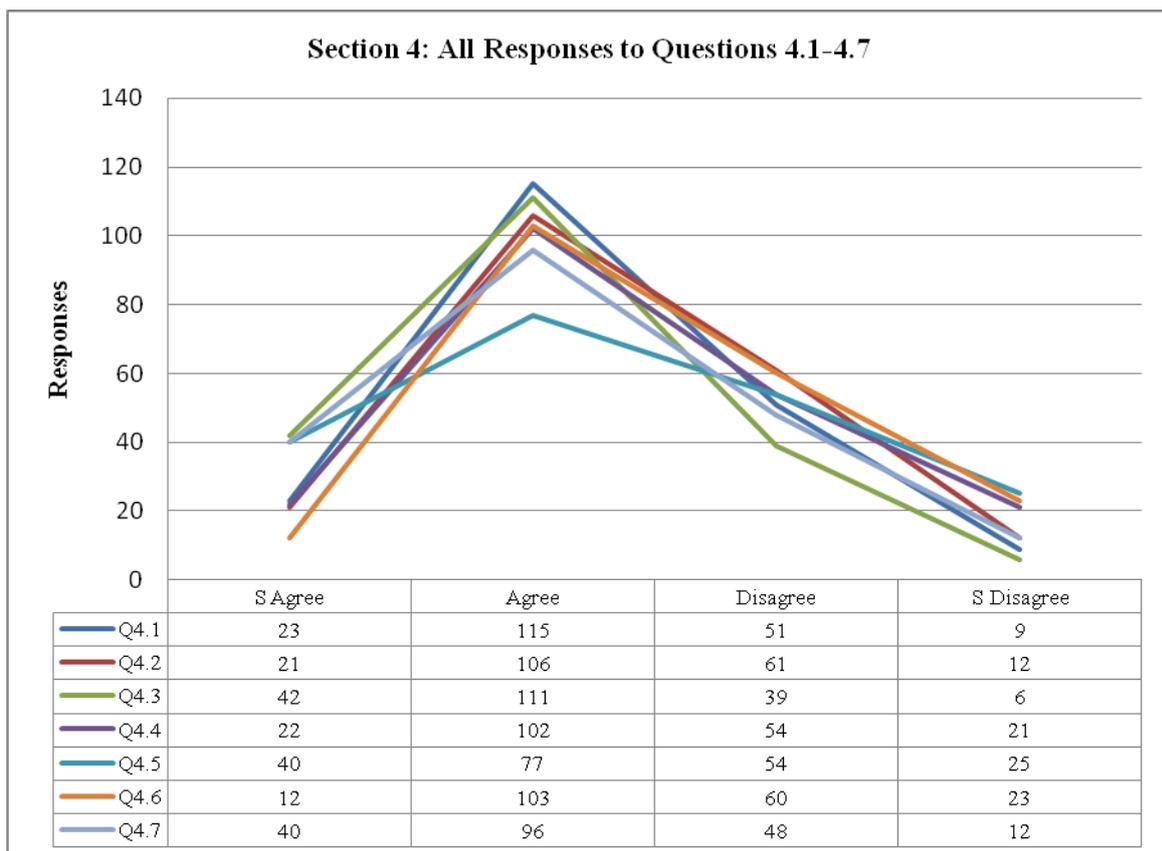
	Male	Female	Total
Question 3.1	2	-	2
Question 3.2	2	3	5
Question 3.3	3	1	4
Question 3.4	4	3	7
Question 3.5	2	-	2
Question 3.6	3	1	4
<b>Total</b>	<b>16</b>	<b>8</b>	<b>24</b>

**4.2.4. Section 4: results**

Section 4 offered seven statements for learners to consider and to indicate their agreement or disagreement on a rating scale of 1-4. This section considered the affiliation of the HIV and sex education curriculums within LO. The sum of each learner’s responses was calculated and divided by the number of variables. Values were calculated for the three groups’ male/female and total group:

- The sum of male responses = 2.6495
- The sum of female responses = 2.7404.
- The sum of the total responses = 2.6965
- The median for all three groups = 3

67% of learners agreed that the HIV and sex education complimented each other (Q4.1) and that the information was closely linked- 62% (Q4.2). Learners indicated that the HIV and sex information in the text books is totally relevant to grade 10, 61% and 57% agreed that the information in the curriculum is in line with what grade 10 earners want to know.(Q4.4, Q4.6). The information in the text book left 58% of learners with questions unanswered (Q4.5), however, 68% felt that all LO teachers are able to answer all HIV and sex related questions (Q4.7). Figure 4.4 shows all responses to all questions in this section.



**Figure 4.4 Section 4: All Responses to Questions 4.1-4.7**

**Table 4.7****Section 4: Missing Responses**

	<b>Male</b>	<b>Female</b>	<b>Total</b>
Question 4.1	1	3	4
Question 4.2	1	1	2
Question 4.3	2	2	4
Question 4.4	2	1	3
Question 4.5	3	3	6
Question 4.6	2	2	4
Question 4.7	1	5	6
<b>Total</b>	<b>12</b>	<b>17</b>	<b>29</b>

**4.2.5 Section 5: results**

A number of studies have recorded increases in knowledge following interventions but limited measured effect on risk behaviour. This section was designed to ascertain if the learners felt the information they receive has any affect on their behaviour? This section offered five statements for learners to consider and to indicate their agreement or disagreement on a rating scale of 1-4. The sum of each learner's responses was calculated and divided by the number of variables. Values were calculated for the three groups' male/female and total group:

- The sum of male responses = 2.6495.
- The sum of female responses = 2.5306.
- The sum of the total responses = 2.5897
- The median for all three groups = 3

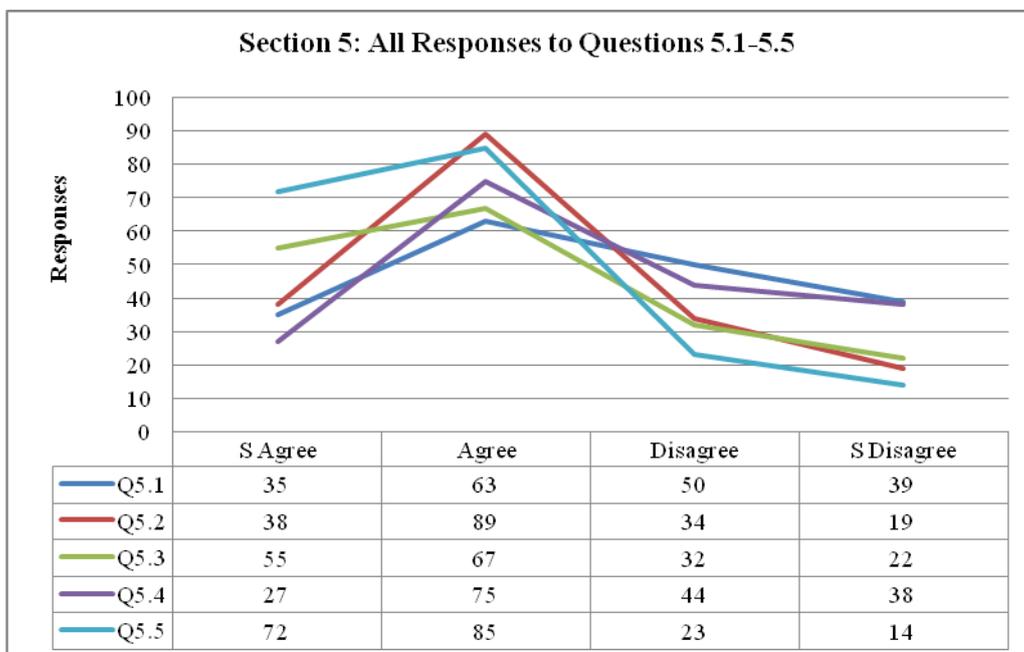
The level of missed responses in Section 5, were expected. Question 5.2 and 5.3 referred to delaying sexual debut, not applicable to a small percentage (see Section 6 results) and reduction of risky sexual behaviour, not necessarily applicable to all. In addition; at this point in the questionnaire the statements take on a more personal approach to which some learners may not have wished to contribute. Missed responses of females almost tripled that of males.

**Table 4.8**

**Section 5: Missing Responses**

	<b>Male</b>	<b>Female</b>	<b>Total</b>
Question 5.1	4	11	15
Question 5.2	6	16	22
Question 5.3	9	17	26
Question 5.4	3	15	18
Question 5.5	1	8	9
<b>Total</b>	<b>23</b>	<b>67</b>	<b>90</b>

Information in the curricula, on HIV and sex has influenced 59% male and 62% females to delay their sexual debut,(Q5.3). 73% of males and 82% of females felt that the information provided had made them more aware of the risk of contracting HIV(Q5.5). Information received had caused 60% of males and 65% of females to reduce their risky sexual behaviour (Q5.2). Learners giving consideration to their sexual behaviour, due to the influence of the curricula content was 53% males but only 36% of females (Q5.1).



**Figure 4.5 Section 5: All responses to questions 5.1-5.5**

48% of the total learners stated they agreed to the consideration of their behaviour, alternatively 50% of all learners stated that the information had no influence on their behaviour.(Q5.4). Question 5.6 was an open ended question which asked learners if there were was any information that could be added to the curricula that might influence safer sexual behaviour? Comments of relevance / value are provided in Table 4.9.

**Table 4.9**

**Section 5: Comments from learners**

Male comments	Female comments
<p>“ I think we know enough about Hiv/Aids”</p> <p>“Sex before marriage should be totally condemned. There is no such thing as “safe sex”.</p> <p>“I’ve never had sexual intercourse, maybe they can emphasise more of the “cons” of sex before marriage.”</p> <p>“ Nothing more about HIV and Aids, we have learned enough and are tired of hearing it over and over in each grade”</p>	<p>“Focus on other things to keep you busy, put emphasis on relationships then sex wouldn’t be such a big problem”</p> <p>“Yes, better explanation”</p> <p>“More in depth explanation”</p> <p>“I think the curriculum should change so that we can be more aware of HIV and sex. The subject must be discussed in more detail. What exactly is the virus?”</p> <p>“I would like more information on HIV”</p>

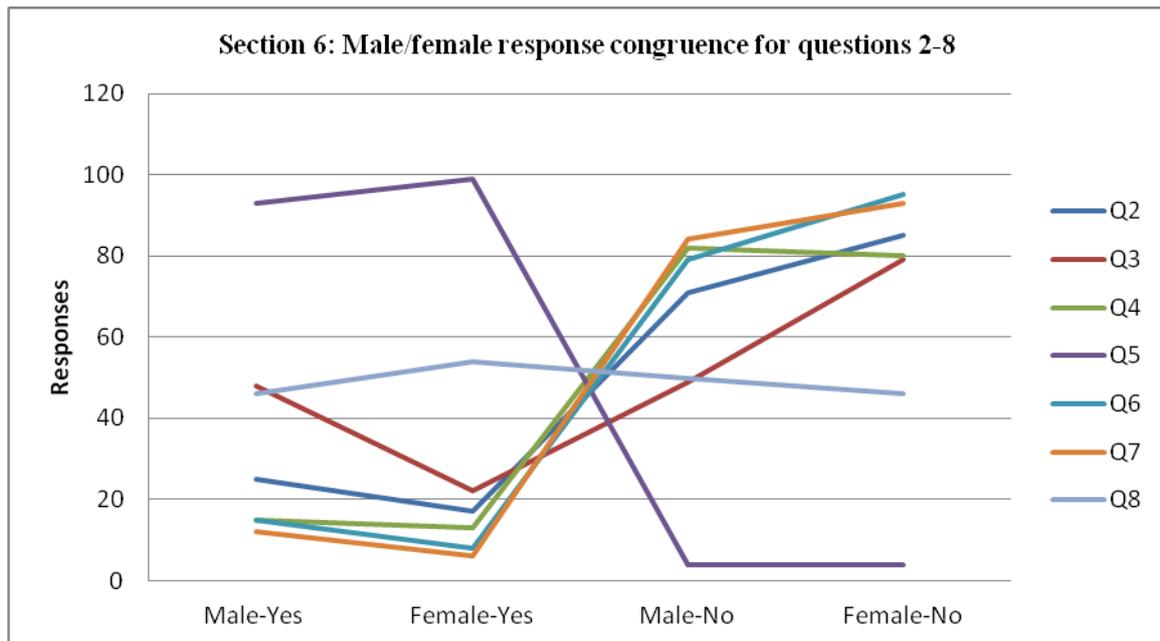
**4.2.6 Section 6: results**

Continuing on the personal theme from Section 5 this last section directly asked the learners for personal information and confirmation of certain areas of knowledge. Although the introduction did remind learners they need not complete any questions that made them feel uncomfortable, the missed responses were considerably lower than anticipated. Question 6.1 asked the learners to indicate their sex, questions 6.2-6.7 were closed “Yes /No” questions with the last question providing a central option.

**Table 4.10****Section 6: Missing responses**

	<b>Male</b>	<b>Female</b>	<b>Total</b>
Question 6.2	2	2	4
Question 6.3	1	3	4
Question 6.4	1	11	12
Question 6.5	1	1	2
Question 6.6	2	1	3
Question 6.7	2	5	7
Question 6.8	2	4	6
Question 6.9	2	2	4
<b>Total</b>	<b>13</b>	<b>29</b>	<b>42</b>

Only 21% of the total learners understood the term post exposure prophylaxis.(Q6.2). With regards to HIV testing only 35% understood the term “window period” (Q6.3). Only 14% of learners had seen a demonstration, by a teacher, of the correct way to put on a male condom.(Q6.4) 95% understood the term sexually transmitted infection(Q6.5) 50% of learners believed they could become HIV infected performing oral sex, 48% did not.(Q6.8). Of the 11% of learners who have ever had sexual intercourse, 15 are male and eight are female.(Q6.6). Of the 15 males, 11 have had sex without the use of a condom and four have only had sex with a condom. Of the eight females, six have had sex without the use of a condom and two have only had sex with a condom.(Q6.7). When asked if learners believed they knew all the ways in which they could become HIV infected 44% stated they did, 5% said “No” and 51% are unsure (Q6.9). Figure 4.6 provides an overview of this detail.



**Figure 4.6 Section 6: Male/female response congruence for questions 6.2-6.8**

### 4.3 Qualitative data capture

This study was conducted at an Afrikaans speaking school, with text books printed in Afrikaans. As the researcher is English speaking, an indigenous speaking assistant was solicited to assist. To further assist a local English speaking school (learner numbers too small to facilitate the study) provided LO text books in English. What became apparent were the varying number of different publishers of the LO text books, all with the key information contained within, but layout and presentation varied considerably. Most likely the reason why Director for Schools Curriculum, General Education and Training stated “There will be one orientation manual for each subject”. (DBE 2011).

Presented within this section of the research are extracts of the LO curricula of grade 7-10. Attempt is made here to retrieve only the salient detail in order to provide an overview of the related HIV and sex information presented to learners as they progress through the LO programme, this being the analysis and results. In Table 4.11 colours have been applied to show the corresponding content in each grade 7-9.

**Table 4.11**

**HIV and sex related content of the grade 7-9 Life Orientation curricula**

Grade 7	Grade 8	Grade 9
Physical and emotional changes Understanding the changes and how these impact on relationships Respect for own and others' body changes and emotions	Concept: sexuality Understanding one's sexuality the influence of friends and peers Family and community norms that impact on sexuality	Sexual behaviour and sexual health: Risk factors leading to unhealthy sexual behaviour Unwanted results: teenage pregnancy, STIs, HIV / AIDS.
Dealing with abuse in different contexts: between adults and children and between peers	Cultural values that impact on sexuality Social pressures including media that impact on sexuality	Factors that influence personal behaviour including family, friends, peers and community norms
Substance abuse: Types/ forms of substance abuse Symptoms of substance abuse	Social factors that contribute to substance abuse. Appropriate behaviour to stop and avoid substance abuse.	Strategies to deal with unhealthy sexual behaviour: abstinence and change of behaviour
Personal factors that contribute to substance abuse: intrapersonal and interpersonal	Informed, responsible decision-making about health and safety:	Adverse consequences and implications of teenage pregnancy for teenage parent(s) and the children born to teenagers.
Protective factors that reduce the likelihood of substance abuse	HIV and AIDS- Prevention and safety issues Management-medication, diet, healthy living and positive attitude.	Common acts of violence at home, school and in the community
Prevention measures: early detection	Caring for people living with HIV and AIDS	Reasons that violence occurs.
Types/ forms of substance abuse	Concept: gender equity Defining gender-based violence	Impact of violence on individual and community health and safety
Causes of diseases: social, economic and environmental factors.	Emotional, health and social impact of rape and gender-based violence	Alternatives to violence: problem-solving skills and managing conflict
Strategies for living with tuberculosis, diabetes, epilepsy, HIV and AIDS.	Prevention of violence against women: law on sexual offences	Protecting oneself and others from acts of violence:
Treatment options, care and support	Sources of help for victims: safety for girls and women	

(Compiled from CAPS LO curriculum grade 7-9 DBE 2011)

The key information related to HIV and sex is found in the two topics Development of the self in society and Health, social and environmental responsibility. Table 4.12 illustrates the hours allocated to these two subjects in a school year, in comparison to physical education. The time allocation equates to an estimated 17 minutes per week available to develop the learner into society and for the learner to understand his/her health, social and environmental responsibilities. The time available for Health, social and environmental responsibility reducing through grade 7 to grade 9. In mitigation- it is understood that there are only a certain number of hours available in a school year to educate a learner and priorities have to be decided.

**Table 4.12**  
**Weighting of topics grade 7-9 Life Orientation**

<b>Topic</b> <b>Total contact time for</b>	<b>Grade 7</b>	<b>Grade 8</b>	<b>Grade 9</b>
	<b>Hours</b>	<b>Hours</b>	<b>Hours</b>
Development of the self in society	10	9	10
Health, social and environmental responsibility	10	8	7
Physical education	35	35	35

(Adapted from CAPS LO curriculum grade 7-9 DBE 2011)

#### **4.3.1 Grade 7 analysis and results**

Grade 7 is the age group 12-13 years, at this stage in the curriculum the learner is introduced 'formally / officially' to sex education. The physiological changes are discussed and the psychological effect (emotions) of these changes. Learners are made aware of the potential for personal abuse. As part of the preparation to move from primary to the senior school and into the adolescent world they consider the types and forms of substance abuse, which may become more available, accessible and /or common place from here on .In considering the causes of disease, the curriculum broadens the learner's concept to include social, economic and environmental factors.

#### **4.3.2 Grade 8 analysis and results**

At 13 -14 years of age, the curriculum, introduces learners to the concept of sexuality- the influences of people, the community norms and cultural values and social pressures In the follow-on from the previous year substance abuse is reintroduced discussing social factors

and avoidance. Sexual behaviour is discussed in decision making about health and here HIV prevention and safety issues are discussed, including care of people living with HIV. Tying in with sexuality and susceptibility to HIV, gender equality, gender based violence and the issue of rape are introduced.

#### **4.3.3 Grade 9 analysis and results**

Preparing the learners now, as they attain the generally accepted official age of the sexually active- 15 years; the curriculum introduces sexual behaviour and sexual health. Factors that influence and the consequences of unhealthy sexual behaviour are explored - pregnancy, sexually transmitted diseases and HIV are included here. The issue of violence in home, school and community, the reasons and its impact are included, as well as avoidance and protecting oneself.

#### **4.3.4 Grade 10 analysis and results**

In grade 10 an additional subject, 'Study skills', is added to the LO curriculum and the time allocated for delivery of the LO curriculum is reduced to 66 hours in the school year. As with grade 7-9 time allocation, 50% (33 hours) of available time is given to physical education. The related HIV and sex component of LO is found within the topic: 'Development of the self in society'. Table 4.13 The topic appears only in term 1 and 3 of the grade 10 school year and is allocated 8 hours in total.

The subject material of grade 10 follows on from grade 9 as stated by DBE, with Term 1 considering gender roles and responsibilities and the influence of gender inequality on relationships: sexual abuse, teenage pregnancy, violence, STI's including HIV and AIDS. Within the topic 'Democracy and human rights', (Chapter 5, p77) HIV status and testing is discussed.

Term 3 content expands now to physical and emotional development and responsible decision making in respect of sexuality and lifestyle. Abstinence, self control and the right to say "No" are clustered. Risk behaviour re-appears, with regard to sexual intercourse, pregnancy, sexual abuse and rape. Personal skills development related to sexuality and lifestyle are discussed and where to find assistance; the grade 10 LO textbook (Mahuluhulu S. et al 2011), Chapter 11 p191, contains a complete list of related help-lines and contact numbers. The issue of substance abuse, does not now feature in the grade 10 curriculum?

**Table 4.13**

**HIV and sex related content of the grade 10 Life Orientation curriculum**

<b>Grade 10 Development of the self in society, Life orientation</b>
<p><b>Term 1 (3 hours)</b></p> <p>Definition of concepts: power, power relations, masculinity, femininity and gender</p> <p>Differences between a man and a woman: reproduction and roles in the community, stereotypical views of gender roles and responsibilities, gender differences in participation in physical activities.</p> <p>Influence of gender inequality on relationships and general well-being: sexual abuse, teenage pregnancy, violence, STI's including HIV and AIDS.</p>
<p><b>Term 3 ( 5 hours)</b></p> <p>Changes associated with development towards adulthood: adolescence to adulthood.</p> <p>Physical changes: hormonal, increased growth rates, bodily proportions, secondary sex/gender characteristics, primary changes in the body (menstruation, ovulation and seed formation) and skin problems.</p> <p>Emotional changes: maturing personality, depth and control of emotions, feelings of insecurity, changing needs, interests, feelings, beliefs, values and sexual interest.</p> <p>Social changes: relationship with family, interaction with social groups, need for acceptance by and dependence on peer group, moving into the workforce and increased responsibilities.</p> <p>Values and strategies to make responsible decisions regarding sexuality and lifestyle choices to optimise personal potential.</p> <p>Behaviour that could lead to sexual intercourse and teenage pregnancy, sexual abuse and rape</p> <p>Values such as respect for self and others, abstinence, self-control, right to privacy, right to protect oneself, right to say 'No' and taking responsibility for own actions</p> <p>Skills such as self-awareness, critical thinking, decision-making, problem-solving, assertiveness, negotiations, communication, refusal, goal-setting and information gathering relating to sexuality and lifestyle choices. - Where to find help regarding sexuality and lifestyle choices.</p>

(Compiled from CAPS LO curriculum grade 10 DBE 2011)

The contents of the Grade 7-10 CAPS, LO curricula as described above, are in essence headings and a guide as to the main subject matter per term, per year. The related textbooks provide the supporting detail of the CAPS.

#### **4.3.5 Grade 10 LO textbook**

All of the available grade 10 textbooks were reviewed for consistency, one was chosen as the primary source of the review “Life Orientation-Focus” For the purposes of reporting the salient points are extracted. From a cost perspective a text book should remain evergreen for as long as possible, in terms of its relevance and content. This publication may well have been out of date within months of being printed. Chapter 5, p77 states that “the Departments of Health and Basic Education are implementing voluntary HIV testing in schools”, the chapter continues by discussing- knowing one’s status and the issues of volunteerism, confidentiality and discrimination. A statement made on 29 June 2012 by Basic Education Minister Angie Motshekga, appears to counter p77 of the textbook; when she told reporters “the commission on education discussed the issue, but decided HIV testing should not take place in schools.”(City Press 2012).

Throughout the text book good use is made of presenting case studies of situations such as: abstinence and resistance to peer pressure, (p177), risk behaviour (p179) and sugar daddies-intergenerational sex (p181). Following the case studies the book directs learners into groups to reflect, discuss and report on the cases. There are substantial sections on abstinence, pregnancy (p190) and saying “No” and a group exercise on the practice of negotiation and refusal skills (p188). A 12 point, HIV questionnaire and discussion of prevention is found within the topic’ Social and environmental responsibility’ (p133); its location not obvious from the curriculum guidelines.

#### **4.3.6 Natural Science Curriculum**

The substantial number of learner comments (4.2.2, 4.2.3) provided in the completed questionnaires, referred to Biology (Natural Science) as a major source of information on HIV and sex. Although not a part of the original research parameters, investigation of natural science curriculum was considered necessary.

A review of the CAPS Natural Science Curriculum for Grade 9 revealed only minimal mention of HIV and sex. In Term 1 the curriculum covers the subject of ‘Stages of Reproduction’ the final two statements under ‘content and concepts’ (p60) are:

- pregnancy can be prevented by using contraceptives such as condoms to prevent the sperm reaching the egg.
- condoms also prevent the transmission of HIV/AIDS and other STDs (sexually transmitted diseases), if used effectively

The Afrikaans grade 9 textbook for “Natuurwetenskappe” (Natural Science) currently in use at the high school does contain a complete section covering: sexually transmitted infections, HIV transmission, stages of HIV infection, medication and myths and facts. (p1.56-1.59).

A review of the CAPS Grade 10 Natural Science curriculum finds no reference to HIV or sex related information. The grade 10 natural science text book could not be reviewed. An assumption is made that the grade 10 textbook may have a similar HIV related section and as with the grade 9 information, might explain the comments from the learners.

## **CHAPTER 5: DISCUSSION OF RESEARCH RESULTS**

### **5.1 Introduction**

This chapter will interpret and evaluate the results obtained from the quantitative research-completed questionnaires and the qualitative research- review of curricula. The questionnaire results will be applied to and compared with the findings of the review of the HIV and sex education curricula. All reference to the “participants” or “group” and levels of response will be those of the combined male and female learners, unless specified as separate. Likewise, the term ‘information’ will mean HIV and sex related unless specified. Any reference to teacher knowledge levels is not to question the competencies or professionalism of any one or group of teachers, it is simply a question required to be asked in the context of the discussion. The chapter will conclude with a summary of the level to which the curricula meets the needs of the learners.

### **5.2 Comparison of male / female response**

There was a distinct parallel of opinions and responses from the two male and female groups, evident throughout the reported results of the questionnaire. Figures 4.2 to 4.6. Confirming that the HIV and sex related information being provided is acceptable and understood by both male and female learners and that their frame of reference, based on this information is very similar.

### **5.3 Accessing information**

At the outset of this discussion we should consider, what information the learner is accessing, the reliability and standardisation of the information and from where is the information being accessed? The group agreed that the information in the textbook was easy to understand but wasn't easily located. There is not a specific section within the curriculum or the textbook that affords all HIV and sex related information its own place of reference.

The information is spread throughout, receiving a mention when it relates to the subject matter of a particular chapter or section. HIV testing, discrimination and general HIV information is found in the Democracy and human rights chapter. Sexually transmitted diseases (STI) get a mention in various locations but the different types, signs and symptoms of such an infection and treatment are not discussed. How does the learner know if s/he is

infected? Assumption: that this information is provided in the natural science curricula. Critical here, as stated by one of the learners, “We learn more in biology than in LO, not everyone has got biology”. The indication being not all grade 10 learners take natural science as a subject, so how and where will they get this information?

Learners indicated that the percentage of peers seeking information on the internet was low. This response corresponds with the fact that only 8.5 million people have internet access in South Africa, 60% of these are middleclass homeowners with tertiary education. (WIS 2012). Internet can be accessed via the mobile phone network and although 72% of all 15-24 year olds in the country have mobile phones,(UNICEF 2012) connectivity may not be economically viable for most grade 10 learners.

#### **5.4 Standardised information**

The majority of learners stated that teachers provide additional useful information that is not in the text book. Is the information correct and is it standardised? Which teachers provided the information were not specified? The group did confirmed that all LO teachers are able to answer all HIV and sex related questions and that they learnt more from their teachers than from the textbook. Information provided by the LO subject teachers would have the greatest chance of standardisation, if not formally. LO teachers would be in a position to expand on printed material; to what extent this is necessary would be a reflection on the content of the textbook.

Learner comment suggested that HIV and sex had been discussed in the subjects Afrikaans and maths. HIV and sex are relevant to adolescents; the subjects will surface for discussion outside of LO. So how much do ‘none LO’ teachers know and what information is being disseminated? Do biology teachers regularly include HIV and sex information into their subject, although it may not appear in the curriculum for that group? It is more than likely that they do; it is commendable and may be necessary. Is it standardised with information from other teachers?

Learners discuss many issues with each other, HIV and sex will inevitably be in the ‘Top5’ at this age. If well over half the group felt they learnt more from their peers than from the text book, is this another indication that the curriculum is not meeting needs? The concern is- if all learners are subject to the same information in class and yet some learners provide more

information; what additional information are they providing, from where do they acquire it and how accurate is it?

Countering most of the learner responses above, was the response of >70%, who agreed that the curriculum provided them with all the relevant information they need. The positioning of this question in the survey may have prompted this response. It was the first agree /disagree question in the survey and the first question of Section 1 and 2. With learner unfamiliarity of this style of question and having not read the following questions, a probability of acquiescence bias is suspected. However, consideration for the use of the term “*initial bias*” or “*opening bias*” could be considered for such a situation.

It is clear from the above that there are a number of additional sources of information outside of the presented curriculum and that the curriculum does not appear to meet all the information needs of the learners.

### **5.5 Opinion of peers knowledge**

In Section 1 the participants were asked to comment on the perceived levels of HIV related knowledge of their peers, other 15-16 year olds. The results of these responses could be considered a mirror image of the perceived level of knowledge within their own group. The group indicated that >76% of their peers knew enough to conduct safe sexual relationships or prevent pregnancy; supported by the school pregnancy statistics previously discussed. This may also align to the fact that learners believed only >50% of their peers knew how to correctly use a male condom. Only 15 male and 13 female of all survey respondents had been provided with a demonstration of how to correctly use a male condom, which would suggest the initiative of a single teacher with a class.

Throughout the LO curriculum, from grade 7-10, a period of three years, learners are told to use condoms to prevent STI's, pregnancy and HIV. The review of the curricula and textbooks found no illustrations or written explanation of how to correctly use a condom and no directive for teachers to demonstrate this. If this is the case, it is inconceivable. A teacher would not be expected to coach a hockey team for three years without explaining and demonstrating how to use a hockey stick? But the same principle does not seem too apply to the correct use of a condom, the consequences of which are rather more serious than the loss of a hockey game-“the country...recorded some 94,000 unplanned teen pregnancies in

schools last year, of which 77,000 ended in abortions”.(TNA 2012). If the group believe only half of their peers know enough about HIV to prevent becoming infected, the case for condoms usage becomes even more urgent. And whilst the debate over the provision of condoms in schools goes on, (ILO 2012) it is imperative that learners know how to use condoms, both male and female versions and where they can access them, if not in schools.

### **5.6 HIV and sex information combined**

Of the information indicated in the curriculum and provided in the textbook, the group majority agreed that the combination of HIV and sex information complimented each other and that they were closely linked. They considered the information to be relevant to grade 10 learners and in line with what the group wanted to know. However, it was indicated that the information or lack of, left learners with unanswered questions and that teachers needed to provide additional information.

### **5.7 Influence on behaviour**

In responding to the statements on behaviour and the influence of the information, there were a number of positive responses. The 78% agreement that the information provided, had made learners more aware of the risks of contracting HIV. A majority indicated a reduction in risky sexual behaviour and delay in sexual debut. The main deviation in male to female response was noted in a 20% majority of males stating the information had no influence on behaviour. The group response was closer, but still a 10% majority indicated no influence on their behaviour.

### **5.8 Personal response and risk**

This section was designed to broadly evaluate the risk of infection to learners. A positive: was the 95% of learners who understood the term sexually transmitted infections, although as previously discussed they may not know if they are infected. There is no explanation in the curriculum.

The negative: 46% of respondent are at risk to HIV, stating they either did not know or were unsure of all the ways they might become HIV infected. Further confirmation came with 48% believing they could not become infected by performing oral sex. There is no definitive section of the curriculum which deals with all aspects of HIV.

Post exposure prophylaxis (PEP) is the provision of antiretroviral medication to a HIV negative person who may have been exposed to the HIV virus. The treatment must be started as soon as possible after exposure but within 72 Hours to be effective. It is available through Government sources, free, for cases of what is termed “accidental exposure” i.e. rape and workplace exposure. PEP is available through a doctor, at a price, for any type of suspected exposure, where indicated].

Only 42 learners understood the term post exposure prophylaxis. Why is it important to understand PEP? The South African Police Service recorded 25,862 sexual assaults on females under the age of 18 in 2011/2012 and a further 31,299 for females >18. (SAPS 2012). The information is equally important for male learners with >7,000 sexual assaults on males. (SAPS). PEP is the only prevention measure available for a person possibly exposed to HIV infection. There is no mention of PEP in the curriculum.

As discussed previously the textbook discussed the introduction of HIV counselling and testing (HCT) in schools, it did not make mention of the ‘window period’ a critical piece of information for anyone considering participation in HCT. [Any person unknowingly infected with HIV, who tests within a two month period of the possible exposure date may return a negative result, even though infected]. Only 35% of learners understood this term, leaving 65% of learners at risk of receiving what is termed a ‘false negative’ from an HIV test result.

For a percentage of the participant learners, it may already be too late to prevent infection or pregnancy. One learner comment in Section 2 asked “What do you do if you are pregnant?” In the curriculum there are no explanations of how a female would know if she is pregnant or what to do? Of the 23 learners who have ever had sexual intercourse, 11 males and 6 females have had sex without the use of a condom. Is this because they could not access condoms and if they could, it is possible they did not know how to use them? The potential embarrassment for a male, particularly, of not knowing how to apply a condom correctly, may be enough to deter him from even contemplating the use of a condom.

Eight of 15 males who have ever had sex have attended a demonstration of how to use a condom. Are we encouraging sexual activity by these demonstrations or are we preventing infections? (Is the glass half empty or half full?) It will depend on which side of the ‘floor’ you stand. Six of the females had sex without condoms; none of the eight who have ever had

sex have attended a demonstration of the use of a condom. The correct use of both male and female condoms must be addressed in the curriculum.

### **5.9 Learner comments**

It is not the intention here to review every comment made by learners. As a general overview: some learners are tired of hearing about HIV and suggest all aspects are covered. Others need more detailed information, more discussion, more facts, with one suggestion for a change in the curriculum to facilitate more information on HIV. LO should cover more about HIV and there are the comments of biology providing much information. Learners suggested that there is not a single subject area that deals with HIV and sex education, that most subjects cover everything.

### **5.10 Curriculum overview grade 7-10**

The LO curriculum is a well designed module for the development and preparation of adolescents through to exiting high school at age 18. It provides awareness of the physical and emotional changes in the learner. Of the age related changing environment and the staged additional elements of life that will effect and affect the learner as s/he progresses. Accompanying this is direction and advice on how the individual should best deal with these changes and challenges.

In reviewing the grade 10 textbook, used as the primary reference for the qualitative research; as a general observation the information is presented at the right level, headings are clear and illustrations are in cartoon form, appealing to the reader. The subject matter appears to be relevant to the learner group.

HIV and sex education, where is it? Well it appears in a number of locations throughout the curriculum and textbooks, but with no clarity of content. The general trend appears to be warning learners of the dangers of sexual intercourse without the use of a condom and that the consequences are pregnancy, STI's and HIV. However, there is no detail to back up the information. Some learners may well be tired of HIV, the suspicion being, that each time HIV and sex issues are related to the curriculum or textbook subject matter, the same minimal information is given. There is simply a lack of detail on the subject of HIV and critical information such as PEP and oral sex as examples.

### **5.11 Conclusion of research discussion**

The results of the quantitative data, generated from the survey questionnaire completed by 202 grade 10 learners, confirms that the HIV and sex education information contained within the LO curriculum for grade 10 learners does not meet their needs. In addition to the information provided by the curricula, learners seek additional information from their teachers and their peers and in this process, stated that they learn more. The information provided in the LO curricula on HIV and sex had a minimal effect on reducing risky sexual behaviour in some areas, but was not effective enough overall. Learners' responses indicated a knowledge gap in relation to critical preventative issues such as condom use, PEP and HIV counselling and testing. Their overall understanding of the risks of contracting HIV was not sufficient enough to protect them.

The results of the qualitative data generated from a comprehensive review of the grade 7-10 LO curricula, related textbooks and a further limited review of the Natural Science curriculum, prompted the question-Where is the HIV and sex education information? The LO curriculum provides good relevant information on associated HIV prevention strategies such as abstinence and the avoidance of substance abuse and intergenerational sex. Sporadically, throughout the curriculum learners are reminded to use condoms to prevent pregnancy, STI's and HIV. There is no further HIV information. The curriculum does not provide the necessary HIV and sex education information to meets the needs of grade 10 learners or to protect them.

## **CHAPTER 6: CONCLUSION AND RECOMMENDATIONS**

### **6.1 Introduction**

This concluding chapter summarises the research study and offers recommendations that may assist in meeting the needs of learners with regards to HIV and sex education in high schools.

### **6.2 Conclusion**

This study has attempted a basic ‘market research’ exercise. It has consulted grade 10 learners as to their opinion of the HIV and sex education curriculum presented in schools. Based on their responses, the effectiveness of the curriculum to meet the learners’ needs has been assessed. In addition, the knowledge level of learners in respect of certain critical aspects of HIV was assessed. Both the curriculum and learner knowledge levels were found wanting.

The current LO curriculum content appears to be effective and relevant for the development of adolescents and in preparing them for the world of work and adulthood. However, if learners are not fully informed and aware of the threat of HIV, they run the risk of infection and threaten the very future they are being prepared for.

This study has shown that currently learners are not receiving the necessary information and that according to the learners, the little information they do receive does not have the desired effect on their behaviour, to reduce their risk of infection. Information is being received by learners from a number of different sources and therefore cannot be verified as correct or standardised. 11.4% of survey participants have ever had sex. The risk to this group exists, now.

The practices, cultures and beliefs of the learner’s direct families and the community at large, along with the varying socio-economic environments, have influence on the behaviour of learners. The process of addressing all that affects behaviour and achieving behavioural change at home and in the community is realistically a protracted exercise. In the meantime there is an urgent need to present learners with relevant and effective information to enable them to make an informed decision as to their personal behaviour.

In light of what this study has revealed, recommendations are offered for consideration in two areas- education and research.

### **6.3 Recommendations: education**

All recommendations take cognisance of the limited time DBE, schools and teachers have available to achieve delivery of all subjects, to a level that will prepare the learner to progress to the next stage of his/her education.

HIV and related sex education, for this purpose considered a single subject, is currently not an independent subject or an identifiable sub-subject of LO or any other subject within the National curriculum. All teachers and learners need to be able to refer to a standardised HIV and sex education curriculum.

**Recommendation E1:** That a HIV and sex education curriculum be designed, developed and implemented for grade 7-12 learners.

The study has shown that HIV and sex related information is being sought in many areas and delivered in various forms. The subject content is not presented in a standardised format.

**Recommendation E2:** That a standardised information handbook be designed and developed, that reflects accurately the content of the curriculum. The core information will be the content of the grade 7 handbook. The core content will remain the same for all other grades with additional information added as appropriate for each grade. e.g.

- Grade 7 Page 1-20
- Grade 8 Page 1-20 + page 21-25.
- Grade 9 pages 1-25 + page 26-30. and so on.

**Recommendation E2a:** The grade 12 handbook will be issued to every active teacher in South Africa.

**Recommendation E2b:** The appropriate grade handbook be made available to all learner's in each grade 7-12.

**Recommendation 3:** That a standard presentation be designed and developed for delivery to all teachers and grade 7-12 learners on an annual basis. The presentation will be designed as per the handbook with the grade 7 presentation being the core and additional information added for each grade thereafter. It is important that teachers receive the same information as their learners and that it is standardised

Delivery of the presentation should be decided by DBE. It is suggested that use be made of

- a.) A provincial team of facilitators or
- b.) Train two LO teachers per school.

Whoever facilitates the presentations the script must pre-scribe, thus preventing individual interpretation delivery of information must be standard across the country..

Finally, the limited time to deliver the national curriculum in schools has been discussed herein. So where is the school to find the additional time for this presentation?

**Recommendation E4:** That two hours per year be assigned to the delivery of this annual HIV and sex education presentation and that the time be allocated at the expense of the hours allocated to physical education. The introduction of a complete programme of physical education, within the National curriculum is lauded. The subject is allocated 50% of all contact time of the LO curriculum in all grades. The loss of two hours would still leave 38 hours for grade 7-9 and 31 hours for grade 10-12.

Why are these recommendations so important? Unlike other subjects, the learner cannot be afforded a 're-sit' if s/he fails an HIV test.

#### **6.4 Recommendations research**

This study has demonstrated that the current product / information provided to grade 10 learners is not adequate in a number of aspects. So a point has been proven. It would be tantamount to criminal if this paper is filed away as just another thesis with no follow-on research that will culminate in the education and protection of our youth.

This study had limitations, therefore-

**Recommendation R1:** That future such research be conducted in both urban and rural schools, in areas that reflect diverse socio-economic environments, with learner groups that more closely reflect the composition of the population.

An often applied method in research is the process of obtaining pre and post intervention measurements ( $y$ ) of a group. Following the intervention ( $x$ ), comparison of both measurements ( $y$ ) is conducted. A positive change in the post intervention measurement( $y$ ) would see the hypothesis accepted. e.g.

Hypothesis: the application of ( $x$ ) to the group will produce a positive change in  $y = (y-)$   
(Where  $y$  = risk behaviour- a result of( $y-$ ) would be considered positive )

In this research ( $x$ ) = (HIV and sex education) was already being applied to the group, the most efficient way of measuring the effect of ( $x$ ) was to ask the group if ( $y-$ ) was being achieved? This study has shown that ( $y-$ ) is not being achieved. The next steps are: to ask the learners what would have an effect on reducing ( $y$ ) What factors ( $z$ ) positively or negatively influence adolescents' risk behaviour ( $y$ )? How can these factors be affected?

**Recommendation R2:** That future research in this area, consider addressing the issue of adolescents' risky sexual behaviour by asking the group:

- What ( $x$ ) will produce ( $y-$ ).
- What ( $z$ ) influences ( $y+$ )
- What ( $z$ ) influences ( $y-$ )
- What needs to be applied to ( $z$ ) in order to increase ( $y-$ )

## REFERENCES

- Adenuga B.A. (2009) Hiv/Aids Knowledge Of Secondary School Learners In Sefhare, Botswana. *Unpublished master's thesis*, University of south Africa, Pretoria
- Ahmed N. Flisher A.J. Mathews C. Mukoma W. Jansen S. (2009) HIV education in South African schools: The dilemma and conflicts of educators. *Scandinavian Journal of Public Health*; 37(Suppl 2): 48–54
- Battelle December, 2011— The Battelle-R&D Magazine annual Global R&D Funding Forecast
- Bennish ML, Han J (2009) Condom access in South African schools: Law, policy and practice. *PLoS Med* 6(1): e1000006. doi:10.1371/journal.pmed.1000006
- CDC. Guide to community preventive services. Prevention of HIV/AIDS, other STIs and pregnancy: interventions for adolescents. Atlanta, GA: US Department of Health and Human Services, CDC; 2010.  
<http://www.thecommunityguide.org/hiv/riskreduction.html>. Retrieved 05/12/12
- Christensen, L. B. Johnson, R. B. & Turner, L. A. (2011). *Research Methods, Design and Analysis*. 11th edition. Pearson. Page 340
- City Press Motshekga A. No HIV testing in schools.  
<http://www.citypress.co.za/news/no-hiv-testing-in-schools-20120629>. Retrieved 20/01/13
- Collins, C. M. P. P (et al) (2002). *Abstinence Only vs. Comprehensive Sex Education: What are the arguments? What is the Evidence?* AIDS Policy Research Institute, University of California: San Francisco.
- Crime statistics overview RSA, 2011/2012. South African police service,
- Curriculum and Assessment Policy Statement Grades 10-12 Life Orientation, Department of Basic Education 2011.
- Curriculum and Assessment Policy Statement Grades 7-9 Life Orientation, Department of Basic Education 2011.
- Curriculum and Assessment Policy Statement Grades 7-9 Natural Science, Department of Basic Education 2011.
- Curriculum and Assessment Policy Statement. (CAPS). Life Orientation Grade 10-12 Department of Basic Education 2011. Isbn: 978-1-4315-0586-9
- Factors affecting educators supply and demand in South Africa public schools. The health of our educators. A focus on HIV/AIDS in SA public schools 2004/5.  
Edited by: Louw J.S. Louw M.A. Peltzer K. Shisana O, Zungu-Dirway N, 2008.

HIV prevention education for high school pupils (Nigeria) Science and Success in Developing Countries: Holistic Programs That Work to Prevent Teen Pregnancy, HIV & Sexually Transmitted Infections  
<http://advocatesforyouth.org/publications/1159hiv-prevention-education-for-high-school-students-nigeria> Retrieved 20/05/12

Holistic Programs that Work to Prevent Teen Pregnancy, HIV & Sexually Transmitted Infections  
[http://advocatesforyouth.org/storage/advfy/documents/sciencesuccess\\_developing\\_es.pdf](http://advocatesforyouth.org/storage/advfy/documents/sciencesuccess_developing_es.pdf)  
Retrieved 10/08/12

<http://www.education.gov.za/Home/CAPSOrientation/tabid/706/Default.aspx>  
Retrieved 05/04/12

IBISWorld <http://www.marketingprofs.com/charts/2012/7326/market-research-spend-forecast-to-rebound-in-2012> Retrieved 05 12.12

Internet Usage Statistics for Africa 2012  
<http://www.internetworldstats.com/stats1.htm> Retrieved 22/01/13

IOL News Controversy over condoms at school October 8 2012. IOL News 'Free condoms won't encourage sex' October 15 2012.  
<http://www.iol.co.za/news/south-africa/free-condoms-won-t-encourage-sex-1.1403472#.UQ1JbaXryF4>. Retrieved 22/01/13

Johnson S, Kincaid L, Laurence S, Chikwava F, Delate R, and Mahlasela L (2010).  
Second National HIV Communication Survey 2009. Pretoria: JHHESA p39

Peltzer K and S Promtussananon, *J.Soc.,Sci.*,1(1),1-8 2005] A study of 'HIV/AIDS Knowledge and Sexual Behaviour Among Junior Secondary School Students in South Africa';

Kirby D. (1995) Sex and HIV/AIDS education in schools. *BMJ* 1995;311:403

Kirby D. (2006)The impact of schools and school programs upon adolescent sexual behaviour *Journal of Sex Research* Volume 39, Issue 1  
Kirby. D.B, Laris B.A, Roller L.A. (Nov 2006) Sex and HIV Education Programs: Their Impact on Sexual Behaviours of Young People Throughout the World. *Journal of Adolescent Health*, 2007

Krejecie R.V. Morgan D.W. "Determining sample size for research activities"  
*Educational and Psychological measurement*, 30(3), 608. Sage publications,Inc.

Mahuluhulu S, Rooth E, Seshoka A, Steenkamp S. *Life Orientation Learner Book*, Grade 10, Focus 2011. Publishers: Maskew, Miller and Longman.

Mokonyane N. HIV 'genocide' will cripple SA. *Unpublished speech to business community*. Johannesburg. SAPA 2012-04-02 12:40

National Strategic Plan 2012-2016 HIV, Tuberculosis & Sexually Transmitted Infections.

Department of Health. 2011 Page 18. .

Paul-Ebhohimhen V.A, Poobalan A. Van Teijlingen E.R.(2008) A systematic review of school-based sexual health interventions to prevent STI/HIV in sub-Saharan Africa. *BMC Public Health* 2008, 8:4

Prinsloo E(2007) , Implementation of life orientation programmes in the new curriculum in South African schools: perceptions of principals and life orientation teachers. *South African Journal of Education* 2007 Vol 27(1)155–170

South African mobile generation Study on South African young people on mobiles  
UNICEF 29 May 2012

Standing Operational Procedures. Research Ethics Committee, Human Research  
(Humanities) Draft 15, 24 November 2011.

Statistics South Africa Mid-year population estimates 2011 , P0302

Stats SA PO318 General Household Study 2011 03 May 2012 P18,53

Tarkang E.E. (2010) Knowledge, Attitudes And Perceptions Regarding Hiv/Aids And Sexual Behaviours Among Senior Secondary School Learners In Kumba, Cameroon. *Unpublished doctoral thesis*, University of South Africa Pretoria.

Teen sex rife in Eastern Cape schools. Daily Dispatch, East London. 2012-05-07 SAPA

The National Antenatal Sentinel HIV & Syphilis Prevalence Survey South Africa 2010

The New Age. [Condom drive stirs South Africa's worries](http://www.thenewage.co.za/Detail.aspx?news_id=66436&cat_id=1007) Oct 19 2012  
[http://www.thenewage.co.za/Detail.aspx?news\\_id=66436&cat\\_id=1007](http://www.thenewage.co.za/Detail.aspx?news_id=66436&cat_id=1007)  
Retrieved 22/01/13

UNAIDS report on the global AIDS epidemic 2010. UNAIDS/10.11E|JC1958E  
P.9,12,31,80

UNESCO (2009) Volume 1 The rationale for sexuality education. International Technical Guidance on Sexuality Education An evidence -informed approach for schools, teachers and health educators P6

Varga CM (2000) Young people, HIV / AIDS, and intervention: barriers and gateways to behaviour change.

Whitmore S.K. Kann L. Prejean J. Koenig L.J. Branson B.M. Hall I. Fasula A.M. Tracey A. Mermin J. Valleroy L.A. (2012) Vital Signs: HIV Infection, Testing, and Risk Behaviours Among Youths Morbidity & Mortality Weekly Report. 2012; 61(47):971-976.

## **ADDENDUM A : HIV AND SEX EDUCATION CURRICULA RESEARCH SURVEY**

### **HIV AND SEX EDUCATION CURRICULA RESEARCH SURVEY**

**THANK YOU** for volunteering to complete this questionnaire. Your input is very important and may assist in confirming and ensuring the HIV and sex education curricula in high schools provides all the information Grade 10 learners' need.

**IMPORTANT**- Do not write your name or make any mark on this questionnaire that could link the questionnaire or the answers to you.

If there are any questions that you do not want to answer you do not have to. There are no "correct" or "incorrect" answers to the questions, simply complete the questions based on your opinion, what you believe and what you think. **Please be honest.**

#### **SECTION 1 YOUR OPINION**

Please place a  $\surd$  in the box against the answer of your choice-

**In your opinion:**

**1.1 What percentage of 15-16 year olds know enough about sex to have a safe sexual relationship?**

76% - 100%

51% - 75%

26% - 50%

1% - 25%

**1.2 What percentages of 15-16 year olds know how to prevent pregnancy?**

76% - 100%

51% - 75%

26% - 50%

1% - 25%

**Please continue to the next page**

**1.3 What percentage of 15-16 year olds do you believe seek information about HIV and sexual relationships on the internet?**

76% - 100%

51% - 75%

26% - 50%

1% - 25%

**1.4 What percentage of 15-16 year olds know enough about HIV to prevent them becoming infected?**

76% - 100%

51% - 75%

26% - 50%

1% - 25%

**1.5 What percentages of 15-16 year olds know how to correctly use a male condom?**

76% - 100%

51% - 75%

26% - 50%

1% - 25%

**1.6 What percentage of 15-16 year olds, in South Africa, do you believe are estimated to be HIV positive?**

11% - 15%

6% - 10%

1% - 5%

**Please continue to the next page**

**SECTION 2 THE SEX EDUCATION CURRICULUM.**

This section provides a number of statements about the Life Orientation-sex education curriculum provided in school. You are asked to indicate how much you agree or disagree with the statement. Please place a “circle” e.g. **agree** around the answer of your choice, for each statement:

**2.1 The sex education curriculum provides me with all the relevant information I need.**

**Strongly agree                  Agree                  Disagree                  Strongly disagree**

**2.2 I can easily find all the related information I need in the learners Grade 10 text book.**

**Strongly agree                  Agree                  Disagree                  Strongly disagree**

**2.3 The related information in the grade 10 text book is easily understood**

**Strongly agree                  Agree                  Disagree                  Strongly disagree**

**2.4 Teachers provide additional useful information that is not in the text book.**

**Strongly agree                  Agree                  Disagree                  Strongly disagree**

**2.5 I learn more by from my teachers than I do from the grade 10 text book**

**Strongly agree                  Agree                  Disagree                  Strongly disagree**

**2.6 I learn more by talking to other learners than I do from the text book**

**Strongly agree                  Agree                  Disagree                  Strongly disagree**

**2.7 Are there any subjects related to sex and sex education not included in the curriculum that you believe should be included? Please write your comments in the box below:**

**Please continue to the next page**

**SECTION 3 THE HIV EDUCATION CURRICULUM**

This section provides a number of statements about the Life Orientation-HIV curriculum provided in school. You are asked to indicate how much you agree or disagree with the statement. Please place a “circle” e.g. **agree** around the answer of your choice, for each statement:

**3.1 The HIV education curriculum provides me with all the relevant information I need.**

**Strongly agree      Agree      Disagree      Strongly disagree**

**3.2 I can easily find all the HIV information I need in the learners Grade 10 text book.**

**Strongly agree      Agree      Disagree      Strongly disagree**

**3.3 The HIV information in the grade 10 text book is easily understood**

**Strongly agree      Agree      Disagree      Strongly disagree**

**3.4 Teachers provide additional useful information, that is not in the text book**

**Strongly agree      Agree      Disagree      Strongly disagree**

**3.5 I learn more from my teachers than I do from the grade 10 text book**

**Strongly agree      Agree      Disagree      Strongly disagree**

**3.6 I learn more by talking to other learners than I do from the text book**

**Strongly agree      Agree      Disagree      Strongly disagree**

**3.7 Are there any subjects related to HIV not included in the curriculum that you believe should be included? Please write your comments in the box below:**

**Please continue to the next page**

**SECTION 4 GENERAL INFORMATION**

This section provides a number of statements about the Life Orientation-HIV and sex education curricula provided in school. You are asked to indicate how much you agree or disagree with the statement. Please place a “circle” e.g. **agree** around the answer of your choice, for each statement:

**4.1 The HIV and sex education lessons complement each other**

**Strongly agree      Agree      Disagree      Strongly disagree**

**4.2 The HIV and sex education information provided in the text books are closely linked to each other**

**Strongly agree      Agree      Disagree      Strongly disagree**

**4.3 Teachers need to provide additional information that is not found in the curricula.**

**Strongly agree      Agree      Disagree      Strongly disagree**

**4.4 The information on HIV and sex education in the text books is totally relevant to grade 10 learners.**

**Strongly agree      Agree      Disagree      Strongly disagree**

**4.5 The information on HIV and sex education in the text books sometimes leaves me with questions unanswered.**

**Strongly agree      Agree      Disagree      Strongly disagree**

**4.6 The information on HIV and sex education in the curricula is in line with what grade 10 learners want to know**

**Strongly agree      Agree      Disagree      Strongly disagree**

**4.7 All the Life Orientation subject teachers are able to answer all HIV and sex education related questions**

**Strongly agree      Agree      Disagree      Strongly disagree**

**Please continue to the next page**

**SECTION 5 INFLUENCE ON BEHAVIOUR**

This section asks you about the influence the HIV and sex education curricula have on your behaviour. If you are not sexually active some of the questions in this section will not apply to you, leave them blank. Please place a “circle” e.g. **agree** around the answer of your choice, for the following questions:

**5.1 The information on HIV and sex education provided by the curricula makes me consider my sexual behaviour.**

<b>Strongly agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
---------------------------	--------------	-----------------	------------------------------

**5.2 The information on HIV and sex education provided by the curricula has caused me to reduce my risky sexual behaviour.**

<b>Strongly agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
---------------------------	--------------	-----------------	------------------------------

**5.3 The information on HIV and sex education provided by the curricula has influenced me to delay my first time of having sexual intercourse.**

<b>Strongly agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
---------------------------	--------------	-----------------	------------------------------

**5.4 The information on HIV and sex education provided by the curricula has no influence on my behaviour.**

<b>Strongly agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
---------------------------	--------------	-----------------	------------------------------

**5.5 The information on HIV and sex education provided by the curricula has made me more aware of the risk of contracting HIV.**

<b>Strongly agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
---------------------------	--------------	-----------------	------------------------------

**5.6 Is there any information that you believe should be added to the curricula that might influence safer sexual behaviour? Please write your comments in the box below:**

**Please continue to the next page**

**SECTION 6 PERSONAL INFORMATION**

In this last section of the survey, we'd like to ask some questions about you and your knowledge. Remember, we do not want you to answer any questions if you are uncomfortable doing so.

Please place a ✓ in the box against the answer of your choice-

6.1 Are you male  or female?

6.2 Do you understand the term Post Exposure Prophylaxis, also known as PEP?

Yes   
No

6.3 Do you understand the term “Window Period” with regards to HIV testing?

Yes   
No

6.4 Has the correct way to put on a male condom been demonstrated to you by a teacher?

Yes   
No

6.5 Do you understand the term “sexually transmitted infection”?

Yes   
No

6.6 Have you ever had sexual intercourse?

Yes   
No

6.7 Have you ever had sexual intercourse without using a condom?

Yes   
No

6.8 Do you believe you can become HIV infected by performing oral sex?

Yes   
No

6.9 Do you believe you know all the ways in which you can become HIV infected?

Yes  Unsure  No

**THANK YOU FOR COMPLETING THIS QUESTIONNAIRE**