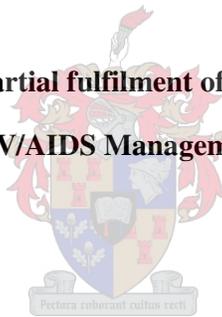


Healthy Children: Healthy Future Employees.

by

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



Africa Centre for HIV/AIDS Management

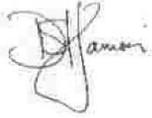
Economic and Management Sciences

Study leader: Prof. JCD Augustyn

March 2010

DECLARATION

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the owner of the copyright thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

A handwritten signature in black ink, appearing to read 'D. J. van der...'.

Date: 14 February 2010

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ABSTRACT

South Africa's National prevalence is currently hovering at 11%, and while workers in the field can take comfort from slightly lower annual incidents it has become difficult to exaggerate the suffering caused by HIV/AIDS in South Africa, with statistics showing that 1 in 5 adults are infected.

This study interrogates aspects of the lives of 50 HIV positive children and a comparative HIV negative group in an attempt to better understand the risk factors for children and the factors that promote resilience. The aim of the study is to provide data and information which could improve and inform prevention programmes focused on children thereby decreasing HIV prevalence. The study focuses on a peri-urban area in KZN and is implemented in high schools. The area is beset by unemployment and the resulting poverty. The schools are state managed schools providing education to large numbers of children from middle-income (parents are teachers, nurses etc) to poor children whose families depend upon grants for survival. It could well be considered an average peri-urban setting.

It has been shown that absenteeism and low productivity are exacerbated by HIV infection in the workforce. An HIV negative generation is one of many essential elements for an improvement in workers' productivity and to ensure that funds invested in skills development are available to promote progress in South Africa in the future.

OPSOMMING

Hierdie studie ondersoek die lewe van 50 kinders wat MIV positief is . Die doel van die studie is die verkryging van inligting wat aangewend kan word vir die beter begrip van kinders wat MIV positief is en daarmee moet saamleef.

Die studie het gefokus op 'n spesifieke area van KZN, 'n area van Suid-Afrika wat gekenmerk word deur 'n besondere hoë voorkoms van MIV/Vigs, hoë vlakke van werkloosheid en hoë vlakke van armoede.

Die studie toon aan dat werksafwesigheid en lae produktiwiteit verder verhoog word deur MIV-voorkoms binne die werksmag en dat dit 'n verdere negatiewe uitwerking op die werksmag het.

Verskeie belangrike voorstelle vir die meer effektiewe bestuur van MIV/Vigs word gemaak, veral vir daardie gevalle waar kinders betrokke is.

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CHAPTER 1

BACKGROUND

1.1. THE CONCEPT

The May'khethele Project of CINDI is a partnership of four civil society organisations all working in the Edendale Valley and Elandskop area of the uMsunduzi Municipality to support children in the fight against HIV & AIDS. The project has several aims which focus on the support and care of HIV infected and affected children. One of the tools used was Voluntary Counselling and Testing (VCT). The project partners encouraged a large number of children to undertake HIV testing in a pre-risk testing project at LifeLine Pietermaritzburg. The VCT project is supervised by Mrs Sinikiwe Biyela, a social worker, and mentored by Dr Gerrit Ter Haar, a volunteer.

Management reviews of the project identified low levels of HIV but high levels of hardship experienced by the children. This study aims to inspect these two areas with a view to understanding the circumstances under which these young people live and the risk factors which influence their HIV status.

The study attracted 1645 children, (LifeLine Annual Report 2008-9) mainly between 12 and 18 years. The Children's Act as amended, (Number 38 of 2005) allows children of 12 years and older to agree to HIV testing without parental assistance. A fundamental value of this study is to ensure that the children have a complete and clear understanding of the implications of the VCT process.

The higher age group is a problem within the South African context. Many children/youth who are over 18 are in grade 11 and 12. The focus of the study was on grades 8, 9, and 10 in an attempt to gather data on children under 18.

It is a policy of LifeLine not to turn away anyone and as a result some learners over 18 years were tested and they have been included in the data. This is a true reflection of school children in the current South African environment.

Research by MacPhail C L, Pettifor A, Coates T and Res H (2006) indicates that children are slow to respond to the call for testing. This is unfortunate because it has been shown that Voluntary Testing and Counselling is one of the more impactful preventive measures. The partnership between the four civil society organisations worked in a supportive and

collaborative manner. The partners were active in encouraging testing and LifeLine employed a young man as a VCT motivator in the schools.

The study is an attempt to gain a better understanding of the issues which impact on the children's decisions to behave in manner that increases or decreases HIV risk. For South Africa to become more internationally competitive we need a more skilled and productive work force. Unless we can decrease the incidents of HIV we are likely to have a physically fragile workforce. Any contribution which promotes an HIV free younger generation will provide a sound base for the development of a more productive economy. The aims of the study can be summed up as follows:

- To explore knowledge about HIV infection amongst senior school learners in a peri-urban area of KZN
- To gain an understanding of the numbers of HIV positive youth in the area
- To gain information about risk factors experienced by youth in this area.
- To use this information to improve prevention programmes amongst youth in order to reduce new incidents of HIV in children.

1.2. DEFINITIONS

Risk factors:

Killian (2006) defines risk factors as 'Any influence that increases the statistical probability of onset, maintenance or deterioration in a problem condition. The factors which may cause a child to develop emotional, social or behavioural problems are commonly defined as poverty, parental psychiatric disorder, large family size, overcrowding at home, marital conflict, poor parenting techniques and parent criminality'. LifeLine has found that as the number of risk factors increase so does the likelihood of the child developing problem behaviours which in turn may increase HIV risk.

References to risk factors for adolescents are numerous in literature. The focus of this study is to focus on the individual risk factors (micro) rather than political or community factors (macro).

GBV: gender based violence, including domestic violence, and all form of abuse including sexual abuse and rape.

HIV negative: refers to a person or persons who have tested and results show they do NOT have the Human Immune-Deficiency Virus

HIV positive: refers to a person or persons who have tested and results show they DO have the Human Immune-Deficiency Virus

AIDS: refers to a person or persons who show a depleted immune system and test positive for HIV and are now showing symptoms of immune suppression such as repeated common ailments. However it should be noted that many people are no longer showing these symptoms as they are responding well the Anti-Retro -Viral Treatment (ARV). For the purpose of this study people who are HIV positive and on ARV's are referred to as having AIDS.

CHAPTER 2: LITERATURE REVIEW

2.1 SOME FACTS:

2.1.1. STATISTICS ON CHILDREN

USAID estimates that 62% of HIV infections in South Africa are among people 15-24 years (USAID 2008). Parker W (2006) quoting the HSRC says the most highly affected are females of less than 20 years of age and in the 15-19 year old group 23,5% of females and 6,0% of males are HIV positive. This trend is confirmed by the report from Shisana O, Rehle T, Simbayi LC, Zuma K, Jooste S, Pillay-van-Wyk V, Mbelle N, Van Zyl J, Parker W, Zungu NP, Pezi S & the SABSSM III Implementation Team (2009) with 13,9% of females and 3,6% of males in the 15-24 group being HIV positive

When focusing on children these figures are interesting as the Love Life research (2004) indicates that only 1% of this age group know their status. MacPhail C L, Pettifor A, Coates T and Res H (2006) point out that while this group states they wish to know their status they, in practice, tend to test only if signs and symptoms have appeared. This reluctance to test does seem to be changing as in the 2008 study reported by the Shisana O, Rehle T, Simbayi LC, Zuma K, Jooste S, Pillay-van-Wyk V, Mbelle N, Van Zyl J, Parker W, Zungu NP, Pezi S & the SABSSM III Implementation Team (2009) in which 43% of males and 56% of females said they had tested within the last 12 months.

Ward K, Waters J. (1999) found in Newark that rates of HIV infection are especially high for African American and Latino youth living in urban environments. These areas are typified by poverty, underemployment, educational decay, drug abuse and high crime rates. The environment of the Edendale Valley is comparable to the Newark environment.

Before the HIV pandemic, orphans were reported at 2% of the population and mainly affected children less than 5 years of age. Now it is estimated by The South African Social Investment Exchange (SASIX) that KwaZulu-Natal (KZN) will have 700,000 orphans by 2010 and they estimate that 18,6% of the children in South Africa are orphans with 38,2% of children been cared for by grandparents or great grandparents.

The social grants required to support these children will be in excess of R1,4 billion Per annum by 2010, Panday S, Makiwane M, Ranchod C., & Letsoalo T. (2009).

Parental death often leads to an increase in age-inappropriate responsibilities; children may become overburdened with high levels of care and be unable to regularly attend school. Further, children may experience multiple losses with parents and siblings dying from HIV

related infections. The South African Child Gauge (page 43) gives a table showing the number of children in school and those with both parents alive. This computes to 71% of children in the Gauge study having both parents alive. This data is contrary to the word of mouth information that LifeLine gets from communities.

This Gauge study quotes the 2007 General Household Survey stating 3,7 million children are orphans in South Africa and equals 20% of all children. However 13% were paternal orphan's i.e. their father was dead and mother alive while 3% were maternal orphans and 4% double orphans. This study also showed that 1% of children had a father whose status was "Unknown". These statistics suggest the numbers of orphans without a mother could be a relatively manageable level of 7%, yet on the ground we find that communities are over stretched trying to absorb children into their families. One well respected man in our local community said: "I don't go to funerals anymore as the children are handed out and because of my standing in the community I am expected to step forward, I can't take on any more children, it is too much financially and we cannot give so many children proper care. My own children are now suffering".

Aunties who are carers are grateful when we provide taxi fare for children to get to the support group, on-going counselling and for the CD4 tests and referrals. They say they wish they had known the child's status before fostering as they cannot take so much time off work to take the child for care. However when questioned they agree that they would not have rejected the child. Judging from the number of children brought to the LifeLine VCT clinic by Child Welfare for adoption clearance, it appears that the child's status is important in legal adoption but not especially so in fostering relatives and neighbours children.

2.1.2 VOLUNTARY TESTING AND COUNSELLING

Gardner W, Millstein S G, Wilcox B L, (1990) found few adolescents test for HIV. This is certainly the case in Pietermaritzburg, where Health Clinics attached to the Municipality express concern at the lack of adolescents testing for HIV yet they are obliged to hand out birth control packages to increasingly large numbers of school children. It is encouraging that Shisana O et. al. (2009) report an increased uptake of testing of 24,7 % .

As quoted in HIV/AIDS Case Studies in South Africa Volume 1 (2002), the Department of Health's Plan for National Adolescent-Friendly Clinics aimed to establish 50 VCT sites by 2001. Accreditation for sites was difficult to attain with complaints being the criteria were unattainable. The clinic was required to be self motivated, doing its own assessment and then to develop the expertise to fill any gaps found. Self assessment is notoriously inaccurate and as a result many clinics failed the accreditation process which followed. Children in the area of the study consistently complain of poor service at local clinics and headlines in local newspapers reporting poor clinic service are not unusual.

It was therefore the challenge of the study to encourage children to test for HIV in numbers.

There is a moralistic attitude often found in clinics where the provision of contraception and reproductive advice to children is frequently done reluctantly. This is further complicated by the child fearing that the clinic sister, who in all likelihood knows the family, will not keep confidentiality.

Children are well known the world over for their reluctance to use health services and it needs only one negative experience to reinforce this. This attitude played into the hands of the May'khethele Project as they are not part of a community clinic structure. They are careful to be respectful towards the children and thus developed a high level of trust remarkably quickly. This was essential to the effectiveness of the counselling and to the availability of honest reports from the children.

2.2. HIV RISK FACTORS FOR CHILDREN

2.2.1 GENDER BASED VIOLENCE AND HIV

Various feminist groups estimate that 1,3 million rapes occur annually in South Africa and that most of these rapes are unreported. In the 2006 study of 1370 men reported by Avert, one fifth of men revealed they had raped a woman. The Minister of Safety and Security was quoted in "The Witness" of June 2008 saying that rape had been reduced by 18% over the past 10 years. The area of this study, the Edendale Valley, is serviced by the Plessieslaer Police Station which has one of the highest reported incidents of rape in the country. Plessieslaer has not shown this trend of a gradual decrease in gender based violence. (SA Police statistics released Feb 2008).

Plitponkarnpim A, Hetrakul P, Kongsakon R, (2005) found in Bangkok Thailand that some risk factors started for children as young as eight years of age, and 2,4% of the cases reported rape as the risk factor. In the United States research by Hammerschlag MR (1998) in Brooklyn found that 80-90% of abused children were females of an average age or 7-8 years with 75-85% knowing the male assailant and that multiple episodes of abuse increase the risk of sexually transmitted diseases including HIV. Hammerschlag found only 0,7% of the children in his study became HIV positive as a result of the abuse, possibly as a result of the lower HIV prevalence of around 0,3% (WHO 2008) in the USA population. Hammerschlag also found parental drug abuse, alcohol abuse and prostitution as well as poverty in the home to be risk factors.

Similar accurate statistics are not available in South Africa as many cases are not reported at all with a disparity between LifeLine cases and those of the local crisis clinic (i.e those reported) being 52% over the six months from June – December 2009. Of the cases reported 32% reported in time to receive post exposure prophylaxis (PEP) medication and become part of the programme of medical monitoring and counselling. Further data from the Rape Crisis

Centre (Pietermaritzburg 2007) indicates 50% of girls' older than 15 years are HIV positive before the rape occurred.

Reporting of rape in Africa is low with 50% of the students in the Asheber B (2006) study reporting that they kept silent about abuse and rape. Many of those that did institute charges felt that the punishment was inadequate.

Students in Ethiopia experienced high rates of rape with 65% being raped at least once in their lifetime, of these 17% became pregnant. Reports of Sexually Transmitted Infections (STI's) after rape vary from 17,6% to 23% and attempted suicide was reported at 37,6% (Asheber quoting Ermias et al 1998). Lary H. (2004) reported high levels of forced sex and infidelity in Dar es Salaam. Abuse of women is not an African phenomenon with four women dying a day in the US as a result of domestic violence according to FBI figures (1994).

Dating violence is another HIV risk factor. Reddy SP, Panday S, Swart D, Jinabhai CC, ASmosun SL, James S, Monyeke KD, Stevens G, Morejele N, Kambaran NS, Omardien RG and Van den Borne HW. (2003) found that 13,6% of 15-19 years olds had experienced violence from their partner. They also found that an equal numbers of boys and girls reported abuse from their partner. Seibert J & Olson R (1989) found 59% of youth in the US perpetrating and or been exposed to dating violence were 14-16 year olds who had experienced violence in the home. This would suggest that parental violence is a risk factor for both perpetrating and accepting sexual violence on a date, which increases the risk of HIV infection.

Condoms are rarely used by rapists. This is an obvious risk for the survivor but is also a risk to the perpetrator. In areas where the low uptake of the PMTCT programmes leads to many children being born positive, the rape of young girls may place a perpetrator at risk of HIV infection. The connection between GBV and HIV is well established as women who are unable to negotiate their sexual safety are exposed to HIV from men who seldom adhere to being faithful to one partner.

Indications of violence in one area of a child's life tend to overflow or contaminate other areas of their lives. In Southern Africa the control of the relationship is often unequal especially in relation to much older men dating children. This is further exacerbated by relationships based on material gain where the child's circumstances are so desperate that he or she becomes vulnerable as a result of poverty.

2.2.2 POVERTY

Poverty is mentioned as a risk factor by all researches investigating HIV risk. In South Africa it is estimated that 11 million children under 18 years live in dire poverty Killian B (2006). Panday S, Makiwane M Ranchod C, & Letsoalo T. (2009), quoting Bhorat & van

der Westhuizen (2008) showed that poverty has declined very little over the first 10 years of the new South Africa with 48% of the population still living in poverty in 2005. Of the whole population 22% are estimated to be living in severe poverty.

Several grant systems are intended to mitigate this situation, however documentation to get the grant is often difficult to complete and access to the grants is even more difficult in more rural areas. Child headed households where the oldest child is under 16 years are not able to apply for the Child Support Grant. The spending on social security has increased from R16,1 billion in 2005 to R26,2 billion in 2006 and is estimated to be R44,6 billion by 2008/9 (Van Rensburg LJ in Falola T and Heaton MM (2006) *Endangered Bodies-Women, Children and Health in Africa*, 2006)

Irwin A, Adams A Winter A et. al. 2009 *Home Truths: Facing the Facts on children, AIDS and Poverty. The final Report of the Joint Learning Initiative on Children and HIV/AIDS (JLICA)* quoting Bassett 2008 and Samson (2004), show that when children live in a household where the female pensioner received an old age pension, school attendance improves significantly with a one-third reduction in non-attendance.

Poverty is a prime risk factor leading to a failure to thrive and this is exacerbated by HIV infection of the child. High levels of anxiety in the mother lead to high levels of infant irritability. Parental illness and a lack of parenting knowledge, lead to difficult family relationships and unhappy children. This is particularly true in South Africa where high numbers of children are in the care of grannies or aunts, who already have several children in their care. Their stress levels and financial constraints lead to poor quality interactions with the child and poor role modelling, especially on such important issues as the management of conflict.

Common Western terms are “latch-key” children or vagabonds; in the South African context we refer to these children as Orphans and Vulnerable Children (OVC). Richter (2008) points out that to identify children affected by HIV ONLY is a mistake as large numbers of children in Southern Africa are vulnerable. For example 60% of children live below the poverty line. The South African Child Gauge (2008/9) states that almost 8 million children received the Child Support Grant in 2008, up by 2 million from 2005. SASIX reports that 1,5 million children are malnourished in South Africa.

Children left alone and to their own devices for long periods, become lonely and bored and tend to congregate on the streets in mischief making groups. Poverty leads to further boredom as children are not able to engage in after school clubs and sports activities. This lack of appropriate supervision, activities and boundaries may be one cause of inappropriate sexual intimacy and high risk behaviour.

2.2.3. PSYCHOLOGICAL FACTORS

Chubb NH, Fertan CI, & Ross JL (1997) studied locus-of-control in relation to self esteem. They found no meaningful difference between genders but Ward K, Waters J. (1999) contend that many young women do seem to require a 'male' in their lives for deferment on much decision making and this would indicate 'external' locus of control is high in these young women. They concluded that it is necessary to develop social skills so that children can effectively negotiate sex and ensure that the risk of personal infection is realistically understood. Ward and Walters assume that if youth are under pressure from other social problems, especially life threatening problems, the risk of HIV seems vague and irrelevant to them.

Reddy SP et. al. (2003) found that 12.2% of learners thought they were at risk of HIV during their lifetime while 65.9% felt they could protect themselves against HIV.

Gardner W et al (1990) suggest that in viewing risk factors for children one tends to make assumptions that risk is considered against rational choice. While common sense dictates that reducing risk factors increases our chances of a longer and safer life, it is also true that many of the circumstances which lead to happiness contain elements of risk. Many relationships based risk taking behaviours take place under circumstances of preoccupation and involve little deliberate thought. The assumption that adults are purposeful and goal-directed (Gardner W 1990) is contained in the Theory of Rational Choice, and is the basis of many of the intervention programmes which assume that with knowledge of the risks, people will not indulge in unsafe-sex. There is much research which shows that people make inconsistent decisions, the inconsistent use of condoms is a relevant example. There is little evidence that children are unable to make rational decisions, or that they do not understand the risks involved in AIDS. Gardner et.al. suggest that these decisions may be made as a "trade-off". Perhaps the status of having several girlfriends is worth more to an individual than their perceived danger of contracting AIDS. People are full of contradictions, saying they value good health, but seldom attending a gym is an everyday example that many of us can relate to. Gardner et. al. assumes that there is a high incident of risk taking in children in terms of unprotected sex. Love Life surveys have endorsed this assumption.

In South Africa several word of mouth reports suggest that decisions by young women to have unprotected sex relates to the desire to gain a Child Support Grant (CSG). High levels of poverty distort the value of this grant. (Unpublished Report on Madadeni Baseline Study, LifeLine Pietermaritzburg 2009). However SASSA and ACCESS research shows that only 2% of adolescent mothers access the CSG. LifeLine findings are that 94% of children born to mothers less than 18 years old in the above baseline study, are cared for and financially maintained by their grandmothers or great grandmothers who receive the state pension. Only 4% were being cared for by the biological father or his family. It would seem that this risk taking behaviour is related more to poor choice than to the hope of gaining the CSG.

Gardner et. al. (1990) suggested risk taking may be related to the concept of competing causes of death. Hunger and poverty may lead children to believe death from HIV at some stage in the future is less of a threat than the hunger of today. Gardner W et. al. argue that this is a rational response to their current dangers which are given preference over a danger at some point in the future. Investing in the future requires sacrifice now; if a child is unable to imagine a positive future this sacrifice might seem too dear.

Counselling is usually based on the rational choice theory. Current HIV related sex education encourages children to delay their sexual début, and provides information on condom use and safer sexual practises. The counselling theory used in the study did not only provide information but worked on creating an environment where the interaction and attitudes towards the child are respectful. The study required counsellors to have a proactive curiosity to understand the child's reasoning rather than to assume the child is being short-sighted and irrational. Merely tolerating the child's point of view is not enough. This attitude went a long way to ensuring high numbers of youth tested for HIV.

Lewis C, Battistich V, Schaps E, (1990) suggests that children need to 'Belong', to have a level of 'Competence' and 'Autonomy' in order to want to uphold the values of their parents. In the area of study the high numbers of orphans and foster children may well lead to a lack of social capital as children are not able to learn social skills and values from carers who find it difficult to provide quality parenting time.

In the research area we are experiencing high levels of petty crime which Hammerschlag MR (1998) associated with low attachment. This suggests that prevention programmes should include opportunities for children to identify, discuss and improve attachments and connectedness, especially to persons of integrity. In this context gang behaviours are usually connections of a negative variety and children with attachment issues are extremely susceptible.

2.2.4. MOTHER-TO-CHILD-TRANSMISSION

Richter L. (2008) states that the overwhelming majority of HIV positive children are infected through Mother-to-Child-Transmission (MTCT). Richter estimates the Prevention of MTCT (PMTCT) services reach only one-third of medium and low income mothers. According to The Scorecard (2009) single dose NVP (Nevirapine) reached 65% of HIV positive pregnant mothers. In this research we did not expect to be able to endorse this statistic as we assumed the majority of children born HIV positive would already know their status by age 12, and would self-select themselves out of this research.

Single dose MTCT therapy became available in June 2001. South African Child Gauge (2008/9, page 94) calculates that in 2001/2 6,7% of women attending public antenatal clinics received HIV testing, indicating that the uptake of the MTCT programme was initially slow,

increasing to 69,2 by 2006/7. By 2006/7 27,2% of children newly infected with HIV were started on ARV's indicating that high numbers of children are born HIV positive (SA Gauge Page 96).

With PMTCT starting in 2001, at best, children that are eight years old in 2009 should be HIV negative. The children in the study group would have been exposed to HIV if their mother was HIV positive at the time of conception, or became positive during the pregnancy or while breast feeding. Richter L (2008) quoting Department of Health statistics shows that 29% of females attending ante-natal clinics are positive. This figure has remained at this level for several years. The more effective double dose MTCT therapy only became available at the beginning of 2008.

Shisana O et. al. (2005) found in a study of HIV positive children, that 1,4% of children in the study had mothers. However they also found that children breast fed by non-biological mother (wet nursed) were 17% more likely to be HIV positive.

Before the availability of Anti-retroviral Therapy for children, the Health Department estimated 50% of HIV positive infants infected by vertical transmission died by two years of age. Children over five who were HIV positive and still in reasonable health probably became infected from breast feeding.

The HIV pandemic places children at risk for many reasons; one of the more obvious risks is parental death. Studies in the US have shown that the child's response to a parent's death is greatly dependent upon the reaction of the surviving parent. Children who have additional risk factors such as parental disharmony, financial hardships and previous losses, are even more likely to struggle with bereavement.

In the typical AIDS related death the infection route is often a result of parental discord and this creates further family distress. The May'khethele project found children with multiple risk factors do not 'get better with time' but need quality therapy. In the project this was provided by SINANI (new name for the KwaZulu-Natal Survivors of Violence) and LifeLine.

Naicker S. (2006) found that HIV affected children find themselves living under very difficult circumstances, these include increased poverty, increased and inappropriate child responsibility, inability to attend school, social discrimination, poor health due to malnutrition and lack of care, crime and violence and abuse. Whiteside and Sunter (2000) suggest that the rapid increase in AIDS orphans who grow up without parental support will lead to increased criminality, with the lack of an adult role model being a significant risk factor.

A second factor relating to parental illness and death is the lack of parental supervision and care and children in these circumstances are even more vulnerable to abuse, and may well sell sex in return for a means to survival or a means to gain 'love'.

2.2.5. NONSOCOMIAL TRANSMISSION

A small number of children appear to be HIV positive yet they do not have HIV positive mothers. As discussed under Gender Based Violence, abuse, especially of little girls, is one possible infection route. Yet there are still children whose status cannot be explained.

The study by Shisana O et. al. (2005) found evidence of nonsocomial transmission (health-care acquired transmission) where 47% of the instruments to be used on patients had signs of blood. An earlier study by Shisana O et. al. (2003) found 62% of primary health care facilities and 17% of private facilities never stocked disinfectant. There was a direct correlation between the low levels of sterilization/infection control at clinics and the areas where the HIV positive children of HIV negative mother's lived. Shisana's study found 1.4% of the children to be HIV positive, but whose mothers were HIV negative. Six of the seven were girls. Unfortunately the reasons for the gender disparity were not investigated. Three had received dental injections and one had been breast fed by someone other than the biological mother.

Although this infection route accounts for a miniscule number of cases, it should not be discounted as each potential infection is another life limited by chronic illness.

2.2.6 SEXUAL ACTIVITY

Children the world over are sexually active at a young age. Rapp-Paglicci LA, Dulmus CN, Wodarski (2004) quote the USA figures for sexual activity as 45% in 2001 for Grade 9-12 (ages 14-18) Consistent condom reporting is very low and the risk of HIV, STi's and pregnancy is high. Currently the national South African Education Department is focusing on reducing learner's pregnancies which have become problematic in some areas (Panday et. al. 2009). When examining the 2008 results from the Shisana O et. al. (2009) report the percentage of males who reported having started sex before the age of 15 was nearly twice the percentage of their female counterparts (11.3% vs. 5.9%).

Parker W (2006 Communication Survey Conference, Durban) found that 10% of 15 year olds, 20% of 16 year olds, and 44% of 17 year olds and 50% of 18 year olds had had sex. This is similar to the finding reported by Papp-Paglicci et. al. above. Reddy et. al. (2003) report that 14,4% of females said they had sex before the age of 14. Makhubele M, speaking at the same 2006 Communication Survey Conference, found sexual debut was generally unplanned and thus preparation, including condoms, had not been made.

Ward & Walters (1999) in the study in the USA Newark area found the age of first intimacy to be 12 years of age, though the USA national average is 16 years.

The Children's Act No 38 of 2005 as amended takes the rational that it is unrealistic to expect a child of 12 years or less to have any control over intimacy, and this control would be completely unattainable if this incident was a result of incest. It therefore criminalises sexual intercourse with a child 12 years and younger, while the age of consent has remained is 16 years. Current practise is more lenient on consensual intercourse between 12-16 children where both parties fall within this age group.

It is argued by Parker W (2006 & 2008) that the reduction in the number of sexual partners in a population with a high percentage of HIV in the general population will not in itself reduce new HIV infections. Parker identifies the current trend of concurrent partners as a major factor leading to the exponential spread of HIV.

The average South African does not appear to have more sexual partners in a lifetime than other countries, however the trend of concurrent partners is prevalent in South Africa. This trend is not the same as polygamy which is practised in countries such as Mali. Polygamy in its true form allows for multiple partners who are faithful to each other and thus the relationships are 'ring fenced'. In a society where multiple concurrent partnerships occur the promotion of condoms might be more effective than attempts to promote abstinence or one-partner faithfulness.

Panday S et. al. (2009) report that in South Africa, 50% of females aged 20 have a child, but the average age of marriage for females is 29 years. They report that this dislocation between marriage and child bearing does not appear to be common in neighbouring African countries and may well be peculiar to South Africa. As being faithful is a HIV prevention method, and marriage has this firm expectation, it would seem that this dislocation may be fuelling the pandemic.

Many authorities including those reported on by Lewis C et. al.(1990) recommend that sex education and life orientation lessons as well as "The" parental talk about sex and HIV should take place before the child becomes sexually active. With children becoming sexually active young, parents often misjudge this and loose the opportunity to positively influence the child. This is reinforced by Panday S et. al. (2009, page 56) whose findings indicate ignorance about the financial and emotional responsibilities of child rearing. Panday S et. al. (2009) found that 66% of child pregnancies were a result of not using contraception, 8% wanted to show they are 'mature' 6% wanted people to 'respect' them.

Elderly carers, very common in the research area, are even more likely to either not engage on the subject of sex with children under their care at all or to discuss it far too late to have impact. It is clear from the review done by Lewis C et.al.(1990) that most programmes target the children too late, and that many do not take a holistic view, focusing only on the sexual behaviour and not on the family environment. One project in the US called "Parents Matter" appears to have had considerably more success than many well intentioned sexual behaviour models. Better protection is found where the relationship between the parent and child is good and where the parental monitoring is sensible and engaged.

Panday S et. al. (2009) report 25% of males and 45% of females aged 15-24 reported only one lifetime sexual partner in 2003. On average females reported that their partners were four years older than themselves. Panday S et. al. found that the HIV prevalence in this group was 17,2%. In the group with partners five years older than the female it almost doubled to 29,5%. Shishana O et. al. (2009) found 14.5% of teenagers reported having partners who were five or more years older than themselves.

Youth at risk are primarily those that use condoms erratically, abuse alcohol and who have several partners concurrently. Concurrent partners was found by Parker W (2006) to be a common risk factor in South Africa with 15.8 % of males having two partners in the past year and 17,4% having more than two. 86% of young people aged 15-24 described themselves as single. Reddy et. al. (2002) found that 70,2% had more than one partner over the past three months, with the highest prevalence being in KZN at 77,8%. Reddy found this to be the case in all race groups. In KZN boys interviewed claim that “dumping” a female partner is culturally rude and thus she is not always informed when he becomes interested in another female. These boys also admitted that this allows them to return to the previous partner with little difficulty should they wish to do so.

The issue of concurrent partners has led to a study on what is now called ‘social networking’ by Parker W (2008). This refers to the transfer of HIV through a group who are unwittingly interconnected through complex sexual interactions within the group, thus transferring the virus around the network. This is not to be considered only a South African phenomenon as in 1989 Sexually Transmitted Diseases (STD’s) were higher in the 10-19 year old group in Nebraska (Siebert & Olson 1989) than for any other age group in the state indicating considerable sexual interaction within this age group. Adolescents the world over tend to believe they are invulnerable thus do not acknowledge their personal susceptibility to AIDS. Whiteside A (2000) suggests that vulnerability to an illness increases exponentially as soon as the infection rate reaches a particular saturation point. In HIV this point is thought to be around 1% of the population. The higher HIV saturation level in Southern African populations means that even a single one-night-stand is a much higher risk than in many other countries. Perhaps it could be compared to playing Russian roulette with more than one bullet in the chamber?

In the age group 15-24, Shishana O et. al. (2009) found an increase HIV among males who reported having more than one sexual partner in the past 12 months from 23.0% in 2002 to 30.8% in 2008, but not among females where it remained below 10%.

Condom use reported on by Parker W et. al. (2006) was highest in the 15-24 year old group with over 60% saying they used a condom the last time they has sex. Research by Dr S Goldstein of Soul City presented at the 1st South African National Communication Survey 2005 found that people used condoms more often with a non-regular partner. In Shisana SO et. al. (2009) both males and females aged 15–24 have the highest reported rates of condom use at last sex, and found little difference between the reported rates of condom use at last sex by male and females 15-24 years.

Forham G (2006) considers the hardening of attitudes towards adolescent sexual activity. He explains that researchers in both Asian and English journals in the early 1990's viewed late adolescent sexual activity as normal and the practise of young men visiting prostitutes as being part of growing up. During the late 1990's this attitude hardened with these behaviours increasingly being viewed as "risky" and thus by implication dangerous and undesirable. This led to the plethora of life skills interventions which focused on delayed sexual debut and abstinence as being the desirable behaviour. What was viewed as healthy adolescent experimentation are now being identified as behaviours fuelling the pandemic. Forham quotes a definition of life skills by Adul as being 'attributes or ability of being socially competent'. Children may feel more socially competent when they "fit in". Social competence can easily be interpreted as conforming. LifeLine defines life skills as the ability to cope with one's world realistically and to prosper at home and at work. Within this definition, learning strategies to remain become a sensible and transparent goal.

The early HIV prevention programmes portrayed HIV infection as moral failure or evidence of 'sin'. This attitude reinforces stigma towards HIV positive people. Stigma is especially destructive for children who are exploring and defining their sexuality, a vulnerable time requiring the caring guidance of an adult.

2.2.7. DRUGS AND ALCOHOL AS RISK FACTORS

Panday S et. al. (2009) report that 31.8% of children reported binge drinking in the last month and that between 6%-12% of them reported using drugs. More significantly 13,3% of sexually active children admit to using drugs or alcohol before sex.

In the USA Lewis C et. al. (1990) found that drugs are an additional risk factor for adolescents. In South Africa we assume the common drugs are cannibals and alcohol and that intravenous drug use is minimal. In the Pietermaritzburg area our local SANCA inform us that cocaine, crack and 'smart' street drugs are readily available and commonly used by children. They agree that intravenous drug abuse is still relatively low in the area covered by this research.

2.3 RISK MITIGATING FACTORS

2.3.1 RESILIENCE

Rapp-Paglicci et. al. (2004) defines the resilient child, also referred to as ego resistant or invulnerable child, as children who are exposed to trauma and distress but have the ability to recover. They appear to have a level of competence which together with a level of invulnerability facilitates resilience. This study also found the majority of children who are exposed to high levels of adversity; grow to up to become healthy productive normal citizens. The goal of psychological interventions in such high risk societies should focus on the

development of 'adjustment enhancing skills' or what we in South Africa call 'life skills'. The Education Department attempts to provide resilience enhancement through their Life Orientation classes (LO).

Resilience is currently a popular theory in South Africa. It is a puzzle why some 50-60% of children exposed to multiple risks still grow up to lead happy balanced lives (Killian 2006). Defining the risks that affect children in one local environment is the challenge of this study. Understanding more about children's risks may make for a more complete picture of the development of resilience.

'It cannot be assumed that risk and resilience are opposite ends of a continuum of adaptability, rather that at times this is true' Killian (2006 pages 85-86) Killian divides the protective process into three groups, intra-psychic strengths such as self esteem, interpersonal skills such as problem solving ability and environmental factors such as positive role models.

Hasewinkel in the SASPCAN report (1988) identified the following attributes which contribute towards resilience in children:

- Rapid response to danger - children living very protected lives cannot practise dealing with fear and difficulty
- Precocious maturity - helps the child to negotiate with adults
- Dis-association of affect - distance themselves from the fear
- Information seeking - enables the child to develop insight
- Relationship forming - child uses his/her ability to form relationships with other adults for support
- Projective positive anticipation - child manages to see beyond the current situation of pain into a hopeful future
- Decisive risk taking - child reveals abuse carefully or chooses how to improve safety in a way that does not create further danger.
- Idealization of the abusers competence - child finds good qualities in the abuser
- Cognitive restructuring of the painful experience - it is not so bad
- Altruism - takes the abuse to avoid younger child getting the abuse

Child workers need to be sensitised to these concepts which may well enable them to identify abuse more readily and to encourage more resilient behaviours.

2.3.2. EDUCATION PROGRAMMES

For many years the Department of Education refused to engage the topic of HIV in schools, today this has improved with the LO subject which includes accurate and factual information on HIV. This change in policy enabled the May'khethele Project to gain access to the schools and for LifeLine to begin VCT in some school grounds.

However the Department of Education still refuses to engage the issue of condoms in a realistic manner, with none of the KZN schools having condoms dispensers and permission from school governing bodies being required before condoms can be given out at awareness talks to older children. The debate between those that wish to encourage a moral rejuvenation amongst the youth and those that wish to engage on the subject with frankness continues. While these opinions are reconcilable and such a joining of forces would be to the great benefit of children who respond better to one message rather than to the current mixed messages.

Quoting from the Department of Education document 'Measures for the Prevention and Management of Learner Pregnancy': 'In the first instance, and above any other measure, a clear and consistent message should be communicated that children should abstain from engaging in sexual intercourse. This policy position is consistent in the document. While many aspects of this policy document are good it is unrealistic in the assumption that telling children not to have sex will induce effective low risk behaviour.

Parker W (2006) found that 74,4% of school goers received AIDS education at school. This appears to be the most common and reliable source of information for children. Of these children he found 46,4% said they were abstaining from sex.

Dodds,S et al in Children Adolescents and AIDS (Siebert & Olson 1989) offer a nine point minimum recommendation for a schools based HIV programme, which should:

- 1 Be developed within the school system in the context of the local community
- 2 Start as early as possible
- 3 Address teacher needs
- 4 Be age appropriate
- 5 Acknowledge the range of human sexuality
- 6 Foster an understanding of the integrity of the body
- 7 Be specific and relevant
- 8 Encourage supportive attitudes
- 9 Be evaluated

The Department of Education's LO tends to be a one-size-fits-all model, though it does attempt to cover these points. The HIV related section is presented mainly in the secondary school curriculum. However many children drop out of school before the end of high school. Save the Children (2006) quote UNESCO, stating that while 94% of eligible children had enrolled in grade 1, by 2004 the number of children completing grade 5 had reduced to 64.5%. This would indicate that some 33% of children miss this section of HIV education. (Note: South African Schools Act (1996) legislates for children to attend school from 7-15 years.)

Parker W (2008) found that 74% of children in his study had learnt of HIV at school, considering that this research was household based it may be that some children attend school erratically rather than not at all.

The fears and inadequacies of educators are seldom addressed in a safe environment. The Bill of Rights allows for religious freedom, and has resulted in schools being more secular as they attempt to avoid offending. This complicates leadership on values for schools. MacPail et al (2006) present four recommendations to encourage youth to attend Voluntary Counselling and Testing (VCT). These are:

- Start HIV education in grade 3 - (Std 1 or between 8-9 years old)
- Create a safe environment
- *The programme cannot be without a values base*
- Deal with teaches fears and inadequacies before implementation.

The lack of a tangible values base places more emphasis on the need for sound leadership by example. This vacuum could be partly filled by secular and political leadership (heroes). This would be particularly effective for children who are experiencing uncertainty and ambivalence.

Good role models are lacking in the South African context which is a point discussed by AIDS activists *ad nauseum*. Our sporting heroes have played their part on the field but many fail to fulfil this role off the field. (The recent media flurry over rugby hero Joost van der Westhuizen's sexual relations outside of marriage is an example of poor moral leadership off the field).

2.4. SUMMARY

While it is evident that both the state and civil society are engaging in various prevention strategies it is equally clear from the statistics that the child growing up in a peri urban environment with high unemployment has more than their fair share of challenges.

If not exposed to HIV by maternal infection they may be exposed by abuse, or by ill judgement understandable in a child not mentored by a mother and father. The high levels of difficulty experienced by children without enough food, struggling in school and trying to look after siblings may well lead to a 'Live for today' approach. Under the circumstances this can be viewed as unfortunate, but not unreasonable.

CHAPTER 3:

RESEARCH DESIGN AND METHODOLOGY

3.1. PROJECT INFORMATION

Taking the suggestions from MacPhail CL et.al. (2006) and Dodd S (1989) in the previous chapter under 2.3.2 into account, as well as the eight years of experience of the LifeLine organisation in testing adults the following protocol was developed:

1. A partnership of four implementing organisations was negotiated, all of which had existing working relationships in the peri-urban target area.
2. Funding was sought by CINDI from PEPFAR. CINDI is a Pietermaritzburg based networking organisation to which all four implementing organisations had been active members for some years.
3. This partnership developed an identity in the community and is known as the May'khethele Project.
4. Two of the organisations were to perform life skills at school level targeting 10 high schools in the peri-urban area. The third organisation SINANI focused on primary schools and did not form part of this study. The fourth organisation, LifeLine Pietermaritzburg was to provide skilled VCT to children from the target area. The study later targeted another four high schools and two schools asked to join the project. The study covered the HIV positive children from 16 high schools.
5. Schools were approached in the particular area, and became part of the study if the Principal and the School Governing Body approved the project.
6. The children were encouraged to attend VCT pre-risk testing with LifeLine on Saturday mornings.
7. Travel vouchers were used to reimburse the children for their return taxi fare to LifeLine, which is situated in the city centre of Pietermaritzburg.
8. Half way into the project, a small bus was sourced and children were transported to the centre and back to the school, reducing the travel voucher requirement. Travel vouchers are given for on-going support, CD4 tests and the attendance of support groups.

9. Six VCT counsellors between the ages of 20-35 years of both genders were employed and trained for the Saturday morning work.
10. One registered nurse and was on duty each Saturday.
11. The children were motivated to attend the pre-risk testing by the two partners working in the schools. As the project aimed at the lower grades it was hoped to encourage children to test who were not yet sexually active, thus using the VCT process as an experiential educational prevention process.
12. Individual pre-test counselling, testing and post-test counselling took between 40 and 60 minutes. During the session each child was assessed for HIV risk, home risk factors and nutritional levels by the counsellors. The counsellors were monitored by a medical doctor weekly (*pro bono*).
13. Two forms were developed for the collection of data. The one focused on the counselling and emotional wellbeing of the child which remained a confidential record within LifeLine. The second focused on the demographic and AIDS related data which was made available to the partnership. The forms are attached in Appendixes “The Counselling Format & Report Form” and “The Data Collection Sheet”.
14. Data from these two forms was used to assess the various risk factors to which the children have been exposed.

Pepfar funded this project and in terms of their contract, all research related to their projects is considered public domain.

3.2 VCT PROTOCOLS

LifeLine Pietermaritzburg is a registered non-medical site for the KZN Department of Health. As such it uses the methods and process of the Department. The co-ordinator of the LifeLine AIDS section attends all on-going training sessions of both LifeLine and the Department of Health and is paid by the Department of Health.

The May'khethale project has the aim of preventing the spread of HIV. Pre risk HIV testing is a key strategy. Schools were the entry point to children in the area and most of the children attended the testing without their parents.

As there are not a large number of children over 12 years attending the Department of Health clinics on their own, additional protocols had to be developed by the project to meet the needs of these young people.

These additional protocols included the need to gain permission from the child for the testing and ensure understanding of the following

- 1 Tests would not be completed without the name and telephone number of a friend or relative who LifeLine may consult should the learner become distressed if the results are HIV positive.
- 2 Follow-up CD4 tests would be completed for all positive children.
- 3 Results would not be given to the May'khethetele partner working in that school but children are encouraged to use the partners for support and assistance with family related issues.
- 4 All children who test positive are encouraged to attend a support group run at LifeLine on a Friday afternoon. Taxi fare is reimbursed and each child is individually interviewed about the implications of attending a confidential group.
- 5 BMI (Body Mass Index) would be calculated for every child to identify nutrition levels. Children with low BMI results would be referred to the May'khethetele project partner facilitating the food gardens project, and food parcels would be provided for temporary relief.

3.3 SELECTION OF CHILDREN

Of all the children tested in the project, those who were found to be HIV positive became part of the study and were matched with HIV negative children from the project of the same gender, grade and if possible class.

The aim of the study was to minimize the distorting affect of formal HIV knowledge by selecting a control group from the same school, grade, and where possible class. The study assumed that the children had been exposed to the same Life Orientation lessons at school. The study intended to highlight differences in home factors and focus on their influence on HIV risk

Names were replaced with ID numbers to minimize accidental disclosure. Initially ten high schools were involved in the study, this had to be supplemented with a further six schools before sufficient HIV positive children could be identified.

Refer to Appendix "The Selection of children".

3.4 USE OF LOGISTIC REGRESSION:

The basis of this thesis is a narrative report on data collected from the children in the study. In an attempt to provide a more scientific approach the data was collated and run through a stats programme (Chi-square). The aim was to identify the high risk factors of statistical significance experienced by children.

In the process of collating the data, it was reviewed with care to ensure those children's stories had been correctly captured. For example one of the children in the data base who had lost both parents, was removed from the data referring to parental risk as when the written report was reviewed it became apparent that the parents died in a motor vehicle collision. For the purpose of this study we are interested in the children who reported HIV related deaths of their parents.

The results show that the most significant risk factor for children is direct exposure through high risk behaviours, the second highest factor is having an HIV ill parent or one that died of HIV and the third highest risk factor is poverty. These results are what one might have expected however in the narrative below these results will be placed in the context of the children's lives so as to gain a deeper understanding of how children become vulnerable to these factors.

CHAPTER 4: DATA PRESENTATION, ANALYSIS AND FINDINGS

Fifty children of the sample of 1645 children who were tested were found to be HIV positive. This study focuses on these 50 children. The study reviews these children mainly in relation to the 50 comparative HIV negative children. At times it is useful to relate the data to the entire sample to gain a better perspective.

These 50 HIV positive children represent 3% of the entire sample which is lower than the 6.2% in the HSRC data reported by Shisana O et. al. (2009). It should be taken into account that the participants volunteered for the testing and thus cannot be viewed as a representative sample of all the children in the area. Children who knew their status would probably not re-test. Only two children were aware of their HIV positive status came forward for re-testing

Of the 100 children in the study only three knew their status and wanted to confirm their HIV positive status, one of whom is HIV negative and had assumed she was positive as a result of a gang rape a few years ago.

Of the 50 children 26% (13) are male and 74% (37) are female. When taken over the entire sample the 13 HIV positive males represent 0,2% and the 37 females 2,25% which is well below the Shisana O et. al. (2009) statistics of 2,4% males and 6,7% females.

The ratio of HIV positive males to females in the Shisana O et. al. study is almost 1:4 while this study has a ration of 1:3

Most children (97) did not know their status. It had been the assumption of the study that most children who had become HIV positive as a result of natal or neo-natal exposure would self select out of the study as they would be aware of their HIV positive status, possibly ill and possibly on ARV's by this age. These results confirm the assumption that HIV positive children would generally not retest.

However the study assumption that children born with HIV would know their status was incorrect as 20 of children who tested HIV positive were not sexually active and many (12) did describe a mother's illness or death in a manner that correlated with AIDS.

The implementers of the study received several verbal "thank-you's" and one cake from carers who "did not know how to discuss HIV with the child or the fact that the mother had died of HIV". Some carers had expressly not told the children that the mother had died of HIV as they "wanted the child to live a worry free life for as long as possible". This sentiment is commendable but problematic as one child was already in a faithful and

affectionate relationship which meant that the partner is also now HIV positive . Another had a CD4 count of seven.

4.1 SEXUAL BEHAVIOUR

The study considered the sexual behaviour of the study sample and the comparative group.

Table 4.1: The age and gender of the sexually active children ($n=100$)

Age	Male	Female	Total	Legal categories	
13	0	0	0	6	Statutory Rape
14	1	1	2		
15	2	2	4		
16	0	2	2	4	Minors
17	0	2	2		
18	0	8	8	22	Adults
19	1	6	7		
20	0	2	2		
21	0	2	2		
22	0	2	2		
24	0	1	1		
Total	4	28	32	32	Check

Of the 100 learners 32 are sexually active. Of this number 28 are females and 4 males. This means that females in this study are seven times more likely to be sexually active than males. Of the 1645 children, 1,7% of the females in the sample are sexually active and 0,2 of the males. The percentage of females is comparable with the Shisana O et. al. (2009) report while the males are lower than the national average.

Looking at the age range of these school children 22 (69%) are legally not children. Referring to the literature study and to Parker's W (2008) research in particular sexual activity by persons more than 18 years of age is common and recommendations for prevention strategies need to take into account that there are a lot of adults' learners in the schooling system.

Of the 22 sexually active children/adults, one female has multiple older partners (sugar daddies), the others had boyfriends from similar age groups as themselves. While sugar mommies are reported to be becoming more common in South Africa they were not indicated by the children in this study. The Shisana O et. al. study (2009) shows more males (19,3%) than females (3,7%) have multiple partners. This type of information is difficult to verify and the ability of the interviewer to completely eliminate “bragging” or “covering up” is virtually impossible.

The factors of the logistic regression show that multiple partners are the most significant variable found in this study ($\chi^2 = 9.33$, $d.f. = 1$, $p=0.002$). Though the number of children in the study with multiple sexual partners is pleasingly low, the study shows that every one of these children are HIV positive.

Of the 32 sexually active children six or 18% are below the legal age of consent (less than 16 years of age). Legally all these children were raped.

4.2 CHILDREN REPORTING RAPE

Of the one hundred children four children reported rape.

Table 4.2: Children reporting rape by gender, HIV status and current sexual activity
($n=100$)

Age	Gender	HIV positive	Sexually active
14	M	P	Y
15	M	P	N
16	F	P	Y
17	F	N	N

Asheber B (2006) as discussed in 2.1.2 above, states that the reporting of rape and sexual abuse is low. In this study time was taken to gain trust and to discuss sexual abuse, however very young children do not recall trauma well and thus we cannot be sure that other children in the study were not exposed to abuse at a young age.

Table 2 shows a equal number of boys and girls reporting sexual abuse. It is a concern that increasingly numbers of male children who are reporting sexual abuse. This may have been underreported historically or it is a new social problem. A similar trend has been observed in the Madadeni Crisis Clinic (Newcastle KZN). Over a 12 month period the number of cases of male rapes increased from 0 in month one to 45 in total by month 12. The Madadeni results

indicate that a number of adult males raped were mentally challenged, showing a continued theme of the rape of the weak and disadvantaged members of society. It is necessary for carers to be more aware of and sensitive to the abuse of the boy child and to protect challenged children with more vigilance.

Two of these children are sexually active and it is unclear if they became HIV positive as a result of the rape or as a result of their sexual activity.

4.3 CONDOM USE

These two children who had been raped tended to blame their positive status on the rape. In counselling they were reminded that the inconsistent use of condoms or sex without condoms is a very likely mode of transmission, and that should this be their sexual practise it would now be impossible to verify how they became HIV positive.

Table 4.3: A Comparison between the condom usage of the HIV negative and HIV positive children ($n=100$)

HIV Status	Consistent	Inconsistent	None	Not sexually active	Total
Negative	3	6	4	37	50
Positive	0	10	9	31	50
Total	3	16	13	68	100

Condoms, as the saying goes are “safer sex” not safe sex. The consistent use of condoms by the children in this study provided them with 100% safety from infection. The use of condoms in the Shisana O et. al. (2005) study by the 15-24 age group had improved to a reported 88,1% However it is the consistent use of condoms which is the vital issue. In this study 16 (or 50%) of the 32 sexually active children used a condom inconsistently.

Four children were sexually active and retained their HIV negative status. These children stated they were in a faithful relationship. They were advised to discuss how the word ‘faithful’ is perceived by their partners and to place their own wellbeing first.

Table 4.4: Shows the risk of HIV compared to the usage of condoms

Risk	Consistent	Inconsistent	None
Low	0%		
High		63%	69%

Comparing the number of positive children to the total children reporting Consistent, Inconsistent and None condom use, highlights the high risk nature of inconsistent condom use. Inconsistent use of condoms is marginally safer (6%) than no condom use at all.

4.4 IDENTIFYING HIGH HIV RISK CIRCUMSTANCES AND BEHAVIOURS

This study found the potential opportunities for HIV infection are multiple as children reported behaviours by themselves and by their parents and other adults that are high risk to the children.

High risk behaviours identified by the children were: frequent alcohol and or drug abuse, susceptibility to peer pressure, multiple partners and continuing a relationship with a partner who refuses to use condoms. These have been termed direct risk factors as they are a risk as a result of the child's action.

Having a boyfriend or girlfriend was considered a risk factor but not a high_risk. High risk behaviours were noted when children reported behaviours that were more likely to expose a child than what one might term ordinary (normal) inter gender relationships.

Parental/adult high risk behaviours reported by the children include multiple partners by father or mother, HIV illness in either parent or abuse of the child by an adult. These are referred to as indirect risk factors to the child as the child is put at risk by the action of others.

Table 4.5: A Comparison between high risk behaviours of adults and children in relation to child's HIV status. ($n=100$)

High Risk Behaviors					
HIV Status	By Adult	By Children	By both	None	Total
Negative	19	3	0	28	50
Positive	20	7	5	18	50
Totals	39	10	5	46	100

Table 4 indicates that 10 of the 100 children were partaking in high risk activities. Seven of these children are HIV positive indicating that the direct exposure from HIV risk activities leads to a 70% risk of HIV infection. The indirect risk resulting from the risk behaviours of the parents/adult lead to HIV infection in 20/39 or 51% of the children.

In all cases where both the parent/adult and the child partake in high HIV risk activities the child is HIV positive. These children have been exposed to multiple risk factors as reported in the literature review of Ward and Walters (1988).

The reporting of no risk behaviour by 46 of 100 children may be an under reporting of risk behaviour, though care and time was taken to understand the individual risk, children living under difficult conditions may underestimate risk. Gardner et al (1997) suggests that rational choice needs to be understood in terms of the stressful environment of many of the children, especially where the risk of HIV death at some stage in the future may be irrelevant to a child who is hungry and cold today.

Table 4.6: The risk of HIV when compared to high risk behaviours in children and their parents ($n=50$)

Risk of Child being HIV positive	Expressed as % of high risk group ($n=50$)
High Risk behaviour by child	70
High Risk behaviour by parent/adult	51
High risk behaviour by both	100

Table 4.7: The risk of HIV when compared to high risk behaviours in children and their parents ($n=100$)

Risk of Child being HIV positive	Expresses as a % of study & comparative group ($n=100$)
High Risk behaviour by child	7
High Risk behaviour by parent/adult	20
High risk behaviour by both	5

Transmission from parent/adult to child is indicated in 20% of the cases where high risk behaviours were identified.

Eighteen children were HIV positive who had not indicated exposure to high risk behaviours. Of these children 12 reported multiple family deaths related to illness though the children did not report that their mother was ill or dead even after direct questioning.

Seven (two males and five females) reported nursing an HIV ill person. Three of these people nursed were not immediate family members but were referred to as neighbours. These children were firm in their denial of having had sex either by consent or by force. One of the female children who had nursed a neighbour had no ill relatives and had never been sexually active or abused. It may be that this child is positive as a result of contact with the body fluids of an HIV ill person. The study by Shisana O et. al. (2005) found evidence of nonsocomial transmission after collating the HIV positive children who did not have HIV positive mothers with possible transmission from inadequate medical care and/or wet-nursing.

These cases are difficult to explain with certainty. Children most often do not recall abuse which takes place before the age of two years (SASPACAN 1988). Transmission at a clinic is possible in terms of the Shisana O et. al. (2009) results and the issue of traditional healers interventions were not raised in this study.

Of the HIV positive children, (66%) could describe the death of biological family members in detail and this suggest that mother-to-child transmission was the most likely mode of transmission

The logistical regression shows that parental HIV status is the second most significant variable found in this study ($\chi^2 = 12.2$, $d.f. = 1$, $p=0.005$). . Table 6 indicates that 20% of children are exposed to HIV as a result of adult risk behaviours. In two-thirds or 67% of these cases the “risk” behaviour is creating a child while being HIV positive in a country (at that stage) adverse to the provision of mother-to-child-prevention medication. There has been

some suggestion that this aversion by the state could lead to the prosecution of the resistant authorities and that the risk was in fact not the fault of the individual but rather that of an ineffective state policy.

It should be remembered that these children would have been born before the wide spread use of ARV therapy to prevent natal and neo-natal exposure of the infant, so these results cannot be taken as an allotment of blame on the adult but rather a vindication of the children's low risk taking behaviour showing an almost 1:3 ratio (or 7 children to 20 adults) rate of infection from high risk behaviours.

4.4.1. CONSIDERING THE PRIME CARER

In considering the circumstance of children in the study the identification of the primary carer was important to the process of understating the child's home environment. The role of the parent or primary carer is important for the overall well being of the child. In the case of HIV infection and death there are large numbers of children who find themselves with a primary carer who is not a biological parent.

Table 4.8: Identifying the primary carer in relation to the child's HIV status. (n=100)

Status of child	HIV negative	HIV positive	Total
Primary CARER			
Mother	19	15	33
Father	2	3	5
Both Parents	1	3	4
Grandparent	13	15	29
Aunt	6	9	14
Child/Sibling	4	2	8
Adult relative	3	3	6
Non relative	2	0	1
Total	50	50	100

Table 7 shows 42% (33+5+4) of all the children are cared for by one or both parents. Those living with a single mother referred to their father as dead or absent. It was not always easy to ascertain if the father was in fact deceased or had absconded. What was clear is that the child did not remember a father; the father was not involved in the child's current life and did not contribute towards their maintenance. There is little difference between the HIV positive (15+3+3=21) and HIV negative (19+2+1=22) groups. This is in direct contradiction to the research reported by Pendleburg S et. al. in the South African Child Gauge 2008 in the literature review which indicated that 71% of children reported both parents alive.

Children living with grandparents could often explain the parent's death or knew where the mother was working. Children living with grandparents and aunts expressed considerable affection for these relatives. Aunts and grandparents care for 43% (29+14) of the children. It is more common for HIV positive children (15+9=24 compared to HIV negative 13+6=19) to be living with an aunt or grandparent, usually as a result of the mother's death.

Table 4.9: Wellbeing of the parents in relation to the child's HIV status. (n=100)

Status of child	HIV negative	HIV positive	Total
MOTHER			
Dead	15	19	34
Absent	16	10	26
Present & well	17	15	32
Present & unwell	2	6	8
Total	50	50	100
FATHER			
Dead	31	32	63
Absent	15	12	27
Present & well	1	5	6
Present & unwell	3	1	4
Total	50	50	100

A high number of mothers are either absent or dead (34+26=60). Fathers appear to take little responsibility for children in the study, with only 10% of the fathers being present in the child's daily life.

Of the children 63 said their fathers were dead while 34 said their mothers were dead. The population estimated by Stats SA does indicate the female population is 52,5%. This does not account for the high numbers of absent or dead fathers.

As already mentioned, parental HIV infection or death as a result of AIDS is a risk factor for the child. Table 8 shows that children with an ill mother are four times more likely to be HIV positive. However these results do not show any significant impact on the child's HIV related circumstances in terms of the care, social and spiritual influence of the parent. Children were then asked if they had a person they could talk to when they had a problem or from whom they could solicit advice.

4.4.2. THE PRESENCE OF A CONFIDANT

The study explored if the child had a confidant in the absence of a mother and or a father in order to better understand how the lack of affection and connectedness might influence HIV risk in relation to “not feeling alone”.

Table 4.10: The presence of a confidant in relation to the child’s HIV status. (*n*=100)

Status of child	HIV negative	HIV positive	Total
Has an existing confidant	20	30	50
Could think of a person	26	18	44
No confidant	4	2	6
Total	50	50	100

Only a small number of children (6) said they had no one to speak to if they had problems. Some saying that they would specifically not tell their parents if they were HIV positive. All six of these children identified a class friend as a potential supporter and two of these children were obliged to use their supporter in terms of the VCT protocol used in the study.

The HIV positive children were more likely to have developed a family confidant and said that their family members had been supportive when their HIV positive status was first revealed.

4.4.3. LACK OF LOVE AND ATTENTION AS A RISK FACTOR

Table 4.11: Feelings of abandonment in relation to HIV status and size of household.
(*n=100*)

Lack of love & attention as a HIV risk factor			
Size of household	5 or more than 5 children	Less than 5 children	Total
HIV POSITIVE	11	39	50
Feelings of abandonment	0	10	10
HIV NEGATIVE			
	16	34	50
Feelings of abandonment	2	2	4

Some children did express feelings of abandonment and lack of love, and these feelings were expressed most often (10 of 39) by HIV positive children in small families. This is noteworthy as only 2 children in small families who are HIV negative did not express any feelings of lack of love.

Children in larger families (between 5-12 children) said they gained love and support from older siblings. None of the 11 children in large families expressed feelings of abandonment. This relates to Chubb's work (1997) which indicated the need to belong as being an important factor in children's ability to develop resilience.

This positive indicator for large families may be negated by the levels of poverty experienced by children in such large households.

4.4.4. LEVELS OF POVERTY

Table 4.12: Poverty as a risk factor in relation to the child's HIV status and family size.
(*n*=100)

Poverty as a HIV risk factor			
Size of household	5 or more than 5 children	Less than 5 children	Total
HIV POSITIVE	11	39	50
Hunger as a stressor	6	7	13
HIV NEGATIVE			
HIV NEGATIVE	16	34	50
Hunger as a stressor	7	9	16

This study did not do a full evaluation of the family financial circumstances but relied upon the reporting of children, the need for child support grants, and the BMI (Body Mass Index) as indicators.

Of the children 29% (16+13=29) said they were hungry and sometimes went to school without breakfast or did not have a super at night.. These children were found to have marginal BMI readings and were placed on the nutrition support programme of the May'khethle project. Here one needs to bear in mind that the nutritional programmes (feeding schemes) of the Department of Education are active only in Primary schools. These children are all from high schools and would therefore remain hungry for the entire day.

Children from smaller families 22% were found to be under nourished while 41% of the children in larger families were under nourished. This would indicate that poverty is a negative effect of larger families.

In this study poverty was found to be the third most significant variable ($\chi^2 = 9.6$, *d.f.* = 1, *p*=0.010). Poverty is, as discussed above in section 2.2.2, one of the leading risk factors and this was a view especially supported by the South African government during the Mbeki presidency. This research indicates that it is one of several significant factors and by no means the single prime risk factor for children.

One HIV positive child with an acceptable BMI did say she had several older partners for the express purpose of material gain, however this families financial circumstances were investigated and it was found that three of the adults have full-time permanent jobs and the child was not be in need of basic shelter or food but wanted the funds for fashion goods and

her cell phone. This shows that most of the children in very poor settings showed considerable constraint in their behaviour.

4.5. CONSTRAINING FACTORS

All 50 children who are HIV negative were asked if they had a particular reason for retaining their negative status. While all were delighted to receive a negative result and expressed a desire to stay HIV negative in general terms, only the following 24% had particular ideas.

Table 4.13: List of factors named by HIV negative Children as motivators to remain HIV negative.

Number	Ideas for remaining negative
3	Always use a condom and refuse intercourse with a partner who is unhappy to use condoms.
3	Were anxious about failing virginity testing
2	Had decided to abstain and would reconsider this decision when they are out of school
3	Had clear ambitions for the future and said they would abstain in order to reach their life goals
1	Her mother had discussed this with her and set a good example.
12	Total

In order for these children to make these informed decisions they had to have the correct facts. This shows that both the LO Programme and the work done by various civil society projects, both in the schools and in the wider media, are providing the facts to those who want to know them.

The HIV fighting abilities of these 12 children range from assertiveness to ambition. Over the entire study this is a small number of children who have been able to identify, implement and articulate a clear strategy to retain an HIV negative status. Efforts being placed on children in prevention programmes need to foster and grow these strategies.

CHAPTER 5:

RECOMMENDATIONS AND CONCLUSION

In the study several expected factors arose. These are mother-to-child transmission, poverty and sexual activity without a condom or inconsistent condom usage. None of these results are a surprise to anyone working in the field though all of them are important to take into account when presenting prevention interventions.

It is the unexpected and the slight differences that might be more useful to consider, not as being more significant but as being more unusual and therefore more interesting.

In the area of study boys are responding to prevention messages better than girls, being low in positivity and high in abstinence. The boys in this area also showed lower levels than boys in the national average results. Why this is was not interrogated by this study. It may be that the boys that wished to be part of the study are generally concerned about HIV and therefore more compliant with prevention recommendations. This good news needs to be used to encourage boys to continue to be ahead of the country in this regard.

As indicated in the study quite a number of school goers are over 18 years of age and that as adults they are very likely to have a sexual relationship. It should be remembered that the project targeted the lower grades, leaving out grades 11 and 12 specifically because they would be more likely to be adults who are already sexually active. It is then significant that even at this lower grade level there are a number of adult learners. The manner in which one should address children on HIV related issues is quite different to the manner in which one would address adults. The school system does not take this into account as the focus on abstinence is unlikely to produce a good result in this age group. The schools and agencies must consider age related LO lessons rather than addressing one grade in one-size-fits all HIV prevention effort.

While examples of relationships with multiple partners and multiple older partners were present in the study they did not form a large or significant number. However in all such cases the children were HIV positive indicating this as high risk behaviour and one identified by other studies as such. The practice of multiple partners needs to be developed into a negative social norm much as smoking, drinking and driving are becoming much more unacceptable now than they were a few years ago. Such a campaign would need to be backed by leaders able to stand the acid test of media prying into their personal lives. Parents should be aware of the part they can play in setting an example to their children, remembering that children tend to imitate what they see rather than what they hear.

The increased reporting of the abuse of male children must be highlighted in prevention programmes and to carer training interventions. The shame of abuse must be focused on the perpetrator and removed from the victim to encourage reporting. Further work needs to be done to focus on the responsibility community has for challenged children and adults.

Inconsistent use of condoms should be highlighted as a poor prevention method. Data collected from this study can be used to support such discussions. Children who refuse intercourse without a condom could be encouraged to speak to groups of peers (especially peers who report inconsistent usage) on their techniques/successes. Girls who learn to speak with one voice on condoms are less likely to be marginalized and bullied by boys who refuse to wear condoms. The Femidom was not mentioned in a way that enables the study to assume they were in regular use by girls. The availability of the Femidom is often the problem, however even though the Femidom was made available to every child who tested, the number of children returning for more Femidoms is not remarkable. The use of the Femidom needs to be made more acceptable, even sexy, to encourage girls to take responsibility for protection 50% of the time.

Imagining a better future is one motivating factor found to reduce HIV risk in the study. Children who could articulate a better future were more able to dictate their sexual safety in a firm and rational manner. Helping children to envisage a future in which they can work and improve their personal prospects seems an excellent solution but one that will not hold much water with children who are aware of high unemployment rates, even for graduates. Good news or personal success stories could also be used to motivate children into believing that “I *can* be the one to make good”.

Mother-to-child-transmission is of key importance in the fight against HIV and this was again reinforced by the results of the study. The new protocols are of a higher standard and females need to take responsibility to ensure that their children are born HIV negative, even though HIV may have been introduced into the relationship by either partner, pregnancy is ultimately the female choice.

The generation of children infected by HIV by transmission from their mother should be acknowledged by both society and political leadership as a travesty and these children should be helped to find a place in a developing South Africa. They are a key factor in preventing further spread of HIV both to their children and partners.

Strategies focussing on having children without fear of transmission should be investigated as a potential solution to this generation of children.

Transmission from currently HIV positive mothers to new born children should be viewed in a serious light and the need to join a PMTCT programme should be socially compulsory if not legally so.

Testing and knowledge about HIV is essential at a young age as numbers of virgins (male and female) are already positive due to MTCT. Sadly we cannot afford to assume that young children are better off ‘not knowing’ when knowing provides medical opportunities for the child and protection for associates.

The lack of any indication of responsibility taken by fathers in this study is very high and socially abhorrent. This attitude is perpetuated in many areas of the South African culture as evidenced by the high number of cases of rape and domestic violence before the courts. All legislation and policy should be reviewed to ensure that both parents are responsible for a safe and happy childhood for their children. For example: The Department of Education's policy on teenage pregnancy should involve the father of the unborn child who should be equally obliged to take turns with the mother to take the child to the clinic or miss school when the baby is ill.

There were a few children who may have become positive as a result of nursing relatives and neighbours. It would be unfortunate if communities did not care for each other out of fear of infection. It is therefore important for the state to have free and accessible distribution of gloves at clinics (dispensers similar to those for condoms). Universal precautions must be part of prevention programmes, we cannot assume that everyone understands the basic prevention methods.

Providing a child with love or "connection" is revealed as being very important in HIV prevention. Parents should be helped to see that beyond basic food and shelter, it is their love and time which provides immediate and long term benefits for their children. In this study a sense of belong was increased where the family was large, but then these children were often at risk due to high levels of poverty. Large families are not the solution. Personal and individual attention to the child's concerns is important. While many children had a confidant, this too was not enough. The attitude of "my child knows I am here if he/she has a problem" is not sufficient to allow a child to feel special, loved and nurtured. Parenting course should consider emphasising the role of the carer or parent, and in the absence of this person, civil society will need to fill the gap.

Sexual activity with a minor below 16 years is a crime. The Social Policing Unit needs to be more active in reducing children's exposure to sexual predators. As provided for the Children's Act 38 of 2005 as amended, society needs to report and speak out against this in their own community. The Act provides legal protection for any adult who reports abuse provided the report is not malicious. Communities seem unaware of this Act and more effort needs to be made to encourage every individual in society to take responsibility for the safety of children in their environment.

While many of the children expressed a connection to Christianity none of them referred to these values when considering the reasons for retaining and HIV negative status. Such values as being a virgin when getting married were not mentioned in the study group. Preventative programmes which stress this perspective might fall on deaf ears and programmes may well be more successful in discussing what is important to the children. Values systems of both core religion and cultural groups seem to have been undermined by global values as promoted on television and in the cinemas. Telling children about values seems to have little effect while values based behaviour and discussions seem to enable children to choose a sound system for themselves.

The rejection of traditional values by right based workers is at best arrogant. Children should be encouraged to revisit traditional values and to consider their worth. The reason behind the establishment of a traditional value is often sound, while the actual practise may have become problematic in a country with a Bill of Rights. Many of the practises can be revisited if a respectful attitude is held towards the original aim of the practice. In this way traditional practices which assist in the prevention of HIV may be embraced in a more modern rights base manner which leads to voluntary adherence to the traditional.

It is clear that the HIV pandemic is complex and no one solution will make the impact required to stem the transmission. While many studies show similar results, the most significant result is that success is happening on a small scale and that this success should be used to multiply the impact. The children who have developed anti HIV survival tactics should be the ones driving the future prevention strategies. Studies such as these identify risk reduction strategies which work and they should be included in prevention programmes.

Perhaps the most powerful force is the imbedded knowledge of a child who has developed strategies in a resource poor environment which promotes a positive view of the future and connects to a value system which is helpful. Groups of similar age children might benefit from time to learn from each other in a peer sharing intervention.

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APPENDICES
THE DATA COLLECTION SHEET



MAY'KHETHELE
INFORMATION FORM



PERSONAL DETAILS			
FIRST NAME:		SURNAME:	

Male Female **Date of Birth:** _____ **Age:** _____

Address:

Home Tel/Cell: _____

CURRENT SCHOOL		CURRENT CLASS	
-----------------------	--	----------------------	--

My mother is:	Present and well		My father is:	Present and well	
	Present and mostly ill			Present and mostly ill	
	Absent			Absent	
	Dead			Dead	

PREVIOUS		PREVIOUS	
-----------------	--	-----------------	--

SCHOOL		CLASS	
<p>Name of the person who looks after me at home: _____</p> <p>The person who looks after me is:</p> <p><input type="checkbox"/> My Mother/Father</p> <p><input type="checkbox"/> My Grandparent</p> <p><input type="checkbox"/> Other relative (e.g. uncle/aunt, brother/sister)</p> <p><input type="checkbox"/> Adult not related to me</p> <p>Tel No. of person looking after me: _____ Cell No. _____</p> <p>Number of children in the house who are under 18 years of age _____</p>			
Completed by (name):		Date:	Signed:
Facilitator's name:		Date:	Organisation:

For office use only:

Data captured by: _____ : date:

Data verified by: _____ : date:

THE COUNSELLING FORMAT & REPORT FORM

Life Line & Rape Crisis PMB. Confidential VCT Report

Identity Number													
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Callers details	Counsellor details	Report No.
Name:	Name:	Date:
African Asian Caucasian Coloured	Pseudonym:	Time: ... h... to ...h..
Male Female	Probationer:	Duration:
<18 19-60 60>	Employed Unemployed Breadwinner	Status: - +
Married Single Other	<i>Chemical Manufacturing</i> <i>Transport</i>	<i>Welfare grant: Pension</i>
Children: Ages:	<i>Tourism Service & Retail</i> <i>Tourism</i>	<i>Child Support Disability</i>

Tick & circle the items discussed and fill in the actual counselling below.

REFERRALS:		
PRE TEST	*Possible Symptoms:	
*Introductions	Recurrent OI – which?	
-Counselling process & generic nature of LL	- explain common disease progression	+
-Confidentiality	TB – risk/testing	
-Discuss feelings of anxiety etc.	* Explain HIV test	
-Make follow-up appointment – explain	- accuracy	
Date: Time:	- denial	
*REASON FOR COMING	- window period	#
-Allow them to tell their story	*Legal/Human Rights:	
-Assess risk factors while listening	- Work related/reasonable accommodation	+
*Clarify – causative factors if necessary	- Partner rights/ encourage communication	# +
Alcohol/drugs many partners/high risk sexual acts #	*Support	
*Give accurate information where necessary	- Who to tell?	+
*Myths –what do you know about HIV & AIDS?	- Change behaviours?	# +
*Transmission: <i>all # +</i>	- Supports group at home & at work	+
- Sexual intercourse	*Treatment:	<i>all # +</i>
- PTCT (parent)- programme & risks to mother	- Lifestyle management/stress	
- Blood including intravenous drug users	- Nutrition/Exercise	
- Some traditional practises/shared razors etc	- Regular visits to clinic/treatment of OI	
*Prevention: Abstain (100%) <i>all # +</i>	- Anti-retroviral drugs	
- Faithful relationship/multiple partners	*Options discussed <i>as appropriate # +</i>	
- Condoms- safe use/expiry /lubrication/disposal	- Consider clients world view/what will work	
- Femidoms REMEMBER – possibility of condom failure MUST be mentioned	- How do they think will work	
- Less risky intimate acts	*Relationship issues	
*Sexual abuse: Child (get details)	-How to tell (try telling me how you will...) +	
- Adult	- Partner testing	
- Partner	* Work related issues:	+
- Rape	- work place programme/medical aid	

POST TEST: Check results are understood & give time for feelings *then* if negative go over items marked # BUT if positive go over items marked +. Give next appointment slip.

THE SELECTION OF CHILDREN

Demonstrating the matching of the study group and the comparative group.

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Age	School	Positive Study group	HIV Status	Class	Males	Gender	Check
14	Bongadunga HS		N	8A		F	
15	Bongadunga HS		N	8C		F	
14	Bongadunga HS	1	P	8D		F	
15	Bongadunga HS	1	P	8D	1	M	
15	Bongadunga HS		N	9C		F	
17	Bongadunga HS	1	P	9B		F	
15	Bongadunga HS	1	P	9A		F	
16	Bongadunga HS		N	9A		F	8
14	Edendale Com Tech	1	P	8D		F	
14	Edendale Com Tech		N	8M		F	2
14	Emzamweni		N	8A	1	M	
14	Emzamweni	1	P	8C	1	M	
19	Emzamweni		N	10G		F	
20	Emzamweni	1	P	10G		F	4
15	Fundokhule HS		N	8B	1	M	
15	Fundokhule HS		N	8A		F	
14	Fundokhule HS		N	8A	1	M	
16	Fundokhule HS	1	P	8C		F	
14	Fundokhule HS	1	P	8B	1	M	

14	Fundokhule HS		N	8A		F	
17	Fundokhule HS	1	P	8C	1	M	
14	Fundokhule HS	1	P	8C		F	8
18	Gobindlovu HS		N	10S		F	
18	Gobindlovu HS	1	P	10S		F	2
13	Imvunulo	1	P	8B		F	
16	Imvunulo	1	P	11J		F	
18	Imvunulo		N	10J		F	
14	Imvunulo		N	8A		F	
15	Imvunulo		N	8B	1	M	
15	Imvunulo	1	P	8B	1	M	6
15	KwaMncane HS	1	P	8A	1	M	
19	KwaMncane HS	1	P	8A		F	
14	KwaMncane HS	1	P	8B		F	
15	KwaMncane HS	1	P	8B		F	
15	KwaMncane HS		N	8A	1	M	
19	KwaMncane HS		N	10C		F	
14	KwaMncane HS		N	8C		F	
15	KwaMncane HS		N	8C		F	
17	KwaMncane HS		N	10B		F	
19	KwaMncane HS		N	10C		F	
21	KwaMncane HS		N	10D	1	M	
21	KwaMncane HS	1	P	10A		F	
20	KwaMncane HS	1	P	10C		F	
17	KwaMncane HS	1	P	10B		F	14

15	KwaPata S		N	9C	1	M	
17	KwaPata S		N	10B		F	
17	KwaPata S		N	10F	1	M	
18	KwaPata S		N	10B		F	
14	KwaPata S		N	8D		F	
18	KwaPata S	1	P	10B		F	
15	KwaPata S		N	8E		F	
18	KwaPata S	1	P	10H		F	
14	KwaPata S	1	P	8C		F	
16	KwaPata S	1	P	8D	1	M	
15	KwaPata S	1	P	8F		F	
16	KwaPata S	1	P	10C	1	M	12
22	Langalakhe HS		N	9A		F	
13	Langalakhe HS		N	8B		F	
18	Langalakhe HS		N	10D		F	
13	Langalakhe HS	1	P	8C		F	
14	Langalakhe HS		N	8B		F	
24	Langalakhe HS	1	P	10D		F	
14	Langalakhe HS	1	P	8A		F	
19	Langalakhe HS	1	P	10D		F	
13	Langalakhe HS		N	8A	1	M	
14	Langalakhe HS	1	P	8A		F	10
14	Mkholwa		N	8A		F	
14	Mkholwa	1	P	8D		F	
18	Mkholwa	1	P	12B		F	

18	Mkholwa		N	8B		F	4
13	Mthoqotho	1	P	8A		F	
13	Mthoqotho	1	P	8A		F	
13	Mthoqotho		N	8C		F	
13	Mthoqotho		N	8B		F	4
14	Ngon'thwele	1	P	9C	1	M	
13	Ngon'thwele		N	9C	1	M	2
15	Nsikayethu	1	P	8A	1	M	
15	Nsikayethu		N	8C	1	M	2
17	Qopisizwe		N	10B		F	
18	Qopisizwe	1	P	11B		F	
17	Qopisizwe	1	P	10C		F	
18	Qopisizwe		N	10B		F	4
14	Smero HS		N	8C		F	
14	Smero HS	1	P	8B		F	
15	Smero HS		N	9B		F	
19	Smero HS		N	10B	1	M	
16	Smero HS	1	P	10A		F	
19	Smero HS	1	P	11B		F	
15	Smero HS	1	P	9C		F	
16	Smero HS		N	10A		F	8

13	S'Qongweni HS	1	P	8B	1	M	
14	S'Qongweni HS	1	P	8B		F	
14	S'Qongweni HS	1	P	8B	1	M	
18	S'Qongweni HS		N	10D		F	
18	S'Qongweni HS		N	11B		F	
22	S'Qongweni HS	1	P	10C		F	
14	S'Qongweni HS		N	8C		F	
13	S'Qongweni HS		N	8B	1	M	
18	S'Qongweni HS	1	P	10B		F	
14	S'Qongweni HS		N	8C	1	M	10
Sample from 16 High Schools		50			26		100
		50%			26%		

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