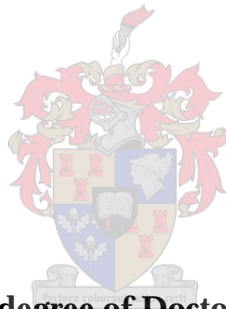


**THE DEVELOPMENT AND EVALUATION OF A PILOT SCHOOL-BASED
PROGRAMME FOR PREVENTION OF HIV/AIDS AMONG VISUALLY
IMPAIRED AND BLIND SOUTH AFRICAN ADOLESCENTS**

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Stellenbosch University**

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DECLARATION

I, the undersigned, hereby declare that the work contained in this dissertation is my own original work and that all sources I have cited or used have been acknowledged by means of complete references and that I have not previously in its entirety or in part submitted it at any university for a degree.

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Signature

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Date

DEDICATION

This work is dedicated to my wife and children; Laetitia, Louelle, Chante' and Jaden and my parents.

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ABSTRACT

The aim of this study was to develop a HIV intervention programme tailored for South African adolescents with visual impairments. A further aim was to pilot and evaluate this tailored programme. This investigation was deemed necessary in the light of the growing HIV pandemic in South Africa, which has proliferated over the last 10 years. Adolescents and young adults are among the most vulnerable to HIV infection, and this does not exclude adolescents with visual impairments. Despite the perceptions among sighted people of asexuality in adolescents with visual impairments, they are a vulnerable group for HIV infection.

The motivation for this study is the fact that very little literature is available on HIV/AIDS and people with visual impairments, and that this vulnerable group is marginalized in HIV/AIDS campaigns internationally. As far as we could ascertain, there have been three HIV prevention initiatives for people with visual impairments in South Africa, none of which was fully researched and evaluated, and all of which used existing generic interventions but transcribed into Braille and large print format. The reality is, many adolescents with visual impairments, as is the case with sighted youths, are sexually active, and the absence of research on HIV prevalence and HIV prevention needs in this sector, is conspicuous. An urgent need exists to tailor HIV preventative programmes for this vulnerable sector.

The dearth of research on HIV/AIDS and people with visual impairments motivated the choice of a key informant study to investigate the effects that HIV/AIDS and other concomitant issues have on persons with visual impairments, prior to the design of any intervention. A purposive sample of key informants who are working among people with visual impairments on a daily basis, most of whom had visual impairments themselves, was selected. Information gathered from the key informant study was combined with the lessons from a review of available literature on health promotion programmes and HIV prevention programmes in particular to develop an HIV/AIDS intervention programme to be piloted and evaluated for its effectiveness. The design of the programme took account, in addition, of broader contextual issues such as power and gender issues, and the marginalization and

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stigmatization of disabled people. The theoretical framework which forms the basis of the programme was informed by elements of a number of cognitive theories in the health promotion field, and especially the Informational-Motivational-Behavioural model (IMB). The programme was designed to empower participants and to create an environment of real-life experiences in which they could acquire important negotiation skills, decision-making skills, and practical skills to use condoms and HIV/AIDS knowledge to facilitate attitude and behaviour change.

The next objective of this research was to implement the intervention programme of eight sessions designed for adolescents with visual impairments and to investigate the outcome on participants in this study. For this purpose an experimental design, one experimental group and three control groups (n= 56), not randomly assigned, was used to test the effect of the programme on participants in the intervention group compared to the control groups, who received a health promotion programme of four sessions. All participants were learners at the only two schools for learners with visual impairments in the Western Cape Province of South Africa, and they were allocated into treatment or control conditions on the basis of the school grades in which they were already placed. The empirical investigation utilized a questionnaire that was developed and transcribed into Braille as well as large print. Following a small pilot study, the questionnaire was finalized and administered to all four groups (pre-test, to determine baseline differences; post-test, to determine the immediate effect of the programme; and follow-up [3 months later] to determine longer term effectiveness). An analysis was done to assess the internal consistency of the measuring constructs of the questionnaire, and satisfactory internal consistency was found, with Cronbach's alpha scores ranging between 0.72 and 0.92.

Quantitative data were analyzed using multivariate techniques, beginning with a repeated measures MANOVA analysis and, once an overall significant F ratio between variables, time and groups ($F=2.009$, $p<0.05$); a significant F ratio between groups and variables ($F=4.211$, $p<0.01$), and significant F ratio between time and groups ($F=2.611$, $p<0.01$), had been found, we continued with more focused analyses. Baseline results revealed no statistical differences

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between the four groups. There were statistically significant improvements in knowledge of HIV/AIDS for both the experimental group and two of the control group, but these differences were not maintained at follow up. Significant differences in attitudes towards HIV/AIDS were found for the experimental group and for one of the control groups. Though there were significant changes in both knowledge and attitudes, therefore, it cannot be claimed that the intervention itself was responsible for knowledge and attitudinal change. There was some evidence for diffusion of innovation in terms of HIV knowledge from the experimental group and the control group situated at the same school. Changes in reported HIV risk behaviour were not recorded to a significant degree, a fact which may have been attributable in part to small sample size.

Qualitative process information was used to get a sense of the experiences of participants and the concomitant issues they discussed during the intervention. The qualitative data revealed a host of contextual factors relevant to issues of HIV/AIDS and sexuality in this group, including experiences of stigmatization as people with visual impairment, negotiating masculinity in the context of visual impairment, gender oppression of women and resistance to this, and a general atmosphere of myths and silences around HIV/AIDS in particular and sexuality in general.

Despite the limited impact of the programme, this pilot study revealed important issues for adolescents with visual impairments regarding HIV prevention which require further investigation. Participants in the experimental group indicated that they learned a lot from this programme and suggested that it be given to younger adolescents to enable them to acquire these vital skills prior to active sexual engagement and the involvement in any form of unprotected sex. A number of recommendations are made for further well-documented and evaluated research in this field.

Die doel van die studie was om 'n MIV-intervensieprogram te ontwikkel wat op Suid-Afrikaanse adolessente met gesigsgestremdhede gemik is. 'n Verdere doel was om 'n proeflopie van die pasgemaakte program te doen en dit te evalueer. Hierdie ondersoek is nodig geag in die lig van die groeiende MIV-pandemie in Suid-Afrika, wat oor die afgelope tien jaar vinnig versprei het. Adolessente en jong volwassenes tel onder die kwesbaarstes vir MIV-infeksie, en dit sluit nie adolessente met gesigsgestremdhede uit nie. Ongeag die persepsies omtrent aseksualiteit in adolessente met gesigsgestremdhede onder diegene wat nie gesigsgestremd is nie, is eersgenoemde 'n kwesbare groep vir MIV-infeksie.

Die motivering vir hierdie studie is die feit dat baie min literatuur vir mense met gesigsgestremdhede beskikbaar is, en dat hierdie kwesbare groep wêreldwyd in MIV/VIGS-veldtogte gemarginaliseer is. Sover ons kon vasstel, was daar drie MIV-voorkomingsinisiatiewe vir mense met gesigsgestremdhede in Suid-Afrika, waarvan nie een ten volle nagevors en geëvalueer is nie, en wat almal bestaande generiese intervensies gebruik het wat in Braille en grootdruk-formaat omgesit is. Die werklikheid is dat baie adolessente met gesigsgestremdhede – nes die geval is met jeugdige sonder gesigsgestremdhede – seksueel aktief is en dat die afwesigheid van navorsing oor MIV-voorkoms en MIV-voorkomingsbehoeftes in hierdie sektor opvallend is. Daar is 'n dringende behoefte aan pasgemaakte MIV-voorkomende programme vir hierdie kwesbare sektor.

Die gebrek aan navorsing oor MIV/vigs en mense met gesigsgestremdhede het die keuse van 'n sleutelinformantstudie gemotiveer om die invloed wat MIV/vigs en ander gepaardgaande kwessies op mense met gesigsgestremdhede het, voor die ontwikkeling van enige intervensie te ondersoek. 'n Doelgerigte steekproef van sleutelinformante wat op 'n daaglikse grondslag onder mense met gesigsgestremdhede werk, waarvan die meeste self gesigsgestremd is, is gekies. Inligting wat van die sleutelinformantstudie verkry is, is gekombineer met die lesse uit 'n oorsig van die bestaande literatuur oor gesondheidsbevorderingsprogramme – in die besonder MIV-voorkomingsprogramme – om 'n MIV/vigs-intervensieprogram te ontwikkel

wat as loodsprojek kon dien en wat vir doeltreffendheid geëvalueer kon word. Die ontwerp van die projek het, daarbenewens, ag geslaan op breër kontekstuele kwessies soos mags- en genderkwessies en die marginalisering en stigmatisering van mense met getremdhede. Die teoretiese raamwerk wat die grondslag vir die program vorm, is op elemente van 'n aantal kognitiewe teorieë op die gebied van gesondheidsbevordering, en spesifiek die inligting-motivering-gedragsmodel geskoei. Die program is ontwerp om deelnemers te bemagtig en om 'n omgewing van lewenservaringe te skep waarbinne hulle belangrike onderhandelings-, besluitnemings- en praktiese vaardighede kon ontwikkel om kondoomgebruik te bevorder, asook kennis omtrent MIV/vigs om houdings- en gedragsverandering te fasiliteer.

Die volgende doelwit van hierdie navorsing was om die intervensieprogram van agt sessies wat vir adolessente met gesigsgestremdhede ontwerp is, te implementeer en om die resultate ten opsigte van die deelnemers aan die studie te ondersoek. Met hierdie doel voor oë is 'n eksperimentele ontwerp – een eksperimentele groep en drie kontrolegroepe (n=56), wat nie ewekansig toegewys is nie – gebruik om die invloed van die program op deelnemers in die intervensiegroep te toets teenoor dié op die kontrolegroepe, wat aan 'n gesondheidsbevorderings-program van vier sessies deelgeneem het. Alle deelnemers was leerders by die enigste twee skole vir leerders met gesigsgestremdhede in die Wes-Kaap, Suid-Afrika. Hulle is op grond van die skoolgraad waarin hulle reeds geplaas is, aan behandelings- of kontroletoestande toegewys. Die empiriese ondersoek het 'n ontwikkelde vraelys gebruik wat sowel in Braille getranskribeer is as in grootdruk gedruk is. Ná afloop van 'n klein loodsstudie is die vraelys gefinaliseer en aan al vier groepe toegedien (voortoets, om die basisverskille vas te stel; na-toets, om die onmiddellike invloed van die program vas te stel; en opvolg [3 maande later] om doeltreffendheid op langer termyn vas te stel). 'n Ontleding is gedoen om die interne konsekwentheid van die meetkonstrukte van die vraelys te assessee: voldoende interne konsekwentheid is gevind, met Cronbach se alfapunte wat tussen 0.72 en 0.92 gewissel het.

Kwantitatiewe data is met behulp van meervariaatteenigheidsontleding ontleed. Eers is 'n herhaalde-meting- MANOVA-ontleding gedoen en daarna – nadat 'n algeheel beduidende F-

verhouding tussen veranderlikes, tyd en groepe ($F=2.009$, $p<0.05$); 'n beduidende F-verhouding tussen groepe en veranderlikes ($F=4.211$, $p<0.01$) en 'n beduidende F-verhouding tussen tyd en groepe ($F=2.611$, $p<0.01$) gevind is – is dit deur meer gefokusde ontledings gevolg. Basislynuitslae het geen statistiese verskille tussen die vier groepe getoon nie. Daar was statisties beduidende verbeteringe in kennis oor MIV/vigs in sowel die eksperimentele groep as die twee kontrolegroepe, maar hierdie verskille is nie met die opvolgtoets volgehou nie. Beduidende verskille in houding jeens MIV/vigs is by die eksperimentele groep en een van die kontrolegroepe gevind. Hoewel daar beduidende veranderinge in sowel kennis as houdings gevind is, kan daar nie beweer word dat die intervensie self vir die kennis- en houdingsveranderinge verantwoordelik was nie. Daar was 'n mate van bewys vir diffusie van innovering wat betref kennis oor MIV van die eksperimentele groep en die kontrolegroep by dieselfde skool. Veranderinge in aangemelde MIV-risikogedrag is nie in 'n beduidende mate aangeteken nie, 'n feit wat gedeeltelik aan die beperkte grootte van die steekproef te wyte kan wees.

Inligting uit 'n kwalitatiewe proses is gebruik om 'n indruk te skep van die ervarings van deelnemers en gepaardgaande kwessies wat hulle tydens die intervensie bespreek het. Die kwalitatiewe data het 'n reeks kontekstuele faktore blootgelê wat vir kwessies van MIV/vigs en seksualiteit in hierdie groep tersaaklik is, met inbegrip van ervarings van stigmatisering as mense met gesigsgestremdhede, die hantering van manlikheid binne die konteks van gesigsgestremdheid, genderonderdrukking van vroue en weerstand hierteen, asook 'n algemene atmosfeer van mites en stilswye oor MIV/vigs in die besonder en seksualiteit in die algemeen.

Ten spyte van die beperkte impak van die program het hierdie loodsstudie belangrike kwessies vir adolessente met gesigsgestremdhede betreffende MIV-voorkoming blootgelê wat verdere ondersoek noodsaak. Deelnemers in die eksperimentele groep het aangedui dat hulle baie uit hierdie program geleer het en het voorgestel dat dit aan jonger adolessente aangebied word om hulle in staat te stel om hierdie noodsaaklike vaardighede te ontwikkel voordat aktiewe seksuele betrokkenheid en betrokkenheid by enige vorm van onbeskermdede

seks plaasvind. 'n Aantal aanbevelings vir verdere goed gedokumenteerde en geëvalueerde navorsing op hierdie gebied word gemaak.

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SECTION 1

CHAPTER 1 INTRODUCTION AND OBJECTIVES OF THIS STUDY

1.1 Background to this study

The spread of HIV in young adults, adolescents, children and women in developing countries is dramatic (Buseh, Glass & McElmurry, 2002; Parker, 2001); and an estimated 38.6 million people worldwide are currently living with HIV (UNAIDS, 2005). The number of new people estimated to be infected with HIV is 4.1 million worldwide. The dominant mode of transmission in sub-Saharan Africa is through unprotected sex (largely heterosexual) (Peltzer & Pengpid, 2006; Shisana et al., 2005), and infection through intravenous drug use is rare. Many persons diagnosed with AIDS between the ages of 20-29 years had been infected during adolescence (Mullen, Ramírez, Strouse, Hedges & Sogolow, 2002).

It has been estimated that the prevalence of AIDS will reach 27% of the sexually active population in South Africa by 2010 (Peltzer, 2002). The latest figures on HIV prevalence in South Africa indicate that South Africa has experienced one of the fastest growing pandemics in the world, and has reported the largest number of people living with HIV/AIDS (Harrison, Smith, & Myer, 2000; Johnson, Johnson, & Jefferson-Aker, 2001; Loening-Voysey, 2002; Peltzer & Pengpid, 2006; Shisana et al., 2005; UNAIDS, 2005). Trends in HIV prevalence reveal a 12 to 14% infection rate for people between the ages of 15-49 in 2002 (International Labour Organization (ILO), 2005; Walker & Gilbert, 2002) reaching 16.2% in this age-group in 2005 (Shisana et al., 2005). UNAIDS (2005) estimated that 5.5 million (10.8%) South Africans were living with HIV/AIDS at the end of 2005, with the highest prevalence amongst the young adult population between 15-49 years. The largest increase is among females aged 15-24, with 12% in 2002 compared to 16.9% in 2005, with HIV incidence among females 8 times higher than that for males.

Young people are most severely affected by this disease, with women generally infected earlier than men (Shisana et al., 2005; Walker & Gilbert, 2002). According to the UNAIDS Inter-Agency Task team on Gender and HIV (2005) 75% of all infected people in sub-Saharan Africa are women and young girls.

Prevention of infection remains the best hope for containing the devastating effects of the epidemic (Mustanski, Donenberg & Emerson, 2006). In South Africa, HIV prevention programmes targeting communities have been widely disseminated. The continuing increase in infection rates suggests that prevention efforts have limited success or are perhaps not effective on a broad scale to achieve a significant public health impact. Nevertheless, prevention is considered the most effective way to combat the disease, but must address HIV in the context of people's lives (Buseh et al., 2002; Harrisson et al., 2000).

A search conducted by the researcher found relatively little empirical research focusing on HIV/AIDS and its effect on adolescents with visual impairments, a vulnerable group who are at risk for HIV/AIDS infection. This finding was confirmed by Groce (2003), who highlighted that people with disabilities are marginalized in HIV/AIDS prevention and intervention initiatives internationally. According to Kelly et al. (2002) vulnerability amongst persons with disabilities in the face of HIV/AIDS is especially severe amongst poor people. There are no specific prevalence data on HIV infection in any disabled population from sub-Saharan Africa, Asia, Europe, Central and South America or the Caribbean (Groce, 2003). The reality is that this group, contrary to some stereotypes, is sexually active, and primary prevention and intervention is therefore important for disabled people, and, in this case, for people with visual impairments, just as it is for their able-bodied and sighted peers, to combat the spread of the HIV/AIDS pandemic. The dearth of work in this important area motivated the researcher to investigate a tailored HIV intervention programme for adolescents with visual impairments.

1.2 Motivation and relevance of the research

For the purposes of this study it is important to contextualize people with visual impairment within a group that encompasses other people with disabilities. According to the census of 2001 (the most recent for which figures are available), people with disabilities constitute more than 2.2 million of the South African population of approximately 40 million. About one million South Africans have a visual impairment, while people who are totally blind represent more than 50% of this one million (Statistics South Africa, 2003).

The researcher is a psychologist working for the past 9 years among adolescents with visual impairments. He has found that these adolescents, like all adolescent groups, experience various challenges regarding social skills, including communication skills, negotiation skills, and assertiveness and self-esteem issues. Difficulties in these areas may make them vulnerable to HIV/AIDS infection. A major concern of those people involved in the sector of people with visual impairments is that existing projects on HIV/AIDS do not systematically take into account this vulnerable social group. For obvious reasons, communication strategies to disseminate information on HIV/AIDS control measures for people with visual impairments must be different from the visually loaded campaigns commonly used. Though there is some general awareness that HIV is an issue for people with visual impairments, there does not seem to be any systematic evaluated work on this issue.

It has recently been argued that people with disabilities are at an increased risk of being exposed to all the known risk factors for HIV/AIDS, including drugs, alcohol, violence and rape (Groce, 2003; Johnson, et al., 2001). Colleagues working with people in the visual impairment sector express the concern that preventative programmes are insensitive and completely ignore the contextual and social conditions of the people with visual impairment. This view is supported by Groce (2003), who stressed that

almost no general campaigns about HIV/AIDS target or include groups with disabilities, and that, on the contrary, they tend to exclude groups like people with visual impairment during TV campaigns. DeMarco and Norris (2004) underlined that psychosocial factors and cultural values and traditions are critical and need to be considered in HIV prevention programmes; this is no less the case when we consider visual impairment.

According to Mustanski et al. (2006), HIV preventive interventions tailored for the unique risk factors of each target population (in this instance people with visual impairments) have the greatest chance of success, especially in the absence of a vaccine to curb the disease. Many people with visual impairment are sexually active, and the paucity of research on HIV prevalence and HIV prevention needs in this sector is conspicuous. An urgent need exists to tailor HIV preventative programmes for this vulnerable sector. As Buysse and Ickes (1999) put it in a more general discussion of HIV programmes:

It is important that prevention programs designed and implemented be culturally tailored in order to communicate meaningfully with affected groups and populations (p. 121)

Another issue as highlighted by those working in the sector of people with visual impairments is the exclusion of people with visual impairments in HIV/AIDS prevention planning and interventions. They strongly campaign for self-representation when prevention programmes are planned, designed and delivered, as prescribed in the SAHRC (South African Human Rights Commission, 2002) report. During key informant interviews to be discussed later in this thesis, the Executive Director of the South African National Council for the Blind (SANCB) stated that people with visual impairments prefer that HIV prevention programmes be presented by their own organizations and schools, by trained people with visual impairments, and by HIV/AIDS counsellors who are sensitized around the needs of people with visual

impairments. This could lead, he argues, to participants gaining maximum benefit because they are likely to feel more at ease.

The study is therefore motivated by a lack of empirically researched HIV/AIDS prevention programmes tailored for people with visual impairments, and the lack of tailored awareness programmes at many institutions for people with visual impairments.

1.3 Preliminary research in the domain of HIV/AIDS and people with visual impairments

The researcher is interested in the vulnerability of people with visual impairments to HIV/AIDS, and what can be done about this. A literature search conducted by the researcher produced very little relevant information. Groce (2003) and Blanchett (2000) both confirm this paucity.

The handful of researchers who do write about HIV risk among people with disabilities underline the importance of the development of tailored programmes for the people with disabilities, including people with visual impairments. Johnson et al. (2001) emphasize the need for theory-based, culturally sound, educationally appropriate and empirically tested intervention strategies to prevent HIV/AIDS infection among adolescents, including those with disabilities. Brown and Jemmott (2002) and Kateiva and Weber (2002) corroborate this view and highlight the importance of devising HIV preventive strategies for groups such as people who are hard of hearing, people with developmental disabilities, people with visual impairments, people who are mentally ill, people with physical disabilities, and non-English speaking populations in English speaking countries. All these groups, they maintain, are given low priority in the development of HIV/STD preventive education packages. The same applies to the South African situation, where the HIV prevention needs of people with disabilities are

almost completely overlooked, with very few researched HIV prevention programmes for people with disabilities and people with visual impairments in particular. Kelly, Ntlabati, Van der Riet and Parker (2002) argue that a 'one size fits all' approach has been followed and that there has been little appreciation of the unique challenges facing distinct populations of young people.

A search for HIV prevention programmes tailored for people with visual impairments produced very limited results. Research by Jaime, Ortiz, Dávila, Torres and Diaz (2001) among university students with visual impairments in Puerto Rico found high knowledge levels, but with "gaps". These authors underline that HIV educational material for the targeted population must be developed to inform people with visual impairments about HIV/AIDS. Research by Yousafzai, Edwards, D'Allesandro and Lindström (2005) among people with disabilities in Rwanda and Uganda also suggested targeted programmes for people with visual impairments. They stated that one needs to be mindful of issues such as inaccessible information and inappropriate teaching techniques, and focus on themes such as the stigmatisation of people with disabilities as asexual, low self-esteem and issues of self-efficacy in HIV prevention programmes for people with disabilities. HIV prevention work in Tanzania among people with disabilities in 2003 by the Disabled Organization for Legal Affairs and Social Economic Development (DOLASED) found that Braille information materials had a positive impact on the knowledge and attitudes towards condom use amongst participants. This finding was confirmed by post-test questionnaires which indicated increased knowledge about condom use and the transmission of HIV/AIDS.

In South Africa, the Johannesburg Society for the Blind, the Sibonile School in Johannesburg and the South African National Council for the Blind (SANCB), supported by the Department of Health, have produced audio and Braille information for people with visual impairments. None of these programmes was researched amongst the target population group. Materials in general use were simply translated

into Braille or audio. There is an implicit assumption that generic programmes will meet the needs of people with visual impairments. The full effect of HIV/AIDS on this population, furthermore, is difficult to assess, because there are reportedly no seroprevalence studies that have targeted people with visual impairments. During an interview for the key informant study which will be discussed in more detail later, the President of Disabled People South Africa, argued that the lack of research and the absence of an HIV/AIDS prevention programme tailored for people with visual impairments are a consequence of the persistent stereotype that people with disabilities do not experience sexual feelings or engage in sexual behaviour. People with disabilities are consistently marginalized (HIV/AIDS and TB Newsletter, 2001), and there is a lack of visibility of persons with disabilities in programme planning and information dissemination in relation to HIV/AIDS in South Africa.

This study therefore represents the first known attempt to develop and evaluate an HIV/AIDS prevention programme tailored for people with visual impairments focussing on knowledge, attitudes and behaviour.

1.4 RESEARCH OBJECTIVES

The objectives of this research are:

- To design, implement and evaluate a preventive programme among a selected group of adolescents with visual impairments, so as to provide a basis for the development of such programmes for people with visual impairments.
- To record process information on the needs and experiences of people with visual impairments. This qualitative information may be of some use for the design of future preventive programmes and activities.

1.4.1. Research design, methodology and approach

HIV interventions and the investigation of studies are best conducted in 'real world' situations (Jarlais & Semaan, 2002). Outcome data may be provided through quantitative methods, but valuable information may also be gathered from qualitative approaches, designed to help health educators to have a better understanding of communities and health problems (Bartholomew, Parcel, Kok & Gottlieb, 2006). The main study is a quasi-experimental design to test the impact on a HIV intervention programme on the participants. There was also a qualitative analysis of the intervention process (see Section 4), which was undertaken to explore underlying issues and to get an understanding of the research topic. In the Western Cape, there are only two schools for adolescents with visual impairments. These are the Athlone School for the Blind and Pioneer School for the Blind, and both institutions were used in the study.

Several research techniques were used in order to provide a basis for the design, implementation and evaluation of a prevention programme.

STUDY 1: A preparatory key informant study on visual impairments and HIV risk

Fifteen influential people in the field of visual impairments were identified and interviewed using a semi-structured schedule. Three quarters of those sampled had visual impairments themselves (all congenital), 25% were sighted people who had experience working in the sector. These results are reported in Section 2.

STUDY 2: Designing and testing a pilot HIV prevention programme for adolescents with visual impairments

Control groups and an experimental group were selected from participants who volunteered to take part in the study (the reason for the use of more than one control

group will be given later). The experimental group was exposed to an intensive preventative programme while the control groups received a health promotion programme that constituted an attention placebo.

Details of the experimental and control conditions will be given later.

- Outcome of the programme was assessed by a pre-test-post-test-follow-up design.
- Qualitative process information was also collected.

1.5. DEFINITION OF TERMS

1.5.1 What is a visual impairment?

The term “visual impairment” is used to refer to people who:

- have never had any visual functions (functional loss of vision), and/or
- have had normal vision for some years before becoming gradually or suddenly partially or totally blind, and/or
- have visual acuity that cannot be corrected to normal performance level, and/or
- who have specifically selective impairments of parts of their visual field, and/or
- who experience a general degeneration of acuity across visual field (Landsberg, Krüger & Nel, 2005; Scheiman, 2002).

The definition of the World Health Organisation (WHO) based on visual acuity scores is the most widely accepted. Persons scoring between 6/18 (can see an object at 6 meters that a person with perfect sight would see at 18 meters) and 3/60 (the person can see an object at 3 meters that a perfect sighted person would see at 60 meters) are classed as having low vision; and a person scoring less than 3/60 is classed as being blind (Davis, 2003).

1.5.2 Terminology of visual impairment

There is widespread controversy around terminology with respect to visual impairment.

Literature on disability emphasizes the importance of terminology, because the description of people with disabilities reflects historical perceptions, discrimination and marginalization of people with disabilities, and contemporary attitudes and beliefs towards them. Different terminological expressions are used in Europe, the USA and Africa. Terms such as visually impaired, low vision, visual disability, and legal blindness, partially sighted are some of those used when referring to persons with visual impairments. South African terminology emphasizes, promotes and recommends the acknowledgement of the individual; therefore the terms “people with visual impairments” or “visually impaired people” are accepted terminology when referring to people with a visual disability. In this study the accepted “people first” language is preferred. The term, “people with visual impairments”, will be generally used, and all terms will be in accordance with guidelines provided to the author by the SANCB.

1.5.3 Prevention

This study falls into the category of primary prevention - prevention initiatives where the focus is mainly on health promotion and health education; interventions aimed at preventing a health problem before it occurs (Bartholomew, Parcel, Kok & Gottlieb, 2006). Primary prevention targeting HIV has to do with the distribution of information to the public, and empowerment. The focus is on competence and skills development of individuals by improving their knowledge of HIV/AIDS and condom use, raising self-esteem, introducing or improving negotiation skills and the sensitization of young

people on HIV/AIDS issues (Perez & Dais, 2003). Primary prevention can be described as proactive and deals with people not yet infected by HIV/AIDS.

In the current study, it was not known whether any of the participants was already HIV infected, and it would have been ethically complex to undertake HIV testing. Nevertheless, an overall primary prevention approach was undertaken.

1.5.4 Use of racial terminology

In South Africa, researchers have little choice but to use racial terminology which relates to our historical past and apartheid policies. Apartheid categories, though no longer legislated, continue to have social relevance. Four major “races” or “ethnic groups”, or “population groups” were identified and generally used by the apartheid system; black (indigenous African), coloured (people of mixed racial origin), Whites (Caucasian) and Asian (people of Indian origin).

In this study, the terms “white”, “black”/African”, “coloured” and “Indian” will be used. This does not imply acceptance of apartheid categories.

1.6. Overview and structure of this research study

This dissertation is divided into four sections, (Section 1-4) and some of the sections are further divided into subsections. An outline of the focus of each section is discussed below.

SECTION 1:

Chapter 1

The current section has given an explanation of why this study was done. The focus of this section has been to give an outline of the rationale for this study, the design,

implementation and evaluation of a pilot HIV intervention programme tailored for adolescents with visual impairments.

SECTION 2: KEY INFORMANT STUDY

Chapter 2

Due to scant research on HIV/AIDS and people with visual impairments, a key informant study was undertaken to investigate which issues and components needed to be included in the intervention programme. This study is reported in this section.¹

SECTION 3: INTERVENTION STUDY

This section opens in **Chapter 3** with an overview of health behaviour theory, cognitive behaviour theories, theories and models in the social context of HIV, social-level theoretical approaches, and models on disability with respect to HIV/AIDS prevention that informed the design and implementation of the intervention programme. These theories and models also provide guidelines to the theoretical framework used in this dissertation and contribute to an understanding of the issues pertaining to preventive interventions.

The literature review is followed in **Chapter 4** by a discussion of the research methodology, explaining the research process followed, including the process of obtaining access, reasons for the research design, method of data collection, and the implementation of the intervention programme.

Chapter 5: This section reports the results of the intervention and quantitative findings of the main study.

¹ The key informant study will be presented, somewhat unconventionally, before a comprehensive literature review on the design of HIV interventions. The review will appear in the following section, for ease of reference when the intervention itself is described.

Chapter 6 provides an analysis of the qualitative data and reports on the process findings in terms of the different themes identified.

SECTION 4: DISCUSSION

Chapter 7 provides a discussion of the results obtained in the light of the research questions, discusses the limitations of the study and makes recommendations to improve future intervention programmes and further research.

SECTION 2

CHAPTER 2: KEY INFORMANT STUDY

2.1 Introduction

The key informant study reported on here has been briefly discussed by the researcher and his supervisor in a short report (Philander & Swartz, 2006).

The key informant study was undertaken to prepare for the main study. Due to the fact that so little information was available on the effect of existing HIV/AIDS programmes and the possible impact on adolescents with visual impairments, particularly in South Africa, the study was done to gain a rapid sense from informants of key issues which had not been captured in published literature. All schools catering for people with visual impairments nationally, and all organisations affiliated to the SANCB were polled to determine if they knew of literature on the topic. When they all answered in the negative, the key informant study was designed (see Philander & Swartz, 2006).

2.2 Objectives of the key informant study

The primary objective of this explorative study was to investigate and to ascertain key stakeholders' views on the prevention of HIV/AIDS and other concomitant issues on persons with visual disabilities. Key informants were also asked their opinion on HIV prevention needs in this sector.

2.3 Method and data sources

2.3.1 Participants and procedures

The purposive sample was constructed to consist of those participants best able to comment on issues pertaining to the target group (people with visual impairments) and to help us design the intervention appropriately. Participants were therefore recruited from community-based service providers in the sector dealing with visual impairments, and other influential individuals who are in management positions in the SANCB and affiliates. Given that these organizations provide services to people with visual impairments on a daily basis, participants were likely to be more aware than others of the needs of people with visual impairments with respect to HIV. The respondents represent the bigger organizations which have been providing essential services to people with visual impairments for many years.

The sample consisted of fifteen participants (n=15), most of whom were in senior positions of organizations and service providers in the field of visual impairments (see Table 1, p. 15, for details). Thirteen were from the Western Cape, one from Kwazulu-Natal and two others were from Gauteng. The bias towards the Western Cape Province was appropriate given that this is the province where the intervention study was conducted. All but one of the respondents was involved on a daily basis as direct service providers to people with visual impairments. The average experience in this work was roughly 17 years. More than 75% of the informants had visual impairments, all of these being congenitally blind or, in the case of three respondents, congenitally partially sighted. All respondents were Braille literate. Participants ranged in age from 22 to 62 years, with a mean age of 45 years. Oral consent was requested beforehand for participation in this study and permission obtained for the interview to be audiotaped. Participation was voluntary; no informants refused to be interviewed.

Table 1: Description of Positions in various Organizations and Occupations of Respondents N=15

Respondents	Positions of Respondents in Different Organisations	Occupation
1	Chairperson of SABYO (South African Blind Youth Organization)	Psychology Intern (University of Stellenbosch)
2	Vice Chairperson - Athlone School for the Blind Association	Deputy Principal at Athlone School for the Blind
3	Executive member - Western Cape Council for the Blind	Executive Director - Cape Town Society for the Blind
4	Chairperson - Beacon Club	Senior Teacher - Athlone School for the Blind
5	Vice Chairperson - South African Council for the Blind (SANCB)	Executive Director - LOFOB (The League of Friends of the Blind)
6	Chairperson - Western Cape Council for the Blind	Physiotherapist (Private Practice)
7	National Executive council member - SANCB	Coordinator: Advocacy and Government Relations at SANCB
8	Chairperson of DPSA (Disabled People South Africa)	Member of Parliament - RSA
9	Executive member of SANCB	Executive director - SANCB
10	Registered Nursing Sister and AIDS activist	Nursing Sister at Pioneer School for the Blind
11	Member of Western Cape Council for the Blind	Principal of Pioneer School for Blind
12	Vice Chairperson of SABWIA (South African Blind Women in Action)	Rehabilitation facilitator at LOFOB
13	Chairperson - South African Blind Cricket	General Manager - Western Cape Animal Anti - Cruelty League
14	Chairperson- Western Cape Blind Cricket	Director of Operations - LOFOB
15	Vice Chairperson- SABWIA (Western Cape Branch)	Journalist - Radio KFM

2.3.2 Procedure

In this qualitative descriptive study, face-to-face and telephone interviews, based on a semi-structured questionnaire as a primary mode of data collection, were conducted. This formal semi-structured interview of nineteen open-ended questions was used to direct the interviews, lasted an average of 60 minutes and collected information presenting the perceptions and views of key informants. Care was taken not to influence the respondents to answer in particular ways. The semi-structured questionnaire is presented in Table 2 (p. 17). Further permission and verbal consent were obtained to tape-record conversations before each interview was conducted by the first author.

2.3.3 Data Analysis

The audio taped interviews were transcribed verbatim by the researcher to preserve the exact quotations and views of respondents. All the transcripts were captured and analyzed, using a content analytic approach (Ryan & Bernard, 2000) to identify specific concerns that in the view of the informants should be included in the envisaged programme. Data were manually coded and divided into subgroups. Dominant emerging themes were determined through categorizing, indexing and considering quotations from key informants. Emerging themes were finalized and used as headings in the discussion of the results.

Table 2 Interview questions for Respondents in Organizations for People with Visual Impairments

1. Do you think that the HIV/AIDS pandemic is affecting people with visual impairments and in what ways?
 2. In your view, are they at the same risk, less risk or more risk than their age peers, and why?
 3. Are there particular groups within the visually impaired population which are more/less at risk of HIV infection?
 4. In your experience could you please estimate the incidence of
 - 4.1 Pre-marital sexual activity, and
 - 4.2 Extra-marital relations amongst people with visual impairments.
 5. To what extent are people with visual impairments victims of sexual violence?
 6. To what extent are people with visual impairments perpetrators of sexual violence?
 7. What is the degree of concern about the personal risk of HIV amongst people with visual impairments?
 8. Can you comment on the appropriateness of existing prevention/intervention HIV/AIDS programmes with specific reference to the needs of people with visual impairments?
 9. What elements do you think need to be targeted in the design of an HIV/AIDS prevention programme for persons with visual impairments?
 10. In your opinion, what are the barriers to HIV/AIDS prevention in this sector?
 11. Do people with visual impairments hold any myths/beliefs regarding HIV/AIDS?
 12. Does the general population hold any myths/beliefs about the effect of HIV/AIDS on people with visual impairments?
 13. What is your experience of girls and women's with visual impairments ability to protect themselves from abuse?
 14. To what extent are girls and women with visual impairments struggling with a variety of survival issues in their lives; like housing, work, dependence etc. that might contribute to their vulnerability?
 15. How important are HIV/AIDS prevention programme/s tailored for people with visual impairments?
 16. Are you aware of any HIV/AIDS prevention programme/s tailored for people with visual impairments?
 17. To what extent is it possible to include visually impaired people in HIV/AIDS awareness programmes elsewhere?
 18. Have you ever knowingly come across people with visual impairments infected with HIV/AIDS or STDs? What issues do they face?
 19. Please add anything regarding the topic of the questionnaire that I didn't ask you.
-

2.4 Results

Findings were summarized and examined regarding the prevailing trends, patterns and suggestions in the responses of participants with respect to HIV/AIDS and people with visual impairments. In all cases, the views expressed and claims made are those of informants². Philander & Swartz (2006) reported that the following themes emerged from the qualitative data:

- Perceived HIV/AIDS risk
- Contributing factors to HIV risk
- Concerns about personal risk of HIV and HIV prevention programmes
- Barriers to HIV/AIDS prevention
- economic and gender factors related to vulnerability to HIV
- Targeting elements in HIV/AIDS prevention programme design. (p. 112)

All respondents commented on all themes. Each theme will be discussed in turn below.

2.4.1 Perceived HIV/AIDS risk for people with visual impairments

Several factors that increase the risk of HIV/AIDS for people with visual impairments were identified by all the informants. All respondents agreed that HIV/AIDS affects all people who are sexually active, including people with disabilities. There are various factors that contribute to vulnerability of people with visual impairments. Respondents indicated that contributing factors that make people with visual impairments more vulnerable for HIV infection included:

- sexual relationships with multiple partners in close-knit circles (73%, n=11)

² At times respondents made statements which some would regard as stigmatizing of people with visual impairment. I myself do not agree with all the remarks. The aim of this section, however is to accurately reflect what was said in the interviews.

- limited choice of sexual partners (60%, n=9)
- lack of information on the HIV pandemic and preventative measure like the use of condoms for example (87%, n=13)
- an alleged common tendency of blind people to touch and feel (which according to respondents may lead to increased sexual activity) (40%, n=6)
- the lack of control people with visual impairments have over their own lives (66.7%, n=10).

(Philander & Swartz, p. 112)

Almost ninety percent of participants believed that people with visual impairments are more at risk than their sighted peers. Due to the history of discrimination and marginalization of people with visual impairments they find themselves in circumstances which increased their risk for HIV infection. Philander and Swartz (2006) emphasized the following risk factors that were mentioned by key informants:

- low socio-economic status (mentioned by 80% of participants) of many people with visual impairments
- the lack of accessible information, low self-esteem (80%)
- lack of social skills and control as a result of overprotection (80%)
- and fewer personal resources to protect themselves (80%). (p. 112)

Thirty three percent of the participants indicated that the need for acceptance resulted in many youth being sexually exploited, which increased their vulnerability for HIV infection. The need for acceptance could increase the vulnerability of girls especially. As one respondent put it:

It gives mental boost to a disabled girl to have a partner who is not disabled (Philander & Swartz, 2006, p. 112).

All of the participants concurred that the issues facing people with visual impairments regarding HIV/AIDS infection were the same as for sighted people, but that critical issues like confidentiality were compromised, because people with visual impairment were dependent on others to transport them to clinics. Another burning issue according to respondents was the attitudes of clinic staff and the humiliation people with visual impairments faced whenever they had to go for treatment or prevention services, since it was not expected of people with visual impairments to be infected or at risk of infection. People with visual impairments were often rejected by many of their families, and the intense fear they experienced resulted in extreme loneliness owing to their rejection. Some informants stated that they believed that the struggle of people with visual impairments would retrogress instead of ameliorate, and that the need for acceptance could lead to sexual risk-taking.

2.4.2 Contributing factors to HIV risk

Participants noted that people with visual impairments were human beings with sexual desires, like those of other people. Sixty percent of respondents thought that there was probably a higher rate of premarital and extramarital sex amongst people with visual impairments than in the general population. Reasons for this were thought to be a desire on the part of people with visual impairments to be accepted and the consequent willingness to comply with their partners' wishes, especially in relationships between young visually impaired women and sighted men (Philander & Swartz, 2006). Other factors that were reported to influence extra-marital relations were situations in which people became blind late in their lives, which in turn impacted dramatically on the marital relationship. Cultural roles and the traditional gender roles were also aspects that affected the sector. Extra-marital relations were practised in certain communities and sometimes sexual partners were arranged for disabled females. In some groups there were arranged marriages, and respondents felt that these arranged marriages could lead to partner abuse and to sexual relationships outside the marriage.

Ninety three percent of respondents reported that sexual violence amongst people with visual impairments was prevalent. They located this in the context of and contributing to unequal power relations. Respondents alluded to date rape and to sexual relationships amongst boys at hostel residences and communities where minors are left under the supervision of people who abuse them. Sexual abuse of people with visual impairments was emphasized as a matter of great concern at the Biennial conference of the SANCB in 2004.

Ninety percent of the participants were aware of sexual offences committed by adolescents and men with visual impairments. They attributed these offences partly to environments conducive to these practices. Women were reported to be more likely to be victims of sexual violence.

2.4.3 Concern about the personal risk of HIV and HIV prevention programmes

A significant percentage (67%) of the participants agreed that the concern amongst people with visual impairments about HIV infection was greater than it had been a few years ago and that they definitely benefited from HIV campaigns. People with visual impairments were however reported to be frustrated with workshops designed for sighted people, which they said marginalized the specific needs of people with visual impairments, and were not available in accessible formats (Braille/large print and/or audio formats). People with visual impairments were reportedly concerned about the lack of resources and the worry that they could be infected by an HIV positive person in the context of a growing epidemic. A minority of respondents (27%) believed that the concern about HIV infection amongst people with visual impairments was very low. These respondents stated that people with visual impairments were still in denial and believed their disability protected them. Resources were however a problem and

service organizations were concerned about their lack of capacity to deliver targeted programmes.

All respondents stated they believed that tailored HIV/AIDS prevention programmes were essential for people with visual impairments. As one respondent put it, “It is of lifesaving importance”.

Respondents argued further that people with visual impairments should play a significant role in the design of interventions for their own community. In spite of their being leaders in organizations dealing with visual impairments, only twenty percent of respondents were aware of any HIV/AIDS prevention initiatives for people with visual impairments (the programmes mentioned in the introduction [see p. 6] – no other programmes were identified).

Given that there are so few targeted programmes, respondents were asked about broadening existing programmes to include the needs of people with visual impairments. Just over half of the respondents felt that because mainstream programmes tended to marginalize people with visual impairments, only specialized programmes should be considered (Philander & Swartz, 2006). All respondents noted that there was diversity within visually impaired groups. Special populations included people who were illiterate, and people with visual impairments and intellectual impairment. Generic programmes would, for example, be especially inappropriate for people with visual impairments who were also intellectually disabled. Respondents requested that programmes should not only be holistic and ensure enablement for proper protection for people with visual impairments, but that the programme to be designed, piloted and implemented, should also be linked to the general HIV prevention strategy of the country (South Africa). People with visual impairments should therefore be catered for in public HIV campaigns.

2.4.4 Barriers to HIV/AIDS prevention in this sector

Various barriers were identified by respondents as being associated with HIV/AIDS prevention in this sector. Respondents reported that lack of assertiveness and dependence on support organizations both contributed to the lack of reaction around HIV within the sector. This concern was summarised by one respondent in (Philander & Swartz, 2006) who states that:

visually impaired people have so much done for them over the years to the point where they believe everything, even the threat of possible HIV infection, will be sorted out for them (p. 113).

Ninety three percent of the respondents agree that the general population held myths about people with visual impairments. In terms of sexuality and sexual needs, people with visual impairments were commonly seen as asexual or abstinent. Twenty percent of respondents also referred to the myth of virgin cleansing as a cure for the AIDS virus. This is a belief, which is disputed by some, that sex with a virgin will cure AIDS (Groce, 2003; Leclerc-Mdlala, 2002). As many sighted people believe disabled people do not have sex, this makes them targets for “virgin rape”. Two informants believed that the myth still existed that HIV/AIDS affected only prisoners, sex workers and homosexual men, and that people with visual impairments believed that their disability immunized them from HIV/AIDS. All the other respondents expressed the view that myths were determined by the broader society.

2.4.5 Economic and gender factors related to vulnerability to HIV/AIDS

Informants were asked about the ability of women and adolescent girls to protect themselves against abuse. Twenty percent of informants stated that all women (whether they had disabilities or not) in some cultures did not have a choice when it

came to the selection of a partner, but all the respondents said that women with visual impairments were commonly not in a position to select a sexual partner (Philander & Swartz, 2006). Women and girls with visual impairments were seen as easy targets by men. According to (Philander & Swartz, 2006) respondents link this to:

A lack of assertiveness and interpersonal skills (60%); lack of information on personal rights (26.7%); low self-esteem (86.7%); (viewed to be a major factor); over-protection by some parents (26.7%); and women's need to be accepted in relationships in order to boost their self-worth (80 %). (p. 113).

In addition, public transport was poorly provided in South Africa, with little effective provisioning for people with disabilities. Women were therefore commonly dependent on others for their mobility needs, a situation which created opportunities for exploitation and abuse.

In addition to the factors mentioned above, women and girls with visual impairments were struggling with income inequality and unemployment. This was identified by respondents as one of the biggest issues leading to vulnerability to abuse – sexual favours were traded for money and basic supplies to meet survival needs (Philander & Swartz, 2006). Eighty percent of respondents stated they believed that economic dependence was the greatest contributor to the abuse of girls and women. This dependence limited choices in decision-making and minimized their resistance to abuse. One informant argued that women, who were compromised economically, were also psychologically affected by their situation, and lost the psychological will to resist abuse.

2.4.6 Targeting elements in HIV/AIDS prevention programme design

Accessible formats, like Braille and audiotapes, were emphasized as important by all

participants. Most also mentioned the importance of the inclusion of people with visual impairments in general programmes. Philander & Swartz (2006) reported that all the informants emphasized the importance of focusing on:

- social skills – communication and assertiveness strategies (including how to say ‘no’ to unwanted sexual contact)
- the acquisition of decision-making skills and the enhancement of self-esteem
- proper instruction on the use of condoms
- discussion of appropriate sexual behaviour, and
- personal growth strategies (p. 114).

Accessible teaching for people with visual impairments was emphasized by a third of the respondents. They indicated that the didactics and methodology should be within a positive, friendly and educational environment. People with visual impairments in the sector should therefore be included in the planning, design and delivery of HIV programmes. People with visual impairments of all ages should be included in HIV prevention campaigns irrespective of their educational level.

2.5 Discussion

The main objective of this study was to gauge from informants certain areas that in their view need to be focused on in the design of an HIV/AIDS prevention programme for people with visual impairments. All respondents considered HIV/AIDS to be a serious problem, and all stated they believed that prevention work was crucial and should be implemented as soon as possible. Both the issues of vulnerability and of risky behaviour must be addressed. Respondents stated they believed that a lack of education, lack of information in accessible formats, ignorance of sighted people when it comes to the sexuality of people with visual impairments, and the inaccessibility of current preventive measures, fostered conditions that were conducive to risky sexual

behaviour (Philander & Swartz, 2006). Illiteracy, inability to read Braille, impoverishment, and different levels of development were realities which need to be addressed. The exploitation, marginalisation and negative attitudes of people with visual impairments by sighted people contributed to a relationship of mistrust among people with visual impairments. This relationship needed urgent attention in delivery of HIV preventive programmes. Respondents emphasized the importance of focusing programmes on the needs of women and girls regarding self-esteem, relationships skills, and skills to protect themselves against abuse, assertiveness training, and how to cope with their dependence on others.

Participants (rightly or wrongly) stated that people with visual impairments did not realize how susceptible they were to HIV infection and therefore not sufficiently threatened and concerned about HIV risks at a personal level. These risks were further exacerbated by myths which were held both by the general population (for example, virgin cleansing) and also by people with visual impairments (for example, that only sex workers, homosexuals or prisoners contract HIV/AIDS) (Philander & Swartz, 2006). Sixty percent of respondents (most of whom were themselves visually impaired) seem to believe that the tendency of people with visual impairments to touch leads to increased sexual promiscuity. Such beliefs must be addressed in intervention approaches.

2.6 Conclusion

Judging by the responses obtained in this study, there is a need for more work to be done regarding HIV/AIDS prevention for South Africans with visual impairments. Many of the issues reported by participants are both technical (for example, the lack of information in accessible formats) and social (it is clear that respondents see social exclusion as an overarching risk factor). This study gleaned opinions only from key informants, and it is not possible to assess how accurate these views are, or even

whether the informants themselves are reproducing stereotypes about HIV and visual disability. What is clear though is that there is a widespread belief that we need to know more about HIV and visual disability. These participants indicated that targeted HIV prevention programmes need to be developed for people with visual impairments which take seriously their marginalized social circumstances.

SECTION 3 THE DESIGN AND IMPLEMENTATION OF AN INTERVENTION

CHAPTER 3 LITERATURE REVIEW

In this chapter I will discuss HIV/AIDS as a major health problem, followed by an investigation of the role of theory in HIV interventions, explore HIV/AIDS interventions and the design thereof and discuss various theories and perspectives on HIV/AIDS and people with disabilities.

3.1 Introduction

HIV/AIDS in Africa is catastrophic both from a public health perspective and regarding the impact on economic and social stability in many communities. The links between HIV/AIDS, stigma, racism and poverty underscore the accelerated spread and degeneration of the epidemic into a full-blown disaster in Africa (Okeagu, Okeagu & Adegoke, 2003). HIV/AIDS represents a devastating pandemic among the youth of South Africa of ages between 15 and 24 (Hartell, 2005; Tillotson & Maharaj, 2003; Visser & Schoeman, 2004).

Adolescents and young adults are at high risk for many negative health outcomes related to sexual risk behaviour, including HIV infection, or other sexually transmitted diseases (STDs; e.g., syphilis, Chlamydia), and pregnancy (Rapp-Paglicci, Dulmus & Wodarski, 2004). It is possible to prevent people from contracting HIV through behaviour change; therefore the development of comprehensive prevention strategies designed to reduce sexual risk behaviour among adolescents is of vital importance.

Interventions to stem the spread of HIV/AIDS throughout the world are as varied as the contexts in which we find them. Sexual behaviour remains the primary target of AIDS prevention efforts worldwide, with a focus on intravenous drug use less common

and less important in the African context, where the epidemic is spread primarily through heterosexual sex (UNAIDS, 2006). Sexual behaviour and sexual decision-making by many people are determined by individual choice and desire, and influenced by social and cultural factors, economic issues, and the environmental context. These factors can be linked to risky sexual behaviour and make prevention of HIV enormously complex involving a multiplicity of dimensions (King, 1999). Skinner (2000) alluded to the fact that resistance to change has been found in many HIV related behaviours, which suggests that persuasive interventions may be required. It is a complicated and difficult process to motivate people to engage in health behaviour change programmes (Rogers, 2000). An adequate understanding of those factors that influence and determine behaviour in general and in relation to HIV in particular is therefore required and is crucial in order to address the motivational challenge and to facilitate behaviour change (Skinner, 2000). It is therefore important that researchers and developers of HIV interventions should ground their programming process in the theories that have been the foundation of other successful health promotion programmes.

Various theories have been used to assess and explain behaviours relating to HIV/AIDS transmission and spread in populations (Williams, Ekundayo, Udezulu & Omisbakin, 2003). A number of theoretical contributions, models or frameworks have been designed to guide the implementation and evaluation of programmes, by following certain processes which available evidence suggests may yield a helpful outcome (Skinner, 2000). In this chapter a number of these theoretical contributions will be outlined briefly. The strengths and weaknesses of these theories will be examined as they pertain to individual actions and behaviour in relation to HIV/AIDS prevention and education.

The literature highlights the importance of theoretically based HIV preventive interventions, and especially the role these can play in the design of HIV prevention

programmes. The role of theory and its relevance in HIV interventions will now be discussed.

3.2 The role of theory in HIV prevention

Kelly (cited in Fishbein, 2000) points out that a key task confronting behavioural sciences is to develop theory-based intervention programmes to reduce 'risky' and increase 'healthy' behaviours. He is also of the opinion that we have come a very long way towards achieving this goal. The most effective interventions, Kelly argues, will be those directed at changing specific behaviours rather than behavioural categories. Kelly also argues that the theory-based approaches that are tailored to specific populations and behaviours can be effective in specific cultures and communities. Many researchers agree that behaviour interventions are most effective when targeted towards specific groups, taking into account the socio-cultural context and economic issues of a community (Harrison, Smit & Myer, 2000).

Sharma (2005) stated that theory should play a central role in the design, implementation, and evaluation of health education programmes. Theory is also central to specifying methods of behaviour change, and useful in securing measurable programme outcomes and assisting in the timing of interventions. Furthermore, theory helps in choosing different strategies in intervention planning, improves replication, and enhances programme efficiency and effectiveness.

Herlocher, Hoff and DeCarlo (1996) argue that formal theory at best relies on principles and methods of prevention and behaviour change that have already proven useful in some areas of disease prevention and behaviour change. They postulate that theories can give HIV programme planners a framework for goals of an intervention, or help explain aspects of risk-taking behaviour when working with a new population. The use of theories can help to guide decisions about the design and implementation of HIV

prevention interventions, can improve programmes and ensure cost effectiveness. Use of theory allows programme planners to take a closer look at what works in prevention design, facilitates more effective programmes, and lays the groundwork for programme evaluation (Govender, 2002; Herlocher, Hoff & DeCarlo, 1996). King (1999) emphasizes that psychological theories provide important guidance to the interventions in formulating design and evaluation with diverse populations in a variety of settings, and states that numerous studies have proven the usefulness of these theories.

Ben-Zur, Breznitz, Wardi and Berzon (2000) support the importance of psychological theories in HIV/AIDS prevention, and indicate that associations between constructs such as self-efficacy, perceived peer behaviour and outcome expectancies with regard to condom use and partner reactions and prevention suggest that psychological models may be utilized to describe and predict HIV/AIDS related risk behaviours. King (1999) highlighted the successes of interventions aimed at individual behavioural change and outlined certain key elements which are characteristic of these programmes. These elements include: increasing participants' ability to communicate effectively about sex, condom use skills, personalizing risk, achieving participants' perception of risk avoidance as an accepted social norm, and providing reinforcement and support for sustaining risk reduction. However, it has become increasingly evident that psychological theories alone do not entirely explain why some populations have higher HIV prevalence; neither do they explain fully the complex interactions between contextual factors and individual behaviour (King, 1999). The importance of context specific information and skills for any intervention is emphasized as critical in individual level interventions.

3.3 Theory-based design of HIV/AIDS intervention programmes

The literature review suggests that there are various key factors that need to be considered in the design of any HIV prevention programme. Donovan and Ross (2002)

mentioned that it is critical to understand the social processes and wider context of sexual behaviour, which reveal a number of barriers to change in the design of HIV interventions. Research by Weiss, Whelan and Gupta (2000) indicated that interventions which aim to increase the adoption of protective behaviour must be based on an understanding of the socio-cultural and economic context of the lives of especially young people, of sexual meaning in their culture, and gender dynamics in households and how it impact on intimate relationships. This view is supported by Tillotson and Maharaj (2001) who emphasized those multifarious factors like gender roles, economic issues and social context that affect the spread of HIV. They however highlighted sexual behaviour and risk-taking as two of the most important aspects that need to be understood and included in the design of prevention efforts.

Rogers (2000) underlines that HIV/AIDS prevention behaviour is about changing attitudes, and especially overt behaviour, and not simply about the transmitting of knowledge. Research cited by Rogers (2000) found that knowledge alone is insufficient for most individuals to change risky behaviours. It is important that the meaning of risk behaviours be identified as well as environmental and social factors that can be linked to intervention activities. Qualitative methods can be very useful to explore daily routines or habits and are also helpful for understanding social and environmental influences on behaviour and methods of integrating risk reduction practices into daily life. This information can be useful to increase participants' motivation in HIV preventions (Latkin & Knowlton, 2005).

3.4 Overview of theories used in planning and evaluation of HIV/AIDS interventions

Govender (2002) makes the point that the development of new interventions is expensive and time consuming, and it makes good sense where feasible to adapt programmes that have been demonstrated to be effective in HIV prevention. It is

however important to have a contextual understanding of the reasons why people engage in risk behaviour, and to promote positive behaviour change. Research in western countries has shown that the most effective behavioural interventions for reducing HIV transmission risks are grounded in conceptual models derived from a family of theories known as theories of behaviour change (Kalichman, 2005). Many psychological theories have proved to be useful for interventions, and the reduction of risk behaviour. Skinner (2000) notes that no one theory has yet proved sufficient to account for the phenomenon of HIV. For the purposes of this research the focus will be on well known and generally well researched psychological theories applicable to HIV prevention. The following theories will be considered: the Social Learning Theory (SCT), Health Belief Model (HBM), Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB), Trans-theoretical Model (TTM), the AIDS Risk Reduction Model (ARRM), and The Information-Motivation-Behavioural skills (IMB) Model. Later in this chapter, contextual issues such as those of gender, power and disability will also be discussed. Social Cognitive Theory forms the basis of many other theories of behaviour change, so this theory is considered first.

3.4.1 Social Cognitive Theory (SCT)

The Social Cognitive Theory (SCT) of Bandura, combines stimulus response (SR) theory, which defines that learning is based on the relationship between stimulus, response and the reinforcement, with cognitive theories. The main focus of this theory is on the continuous interaction between behaviour, personal factors and environmental factors which can describe, explain and predict behaviour in individuals (Butt et al., 2002; McDermott, 1998; Sharma, 2005). According to McDermott (1998) social cognitive theory maintains that if any one of these factors is neglected, our ability to understand and change behaviour would be diminished and consequently limits our chances of success in promoting behaviour change among adolescents. In SCT as it is applied to

health behaviour, several primary constructs or determinants are identified by Bandura, (2004) cited in Sharma (2005) as described below:

1. *“Knowledge* of health risks and benefits of healthy practices. This is a prerequisite for any behavior change (p. 3)”. This implies that people will not change their risky health habits if they lack the health related knowledge.
2. *“Perceived self-efficacy* or behavior specific confidence in one’s ability to influence one’s habits. Self-efficacy is a fundamental requirement for behaviour change (Sharma, 2005, p. 3)”.
3. *“Outcome expectancies* about expected costs and benefits for different health habits. There are major categories of outcome expectancies:
 - physical outcomes
 - social outcomes (of chiefly, approval and disapproval)
 - positive and negative self-evaluative reactions to regulate their behavior (Bandura, 2004, p. 144)”. Bandura (2004) states that people do things that give them self satisfaction and can therefore be motivated to change their behaviour if they see that habit changes are in their self-interest and for example good for their health.
4. *“Goals* that a person sets for him or herself, both proximal and distal, set the course for change (Sharma, 2005, p 3)”.
5. *“Perceived facilitators* and *impediments* or obstacles pertaining to personal/ situational factors and those of the health system (Sharma, 2005, p. 4)”.

An outline of the socio-cognitive causal model of Bandura (2004) appears in Figure 1, illustrating the structural path of influence, wherein perceived self-efficacy affects health habits both directly and through its impact on goals, outcome expectations, and the perception of socio-structural facilitators and impediments to health promoting behaviour.

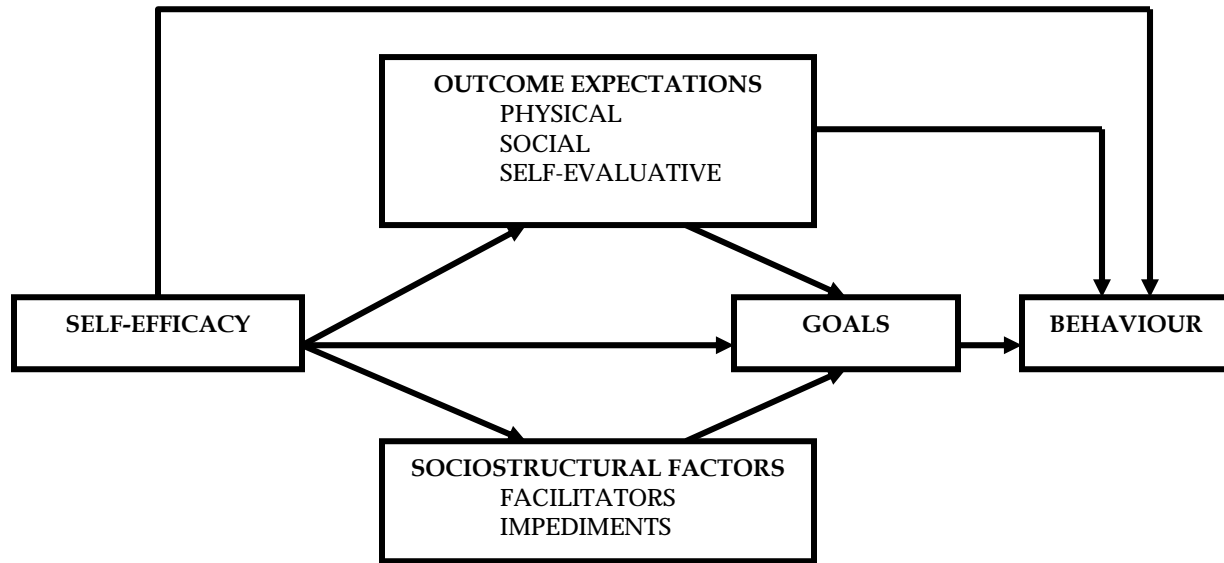


Figure 1 Socio-cognitive causal model
(Source: Bandura, 2004, p. 146)

Learning is an important component in SCT, and is described as a reciprocal interaction between the individual's environment, cognitive processes, and behaviour as explained by means of several constructs. These constructs: reinforcement, behavioural capacity, expectations, expectancies, self-control or self-regulation, self-efficacy, emotional-coping response, reciprocal determinism, and locus of control will be discussed below; and are quoted or paraphrased from the work of Bandura (2004), McCalman (2003), Mckenzie and Smeltzer (1997) and Trunnell & White (2005).

1. Reinforcement

Reinforcement is defined as an event that follows a behaviour which increases a target behaviour. In simple terms, if the behaviour is followed by a positive event, the frequency of the behaviour will increase afterwards. Reinforcement can be accomplished in one of three ways:

- directly (for example, verbal feedback to participants)

- vicariously (for example, where participants observe someone else being reinforced for behaving in an appropriate manner; also referred to as social modelling)
- alternatively through self-management (for example, where participants keep records of their own behaviour, performed in an appropriate manner with rewards reinforcing themselves) (Mckenzie & Smeltzer, 1997).

2. Behavioural capability

Behavioural capability has to do with participants' prior knowledge and skills, what their behavioural repertoire is, and how they perform behaviours. Skills mastery is very important if one wishes to expand behavioural capabilities. It is not possible to perform behaviours which are outside the range, or the potential range, of one's behavioural capability (Mckenzie & Smeltzer, 1997).

3. Expectation

The construct of expectation refers to the ability of people to anticipate and hence to expect certain things to happen in certain situations if the procedures are followed. Behaviour will be influenced by the fact that people have the ability to anticipate outcomes for behaviours (Mckenzie & Smeltzer, 1997).

4. Expectancies

Expectancies are not to be confused with expectations. Expectancies are dependent on expectations, but concern the values that individuals place on an expected outcome (Mckenzie & Smeltzer, 1997, p. 102).

If people value an expected outcome, for example, not getting infected with HIV because of correct condom use, they are more likely to perform necessary behaviours to yield the outcome (Mckenzie and Smeltzer, 1997).

5. Self-regulation

This construct concerns the fact that individuals may gain control through monitoring and adjustment of behaviour. It is well established that monitoring of behaviour over a period of time followed by benefits for the individual (reinforcement) of monitored performance, helps individuals to change their behaviour (Bandura, 2004; Mckenzie & Smeltzer (1997) .

6. Self-efficacy

Self-efficacy refers to the internal state that individuals experience as “competence” to perform certain desired tasks or behaviour. According to Bandura (2004) self-efficacy is a focal determinant both because it affects health behaviour directly and because it influences other determinants. Efficacy beliefs influence goals and aspirations and shape the outcomes people expect from their efforts to produce (Bandura, 2004). Self-efficacy is commonly specific to situations, such that someone may be self-efficacious in one situation, but not in another.

Because self-efficacy is so central a construct, it is important to expand on this construct. According to SCT, behaviour change and maintenance are centrally influenced by two elements: “efficacy expectations” which are expectations about whether the individual will be able to engage in the behaviour change, and “outcome expectations” which are expectations about the likely outcomes (mainly, benefits or cost) of the behaviour change.

Although people may have efficacy expectations, they may not want to engage in behaviour because they may not think the outcomes of that behaviour would be beneficial to them (Mckenzie & Smeltzer, 1997). McCalman (2003) argues that it is therefore a person's perception of the advantage/disadvantage of an outcome, and not necessarily the "true" capabilities that influence behaviour. Self-efficacy beliefs also determine how obstacles and impediments are viewed. According to Bandura (2004) a person with low efficacy can be easily convinced of the futility of their efforts, while those with high efficacy view impediments as opportunities for improvement of self-management skills and to persevere in order to succeed.

Self-efficacy is based on four principal sources of information which influence behaviour change: enactive attainment, vicarious experience, verbal persuasion, and physiological state (McCalman, 2003; Trunnell & White, 2005).

- 6.1 **Enactive attainment** (personal mastery of a task) refers to the experience of the individual after learning through successful practice. Success raises efficacy, self-evaluation and failure lowers it (McCalman, 2003; Trunnell & White, 2005).
- 6.2 **"Vicarious experience** (observing the performance of others) refers to the observation of other people's successful performance, and can raise self-efficacy within an individual internally, proposing to the beholder that he or she possesses the capabilities to master comparable activities" (McCalman, 2003, p. 571).
- 6.3 **Through verbal persuasion** (receiving suggestions from significant others) the individual can be influenced when he or she has little experience with the subject matter or has little feedback related to past performances (McCalman, 2003; Trunnell & White, 2005).

6.4 Emotional arousal (interpreting one's emotional state) can influence self-efficacy. Some people, for example, may interpret their somatic arousal as an ominous indication of vulnerability. A relatively relaxed disposition may contribute positively to one's self-efficacy appraisal (Trunnell & White, 2005).

7 Emotional-coping response

According to this construct a person must be able to learn, that he/she has the capability to deal with the sources of anxiety that relate to behaviour and behaviour change. Self-efficacy plays some role in people's emotional reactions, such as anxiety and distress and thought patterns, which in turn impact on the success of the performance of the task at hand. Fear is an important emotion that can be involved in the learning process; participants would according to this construct have to deal with the fear before they could acquire the appropriate behaviour (Mckenzie & Smeltzer, 1997).

8. Reciprocal determinism

This construct states that there is an interaction between the person, the behaviour, and the environment which shapes the person. All these relationships are dynamic.

9. Locus of control

This construct grew out of social learning theory. Any person's history of positive or negative reinforcement across a variety of situations shapes a belief as to whether or not a person's own actions will lead to that reinforcement. Rotter (1954, cited in Mckenzie & Smeltzer, 1997) stated that people with internal locus of control perceive that reinforcement is under their control, whereas those with external control perceive

reinforcement to be under the control of some external force and not affected by their own behaviour.

3.4.1.1 Social Cognitive Theory and HIV prevention programmes

SCT is the conceptual foundation for many effective preventive interventions in the behavioural health field, and specifically in HIV prevention (Rapp-Paglicci, et al., 2004; Sherman, et al. 2003). According to SCT, to implement a protective behaviour (e.g., condom use) the target group must in SCT terms be able to apply the following;

- Knowledge to know what the protective behaviour is
- Self-efficacy - the belief that they will be able to engage in the behaviour
- Expectation - the belief that the execution of the method will be successful
- Expectancy - the anticipation of benefit once the behaviour has been completed.

According to Airhihenbuwa and Obregon (2000) and Melkote, Muppidi and Goswami (2000) the two primary domains of Bandura's theory that have been widely used in HIV/AIDS programmes are modelling (imitation of the behaviour of a role model) and self-efficacy (one's perceived ability to adopt a recommended behaviour). Most of the HIV research based on SCT has examined the importance of efficacy expectations in predicting HIV-related risk and protective behaviours. SCT-based interventions have been found to result not only in higher efficacy expectations, but also in higher levels of positive condom outcome expectations as well (Mitchell, Kaufman & the Pathways of Choice and Healthy Ways Project Team, 2002). Similar results were also found in a review of HIV reduction interventions, which used SCT in controlled experimental trials. A review of 12 published interventions with mostly uninfected individuals showed that all studies obtained positive changes in risk behaviour (King, 1999). A study in Brazil further showed that the result of an SCT intervention programme was the positive change in deeply ingrained cultural beliefs and behaviour (Levinson et al., 2004).

Williams et al. (2003) referred to Bandura's hypothesis, which states that self-efficacy is a significant factor in determining the translation of knowledge and attitudes into actions which are vital in the prevention of HIV/AIDS. Studies reviewed by Williams et al. (2003) have consistently corroborated this hypothesis, especially with regards to protective measures like condom use for preventing sexually transmitted infections including AIDS. Bandura (cited in McCalman, 2003) claimed that:

Perceived self-efficacy influences all aspects of behavior, including the *acquisition* of new behaviors (for example, young adult learning how to use a condom), *inhibition* of existing behavior (for example, decreasing alcohol consumption), and *disinhibition* of behaviors (for example, reintroducing sexual activity after cardiac surgery). (p. 571)

The individual's confidence to change behaviour is influenced by his/her choice of behavioural settings, the amount of time they will spend on a task and the length of time they will persevere in facing obstacles (Kwang-Lai Poon & Trung-Thu Ho, 2002). Self-efficacy is required for negotiating with a partner, which is of vital importance in HIV prevention. The person must have the ability in to persuade a resistant partner to engage in safer sexual behaviour, like using a condom (Wilkinson, Holahan & Drane-Edmundson, 2002). According to Kwang-Lai Poon and Trung-Thu Ho (2002) self-empowerment and efficacy should be the guiding principles of intervention programmes.

Self-efficacy is important when people attempt to change their own behaviour, or when they want to adopt safe behaviours in relation to HIV, many of which are socially complicated, (e.g. condom use). Bandura (2004) emphasized that beliefs of personal efficacy play a central role in personal behaviour change and form the foundation of human motivation. In HIV interventions, therefore, self-efficacy can be increased by providing education on how to perform safe behaviours, but support for behavioural change is also key (Bandura, 2004; Skinner, 2000). Soet, Dudley and Dilorio (1999)

emphasized that greater self-efficacy may also facilitate disclosure of HIV status, which can in itself lead to a decrease in transmission of the virus.

Many interventions, especially school-based and community-based interventions, have incorporated the primary components of Social Cognitive Theory into their programmes (Airhihenbuwa & Obregon, 2000; Melkote et. al., 2000; Watson, Bisesi & Tanamly, 2004). DiClemente and Ross (1999) contend that SCT-based interventions have been effective with a variety of populations, including minority adolescents and incarcerated women, and in programmes targeting health care providers. Patterson, Shaw and Semple (2003) also emphasized that SCT-based brief HIV interventions have been successful in reducing risk behaviours in a number of contexts.

SCT has been found to be very useful in HIV/AIDS communication campaigns in the United States. Bandura (2004) argued that whereas most models of health behaviour only predict health habits, social cognitive theory offers both predictors and principles on how to inform, enable, guide, and motivate people to adapt habits that promote health and reduce those behaviours that impair it. Although social cognitive theory has been criticized, sexual behaviour and condom use with adolescents and at-risk populations can be changed if the model is used in a way that is sensitive to cultural beliefs (Levinson, Sadigursky & Erchak, 2004).

Social Cognitive Theory has been criticized for its assumption that individuals are in volitional control over their behaviour. This is sometimes not the case in sexual relationships, especially where dominance and even violence are part of the relationship, or where sexual contact forms part of a transaction which may include exchange of sexual favours for material gain (Campbell, 2003). The theory has also been criticized for not taking sufficient account of many socio-demographic variables (low socio-economic background, low parental education, and large families) that impinge on preventive health behaviour (Melkote et. al., 2000).

SCT depends centrally on the idea of individual autonomy and capacity for self-regulation; this autonomy may be affected by socio-economic and political factors, including gender inequality. It may also be problematic to depend on autonomy in cultures where individual decisions are strongly influenced by group norms. The value of individualism implicit in SCT may in fact go against the grain of prevailing social cultural beliefs. The contextual issues of gender and power and their effects on HIV interventions will be discussed in detail later in this chapter; further theories, most of which owe much to SCT, will now be discussed.

3.4.2 Health Belief Model

The Health Belief Model (HBM) is a conceptual framework that attempts to explain individual differences in preventive health behaviour. The HBM has been used to try to explain why some young people voluntarily protect themselves against HIV infection, while others do not, despite having knowledge of the disease (Hollar & Snizek, 1996). Since individuals still fail to take precautions to avoid transmission of HIV/AIDS despite having knowledge of the disease, other potentially influential factors need to be incorporated into the HMB to reduce AIDS risk among young people. According to Hollar and Snizek (1996) self-esteem is a component that should be included in the Health Belief Model.

The HBM and other theories were designed to address health prevention from an individual, linear, and rational perspective. Like the Theory of Reasoned Action (TRA) (discussed later in this chapter), the HBM emphasizes cognitive determinants to bring about behaviour change. These determinants are perception of susceptibility, severity of effects, benefits of action, intention of performing behaviour, which all may impact on behaviour change (Ben-Zur et al. 2000; Melkote et al., 2000).

According to Zak-Place and Stern (2004) this model proposes that when a person is confronted with a health threat, two cognitive processes are initiated: threat appraisal and coping appraisal. Two factors are considered within the threat appraisal; one has to do with assessment of perceived severity or the seriousness of the health threat and the other is concerned with the level of perceived vulnerability or one's belief of susceptibility to the threat (Taylor, 2006; Zak-Place & Stern, 2004). The process of coping appraisal involves assessing response efficacy, or the expected advantages or benefits associated with the response; and assessing response cost, or the perceived barriers related to the response. Dadoo and Ampofo (2001) stated that this model is also premised on a personal evaluation of the threat associated with a disease, perception of self-risk, and the evaluation of the costs and benefits of a given action.

A graphical outline of the Health Belief Model is provided below in Figure 2.

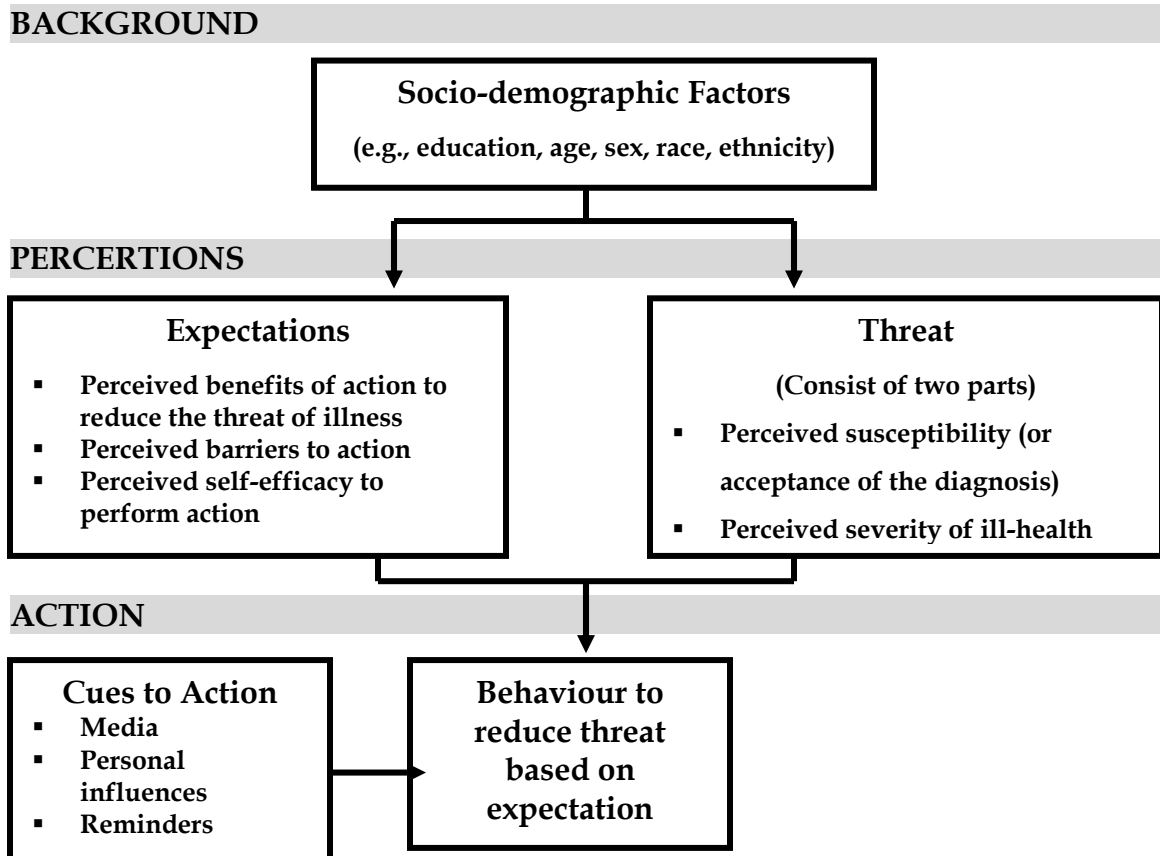


Figure 2 Diagram of the Health Belief Model

Source: (Rosenstock I., Strecher, V., & Becker, M., 1994 cited in Denison, 2002, p. 4).

In this model, there are four main components to appraisal of the health threat:

- susceptibility to a health threat
- perceived severity of the threat
- perceived benefits of the behaviour change
- perceived barriers to the behaviour change.

In addition, internal or external cues to action (e.g., symptoms perception, public health messages), and the level of available support are important factors in determining the likelihood of action (Lin, Simoni & Zemon, 2005; Purdie & McCrindle, 2002). Personal and social characteristics can modify behaviour. Self-efficacy has consistently been found to serve as a significant predictor of many health behaviours that involve the

initiation and maintenance of complex behaviours. Purdie and McCrindle (2002) and Zak-Place and Stern (2004) mentioned that the original HBM was expanded to include self-efficacy as a predictive factor, or the perceived ability to successfully initiate the given response, as a third coping appraising variable. According to Ben-Zur, et al. (2000) this theory predicts HIV/AIDS-related behaviour better than other cognitive models. Lin et al. (2005) indicated that research has demonstrated that the manipulation of self-efficacy is an effective strategy for reducing health risk behaviours.

Like the SCT model, the HBM focuses on individual factors, and tends to gloss over other factors, such as environmental or economic factors, that may influence health behaviour. The model pays less attention than it could to the influence of social norms and peer influences on people's decisions regarding their health behaviours (a point to consider especially when working with adolescents on HIV/AIDS issues). Skinner (2000) stated that results from the HBM have been consistently less useful in the study of HIV than other theories such as the Theory of Reasoned Action and Self-Efficacy Theory.

3.4.3 Theory of Reasoned Action (TRA)

The Theory of Reasoned Action (TRA) of Fishbein and Ajzen (1975) aims to predict and understand individual behaviour by examining attitudes, beliefs, behavioural intentions, and the observed expressed acts (Airhihenbuwa & Obregon, 2000).

According to the TRA, all actions are based on behavioural intentions, and the immediate cause for any behaviour is the individual's intention to engage in or refrain from the behaviour. Forehand et al. (2005) and Tremblay and Frigon (2004) mentioned that this theory proposes that the decision to engage in a behaviour can be predicted by a person's intention to perform the behaviour. Intentions are in turn determined by an individual's attitude towards the behaviour and his or her perception of social pressure

(peer norms) to refrain from the behaviour in question. Research on adolescents finds that they are generally susceptible to the influence of subjective peer norms, particularly with regard to sexual behaviour (Butler et al., 2005; Pedlow & Carey, 2004). According to Forehand et al. (2005), TRA offers some insight into the cognitive precursors of adolescent sexual behaviour.

The construct that distinguishes this theory from other theories is the one that deals with the normative beliefs about what relevant others think the person should do. This construct (often referred to as the subjective norm) states that individuals' intent to perform a given behaviour is dependent partly on their belief about what others (individuals or groups) think they should do so, and partly on the fact that they care about what these others think.

A graphical outline of the Theory of Reasoned Action (TRA) as developed by Ajzen and Fishbein (1980) is provided below in Figure 3.

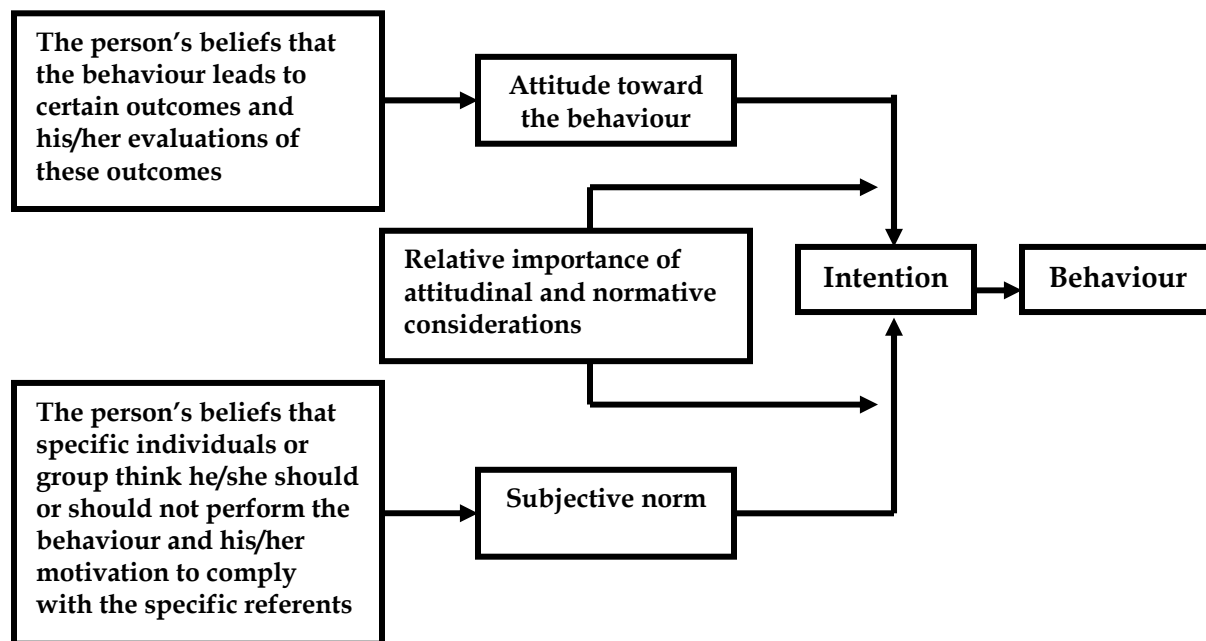


Figure 3 Theory of Reasoned Action

Source: (Tremblay & Frigon, 2004, p 38)

Donavan and Ross (2000) note that the theory of reasoned action (TRA) has been shown to be effective in modifying risk intentions and behaviours, but only if cultural and normative structures around safer sex are also modified; altering risk perceptions alone may be ineffective. This theory also implicitly assumes that individuals are rational in their decision-making process, “a presumption that may not be entirely relevant to AIDS related behaviours that are heavily influenced by emotion” (Airhihenbuwa & Obregon, 2000). Rational judgments, furthermore, may be impaired by other variables like drugs or alcohol etc.

The theory of planned behaviour, discussed below, attempts to deal with this criticism.

3.4.4 Theory of Planned Behaviour (TPB)

The Theory of Planned behaviour (TPB) is directed at behaviours not directly under the control of the person. According to Pavlow and Fygenson (2006), TPB has been most influential in explaining and predicting a wide range of human behaviour. TPB was a further development of the Theory of Reasoned Action (TRA) with the inclusion of perceived behavioural control (PBC). Ajzen (1991) (cited in Pavlow & Fygenson, 2006) stated that most human behaviours are subjected to obstacles; therefore PBC was added to ease the difficulty to perform a target behaviour (Purdie & McCrindle, 2002). This third element of perceived behavioural control is therefore an extension of the theory of reasoned action in order to address the problem of incomplete volitional control (Ajzen, 1988; Purdie & McCrindle, 2002).

Perceived Behavioural Control (PBC) refers to the ease or difficulty of performing a target behaviour and it is assumed to reflect past experiences as well as anticipated impediments and obstacles. PBC draws on factors which either encourage or inhibit the behaviour, which in turn influence intentions. It stands to reason that perceived behavioural control can help predict goal attainment independent of behavioural

intention. The concept has become an important motivational component in understanding and predicting behavioural intention and performance when the behaviour in question is less than completely volitional and not up to one person (Taylor, 2006). Social context and the complexities of sexual behaviour make sexual activity rarely, if ever purely volitional and under individual control (Mckenzie & Smeltzer, 1997; Rye, Fisher & Fisher, 2001; Salabarría-Peña, Lee, Montgomery, Hopp & Muralles, 2003).

In this model, despite the non-volitional components, there remains an assumption that people make rational decisions about their behaviour based on beliefs about behaviour and its consequences. Intentions are formed that are a function of attitudes and perceived social norms towards the behaviour, and perceptions relating to the ease or difficulty of performing the behaviour. Hergenrather, Clark and Rhodes (2004) contend that TPB suggests that intention is predicted by three cognitive determinants: attitude, subjective norm, and perceived behavioural control. Each determinant consists of a belief, or a set of beliefs; and an evaluation of each belief and each determinant will now be discussed in turn.

1. *Attitude* is defined as the individual's perceived consequences of behaviour, and is influenced by an individual's perceptions of the likelihood of identified outcomes from performing the behaviour (behavioural beliefs) and an evaluation of the outcomes as being valued as good or bad (Hergenrather et al., 2004; Salabarría-Peña et al., 2003).

2. *Subjective norm* according to Hergenrather et al. (2004) is defined as the individual's subjective belief about what those people important to him or her think about performance of the behaviour addressed. According to Salabarría-Peña et al. (2003) subjective norm is influenced by the subjective probability that other important individuals think he or she should or should not perform the behaviour (normative beliefs), and the measure of his/her motivation to comply with these individuals. The

subjective norm component is formed by taking into account the normative expectations of various others in their environment.

3. *Perceived behavioural control* is defined as the individual's perception of how difficult it is to perform behaviour and is conceptually related to self-efficacy as conceptualized by Bandura (1986). The explanatory power of the model may be weakened when the behaviour is not under volitional control, and therefore perceived behavioural control as an additional exogenous component was added (Sneed & Morisky, 1998). Perceived behaviour control is determined by the individual's belief that he/she has the necessary skill and resources to perform behaviour and by the degree to which such skill and resources facilitate the behaviour (Salabarría-Peña et al., 2003).

Attitudes and perceived social norms reflect a value component in two ways: first, the value placed on the behaviour by oneself and, second, the perceived value that significant others place on the behaviour (Purdie & McCrindle, 2002). A diagram of the

Theory of Planned Behaviour is provided in Figure 4 below (p. 52).

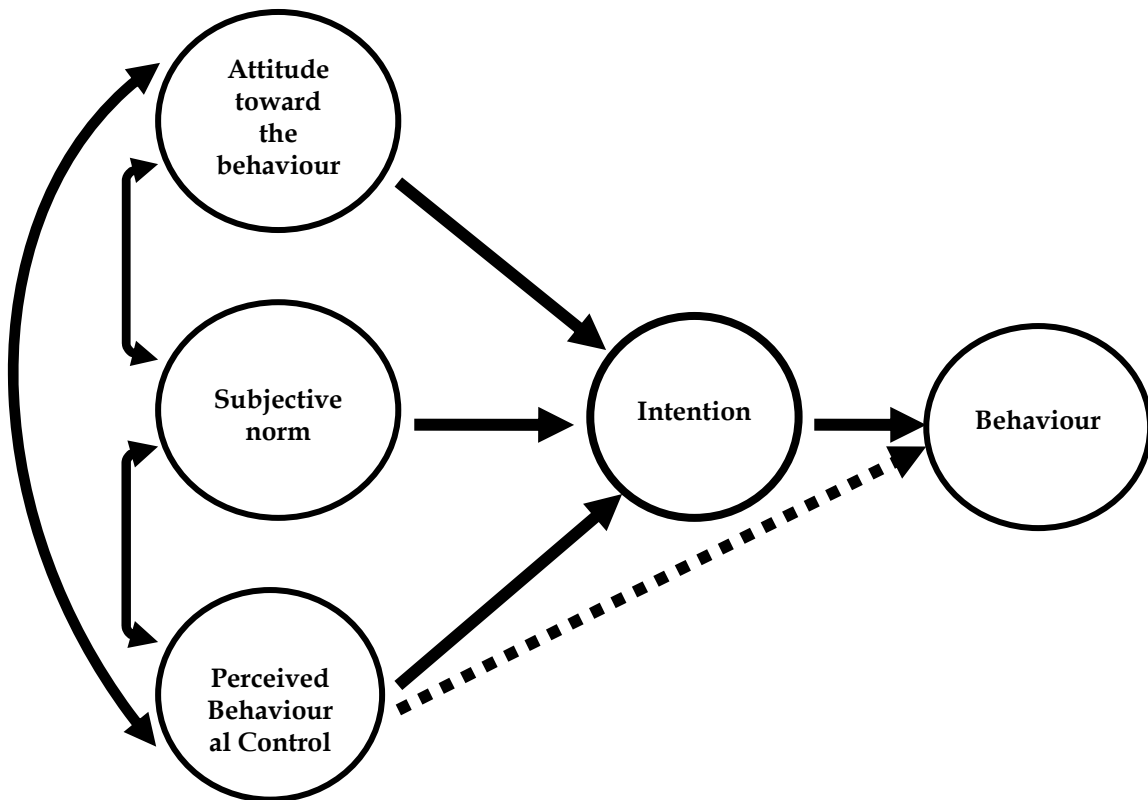


Figure 4 Diagram of the Theory of Planned Behaviour

(Source: Mckenzie & Smeltzer, 1997, p. 106)

According to TPB, behavioural change is ultimately the result of changes in the salient beliefs of the person performing the behaviour. Modifying identified salient beliefs through intervention would create a change in attitude, subjective norm, and perceived behavioural control, and therefore strengthen one's behavioural intention to perform the behaviour addressed (Hergenrather et al., 2004.). The Theory of Planned Behaviour has become one of the most widely used social cognitive behaviour theories to assess behaviour change. According to Petersen, Bhagwanjee, Bhana and Mahintsho (2004) the Theory of Planned Behaviour takes distal factors (socio-cultural and structural issues e.g. poverty and gendered power relations) into account, but these can ultimately transformed only at the level of societal change. The distal context also plays an important mediating role in behaviour change.

3.4.5 Transtheoretical Model or Stages of Change

The Transtheoretical Model of behaviour change (TTM) of Prochaska and DiClemente (1983) derived from research on addiction with smokers. It offers a powerful theoretical framework to facilitate the identification of stages that participants are in and then to help them to transition through the other stages towards actual behaviour change and maintenance. This model provides guidance on how to help participants to become aware of the need to change. Its main feature is that different types of cognitions are important at different stages of behaviour change. The model describes behaviour change as an incremental stage-based process, and includes five stages as discussed below and shown in the illustration in Figure 5 (p. 53).

1. The first stage is the **precontemplation stage** where the individual has no intention to change in the near future.
2. In the second stage, the **contemplation stage**, change is considered by the individual sometime in the next several months, while the individual makes a commitment to attempt to change behaviour and,
3. In the third stage, the **preparation stage**, a behaviour change plan is developed.
4. In the fourth stage, the **action stage**, the individual implements the behaviour change plan,
5. After several months of successful action the individual enters stage five, the **maintenance stage** and focuses on avoiding relapse (Purdie & Stern, 2002; Sagrestano, Rogers, Kittleson & Sarvela, 2005).

Transtheoretical Model/Stages of Change

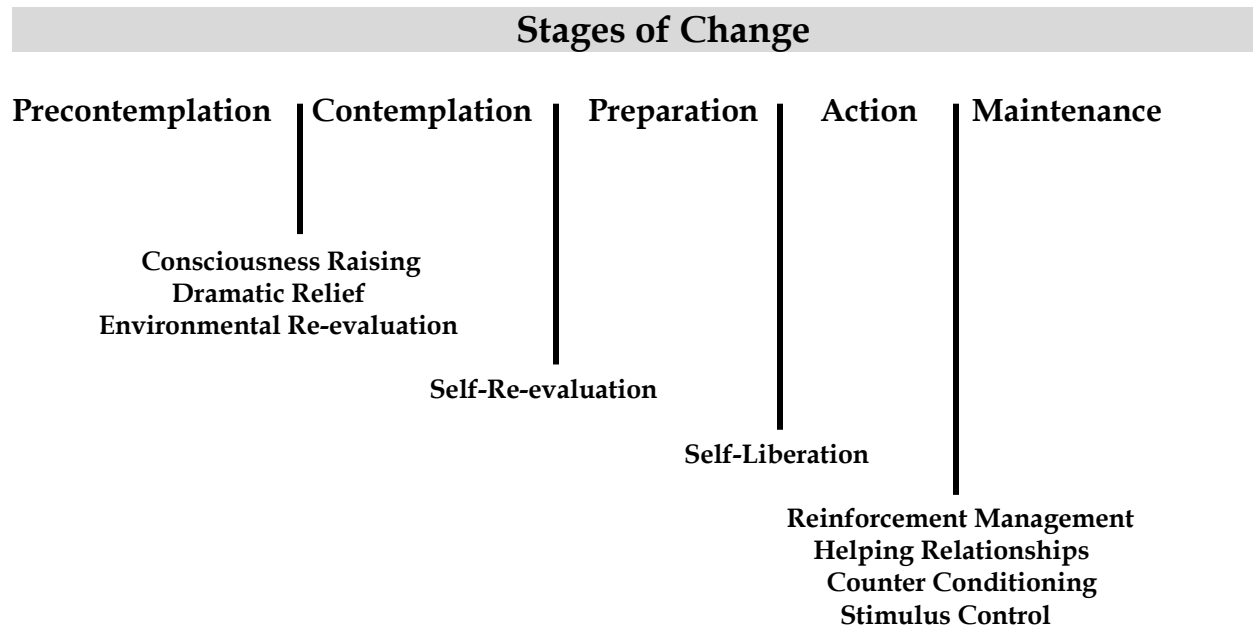


Figure 5 Transtheoretical Model/Stages of Change

Source: (Prochaska, J.O., DiClemente, C.C. & Norcross, J.C., 1992 cited in Denison, 2002, p. 10).

The process as illustrated in this model suggests that people change behaviour through a series of predictable stages from precontemplation (not intending to change), to maintenance to sustain behaviour changes and resist temptation to relapse (Mckenzie & Smeltzer, 1997; Parsons, Huszti, Crudder, Rich & Mendozas, 2000) Transition through these stages results in long term maintenance of newly acquired behaviour. One of the proposed mediating factors in the TTM is self-efficacy. The links between self-efficacy and behaviour change have been demonstrated in many behavioural domains, including sexual behaviour and condom efficacy (Sagrestano et al., 2005).

According to the TTM, in the design of effective interventions it is important first to determine where the individual is on the continuum of behaviour change, and move then to help them to a subsequent, more advanced state. All intervention methods and

messages therefore need to target the specific needs and stage of an individual or group. Taylor (2006) highlighted that interventions must be designed to move people to make explicit commitments as to when and how they will change their behaviour to bridge the gap between preparation and action.

According to Purdie and McCrindle (2002) the strength of this model lies in its ability to be used to match the stage of change of the individual to appropriate intervention strategies. The TTM has been shown to be helpful in planning interventions to increase condom use and reduce other risky sexual behaviours. Sagrestano et al. (2005) recommended that interventions must be carefully tailored not only to the needs of the targeted risk group, but also to the current stages of change of the individuals involved in the intervention. According to Parsons et al. (2000) this model has shown consistency, predictability and explanatory power in various health-related interventions among different populations and HIV reduction initiatives.

3.5 Theoretical models specific to HIV/AIDS prevention

3.5.1 Aids Risk Reduction Model (ARRM)

The AIDS Risk Reduction model is a comprehensive model specifically designed around the HIV phenomena (Griesel & Van Rooyen, 2000).

The AIDS Risk Reduction Model (ARRM) (Cantania et al., 1990) incorporates constructs from the Health Belief Model, social cognitive theory and the theory of reasoned action, amongst others, to explain HIV/AIDS prevention (the process individuals or groups pass through while changing behaviour regarding HIV risk), (King, 1999; Miller, Exner, Williams & Ehrhardt, 2000). It acknowledges behaviour change as a multi-step process with different psychological determinants of each stage.

The ARRM is a 3-stage model and is tabulated in Table 3 (p. 56). Factors influencing the movement between these stages include fear/anxiety and social norms (Herlocher, Hoff and DeCarlo, 1996).

Table 3: Description of the AIDS Risk Reduction Model (ARRM)

Stages	Influences on Stages
<p>Stage 1: Recognition and labeling of one's behaviour as high risk <i>(Depending on the individual, phases may occur Concurrently or phases may be skipped)</i></p>	<p>1 knowledge of sexual activities associated with HIV transmission as well as the influence of aversive emotions on how people perceive AIDS 2. believing that one is personally susceptible to contracting HIV 3 believing that having AIDS is undesirable.</p>
<p>Stage 2: Commitment Making a commitment to reduce high-risk Sexual contacts and to increase low-risk <i>(Depending on the individual, phases may occur Concurrently or phases may be skipped)</i></p>	<p>This stage is shaped by the following factors: 1 cost and benefits 2 perceptions of enjoyment (example, will the changes affect my enjoyment of sex?) 3 response efficacy (example, will the changes successfully reduce my risk of HIV infection?) 4 self-efficacy 5 Knowledge of the health utility and enjoyability of a sexual practice, as well as social factors (group norms and social support), are believed to influence an individual's cost and benefit and self-efficacy beliefs.</p>
<p>Stage 3. Enactment stage: (taking action). This stage is broken down into three phases 3.1 information seeking 3.2 obtaining remedies 3.3 enacting solutions <i>(Depending on the individual, phases may occur Concurrently or phases may be skipped)</i></p>	<p>1 social networks and problem-solving choices (self-help, informal and formal help) 2 prior experiences with problems and solutions 3 level of self-esteem 4 resource requirements of acquiring help 5 ability to communicate verbally with sexual partner 6 sexual partner's beliefs and behaviours.</p>

Source: (Denison, 2002, p. 5)

This model as set out in Table 3 above suggests that in order to change HIV/AIDS related behaviour one must first label the behaviour as risky, then make a commitment to reduce the behaviour, and finally take action to perform the desired change. Factors influencing the movement between these stages include fear/anxiety and social norms. Research has indicated that the AIDS Risk Reduction Model (ARRM) has shown promise for explaining the process of high-risk behaviour change within the gay community and involves a unique inclusion of how individuals personalize the AIDS crisis (Burkholder, Harlow & Washkwich, 1999). The theory has also suggested how the three-stage model could be extended to heterosexual adolescents. Research studies using the ARRM as a theoretical framework have yielded positive findings regarding the linking of Stage 1 (that focus on enabling individuals to realise their susceptibility for HIV infection), and Stage 2 factors (encouraging of individuals to reduce high-risk activities) (Burkholder et al., 1999).

Miller et al. (2000) have modified the ARRM theory to take more environmental considerations into account. In the Modified AIDS Risk Reduction Model (M-ARRM), the renaming of stages took place:

- stage 1 is renamed 'susceptibility'
- stage 2 has been renamed 'intention'
- stage 3, the name, 'enactment' has been maintained

Two new stages were included in the model, namely prioritizing and maintenance. The prioritizing stage was added to this model to allow, for example, women to prioritize and put critically important issues high on their agendas. Risk reduction is not just a matter of changing behaviour, however. Maintaining safer sexual practices, particularly in committed relationships, appears to be very difficult. This recognition led to a second change in the model: the addition of a maintenance phase. The

Modified AIDS Risk Reduction Model (M-ARRM) therefore, has five stages, namely susceptibility, prioritizing, intention, enactment and maintenance (Miller et al., 2000).

According to Miller et al. (2000) M-ARRM includes gender-specific variables to enhance the focus on sexual behaviour, to take into consideration the social contexts of women's lives, and to recognize phases of commitment, which are critical to adult women.

The five stages and the outcomes of each stage will briefly be discussed hereunder (Miller et al., 2000; Govender, 2002):

Stage 1 - Susceptibility

This stage involves acquiring knowledge about the virus, for example; how the virus is transmitted, signs and symptoms and the risk of getting infected with the virus. HIV prevention may involve activities which include: providing educational interventions in schools and organizations, distributing condoms, and the sponsoring of community outreach activities such as media and religious campaigns, public awareness campaigns, coordinating with other community organizations in service delivery or fund-raising activities (Govender, 2002).

Stage 2 - Prioritising

According to Miller et al. (2000), this stage was added to the model as individuals realise that they are at risk for HIV infection and act to prevent HIV infection. This stage empowers individuals to maintain healthy behaviours. Understanding the importance of being tested for HIV and issues like falling pregnant and the consequences and dangers thereof are the priorities of this stage.

Stage 3 - Intention

This stage focuses on the consideration and analysis of intimate relationships. An individual's intention to change behaviour might involve prevention methods to protect oneself against getting the virus and acting proactively to live a healthier life.

Stage 4 - Enactment

An individual informed with HIV/AIDS knowledge has the basis to enable them to negotiate better relationships as opposed to risky or inappropriate sexual relationships. Healthier relationships imply that protective measures are used and will enhance the individual's quality of life. Outcourse³ sexual activities are encouraged and people diagnosed as HIV positive will employ safer ways to curtail the spread of the virus and informing their partners.

Stage 5 - Maintenance

Following the preceding steps will create a long-term cognitive orientation where consistent steps will be taken to control the spread of HIV/AIDS. Positive trends may also influence peer norms positively (Govender, 2002).

Figure 6 below, presents a schematic illustration of the M-ARRM providing background factors, stages, stage determinants, stage indicators and major outcomes.

³ 'Outcourse' sexual activities refers to "non-insertive sex", proposed in HIV interventions as a way of expressing sexuality without intercourse – an alternative to penetrative sex with its attendant HIV risks.

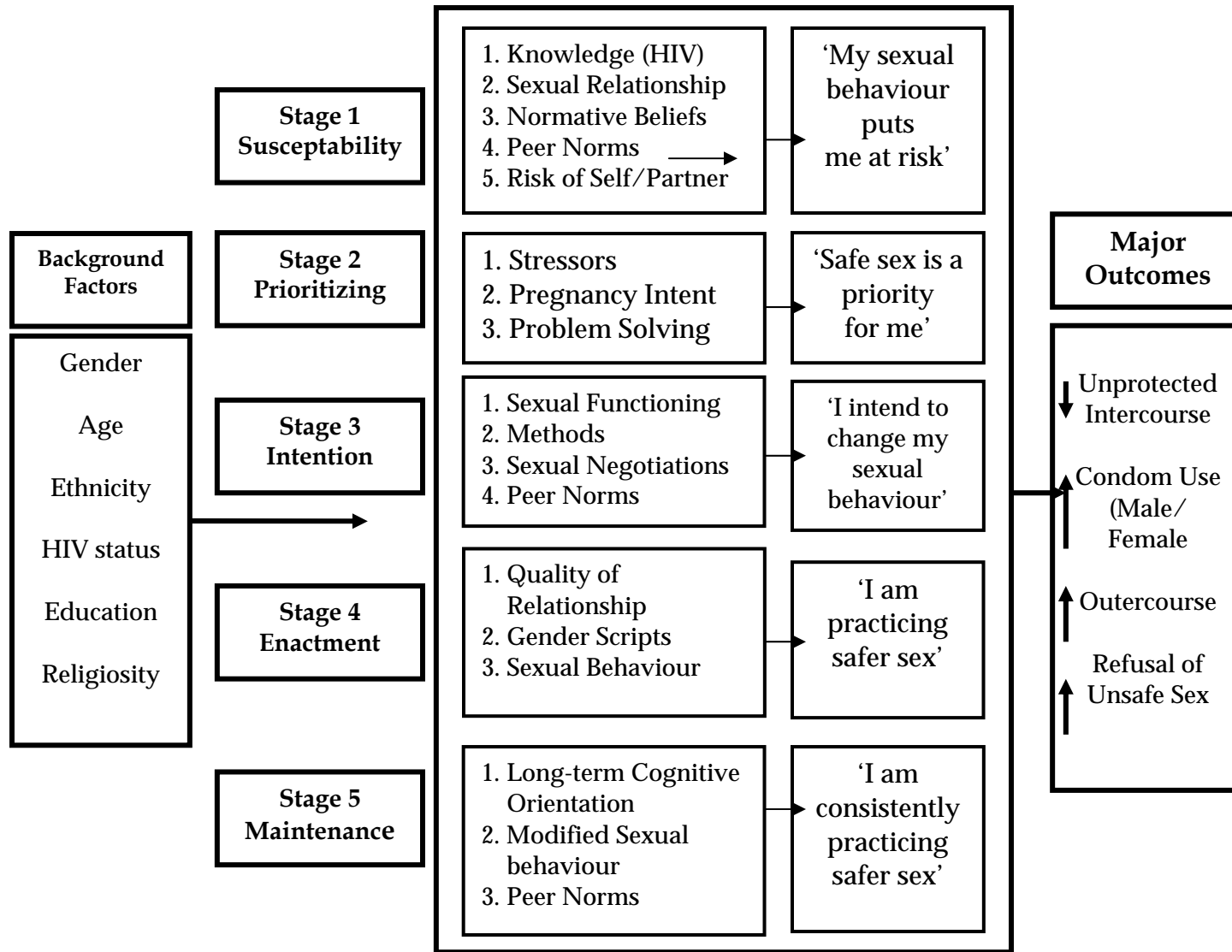


Figure 6 Modified AIDS Risk Reduction Model (M-ARRM)

(Source: Miller, Exner, Williams & Ehrhardt, 2000, p. 608)

According to King (1999), programmes that use the ARRM focus on:

clients' risk assessment, influencing the decision to reduce risk through perceptions of enjoyment or self-efficacy, and clients' support to enact the change (access to condoms, social support) (p. 8).

A general limitation of the ARRM model is its focus on the individual. Researchers suggest that the M-ARRM takes into greater consideration the sociocultural issues that influence, and may limit, an individual's behaviour choices and ability to take action (Miller et al., 2000).

3.5.2 The Information-Motivation-Behavioural Skills (IMB) Model

The Information-Motivation-Behavioural (IMB) skills model was developed in response to the AIDS epidemic, and interventions relying on IMB have demonstrated efficacy (Armistead, Kotchick & Forehand, cited in Rapp-Paglicci et al., 2004). According to IMB, the individuals who are most likely to engage in protective behaviours and maintain their behaviour are those who have adequate information about risks and preventive behaviours. They are therefore motivated to change their behaviour, and have the necessary skills to engage in preventive behaviour. The IMB model provides an integrative framework in guiding AIDS reduction initiatives and posits two cognitive factors and one behavioural factor as determinants of AIDS preventive behaviour (Donenberg et al., 2005). This skill model is a three-factor conceptualization with three fundamental determinants of AIDS risk reduction:

1. *Information on AIDS transmission*, and information on specific prevention methods
2. *Inculcation of motivation* to act on the knowledge and change risky behaviour, change personal attitudes about preventive behaviour, perceived normative support for HIV prevention and behavioural intentions

3. *Behavioural skills* in performing specific prevention acts like practising preventive behavioural skills, including perceived self-efficacy negotiation of safer sex with a partner.

The IMB model proposes that AIDS prevention information and AIDS prevention motivation work through AIDS prevention behavioural skills (as illustrated in Figure 7 below) to affect AIDS preventive behaviour. According to this model AIDS information and AIDS preventive motivation have a direct influence on AIDS preventive behaviour in risky situations or in situations where those behavioural skills are not required for the application of AIDS prevention skills (Fisher, Williams, Fisher & Malloy, 1999). Fisher et al. (1999) also theorized that AIDS preventive information and AIDS prevention motivation are generally independent constructs. This independence is well observed where an adolescent is highly motivated and lacks the AIDS preventive information to practise preventive behaviour. The other extreme can be that the adolescent may be well-informed and no behavioural changes take place due to a lack of motivation. An outline of this Information-Motivational-Behavioural (IMB) is illustrated below in Figure 7.

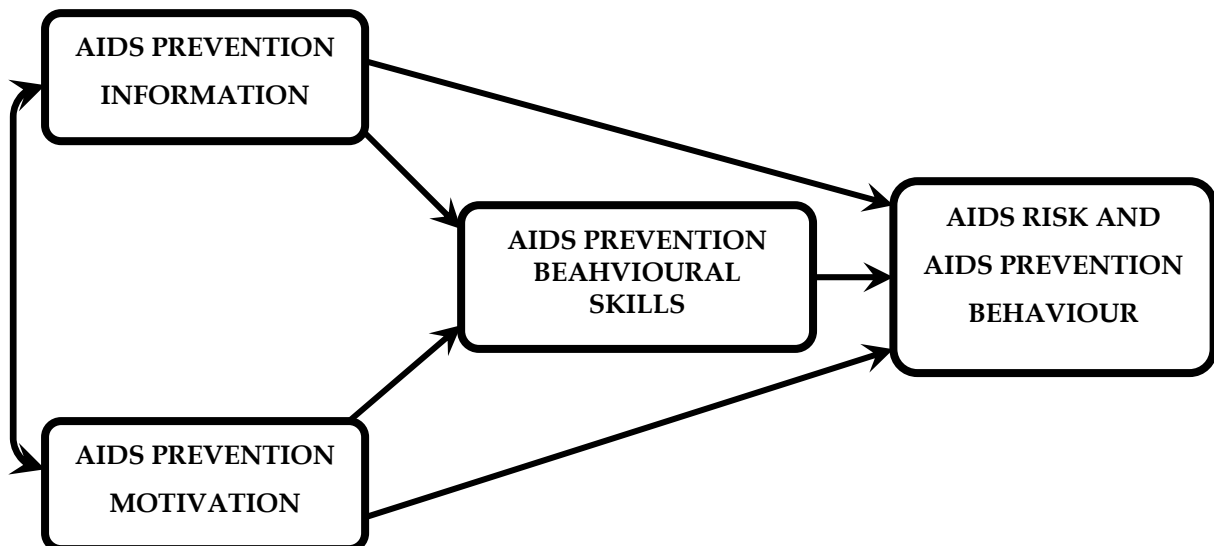


Figure 7 The Information-Motivational-Behavioural-Skills model of AIDS risk and AIDS preventive behaviour

(Source: Fisher, Williams, Fisher, Malloy, 1999, p. 14)

The IMB model refers to three steps involved in the creation implementation and evaluation of an intervention (Rapp-Paglucci et. al., 2004):

- Elicitation research (for example, focus groups, and key informant interviews) is conducted with a subgroup of the target population to determine strengths and weaknesses with respect to information, behaviour and skills (the elicitation research component of the current study was reported on in section 2)
- The results of the elicitation research are used to create and implement empirically targeted interventions for the population
- An independent evaluation is conducted to determine intervention effects.

Butts and Hartman (2002) emphasized that the IMB model can be used with any population, provided that content is tailored for the particular population. Even well-informed individuals need to be motivated in the application of the IMB model in order to initiate and routinely practise risk-reduction behaviours (Butts & Hartman, 2002; St Lawrence, Crosby, Brasfield & O'Bannon III, 2002). Information alone is therefore insufficient to change behaviour. In order to motivate an individual to behaviour change, the individual's attitude towards performing the behaviour and the individuals' perception of how significant others regard their behaviour are two very important factors. The IMB model of AIDS preventive behaviour has been useful in guiding effective HIV prevention interventions to reduce HIV risk reduction among adolescents, men and women (Donenberg et al., 2005; Kalichman, et al., 2006). The IMB model also proposes a process for determining the most appropriate content and format of interviews in a particular community.

3.6 Key aspects of the social context of HIV prevention

The previous section of this chapter focused on HIV/AIDS as a health issue, the role of theory and specifically on behavioural theories which inform the basis of many

HIV interventions, theories which try to explain risk behaviour and to identify the best methods and techniques to bring about permanent behaviour change. Within behavioural theoretical frameworks the main focus is on the individual and there is often the assumption that sexual encounters are within the individual's control. These HIV prevention programmes are very helpful in informing us on how to change behaviour, but do not help us fully understand the multitude of factors around sexuality (social and cultural), which affect the individual. Behavioural theories in HIV prevention initiatives have struggled to account for particular issues, like gender roles and cultural values that influence sexual practices. The issue of inter-group power is key if to understanding HIV more contextually.

In this section the focus will be on two major sociocultural factors that occur in broader social relationships and which are relevant to HIV prevention in the context of this study. The focus will be:

- To understand the dynamics of gender and power in sexual relationships and their relation with HIV infection and,
- to understand the relationship between HIV/AIDS and disability.

3.6.1 The importance of gender and power issues in HIV prevention programmes

Many authors have pointed out that in order to understand HIV, we need an understanding of social structural factors related to sexual inequality and gender and power imbalances (Wingood & DiClemente, 2000). According to King (1999), we need to address the wider social and environmental issues surrounding women, such as distribution of power and authority, and gender specific norms within heterosexual relationships, because individual control has been found to be compromised in contexts where there are unequal gendered power relationships (Petersen, et al., 2004). According to Kalichman (2005) and Wingood and DiClemente (2000) there are three major social structures that characterize the gendered relationships between men and women. These structures according to

Wingood and DiClemente (2000) cited in Maine HIV Prevention Community planning (2004-2008), are:

- the sexual division of labour, that deals with relationship issues and environmental barriers,
- the sexual division of power, which recognizes the power imbalances in heterosexual relationships that contribute to men's authority, control and coercion over women. This power imbalance is influenced by cultural and social influences of a community, and
- the structure of cathexis, which refers to the approved social norms related to traditional gender beliefs and expectations for appropriate sexual behaviour. (p. 63)

Wingood and DiClemente (2000) propose that the three social structures exist at the societal and institutional levels and are maintained in society. These social mechanisms produce gender-based inequalities, which are found in gender relationships among low socio-economic groups where women engage in transactional sex in order to survive, and lead to heightened risk for HIV infection. These women are vulnerable and their control over risk behaviour, such as unsafe sex, is substantially reduced. The sociocultural context of each society in many instances determines gender relationships, which are commonly ignored or glossed over in HIV prevention strategies (Kalichman, 2005; Wingood & DiClemente 2000).

The HIV epidemic in the United States and many African countries like South Africa and Kenya continues to affect women disproportionately. Women, especially members of racial and ethnic minority populations and in developing countries, are the fastest growing group with HIV infection (Gupta, 2003; Koitelet, 2004; Pulerwitz, 2000). Pettifor, Measham, Rees and Padian (2004) note that besides women's greater biological susceptibility to HIV infection, a host of sociocultural and economic factors rooted in gender power inequities exacerbate women's vulnerability to HIV infection. This view is echoed by Chege (2005), who refers to a link between gender

and negative outcomes with respect to sexual and reproductive health due to gender inequalities, poverty and economic underdevelopment and mobility, which are major structural factors that facilitate HIV transmission. Chege (2005) also mentions that empirical evidence has demonstrated that women's low power and lack of assertiveness coupled with high male control in intimate relationships is generally associated with increased HIV risk behaviours and HIV infection. Gender inequalities are therefore very important in order to address the prevention of HIV infections. As Gupta (2003, p. 28) puts it:

Gender inequality kills people. It's no longer just costly, it's fatal.

The power relationships underlying any sexual interaction, heterosexual or homosexual, determine whose pleasure is given priority, and when, how, and with whom sex takes place. The balance of power in any sexual interaction is a major determinant of its outcome. The societal ideals as defined for feminine and masculine behaviour and sexuality, determine to a large extent the access men and women have to information and services, their sexual behaviour and attitudes, and how they cope with illness once infected or affected (Gupta, 2002).

Power relationship imbalances are the product of and contributors to the maintenance of traditional gender roles, which make it more difficult for women to practise safer sex (Kalichman, 2005). Many women have no volitional control over their own bodies and this limits risk reduction initiatives like the negotiation for condom use (Miller et al., 2000).

Hoosen and Collins (2004) and Kim et al. (2002) highlight that researchers have documented three interconnected factors, all of which have gender components, that facilitate HIV transmission. These are poverty and economic underdevelopment; mobility, including migrant, seasonal work and social disruption due to war and political instability; and gender inequalities in themselves. According to Kirstner

(2003) unequal power in sexual relations is implicated in the sexual transmission of HIV in three important ways:

- Less dominant partners are unable to negotiate when and how they have sex, and how to protect themselves and one another from STIs and HIV.
- Unequal relationships are often mediated through sex as currency of exchange: as 'payment' for food, shelter, transportation, clothing and goods.
- In unequal relationships, men sometimes have multiple partners and preventive methods are not used. This contributes to the vulnerability to HIV infection for women in these relationships.

Harrison, cited in Kirstner (2003) emphasizes the necessity for change in gender norms in sexual relationships which is important in HIV prevention. He/she also emphasizes the importance of life skill approaches with the emphasis on sexual rights and sexual health and refusal skills, conflict resolution skills to enhance the ability to engage in safer sex and safe dating, all which are essential for adolescents. Wingood and DiClemente (2002) highlight the importance of communication self-efficacy especially for women because women need to convince men to wear condoms. In order to equalize the balance of power between women and men that currently favours men, increased access for women to information and education, services, economic resources, and assets must be ensured while supportive social networks are established. Gupta (2002) argues that traditional sexual roles need to be challenged in the light of the high HIV prevalence rate, and that HIV intervention programmes should foster open communication and information sharing on sexual roles. Wingood and DiClemente (2002) underline that various factors contribute to the vulnerability of women and that these environmental conditions be addressed to help women to protect themselves against HIV infection.

Gender inequality is also evident among people with disabilities. Although women and men with disabilities share similar experiences of devaluation, isolation, marginalization and discrimination, their fortunes diverge in important ways.

According to Gerschick (2000) women with disabilities experience “sexism without a pedestal (p. 1265)” and she argued that women with disabilities are more likely to be sexually assaulted, whereas men with disabilities are more likely to experience other forms of physical abuse. This is an indication of the gender imbalances facing people with disabilities, which are exacerbated by myths and discrimination by non-disabled people. Hassouneh-Phillips and Curry (2002) mention that women with disabilities are more likely to experience intimate partner violence than are non-disabled women, which may place them at additional risk.

There is widespread agreement that the promotion of more equal gender roles is key to preventing HIV infection and ultimately its negative impact on AIDS prevention (Koitelet, 2004). According to Chege (2005) gender and HIV interventions among men can lead to an increase in support for equitable gender norms and improvements in condom use. She argues that HIV intervention strategies should include individual approaches and should mobilize communities’ activities that promote and increase the probability of sustained involvement and sustained change (Chege, 2005).

3.6.2 Gender and power issues for adolescents

The current HIV pandemic, with high rates seen in adolescent girls in particular, underlines the necessity for special attention to be given to gender and power issues among adolescents. It is clear that programmes must target younger adolescents, with a specific focus on delaying the onset of sexual activity, and the provision of condoms for those who are already sexually active, in order to empower them at a young age and in so doing reduce their vulnerability (Gupta, 2002,). As Gupta (2002) puts it:

While it is true that adolescence is a particularly vulnerable time, it is equally true that it provides a window of opportunity to bring about changes in levels of knowledge, attitudes, and behaviours before they are fully formed. In

order for HIV/AIDS interventions to use this window of opportunity to reduce young people's vulnerability to HIV and address their needs within the epidemic, it is critical to first provide them with accurate information and the skills they need to protect themselves from the epidemic. (p. 20)

Kiragu (2001), King (1999) and Weiss et al. (2000) all argue that to be effective in changing gender-based attitudes and creating changes in behaviour, we require school-based sex and HIV/AIDS prevention programmes. The empowerment of young people to practise safe sex remain a key issue and needs to consider the overarching power dynamics in relationships. These programmes must be participatory and address issues like peer pressure and norms that encourage risky behaviour, teach skills to build resilience with respect to risk factors, create the opportunity for open, non-judgmental, and honest information about sex, gender roles and relationships, and teach safe sex techniques to avoid infection. It is however important that HIV/AIDS curricula must be age appropriate and provide opportunities for the modelling and practise of communication, negotiation of safe sex and refusal skills (how to say no) (Kiragu 2001).

It is difficult to ascertain the extent to which an understanding of gender issues has or has not helped HIV/AIDS prevention in South Africa, as there are limited data. It does however appear important that future AIDS programmes need to challenge practices that disempower women (Campbell, 2003). Koitelet (2004) emphasizes that in prevention efforts it is important to mainstream gender in all programme stages by ensuring that gender related factors are taken into account in planning, implementation, monitoring and evaluation.

3.7 Disability, HIV and power

In all societies, the experiences of people with disabilities are interwoven with multiple deprivations and disadvantages. Since the 1960's people with disabilities, internationally, have concentrated on campaigns to overturn the social exclusion to

which they are subjected (Barnes & Mercer, 2005). Even today, the politics of impairment is inseparable from poverty and inequality, and the social, economic, political and cultural changes in many countries (Barnes & Mercer, 2005). The social model, which will be discussed below is useful in providing, addressing and explaining the social oppression encountered by people with disabilities.

3.7.1 The social model of disability

The social model was developed initially in Britain by Oliver based on the ideas of the Union of the Physically Impaired Against Segregation (UPIAS) (Tregaskis, 2002). Finkelstein added to Oliver's thesis in his seminal exposition of the oppression faced by people with disabilities (Robinson & Stalker, 1998; Tregaskis, 2002). Barnes and Mercer (2005) highlight the need for social change demanded by people with disabilities and which is in their view the focus of the social model. They describe the social model as follows:

it shifted the attention away from the functional limitations and psychological 'loss' stressed by the dominant individual or medical approach to 'disability' (p. 1).

In contrast with the previous focus, the focus now was to understand the physical and social exclusion of individuals with impairments from participation in mainstream society. The social model offers a socio-political analysis of the discriminatory structures and processes that impact on the lives of people with disabilities.

The social model sees disability as a social construct and not simply as an attribute of the individual, but more outside the individual, the social environment in which the individual finds him/herself (Bickenbach, 2001). The social environment creates the category 'disability' and requires change for people with disabilities (Mitra, 2006). Mitra (2006) also underlines the fact that the social model views people with disabilities as an oppressed minority, a group that faces discrimination and

segregation through sensory, attitudinal, cognitive, physical, and economic barriers. By emphasizing the economic, social and physical barriers, proponents of the social model demand greater accessibility of buildings, transport and information and for measures to counter discrimination in employment and other spheres of activity (Barnes & Mercer, 2005; Burchardt, 2004). Tregaskis (2002) notes that this theory has been used by organisations of people with disabilities as the philosophical rationale for their activities for over twenty years.

According to Lakatos' (cited in Tregaskis, 2002) explanatory framework of the social model, the fundamental assumption underpinning the paradigm is that people with impairments are disabled and excluded by a society that is not organized to acknowledge and make provisions to accommodate people with disabilities. Burchardt (2004) put it as follows:

This theory provides a way of conceptualizing the disadvantage experienced by people with impairments, which emphasizes the social, economic and environmental barriers to participation in society. (p. 735)

Within the social model, a key distinction is also drawn between impairment and disability (Burchardt, 2004):

Impairment is a condition of the body or mind, such as lacking a limb, being partially sighted, or experiencing depression. It is an attribute of an individual. **Disability** is the loss or limitation of opportunities to take part in the life of the community on an equal level with others. It arises from the social, economic and physical environment in which people with impairments find themselves. (p. 736)

The social model also defines disability as “socially imposed restriction” (Leicester, 2001, p. 254). Restrictions are explained in terms of the experiences of people with disabilities of the environment around them, which is created through their

interactions within a physical and social world designed for non-disabled living (Leicester, 2001). Discrimination against people with disabilities is reinforced by powerful stereotypes which constitute a widely shared attitudinal problem which sees people with disability as different, not “normal.” The challenge is therefore to educate societies (non-disabled) about disability and disability needs, and in so doing to help members of society abandon deep seated prejudices about people with disabilities (Leicester, 2001).

There are three subsidiary principles which have relevance to the experience of people with disabilities:

- First is, the principle of **equality**. The inequality which is experienced by people with disabilities (widespread poverty, unemployment and marginalization) needs to be removed immediately by modern society (Robinson & Stalker, 1998).
- Barnes and Mercer (2005) and Robinson and Stalker (1998) highlight the second principle, that of **inclusion**, which implies that we need a situation in which the barriers do not exist in the first place and that systems are designed explicitly to cater for all.
- **Autonomy** is the third key principle, which arises from the practice and politics of disabled people. It suggests that disabled people as the experts on their lives need to determine their own destiny. Professionals, bureaucrats, clinicians, therapists, psychologists and other authority figures are not the experts on disability. It is also the view that professionals can in fact become a major obstacle to the self-development and liberation of people with disabilities. The key here is that people with disabilities set the agenda themselves in order to dictate the priorities and to have a real voice in decision-making about their lives (Robinson & Stalker, 1998).

Tregaskis (2002) states that the social model is instrumental in challenging disabled people’s own internalized oppression and making them realize that they are not

responsible for the discrimination and social exclusion they are facing. The stigmatization, oppression and the maintenance of structures of society that conform to acceptable norms is responsible for the marginalization of people with disabilities. Social model theorists also emphasize the need for democratic organizations for people with disabilities in the light that they are experts on the impact of disability (Burchardt, 2004).

Since its original conception the social model of disability has been an emancipatory force in the lives of many disabled people. According to Tregaskis (2002) this model has shown:

how the previously taken-for-granted, naturalistic category 'disability' is in reality an artificial and exclusionary social construction that ignores and discriminates against those people with impairments who do not conform to mainstream expectations of appearance, behaviour and/or economic performance.

(p. 457).

The model also suggests that more attention needs to be focused on the persistence of disabling attitudes of society, and to problems which may derive from working with non-disabled people. These issues need to be addressed so that the model continues to be of practical use to the wider disabled people's movement (Tregaskis, 2002).

In countries like South Africa and Uganda significant change for people with disabilities has been achieved (Barnes & Mercer, 2005). In South Africa, mechanisms have been put in place to ensure an inclusive and equitable society with the White Paper on Disability, and the visionary document on disability: the Integrated National Disability Strategy. People with disabilities are included in the South African society, socially, politically and in policy development with a human rights,

social and development perspective (Nhlapo, Watermeyer & Schneider, 2006; SAHRC, 2002). Although significant progress has been made, we still have a long way to go in establishing a barrier-free and equitable society for people with disabilities. Watermeyer, Swartz, Lorenzo, Schneider and Priestley (2006) and their colleagues throw some light on disability issues in South Africa in their edited volume, by exploring various experiences of people with disabilities in the South African context as well as how the social environment, policies, laws, practices, cultural beliefs and values impact on the lives of people with disabilities.

In spite of some criticism (Tregaskis, 2002) the social model is still seen as relevant as an explanation of the experience of people with disabilities in the developed or majority world where the barriers may be different but the solutions are the same. It illustrates that social action is necessary to create social change. Central to the social model is the understanding that until people with disabilities are fully acknowledged and part of the fabric of society, they will continually be excluded and treated as 'other', and face social exclusion and discrimination. It is therefore important that people with disabilities become advocates in the fight against social exclusion, contest myths and erroneous perceptions around their sexuality, and participate actively in the fight against risks for the people with disabilities such as HIV/AIDS.

3.7.2 HIV/AIDS and disability

A thorough search for literature on HIV risk for people with disabilities resulted in very limited information on this topic (Mouton, 2003). This finding was corroborated by Janssen (2005), who reported that no statistics are available on HIV and people with disabilities. Jelsma, Mielke, Powell, De Weerd and De Cock (2002) also referred to research on a comprehensive global disease study which revealed an extraordinary dearth of data on the health status of people with disability. Swartz, Schneider and Rohleder (2006) mention that the impact of HIV/AIDS on people with disabilities has been widely ignored in national health programmes in South Africa

and internationally. Research by Bat-chava, Martin and Kosciw (2005) and Groce (2004) mention the lack of good quality epidemiological data on the actual incidence of HIV infection among disabled people. There is anecdotal data on the issue, though for example, interviews with advocates and service providers as well as a review of published reports found reports of virgin rape of disabled individuals in association with HIV/AIDS in 21 countries. The virgin cleansing myth is the belief that people who have a sexually transmitted disease can rid themselves of the condition by transferring the infective organism by having sexual intercourse with a virgin (Groce, 2003). This myth of virgin cleansing was also reported in letters from disabled youth in a study in South Africa (Kelly et al., 2002). Respondents wrote that sex with people who are blind or people with disabilities can cure an HIV/AIDS infected person. Barnes and Mercer (2005) strongly requested that Disabled People Organizations (DPO's) mobilize themselves to battle against traditional myths that state that disabled people are everything from the embodiment of hereditary evil to the cure of HIV/AIDS.

Statistics from a small survey in the USA (Welner, 2000) reported that the HIV rate among deaf individuals was twice that of the surrounding hearing population. No such studies have been done in South Africa. The lack of information generally leads to an assumption that people with disabilities are not at high risk (Janssen, 2005). They are not targeted in campaigns and in many cases they are even excluded from receiving information altogether. Although arguably less pervasive today than in the past, the myths surrounding the sexuality of people with disabilities are still very much with us. As Anderson and Kitchin in Di Giulio (2003) put it:

Cultural presentation of disabled people as “sick and sexless” are supported and sustained by a set of myths. Myths in relation to disability and sexuality include people with disabilities being asexual, that is lacking a biological sex drive, being unable to partake in sexual activity and that people with disabilities, (particularly those with a developmental/intellectual disability)

lack the requisite social judgment to behave sexually in a social responsible manner. (p. 53)

There are negative attitudes towards people with disabilities who are sexually active. Such attitudes serve not only to discriminate, isolate and marginalize people with disabilities; they also lead to the internalization of negative attitudes and beliefs by the disabled themselves (Change, 2002; Di Giulio, 2003; Janssen, 2005; Yousafzai et al., 2005).

According to Davies (1996) and Di Giulio (2003) there are three immediate and crucial barriers to sexual health that confront people with disabilities:

- increased vulnerability to HIV/AIDS
- increased vulnerability to sexual exploitation and abuse
- a consistent lack of sexuality education for disabled youth.

Kelly et al. (2002) highlight this concern and argue that there is clearly a greater vulnerability to sexual violence in the case of children and young people with visual impairments. People with disabilities tend to be educationally, economically, and socially disadvantaged, which in itself suggests that they are a high-risk group for HIV infection (Swartz et al., 2006). Despite the myth of asexuality, research is increasingly indicating that people with disabilities often experience known risk factors for HIV infection (Change, 2002; Di Giulio, 2003; Groce, 2004; Janssen, 2005; Swartz et al., 2006; Welner, 2000; Yousafzai et al., 2005; Yousafzai, Dlamini, Groce & Wirz, 2004).

Various factors have been argued to increase the vulnerability of people with disabilities to sexual exploitation and abuse and in fact also HIV/AIDS. Eight factors were mentioned by Di Giulio (2003, p. 60), which may contribute to increased vulnerability:

- They are dependent on others for care and support

- They generally experience feelings of powerlessness, which is the result of their human rights which are denied in societies
- The perception of perpetrators who believe that they will not be caught if they abuse people with disabilities
- The perception that victims with disabilities will not be believed in cases of abuse and rape
- People with disabilities lack education to discriminate between appropriate versus inappropriate sexual behaviour
- They experience social isolation and increased risk of manipulation
- They are faced with greater vulnerability in public places and with mainstreaming
- They are sometimes integrated in society without removing any barriers and any consideration of whether they are empowered enough to protection themselves.

According to Welner (2000) there is a lack of sex and health education, especially safe sex messages for females with disabilities, which could be due to erroneous beliefs that disability prohibits females from being sexually active or limits sexual desire.

The vulnerability of people with disabilities to HIV infection is supported by a recent study by Cheng and Udry (cited in Di Giulio, 2003, p. 60), which found that 12% of adolescent girls with physical disabilities reported that they had experienced forced sex, double the percentage for non-disabled girls. Other studies by Nosek and Howland (cited in Di Giulio, 2003) found high rates of sexual abuse among both the developmentally and physically disabled population. Numerous reports of rape of individuals who are blind, deaf, physically impaired, intellectually disabled or who have mental health disabilities have been recorded, while women and men with disabilities suffered up to three times more risk of rape by a stranger or acquaintance than their non-disabled peers (Gerschick, 2000; Groce, 2004). According to Gerschick (2000) research suggests that children with disabilities are 70% more likely to be physically or sexually abused than their able-bodied counterparts, and that the abuse

is likely to be chronic rather than episodic and commonly perpetrated by family members or personal attendants.

Ongoing research by Groce (2004), the “Global survey on HIV/AIDS and Disability under the auspices of the World Bank/Yale University”, stated that people with disabilities were likely to be at significant risk for becoming HIV infected in all 57 countries surveyed. Furthermore, risk factors associated with HIV, for example poverty, lack of education, lack of information and resources to ensure ‘safer sex’, risk for violence and rape, and lack of legal protection in specific relation to this risk, substance abuse, compromised access and affordability of care, and stigma, are all increased for individuals with disabilities (Bat-chava, et al., 2005; Cambridge & Mellan, 2005; Groce, 2004). According to Groce (2004) the Global Survey has begun to establish that HIV/AIDS represents a significant threat to individuals with disabilities around the globe. There appears to be an HIV infection rate at least comparable to - and quite possibly significantly higher than - rates found in the general public, though definite data are still lacking.

It is clear that people with disabilities are very much a marginalized group nationally and internationally when it comes to HIV prevention (Yousafzai et. al, 2004). It is however important to realize that they actively participate in society and there is no reason to believe that they should not be at risk for contracting STDs and HIV/AIDS – in fact, all the indications are to the contrary.

3.7.2.1 HIV/AIDS and people with visual impairments

Research and literature about the sex education experiences of individuals who are blind is very scant (Welbourne, Lifschitz, Selvin & Green, 1983). The acquisition of information by people with visual impairments is impeded in at least two ways:

- Firstly through overprotection and negative attitudes from parents and professionals that deprive them of vital sexual information and consequently

lead to problems with decision-making and limited and distorted sexual information, because others are making decisions on their behalf

- Secondly by non-visual teaching methods and inaccessible learning materials. Thahane, Myburgh and Poggenpoel (2005) argue that adolescents with visual impairments have less information at their disposal due to the fact that visual information is commonly regarded as the only medium to be used for acquisition of knowledge and skill.

This was also the conclusion of a discussion on HIV/AIDS and disability in Namibia. People with visual impairments were argued to be vulnerable to HIV infection due to lack of education, lack of accessible information like audio-cassettes in local languages, lack of information in Braille, the availability of services and the negative public attitude (Narib, 2003).

Kim (2003) contends that stigmatization and marginalization of people with visual impairments results in negative interactions with sighted people and that people with visual impairments may therefore develop dysfunctional cognitions that inhibit their use of social skills in real-life situations. Another contributing factor to this marginalization is the myth that people with visual impairments are unfit for procreation, and an inappropriate choice for a love object, and depicted as either asexual or hypersexual (Bolt, 2005). This myth may contribute to a perception of inferiority and low self-esteem and may encourage risk taking behaviour.

Children with visual impairments are particularly vulnerable to sexual abuse, and confinement in the family home does not necessarily remove risk (Sentumbwe, 2004). Some young people have indicated that neighbours and relatives were perpetrators of sexual abuse (Groce, 2003). Abusers may believe that women and girls who are blind will not be able to identify them and to defend themselves and are perceived as easy targets for sexual attacks (Yousafzai et al., 2005). The vulnerability of people with visual impairments is emphasized by Janssen (2005) and Sentumbwe (2004) who state that, contrary to myth, sexual relationships between

women with visual impairments and sighted men do occur; perhaps more so in this era of HIV/AIDS, as non-disabled men believe that women with disabilities are among the assumed risk-free groups of females. Though there are of course many respectful sexual relationships between women and girls with visual impairments and sighted men, women and girls with visual impairments are sometimes involved in sexual relationships with sighted men, relationships which are casual, short-term and often covert, causing the female partner to seek more permanent relationships within the disability group (Sentumbwe, 2004).

Considering the factors mentioned above, it is clear that HIV/AIDS prevention efforts among people with visual impairments require an urgent and ongoing acknowledgement of the risks they are facing.

3.8 HIV/AIDS prevention efforts in their immediate social context

3.8.1 Diffusion of Innovation Theory: Advantages for prevention efforts, challenges for research

The previous section dealt with contextual factors affecting the HIV pandemic, including gender, power and disability. The current brief discussion concerns the interface between HIV prevention programmes and their immediate social context.

The magnitude of the HIV/AIDS pandemic has urged researchers, governments, health practitioners etc. to act and to design programmes that can reduce HIV/AIDS infections. These programmes must be disseminated as widely as possible, but cost-effectively. Diffusion of innovation is used as a theory in HIV prevention programmes as a means of disseminating HIV prevention information through influential and credible people in communities so that they can contribute to the reduction of HIV infection. The theory helps us to understand how new ideas or behaviours are introduced to and are spread into communities. We need to develop ways of transmitting HIV/AIDS information from small group interventions to

increase the knowledge and awareness, and change peoples' attitudes towards people infected with HIV/AIDS and with the intention to facilitate behaviour change.

The diffusion of innovation theory (Rogers, 2003) describes the process by which an idea is disseminated throughout a community. According to the theory, there are four essential elements: the innovation, its communication, the social system and time (King, 1999). People form part of a society where they are exposed to new information and ideas, either directly or through the media. These social networks determine the rate at which various people adopt and perform new behaviour. Ideas or practices are spread throughout a social system from person to person by way of particular channels. For example, opinion leaders may shape changes in safe sex norms and thus may make it easier for others to initiate and maintain risk reduction behaviour change. Diffusion of any intervention refers to the possibility of affecting behaviours of community members who have not directly participated in an intervention. Rogers (cited in Latkin & Knowlton, 2005) and Stroman (2005) assert that the most effective way to promote diffusion of innovation is to target networks of specific structural features or respected individuals who hold key positions of influence within the network.

Diffusion of innovation theory argues that the influence of population opinion leaders is important to influence attitudes and behaviour and to establish new behavioural trends (Airhihenbuwa & Obregon, 2000; Kelly, 2004,). After new information is successfully disseminated and beneficial prevention beliefs are instilled within one's immediate environment and friends, the behaviour of the individual is more likely to be consistent with the perceived social norms and influences (King, 1999). Interventions focussing on diffusion of innovation generally investigate the best method to disperse messages within a community and to co-opt the leaders to act as role models to change community norms. Health messages with the goal of widespread change must first engage the community and be aware that the dissemination of messages must take place in a variety of formats and settings.

Stroman (2005) underlines that the dissemination of HIV prevention information must embrace multi-disciplinary methods to effect healthy behavioural change, because different sources, messages and channels are preferred by different age and gender groups.

In the case of HIV prevention, desired behaviour changes include condom use and avoidance of high-risk sexual activities, which need to be communicated through multiple channels. According to Kelly (2004) a series of studies has shown that interventions based on the Popular Opinion Leader (POL) approach could reduce the prevalence and frequency of high-risk sexual behaviours in populations of men attending gay bars in small US cities.

The diffusion of innovation approach has been found useful in various initiatives like the Stepping Stones health promotion programme in Gambia (Paine et al., 2002) and the STOP AIDS Project in the United States (Stroman, 2005). Research by Stroman (2005) and Wu et al. (2002) suggests that in order to engage different target audiences (e.g. drug users, religious leaders, health professionals, families, adolescents etc.), HIV/AIDS information must be communicated in a manner that various audiences can understand, it must be viewed as credible, personally relevant, and reflective of community norms and values. Despite using the best methods to disperse messages and credible people to disseminate ideas, this theory has however been criticized. Airhihenbuwa & Obregon (2000) state that:

Diffusion of innovation has been criticized for being too linear, having a pro-innovation bias, and widening the gaps between the 'information haves and the 'have-nots' in a social system (p. 8).

In spite of its limitations the use of opinion leaders is helping to shape culturally appropriate strategies, and is a component of diffusion of innovation that offers possibilities in HIV/AIDS communication which will be a factor in the outcome of HIV/AIDS prevention.

There are clearly many advantages to diffusion of innovation. From the point of view of some kinds of intervention research, however, diffusion (which may occur without the knowledge of researchers) may contaminate differences between experimental and control groups. Where people who have received an intervention transmit the result of the intervention to others who are constituted for research purposes as not having received the intervention, this may obscure any differences the intervention may have affected. This is a methodological challenge in the present study, as will be seen later.

3.9 Conclusion

Theories, models or frameworks are designed to guide the implementation and evaluation of programmes along certain processes that are believed to yield a certain outcome. According to Kelly (2002) there can be little doubt that behaviour change approaches underpinning many communication campaigns in South Africa have a fundamental limitation in not addressing the complex contextual factors that mediate behaviour. Behaviour is not framed by simple individual choices, but is also shaped and framed by access to resources and services, social judgment systems, economic factors, gender aspects of sexual negotiation and the prevalence of sexual violence. In contexts where individual choice is diminished it is clear that a focus on the individual is insufficient and inappropriate. However, behaviour change interventions directed at the individual still have an important place in the HIV prevention plan, and complementary interventions that broaden the capacity to intervene at multiple levels need to be developed and tested (Gordon, et al., 2005).

The core principle of the social model of disability is the understanding that people with disabilities are part of the fabric of society and therefore not excluded at any level of society. This remains a challenge seeing that disabled people around the world are still excluded, abused and killed, because of a continued lack of sense of their value and recognition of their humanity. Although people with disabilities are promoted in the political systems of South Africa and Uganda, for example, with an

understanding that people with disabilities are a group that face social inequality and injustice, not much is done regarding their inclusion in the fight against HIV/AIDS. It is of vital importance that the barriers faced by people with disabilities in developing countries need to be understood and be included in HIV/AIDS prevention programmes.

The theories concerning human behaviour discussed above are often used in HIV/AIDS intervention efforts. Many of these theories are used in planning and development of HIV intervention efforts, despite being criticized because of their emphasis on the decision-making ability of the individual. These theories rely on the assumption that relevant information on transmission and prevention will facilitate behaviour change. Ben-Zur et al. (2000) note that psychological theories provide important guidelines for understanding and preventing risky behaviour in relation to HIV/AIDS and focus on rational decision-making.

Despite the critique levelled against these theories and models of human behaviour they are still deemed to be useful and very prominent in HIV intervention programmes. Tillotson and Maharaj (2001) stated that although socio-cultural and contextual factors are of paramount importance in HIV prevention initiatives, the individual is still important in sexual decision-making. As will be seen in the following chapter, the intervention studied in this dissertation attempts to take account both of individual level behaviour change theories and of broader social, cultural, and power issues.

CHAPTER 4 RESEARCH METHODOLOGY AND METHODS

4.1 Research Design

The research design in this thesis is primarily quantitative in nature (a pre-test – post-test – follow-up study). In addition a qualitative approach will be used to provide as many pointers as possible to understanding a very under-researched problem – HIV risk for adolescents with visual impairments. The reason for using multiple methods was firstly to determine whether the intervention works, using quasi-experimental design, and secondly, to record key aspects of what happened during the course of the intervention. The qualitative data were collected to gain a sense of the reaction of participants and to explore underlying issues that are possibly related to participants' engagement in risky sexual behaviour. It is helpful, briefly to discuss the different emphases of quantitative and qualitative research methods.

Quantitative research is generally defined as a process of collecting data by using standardized quantitative measures and can be applied to large samples (Durrheim, 2006). The data are manipulated through statistical techniques which are open to replication measures and inspection by others, and allow us to make comparisons. Statistical precision and transparency of methods are key, and generalizability depends on the conventions of statistical significance (Durrheim, 2006; Hartley & Muhit, 2003).

Qualitative research, on the other hand, is often naturalistic; less concerned with statistical accuracy, allows the researcher to do in-depth investigations and to be flexible and iterative. Tillotson and Maharaj (2001) and Jacelon and O'Dell (2005) emphasize the advantage of qualitative research as a very effective tool which adds to human understanding of risk behaviour and the contextual idiosyncrasies that affect attitudes, beliefs and behavioural practices. Researchers argue that qualitative investigation is essential to generate a deeper understanding of the attitudes, beliefs,

perceptions of adolescents, and how it affects risk behaviour and safe sex practices (Hartley & Muhit, 2003; Latkin & Knowlton, 2005). It provides insight into the risky behaviour of participants as well as into personal meaning around risk and protection behaviours, such as risky sex versus safe sex and the opportunity to analyse these data in a meaningful way. Small sample sizes are commonly used in qualitative research (Durrheim, 2006).

Durrheim (2006) defines analysis of qualitative data as follows:

It is a process which seeks to preserve the integrity of narrative data and to explore the different perceptions and meaning (themes) embedded in the data (p. 47).

Hartley and Muhit (2003) stated that qualitative research can help bridge the gap between scientific evidence and clinical practice and may help us to get a better understanding of the underlying issues and concerns related to the topic under investigation. They further argue that there is a need for qualitative research in order to collect culture and disability specific information which may not be easily obtained through the use of quantitative methods. They also indicated that the low prevalence rate of some disabilities make it extremely difficult to draw statistically significant conclusions from quantitative studies.

Quantitative outcomes data and qualitative process information used in this research explore different aspects of the same research problem and enhance our understanding of the complexities of the different factors that impact on the risk taking behaviour of participants. Makubalo (1993) has argued that qualitative and quantitative methods together are complementary in AIDS research, and each approach enhances the other when appropriate. Bartholomew et al. (2006) and Brown (2001) indicated that the two approaches together can provide more comprehensive and practically useful information about the target group under investigation and can greatly strengthen the usefulness of any study for future research.

In summary, in this study a quasi-experimental quantitative approach was used to analyse measured data, and to explore the relationship between variables over time to determine the effectiveness of the HIV intervention programme. In addition, qualitative process information was used to provide a better understanding of the processes that transpire in the sessions of the delivered HIV/AIDS Intervention.

4.1.1 Aims of this study

The objectives of this study have been stated in Section 1. The focus is primarily on the **outcome study** which aimed to develop and evaluate an HIV/AIDS intervention programme for adolescents with visual impairments. This study was motivated by the lack of research in this area and the absence of tailored HIV/AIDS prevention programmes for visually impaired people. The secondary component of this research study was a qualitative approach to glean process information regarding the intervention and to gain a deeper understanding of the concerns and experiences of participants in terms of HIV/AIDS sessions of the intervention. Each of these methods is dealt with separately below.

4.2 Outcome study

The following hypotheses were stated formulated regarding the outcome study.

4.2.1 Hypotheses

The researcher hypothesized that after completion of an HIV prevention programme described in detail later,

- 1 The HIV intervention programme would demonstrate a significant positive change in:
 - HIV knowledge
 - HIV-related attitudes
 - Risk behaviours related to HIV

- Risk behaviours related to HIV in the context of substance use in the intervention group, when compared to the control health promotion condition
- 2 This change would be maintained at three months follow-up.
 - 3 Owing to the fact that it was impossible to control contact between the experimental group and the control group at the same school, it was hypothesized that through diffusion of innovation, the control group at this school would score higher at post-test and follow-up than the control groups at the other school catering specifically for learners with visual impairment in the Western Cape, on the four variables studied, but would still score lower than the score of the experimental group.

4.2.2 Participants

For purposes of this empirical investigation I focused on adolescents and young adults ranging in age from 15 years up to 23. Two study sites were selected which reflect the universe of schools catering especially for adolescents with visual impairments in the Western Cape. All the participants in this research study were learners based either at the Athlone School for the Blind in Bellville South or at Pioneer School for the Blind in Worcester, the only two schools of this kind in the province.

4.2.3 Description of the study sample

Athlone School for the Blind and Pioneer School both accommodate learners with visual impairments but there is a marked socio-economic difference between the two study sites. Participants at the Athlone School for the Blind are entirely from disadvantaged communities with a black population of 46%, while a large proportion of participants from the Pioneer School are from advantaged white communities. The schools therefore differ in terms of ethnicity, educational levels of

families and socio-economic circumstances as well as institutionally. Historically white institutions like the Pioneer school have a history of better funding.

4.2.4 Design

In order to test the hypotheses of this study, an experimental and three comparison groups were established. Participants in this study were assigned to four different conditions with one experimental group and three comparable groups. The decision to have three control groups was to ensure that a substantial number of participants formed part of the study and secondly to determine the impact of diffusion (to be discussed later). We decided to have one experimental group; all grade 10s and 11s that received the HIV prevention programme [N=17] at the Athlone School for the Blind and one comparable group similar in age at Pioneer School. The average age of the two groups was more or less the same and both groups were in the Further Education and Training Band (Grades 10 to 12). We decided to take the seventeen grade 10s and 11s at Athlone School for the Blind as the experimental group, primarily because they have just entered the adolescent stage and will be faced with various issues pertaining to sexual decision-making and they will also stay longer at the school to complete the study. It was not possible to involve the matriculants as they were, because of academic reasons, too busy to be part of a lengthy intervention programme. The learners in these groups were blind or partially sighted. Another comparable group (grade 12's) with an average age of 19.5, at Athlone School for the Blind was compiled, firstly to ascertain the possibility of a diffusion of innovation, and secondly, to increase the number of participants for this study. Another group of participants (grades 7, 8, and 9 learners) at Pioneer School also participated in the study. The reason for including this group was to increase the number of participants in the sample, and also to gain some information on younger adolescents. They were younger than the participants in the other three groups (average age was 15.18). We decided to keep this as a separate, 'young' group and believed that the inclusion of such a young group would be beneficial to this study, adding to the pool of respondents. The target group for this study comprised

adolescents and young adults between the age, of 15 and 23 years who were assigned to the four groups. The sample represents the universe of children with visual impairments in the Western Cape in the respective grades.

The experimental group were subjected to a full intensive intervention programme (HIV prevention programme) while the control groups received a health promotion programme that constituted an attention placebo. Participants in the experimental and control groups received a pre- and post-intervention questionnaire immediately before and after the HIV prevention programme. The programme's longer term impact was assessed with a three months (delayed) post-intervention follow-up evaluation.

In Figure 8, the groups and research design are illustrated.

STUDY SITES	Target groups	Pre-test assessment	Experimental Condition (8 Session intervention)	Comparison groups (health promotion- 4 sessions)	Post-test Assessment	3 months follow-up
Athlone School for the Blind	Grade 10/11 (<i>N</i> = 17) (Experimental group)	X	X		X	X
	Grade 12 (<i>N</i> = 15) (Control Group 3)	X		X	X	X
Pioneer School	Grade 10/11/12 (<i>N</i> = 15) (Control Group 2)	X		X	X	X
	Grades 7,8,9 (<i>N</i> = 11) (Control Group 1)	X		X	X	X

Figure 8 Illustration of the research design and procedure

In the design of experiments randomization is normally used. According to Ferguson (1987) the purpose of randomization is to ensure that extraneous variables which are concomitant with the dependent variable, and may be correlated with it, will not introduce systematic bias in the experimental results. In this study however it was impossible to ensure that the groups were randomly assigned because existing classes were assigned to groups on the basis of classes which were not random. Some researchers call this a quasi-experimental design. All the respondents formally indicated their willingness to participate in the study. They were selected and grouped according to their grades.

In two of the control groups the level of education ranged from grade 10 to 12, while the education level of the third control group ranged from grade 7-9. The level of education of the experimental group was grade 10 and 11. No significant differences with respect to any of the demographic variables could be found in the study sample. All of the participants were either partially sighted or totally blind.

4.2.5 Ethical considerations

Participants were fully informed about the purpose of the study and confidentiality was assured. Sufficient time was spent before and during the intervention to explain the process to all the participants. This was done in order to ensure that all the participants understand the process. Participants were informed about the actual purpose of the study, the reason for their participation was explained and they were fully briefed about how the information will be disseminated and how it would be used. A good relationship was established with participants to facilitate open communication and to overcome possible ethical problems that might occur. Participants were told that they had the right to withdraw at any time and that professional support would be available when and if needed. They were told that I would conduct the research and that other known professionals would be introduced during some of the sessions.

This process was preceded by solitary parental consent (See Appendix 3) indicating that the parent consented that his/her child could participate, while participants themselves were requested to sign an assent form (See Appendix 4) before taking part in the study. Consent forms were mailed to the parents of participants. This was followed by a telephonic confirmation and parents were briefed on the objectives of the study. All recruitment procedures and parental consent forms as well as participant assent forms as approved by the Ethical Committee of the University were completed (See details Appendix 5). This study was approved by the Ethical Committee of the University.

4.2.6 Description of the instrument

The research instrument, a questionnaire (See Appendices 1 and 2) was designed by the researcher to ascertain the knowledge, attitudes/beliefs and sexual behaviour of the adolescents and young adults with visual impairments. The basis of the questionnaire items were compiled and adapted from the Condom use Self-efficacy Scale (CUSES), Attitudes towards Condoms Scale (ATCS), concerned with comfort, embarrassment, sexual arousal and interruption of sexual behaviour, and safety and reliability of condoms, the Sexual History Questionnaire (SHQ) cited in Hunter (1998). Items from the HIV Knowledge Questionnaire (HIV-KQ-18) (Carey & Schroder, 2002) and the HIV Knowledge Questionnaire (HIV-K-O), (45 item version) of Carey, Morris-Beedy & Johnson (1997) were also included. The CUSES was used to measure expectations of success in obtaining, using, disposing of, and negotiating the use of condoms. The original scale demonstrated good internal consistency (Cronbach's alpha, .91) with a test-retest stability of .81 (Hunter, 1998). The psychometric properties of the Attitude towards Condoms Scale in previous research were also found to be strong with an internal consistency of .93 and a test-retest stability of .84. The original SHQ is an 18 item behavioural questionnaire which was used to determine current high risk sexual practices of female college students and their sexual history of the last three weeks. HIV/AIDS knowledge was assessed using items of the HIV-KQ-45 because knowledge is a key component of

the HIV intervention intended to enhance risk awareness. It was originally developed using formative work for people with a low level literacy skills. The psychometric properties of the original instrument (HIV-KQ-45) yielded high internal consistency (alpha .91). The HIV-KQ-18 was developed from the HIV-KQ-45 and also proves to be psychometrically strong with a internal consistency ranging from .75 to .89 and test-retest stability. Carey, et al. (1997) noted that the HIV-KQ-18 demonstrated its sensitivity to knowledge changes due to HIV interventions. Additional knowledge scale items were included from Tate, Longo and Imhof (2002, p. 197). The questionnaire consisted of four sections, each of which is discussed below.

The first section of the questionnaire focused on knowledge. It consisted of 56 questions concerning: the cause, transmission, consequences of HIV/AIDS, and prevention methods employed to combat HIV/AIDS. Respondents were confronted with statements regarding the transmission and prevention of HIV/AIDS. Participants were asked to respond by using the 'true', 'false' or 'don't know' rating scale. The main objective was to gain a realistic insight and understanding of their knowledge of HIV/AIDS.

The second part of the questionnaire assessed attitudes, and consisted of 32 items. In this section respondents gave their views on certain statements presented. The response categories for the attitude section were based on a 5-point Likert scale using the agree-disagree continuum, ranging from "strongly disagree" to "agree strongly" with a 1 "strongly disagree" to a 5 "agree strongly" point value assigned to each chosen response. The aim of this section was to assess attitudes of positivity versus negativity towards condoms use and towards people infected with HIV/AIDS. Scoring was reversed for certain items so that higher scores reflect higher perceived normative support for the use of condoms and people infected with HIV/AIDS while negative attitudes are reflected by lower scores.

The third part of the questionnaire consisted of two constructs. Behaviour 1 (item 1 to item 9.2.5) evaluated respondents' involvement in any risky sexual behaviour, and Behaviour 2 (item 10.1 to 16.2), measured the relationship of risky sexual behaviour in the context of substance use amongst participants. Questions were presented in a yes/no format.

The fourth section of the questionnaire focused on the demographic characteristics and background of the respondents, covering their age, gender, home language, ethnicity, current grade, their visual status and school they were attending. The questionnaire was conducted in the preferred written language of the respondents - the schools in question gave instruction in English and/or Afrikaans. The questionnaire was therefore translated into Afrikaans and respondents completed it either in Afrikaans or English. In order to accommodate all partially sighted participants, adaptation needed to be made to ensure that the questionnaire was accessible. The font size was adjusted to 16 or bigger or smaller depending on the needs of each participant. Participants were allowed to use assistive devices to ensure that they could answer all the questions. Blind participants were provided with a Braille copy of the questionnaire and their responses were recorded in Braille. All the Braille answers were transcribed into script writing by a specialist in this field to ensure accurate transcription.

The measuring instrument (Appendix 1) was developed for this research study to measure the knowledge, attitudes, and safe behaviour practices and risky sexual related to substance abuse among visually impaired adolescents. The internal consistency reliability of the measuring constructs (attitudes and behaviour 1 and 2) of the compiled questionnaire was found to be satisfactorily at pre-test, post-test and follow-up. These scores are provided on p.128.

4.2.7 Pilot study

Prior to finalization of the questionnaire, a pilot study was conducted using four

adolescents with visual impairments (two blind and two partially sighted), none of whom was currently attending school, but who had similar educational backgrounds to the participants. The pilot study was conducted:

- to ensure that all the items and instructions were clear and easily understood
- to ensure that all the questions were written in a language that all learners would be able to answer
- to identify the shortcomings in the questionnaire
- to ensure that the instructions for all Braille candidates were clear and easy to follow.

Based on recommendations and problems experienced by respondents in the pilot study, the necessary changes were made.

4.2.8 Procedure

4.2.8.1 Access to study sites and consultation with the disability sector

The two schools identified as study sites fall under the Elsen (Education for learners with special educational needs) Directorate of the Western Cape Education Department, which granted permission for conducting this research (see Appendix 6). Access to the respective study sites was negotiated and the principals and school governing bodies of both schools enthusiastically supported this research, and their cooperation was remarkable. We also informed the South African National Council for the Blind (SANCB) of our research. They supported this research and mentioned that this study would potentially make a valuable contribution to the well-being of this marginalized minority group. It was also their belief that this research could make a significant contribution to the fight against the HIV/AIDS pandemic.

4.2.8.2 Completion of questionnaires

Questionnaires were completed by all the participants in April 2004, before the

intervention (pre-test), immediately after the intervention (post-intervention) and 3 months later (follow-up), during the second quarter of 2004. One experienced fieldworker was used to oversee the completion of the questionnaires. The fieldworker did not know which of the groups had received the intervention, and which were comparison groups. In some cases questions were read to respondents to ensure that everybody understood the questions. It took 90 minutes to 2 hours to complete a questionnaire.

This instrument as compiled (see Appendix 1), was used for this purpose. The participants were assured that the information in the questionnaires would not harm them in any way and that generally established principles of confidentiality and anonymity would be maintained. The target groups were informed that their participation was voluntary and they could withdraw from the study whenever they wished.

4.2.9 Details of the intervention and control condition and their implementation

4.2.9.1 Data analysis

All comparisons between treatments of variables were done by using firstly parametric methods like MANOVA, repeated measures MANOVA or repeated measures ANOVA, where appropriate. The within subject factor (time) had three levels; pre-test, post-test and three months follow-up. Chi-square analysis were conducted to determine whether there was any association between groups and behaviour 2 items (see details in Appendix 11, items 9.1.1 to 16.1), indicating a decrease in sexual risk taking behaviour.

At the 3 months follow-up, 56 participants from the original sample (N=58), were retained and the participant attrition rate was 3.45%. We are therefore reporting on all the participants up until post-test, but in analyses including follow-up data we could only report on 96.5% of participants. For the intervention to be successful, the

results should show that the experimental group exhibited increased scores on the dependent variables when compared with the control groups over time. Data were analyzed using the Statistical Package for Social Sciences (SPSS) Version 14.

4.3 Process study

4.3.1 Purpose of the study

The outcome study is our main study and findings and conclusions will depend on the results of the outcome study. However, we decided also to look at the process data as their may be factors which would be worth looking at and be useful for further research.

4.3.2 Methodology

This qualitative study tracked the process of what occurred in the experimental group sessions, and also recorded the interventions used, in some detail. Curriculum content was based on the researcher's experience of adolescents with visual impairments, and recommendations of key informants (see Section 2). This study was also used as an exploratory method of inquiry, in which seventeen respondents participated in an informal, but structured group discussion related to a specific topic. Hartley and Muhit (2003) emphasize the importance of qualitative research methods in research on disability and argue that they provide the opportunity not only to listen, but also to include the voices of the vulnerable population in programme planning. They put it as follows:

it educates quantitative researchers about the people and their perceptions, beliefs and practices (p. 103).

4.3.2.1 Data collection

The sessions were conducted by the researcher, assisted by a professional nurse during sessions on condom use. This was done in order to ensure confidentiality and increase participants' willingness to share. Two openly HIV-positive presenters also assisted, as described below. All the sessions were audiotaped and transcribed. Eight sessions were conducted and focused on the topics as described in the curriculum below.

4.3.2.2 Data analysis

It was important that a method be used that would encourage, as far as possible, unprejudiced and unbiased analysis of the data. All the data of the workshops were transcribed verbatim and the transcripts were subjected to content analysis. The researcher is an 'insider' with some experience of working with adolescents with visual impairments and was trying to learn more about the issues touched on by research study from the participants' point of view. My own subjectivity clearly cannot be discounted in the analysis. We decided to use content analysis which is well suited for our research purpose as well as our goal to provide an opportunity to adolescents and youth with visual impairments to communicate their opinions, thoughts and needs, voice their concerns regarding sexuality and HIV/AIDS and to develop their voice for recognition in a society which creates disabling barriers for people with disabilities. Through this study an opportunity was created whereby participants could speak for themselves, and share their experiences. Respondents could help us to understand and identify those factors that were affecting them on a personal level and contextually, which may contribute to their vulnerability for HIV/AIDS infection.

Content analysis can be defined as the systematic, objective, and replicable technique for compressing many words of text into fewer content categories based on explicit rules and coding (Berelson, 1952 cited in Graneheim & Lundman, 2004;

Krippendorff, 1980; Marks & Yardley, 2004; Neuendorf, 2002; Stemler, 2001). In the analysis of these data, thematic content analysis was used. According to Burnard (1991) thematic content analysis has been adapted from Glaser and Strauss' 'grounded theory' approach and from other work on content analysis. Thematic content analysis is defined as an interpretive process whereby the researcher identifies, codes and categorizes the descriptive data according to content, style or both (Neuendorf, 2002). Marks and Yardley (2004) define thematic content analysis as follows:

it is similar to content analysis, but the focus is more on qualitative aspects of the material analyzed (p.56).

According to Joffe and Yardley cited in Marks & Yardley (2004) thematic content analyses often draw on two types of themes:

- **manifest content of the data** (refers to something directly observable from the data, such as a participant's explicitly mentioning social rejection), and
- **latent content level** (which refers, for example to discussions in which social rejection is implicitly referred to but not explicitly mentioned).

A challenge to researchers interested in latent themes is to be able to link themes systematically and transparently to manifest material.

The transcriptions of recorded data were analyzed by the researcher following Burnard's (1991) guidelines for thematic content analysis. The data were categorized and read through with the intent to generate key ideas, words, phrases and verbatim quotes that capture the sentiments expressed and using ideas to formulate categories of concern and placing ideas and quotes in the most appropriate categories. In this way the researcher engaged in a process to become immersed in the data (Burnard, 1991). The researcher attempted initially to generate as many categories as seemed necessary, then to group these categories and hence to reduce the number of

categories to a manageable number. Transcripts were then re-read to see if all the transcripts of the focus groups were covered by the categories generated. Where necessary, quotations, words or phrases were recategorized into more appropriate themes. The themes generated will be presented as the major headings for the findings.

4.4 DESIGNING THE PILOT PREVENTION PROGRAMME

4.4.1 The overall approach

In prevention interventions, although there is a place for teacher-centered delivery of information or lectures, interactive or participatory methods have been proven to be more effective in changing key HIV/AIDS-related behaviours, such as delaying the age of sex debut, increasing confidence in using condoms, and reducing number of sexual partners (Shisana et al., 2005; UNAIDS, 2006).

4.4.2 Focus of the HIV/AIDS prevention programme

The programme intended to address all known salient issues and concerns amongst adolescents and young adults with visual impairments regarding HIV/AIDS with the aim of preventing HIV risk behaviour. It also intended to create a consciousness and an environment that could spur appropriate behavioural change. In this process we planned to examine some of the key factors that leave adolescents and young adults with visual impairments vulnerable to HIV infection. Through this intervention we hoped to empower them with appropriate skills in order for them to cope with issues that could increase their vulnerability for HIV infection. In many ways they would share their own experiences and help us to understand and depict some of the factors that were affecting them. This intervention intended to engage participants through an interactive learning process and to equip them with appropriate AIDS prevention strategies to facilitate attitudinal and behaviour change, which are needed to practise safe sexual behaviour in real life situations.

In order to appropriately address HIV prevention for people with visual impairments, one has to consider how individuals function as subjective and objective participants within their context and determine how they react to this HIV intervention programme.

The programme method was designed to increase participant motivation by integrating HIV prevention with goals relevant to the marginalized group.

4.4.3 Theoretical framework

The importance in theory in HIV interventions was discussed earlier in Section 2 (pp. 31-32). According to Harrison et al. (2000) many interventions are poorly designed in terms of objectives, content, and theoretical basis and do not place sufficient emphasis on the development of cognitive skills. They concur that interventions must be based on cognitive models, which have demonstrated effectiveness.

This HIV/AIDS prevention programme for people with visual impairments derives from approaches owing their origin to social cognitive theory as discussed in the literature (Section 3, Chapter 3), and is rooted in culturally sensitive interventions for skills-building activities, sexual negotiation and condom use. It also aims to resolve contradictions between risk behaviour and beliefs about HIV transmission, as well as to build skills to engage in a repertoire of safer behaviour. The reason for using social cognitive approaches was that there are common elements underpinning a social cognitive approach, elements which have been found to be important in the fight against HIV/AIDS and which are important for the empowerment of learners with visual impairments. These elements include the importance of personalizing information and risk, increasing motivation for change and action, enhancing personal ability to act, understanding and influencing social norms, and developing enabling environments. Mitchell, Kaufman and the Pathways of choice and Healthy ways project team (2002) highlighted the fact that behaviour, cognitive and other

personal factors, and environmental influences interact as determinants of each other.

Research by McIntyre (2004) found that prevention programmes that go beyond demonstration projects and address a balance of knowledge, attitudes and skills, such as communication, negotiation and refusal skills have been most successful in behaviour change.

4.4.4 Intervention procedures

The experimental intervention consists of eight 90 to 120 minute sessions held weekly. Each session focused on a specific curriculum topic developed for visually impaired learners. Each session after the first one began with a review of key issues and issues identified in the previous session.

4.4.4.1 Programme design

The main purpose of this HIV/AIDS prevention programme is to prevent HIV risk behaviours. Siegel (cited in Hollar & Snizek, 1996) emphasizes that persuading infected or at-risk individuals to refrain from behaviour implicated in the transmission of human immunodeficiency virus (HIV) would remain the predominant health strategy for controlling the treat of AIDS, until an effective treatment or vaccine is available.

The choice of an intervention programme was taken after an in-depth literature review. Many HIV intervention programmes were found to be useful for this purpose. I decided to use a modified intervention programme, which derived from a program used by Slonim-Nevo (2001), and the intervention of St. Lawrence, et al., (1995). The original intervention of Slovin-Nevo was used on 139 adolescents in residential centres in Israel. The intervention had a significant and positive effect on the treatment groups' knowledge about HIV/AIDS, attitudes towards prevention

and coping with HIV/AIDS-related high-risk situations. The intervention of St. Lawrence et al. (1995), which focused on African American adolescents, reported that both males and females in the treatment group benefited from the skills training intervention with lower rates of risky behaviour and the sustaining of safer alternatives for those youth who were sexually active and was successful in delaying the onset of sex among young adolescents. Pedlow and Carey (2004) compared various interventions and highlighted the fact that this programme, like others, targeting cognitive factors associated with risk taking, proved to be very effective in HIV interventions. They found that respondents exposed to this intervention engaged less in sexual activity and it also deterred the onset of sexual activity for abstinent youth. A few more items were added to the intervention programme based on my experience of the needs of people with visual impairments and the key informant interviews. The rationale for using and adapting these programmes was because they provided a comprehensive curriculum that contains most of the material that address the HIV-related educational needs of adolescents with visual impairments, although the instruments had to be adapted to the context of the target group. These topics for example include, sexual decision-making, social skills, communication and negotiation skills because they lacked experience in handling sexual situations, technical competency skills to use condoms and refusal skills.

According to St Lawrence et al. (1995), adolescents tend not to personalize their risk for HIV infection. In this regard adolescents with visual impairments are no different as they may believe that they are not at risk of HIV infection. It appears that this perception has its origin in the fact that many children and adolescents with visual impairments are overprotected by their parents which may result in a degree of helplessness and passivity that seriously undermines their ability to make sound and independent decisions (Davies, 1996). Content concerning sexual decision-making skills was therefore included to teach participants sound decisions-making skills and to negotiate safer sex with their partners. In order to sensitize participants concerning their own vulnerability of HIV infection, HIV positive speakers were included to promote risk recognition.

Davies (1996) highlighted the fact that children with visual impairments are not easily accepted by sighted peers. During the adolescent years social interaction becomes a prime concern and because they lack social skills due to their visual impairment, it may be difficult for them to conform to adolescent norms. The lack of social skills such as communication and refusal skills, and assertiveness skills may interfere with the adolescents' acceptability to sighted peers. These concerns were addressed in the intervention so that students could be empowered to refuse pressure to engage in unprotected sex, to negotiate condom use and to communicate safe sex practices with their partners.

The programme focussed on a balance of knowledge, attitudes and skills issues, such as communication, negotiation and refusal skills as well as other issues that were found to be important in equipping people with visual impairments, such as enhancement of self-esteem and empowerment of women. Hackerman (2002) emphasizes that the method of providing HIV/AIDS information must be carefully brainstormed in order to make a significant difference in the lives of youth and young adults. Bandura (cited in Melkote, et al., 2000) states that:

to achieve self-directed change, people need to be given not only reasons to alter risky habits, but also the behavioral means, resources, and support to do so (p. 18)

It is therefore of utmost importance that the development of material for the HIV/AIDS programme be carefully considered. Specific attention must be given to the issues that will be covered, ages involved, cognitive level of participants, ability of the facilitator, accessibility issues of people with visual impairments, materials, etc.

This intervention differs from other interventions because it was designed considering the needs of South African adolescents with visual impairments and takes into account their barriers and learning styles. The approach of the programme was different from the programmes on which it was based partly

because South African languages (both English and Afrikaans) were used. Issues addressed in the programme, furthermore focused on the distinctive lifestyle, personal experiences and the problems experienced by the target group. The intention of the activities was to ensure that messages would be perceived as being personally meaningful and relevant to adolescents with visual impairments.

Materials were customized to accommodate the specific needs of people with visual impairments, and issues pertaining to people with visual impairments were accommodated. Teaching material was adapted (transcribed in Braille or large print and tactile graphs or anatomical models were used), as well as communication styles, with the aim that participants could have equal opportunity to participate, equal access to HIV prevention material, and would participate in an enabling atmosphere which stressed the right to be different.

The atmosphere created allowed culturally and developmentally appropriate material and esteem-building activities to be structured and reinforced. The method used by the facilitator was more hands-on, while learning and active participation by participants were encouraged and activities were personalised to ensure that each participant had enough time to acquire the necessary skills. All issues were discussed with reference to participants' own life contexts. Links to social and cultural narratives and other information were integrated, so that the experience would be sensitive to the social expectations, norms, and values of the participants. These changes were made and incorporated in the programme to make HIV/AIDS prevention messages relevant to the target group, and to give the intervention the best chance of being effective. The programme was also modified to address the particular learning styles of participants.

The following topics were included in the curriculum of the prevention programme, based on the literature review on key issues in HIV prevention programmes, key informant data, and the researcher's own experience of working in this sector. The inclusion of topics selected was also based on the needs and concerns of youth with

visual impairments. The control groups received none of the interventions in the HIV prevention curriculum.

4.4.4.2 Curriculum content

The curriculum focus was on the different domains of the social cognitive variables, including knowledge and perception, self-efficacy, social norms of peers and partners, and outcome expectancies. Specific attention was given to effective condom use, negotiation skills and refusal of unsafe sex (in the context of assertiveness training).

The eight sessions dealt with the following topics:

- (1) The nature of HIV/AIDS
- (2) Understanding HIV/AIDS risk issues (risk education), being sexual responsible and accountable
- (3) The identification of personal risk (vulnerability)
- (4) Adolescent behaviour– complexities of peer influences and self-esteem
- (5) Refusal and negotiating skills to motivate healthy sexual decision-making among adolescents and reduce risky sexual behaviour
- (6) Risk reduction education (for example building behaviour that minimizes the risk of HIV/AIDS)
- (7) The empowerment of women
- (8) Behaviour change maintenance strategies.

The curriculum design, as has been mentioned, was informed by the theories discussed in Chapter 2 and the key informant study (Section 2) and drew heavily on the principles of the Information-Motivation-Behavioural skills (IMB) Model. This

model highlighted three constructs; information on AIDS transmission, the inculcation of motivation and the acquisition of behavioural skills. These constructs will be discussed below.

1. Information on AIDS transmission

According to the IMB model, information on AIDS transmission and information on specific prevention methods are key factors to change risky sexual behaviour. Knowledge is important to enable individuals to protect themselves against HIV infection.

2. Motivation

The inculcation of motivation is important to encourage participants to act on the knowledge and change their risky behaviour. This was done by focusing on future plans of participants (for example asking them where they see themselves in 5-10 years) and in that way encourages the prevention of risky sexual behaviour.

3. Acquisition of behavioural skills

The acquisition of behavioural skills is important to facilitate the translation of knowledge into behaviour change. The focus was therefore on negotiation skills, refusal skills, skills to use condoms, how to handle social rejection within one's social context as well as peer pressure, and communication skills that are necessary in ensuring the performance of specific risk prevention acts. The interactive curriculum employs skill-building activities (for example condom negotiation strategies, self-efficacy in condom use, and role-playing and group discussions), and the co-facilitation by HIV positive people.

4.4.4.3 Intervention procedure

The intervention was conducted by the researcher who audio-taped sessions, which were evaluated and analyzed. The researcher met the group prior to the implementation of the intervention programme to discuss the goals of the intervention, to address their expectations and their concerns. Again it was emphasized that sessions would be audio-taped and confidentiality was guaranteed.

I decided to do the intervention myself as this would give me the opportunity to personally experience the issues and concerns of participants, and to ensure that the programme plan and quality was not compromised. The fact that I delivered the intervention and the health promotion programme for one of the control groups myself raises methodological questions related to my influence over the process, and my triple role as a person in authority over the adolescents, intervention implementer and researcher (though I did not personally collect any of the pre-test, post-test and follow-up data). There are a number of reasons why I went this route:

- 1 This was an unfunded study and I did not have resources to pay another person.
2. The only other psychologist in the Western Cape with the experience and expertise to work with adolescents with visual impairments was employed in the equivalent position to mine at the control school (Pioneer school), and she would have faced some, though not all, of the multiple role issues I faced. In any event, she was not available to conduct the intervention.
3. Though my participation could potentially negatively influenced the outcome, there was a huge benefit from a process point of view to my being a participant and having personal experience of the intervention process.

The group met once a week and each session lasted for 90 to 120 minutes. Each session started with a new topic as planned, but key issues of the previous session

were reviewed. The structure, activities and reasons for the inclusion of curriculum topics in each session is reflected in Table 4 below.

Table 4: INTERVENTION PROCEDURE OF THE HIV/AIDS INTERVENTION FOR PEOPLE WITH VISUAL IMPAIRMENTS

SESSION PURPOSE AND GOALS	ACTIVITIES	REASONS
<p>Session 1 - The nature of HIV/AIDS</p> <p>The objective of this session was to explore and integrate knowledge skills, the identification of risk and to educate participants around HIV/AIDS. Open discussion on the topic was encouraged to get a sense of their knowledge and attitudes towards HIV/AIDS.</p> <p>Another purpose of this session was to equip participants with the appropriate and correct information, to confront them with the reality and to repudiate misconceptions.</p>	<p>1. Activities focused on issues related to this group with special reference to visual impairments. Activities focused on discussion in pairs, group discussions and role plays.</p> <p>1.1 Naming of words that participants associated with HIV/AIDS</p> <p>1.2 Group discussion to discuss HIV/AIDS to explore their knowledge, attitudes towards HIV infected people, and myths around HIV/AIDS.</p> <p>1.3 Small group discussions on methods of protection.</p> <p>1.4 Each participant gave an example of how HIV affects the body.</p> <p>1.5 Activity to personalize the HIV/AIDS issue:</p> <p>1.5.1 Do you think you are at risk for HIV infection?</p> <p>1.6 A quiz about AIDS: Students were divided into two groups and competed in answering questions in order to determine their acquired knowledge of HIV/AIDS.</p> <p>Participants were supplied with transcribed Braille Activities and Braille notes and large print notes were supplied.</p>	<p>The knowledge of participants, and specifically of what HIV/AIDS is and how it affects the body, was anticipated to be fairly poor based on the literature, key informant interviews and my knowledge of the students. Participants were provided with information to inform them on 'what the virus is'.</p> <p>In this study on HIV it was important to determine participants' prior knowledge of HIV/AIDS, (items 1.1, 1.2, 1.3, and 1.4) Through this interactive approach participants were informed about sexual activities associated with HIV transmission.</p> <p>Activity 1.5 was included in light of HBM, and was intended to assess participants' perceived vulnerability (perception of self-risk) to HIV infection.</p> <p>Social Cognitive Theory (SCT) and the IMB model underline the acquisition of knowledge as a key factor in understanding HIV, which is a prerequisite for any behaviour change. In order to change the risky behaviour of participants, information was important in order to equip participants with the knowledge and to enable them to label risky behaviour (items 1.5, 1.5.1, 1.6).</p> <p style="text-align: right;">TURN OVER</p>

SESSION PURPOSE AND GOALS	ACTIVITIES	REASONS
<p>Session 2 - Understanding of HIV/AIDS risk issues (Risk reduction)</p> <p>The main objectives of this session were to provide people with visual impairments additional information about the disease and to raise awareness around their own vulnerability for infection, which was already touched on in the first session.</p> <p>Other goals of this session were:</p> <p>To focus on the role and the marginalization of people with visual impairments in society.</p> <p>The promotion of risk recognition and discussion of perceptions of participants' own vulnerability.</p>	<p>An HIV positive man was brought into the session</p> <p>2.1 Question and answer session involving the HIV positive man</p> <p>2.1.1 HIV person provided additional information on the reality of HIV infection based on his (real-life) experience</p> <p>2.1.2 He informed the group of how he got infected</p> <p>2.1.3 how long he had lived with HIV</p> <p>2.1.4 how his life changed since being diagnosed</p> <p>2.1.5 the symptoms he experienced before being diagnosed as HIV positive</p> <p>2.1.6 his life expectancy, and the medication he was using.</p> <p>Participants interacted with the HIV+ man, touched him and could ask him any question.</p> <p>2.2. Group and pair discussions related to the HIV positive man</p> <p>2.2.1 Thoughts and feelings about HIV person</p> <p>2.2.2 Can it happen to me?</p> <p>2.2.3 What actions do not help if you are infected</p>	<p>The inclusion of an HIV positive person, and related activities, (items 2.1, 2.1.1, 2.2, 2.2.2, 2.2.3, 2.3.2) were designed to sensitize participants around their own susceptibility to HIV infection (component of the Health Belief Model) and encourage them to change their attitudes and behaviour.</p> <p>The objective of this exercise was to translate knowledge acquired into attitudinal and behaviour change. The exploration of participants' attitudes was important to enhance participants' tolerance toward HIV infected people (Activities, 2.2.1, 2.2.2, 2.3.4.).</p> <p>Close proximity can contribute to attitude change, which motivated the inclusion of the HIV + person, sharing his life experience. Adolescents must be motivated to develop skills and assets through positive empowerment and be capacitated to make attitude and behaviour changes. The IMB model underlines the importance of motivation.</p> <p style="text-align: center;">SESSION 2 CONTINUES TURN OVER</p>

SESSION PURPOSE AND GOALS	ACTIVITIES	REASONS
<p>SESSION 2 CONTINUES FROM PREVIOUS PAGE</p>	<p>2.3 Group also discussed issues such as:</p> <p>2.3.1 The vulnerability of people with visual impairments to HIV infection</p> <p>2.3.2 Are the chances of girls and boys with visual impairments higher than sighted girls and boys to get infected with the virus?</p> <p>2.3.3 What can you do to prevent any infections?</p> <p>2.3.4 Group suggestions on what people can do if they are HIV +</p>	<p>The inclusion of an HIV positive person facilitated modification in salient beliefs (TPB), which could create attitudes changes. This could enhance acknowledgement of their own risk (2.2.2, 2.3.1, 2.3.2), and the labeling of risky behaviour (ARRM) to facilitate movement from preparation (planning for change) to the action stages (2.3.3).</p> <p>TTM emphasizes the implementation of positive choices against HIV infection in order to increase the chances that those changes are maintained.</p> <p style="text-align: right;">TURN OVER</p>

SESSION PURPOSE AND GOALS	ACTIVITIES	REASONS
<p>Session 3 – The identification of personal risk (vulnerability)</p> <p>The main purpose of this session was to discuss the social and economic circumstances of people with visual impairments and to discuss which personal and environmental factors and group situations could increase their vulnerability.</p> <p>Other goals of this session were:</p> <ul style="list-style-type: none"> ▪ To focus on attitude changes towards HIV positive people and to internalize behaviour change strategies and positive attitude changes ▪ To focus on the vulnerability of adolescents with visual impairments and to address disability specific issues ▪ To focus on issues pertaining to the acceptance of people with visual impairments in our communities, especially the experience of girls with total blindness and girls with Albinism. 	<p>Activities:</p> <p>3.1 Exploration of future goals and aspirations</p> <p>3.1.1 Each participant wrote down three short term and three long term goals</p> <p>3.1.2 Participants discussed the impact of HIV infection on goals for life and modification of goals</p> <p>3.1.3 Facilitator read a story about a young girl who got infected and how it impacted on her life</p> <p>3.2 Discussion of the social and economic circumstances of people with visual impairments (disability specific issues)</p> <p>3.3 How society’s socio-cultural perceptions of people with visual impairments create the possibility for risk taking behaviour</p> <p>3.3.1 Girls who are totally blind and girls with Albinism shared their experiences with the group</p> <p>3.3.2 Debate on the possibility of exploitation of girls with visual impairments by sighted males/females</p> <p>3.4 Selection of a sexual partner (decision-making)</p> <p>3.4.1 Do’s and don’ts</p> <p>3.4.2 My responsibility when I decided to be sexually active</p> <p>3.5. What are your rights as a woman in a sexual relationship? (including sexual relationship in different cultural contexts)</p>	<p>Future goals and aspirations were emphasized (items 3.1, 3.1.2, 3.13) to motivate behaviour change. The IMB model highlights the inculcation of motivation as an important determinant of AIDS risk reduction, which does not emerge automatically from knowledge, nor change an individuals’ attitude and perception of his/her vulnerability. Activities (items 3.2, 3.3) focused on the socio-economic circumstances of participants, which needed to be highlighted to raise awareness among participants and to prevent factors that contribute to their vulnerability. Low self-esteem may contribute to vulnerability of adolescents and its inclusion is important (activities 3.3, 3.3.1, 3.3.2 and 3.4). The promotion of self-esteem is also recommended in health promotion approaches based on the Health Belief Model. Disability specific discrimination as highlighted by the social model, (items 3.3.1, 3.3.2, 3.3.5) was focused on, as discrimination may attribute to heightened risks. Activities (items 3.4, 3.4.1, 3.4.2) were focused on to improve their self-confidence and their ability to make informed choices. Women with disabilities experience discrimination also in terms of gender inequality, which motivated the discussion of their rights in a sexual relationship (3.5).</p> <p style="text-align: right;">TURN OVER</p>

SESSION PURPOSE AND GOALS	ACTIVITIES	REASONS
<p>Session 4 - Adolescent behaviour - complexities of peer influences and self-esteem</p> <p>This session was conducted primarily to determine whether adolescents with visual impairments were making decisions based on internal or external locus of control, and to empower participants to make their own decisions as far as it's possible, in order to enhance their independence in decision-making. The session aimed to help participants handle peer pressure and external factors like socio-cultural factors.</p> <p>There was emphasis on the importance of good communication skills, and specifically on how these should be applied and could contribute to a relationship of mutual understanding.</p>	<p>4. Sexual decision-making</p> <p>4.1 Group discussion on what they would do in risky sexual situations (disability specific scenarios were used).</p> <p>4.2 The group divided into three to discuss:</p> <p>4.2.1 Whether to have sex</p> <p>4.2.2 with whom</p> <p>4.2.3 under what circumstances</p> <p>4.3. Role play of threatening situation for a girl who was totally blind and in a relationship with a sighted boy. The focus was also on how difficult it was to choose the right partner.</p> <p>4.4 The facilitator provided a list of questions that participants needed to ask themselves when contemplating a sexual encounter. (These skills were trained through active debates and activities, including role plays).</p> <p>4.5 Discussions of external factors influencing decision-making</p> <p>4.5.1 Open discussion on cultural factors, issues like transport,</p>	<p>The objective here was to empower participants to make wise decisions based on internal locus of control, and promote self-efficacy in participants to adopt protective behaviour skills (Mckenzie & Smeltzer, 1997).</p> <p>The acquisition of decision-making skills is important to strengthen their capacity, improve the self-confidence of participants and to enable them to make informed choices, for example on protection if they are sexually active, or to abstain until they are ready for a sexual relationship (items, 4.1, 4.2, 4.2.1, 4.2.2, 4.2.3, 4.3).</p> <p>External factors as predisposing factors for HIV infection, for example unequal gender relations were important to discuss (item 4.5) as these may contribute to the vulnerability of women. It is only through discussions that unequal relations can be raised, considered, challenged and analyzed and the internal locus of control of women can be strengthened.</p> <p>Activities 4.5.1, 4.7.1, 4.8.1 aimed to sensitize participants around the difficulties that might affect their decision-making and volitional sexual control, and the negotiation of the use of condoms.</p> <p style="text-align: right;">SESSION 4 CONTINUES TURN OVER</p>

SESSION PURPOSE AND GOALS	ACTIVITIES	REASONS
<p>SESSION 4 CONTINUED FROM PREVIOUS PAGE</p>	<p>dependence on sighted guides etc. affecting their sexual decision-making.</p> <p>4.6 Self-esteem (Group discussion)</p> <p>4.6.1 Activity on positive stroking whereby participants mentioned at least three of their strengths, which were reported to the group</p> <p>4.6.2 Discussion of the need for social acceptance of people with visual impairments. Participants shared their experiences of acceptance or rejection in their respective communities</p> <p>4.7 Gender issues</p> <p>4.7.1 Discussion of cultural factors and gender issues and the role of women in a male dominated society and how it affected the life of women with visual impairments.</p> <p>4.8 Peer Pressure</p> <p>4.8.1 Discussion of statements by peers (for example, 'every one is doing it') and the consequences of sexual activity.</p> <p>4.9 Two participants role played a simulated situation of how they could be confronted with a situation where sex was requested, and how the views and needs of their partners needed to be respected.</p> <p>4.10 Coaching of skills in decision-making to empower people who are visually impaired to make positive choices.</p>	<p>The inclusion of activity 4.8.1 was important as adolescents are susceptible to influences of subjective peer norms. The aim was to get a better understanding of the cognitive precursors (based on TRA), of their sexual behaviour, and to encourage them to act independently from the beliefs of others and by doing that combat the social pressures for having sex. The focus was on the development of participants' own strengths and capabilities, which are crucial to positive self-esteem development (items 4.6, and 4.6.1).</p> <p>Disability specific factors affecting the vulnerability of participants were highlighted, (item 4.6.2). The perception of asexuality, which relates to discrimination against people with disability was debated to underline that this myth can be resisted, as participants are part of society, have the same needs as other adolescents, are susceptible for HIV infection and need to acquire decision-making skills to prevent HIV infection. Enhancement of self-esteem was focused on (items 4.9, 4.10). It was important to help participants realize that they do not have to accept unprotected sex or feel inferior because of their disability, and they need not to be forced into irresponsible behaviour in return for social acceptance.</p> <p style="text-align: right;">TURN OVER</p>

SESSION PURPOSE AND GOALS	ACTIVITIES	REASONS
<p>Session 5 – Refusal and negotiating skills</p> <p>In this session the focus was on cognitive restructuring. The participants were assisted in acquiring skills in alternative argumentation and in learning to refuse irresponsible sexual requests so that preventive behaviour could be maintained.</p> <p>Other goals of this session were:</p> <p>To introduce participants to alternative precautionary measures to avoid high-risk sexual encounters and eventually learn to protect themselves against infection.</p> <p>To distribute condoms to allow everybody to get used to them, touch and smell them and to ask questions.</p> <p style="text-align: right;">TURN OVER</p>	<p>5. Negotiation skills</p> <p>5.1 A woman living with HIV was introduced who disclosed her HIV status.</p> <p>5.1.1 She also informed the group about her sexual life after she discovered she is HIV positive</p> <p>5.1.2 She shared her personal sexual encounters and discussed how she negotiated the use of condoms with partners before disclosing her HIV status</p> <p>5.1.3 She discussed her own experience with female and male condoms and addressed misconceptions</p> <p>5.1.4 Discussion on the responsibility of HIV positive people in HIV prevention campaigns</p> <p>5.1.5 Group discussion (pairs) – Alternative ways to have sex to avoid risky sexual encounters. Masturbation and mutual masturbation as low risk sexual activities (Outercourse activities)</p> <p>5.1.6 Small group discussion: What to do for sex if you don't have a steady partner</p> <p>5.1.7 Group discussion of the risks of anal and oral sex. Extra information was provided.</p> <p>5.2 Two pairs discussed the dangers and negative impact of drugs and why drugs must not be combined with sex. Simulated role plays, with sexual negotiation scenarios were practised.</p> <p>5.4 Condoms distributed to break down misconceptions.</p>	<p>The reason for the inclusion of a HIV + woman (after the participation of a man in session 2) was to enlighten participants on the negotiation skills required for condom use. The fact that the woman was black whereas the man was coloured was also helpful as it open discussion on cultural issues of gender and power in South Africa. This was especially important with a diverse group of participants. (5.1.1, 5.1.2, 5.1.3, 5.1.4). Items 5.1.5, 5.1.6 and 5.3 were included to increase self-efficacy to the point where participants could feel competent to negotiate alternative sexual activities and increase their levels of condom use (SCT). In activity 5.1.7 participants were informed about how to reduce any intention to engage in similar risk behaviour activities and to effect behaviour change. Condom distribution was based on SCT principles to inform, enable, to guide and to motivate participants to promote risk prevention. The HIV+ woman enlightened the group on her experience of condoms and negated any misconceptions (item 5.4). The clarification was important to encourage the adoption of safe behaviour which is socially complicated. Items 5.2 and 5.3 intended to increase self-efficacy skills (SCT), equip participants to produce desired effects by their action and to persevere.</p>

SESSION PURPOSE AND GOALS	ACTIVITIES	REASONS
<p>Session 6 - Risk reduction education (Behaviour that minimizes the risk of HIV/AIDS infection)</p> <p>Communication skills, assertiveness and safe sex behaviours like abstinence and proper use of condoms were focused on in this skills building session. Participants were again briefed on how the virus enters the body and their risk for contracting HIV/AIDS.</p> <p>Another goal of this session was to highlight the dangers of sex combined with drugs and alcohol.</p> <p>The acquisition of assertiveness skills to ensure participants would be tolerant and be capacitated to replace risky sexual behaviour and be committed to permanent behaviour changes.</p> <p style="text-align: right;">TURN OVER</p>	<p>6 Risk reduction activities:</p> <p>6.1 Discussion and explanation of the “ABCD” Approach in the prevention of HIV. The “ABCD”- Approach focuses on: A - Abstinence, B - Be Faithful, C - Condomise, D - Disease Control</p> <p>6.2 Two pairs role played sexual assertiveness skills</p> <p>6.3 Group discussions on condoms, comparing the advantages/disadvantages</p> <p>6.4 Facilitator and Professional nurse demonstrated correct use of condoms (Step-by-step), first on cucumber and walking cane (non-threatening objects). Instructional session was first done with boys and separately with the girls and later with the group as a whole.</p> <p>6.4.1 Role play by two pairs: Convincing your partner to use a condom.</p> <p>6.4.2 Group discussion on their concerns regarding condoms and their interference with spontaneous sex</p> <p>6.5 Discuss misconceptions regarding condoms:</p> <p>6.5.1 Condoms as not 100% safe</p> <p>6.5.2 Condoms interrupt spontaneous sex</p> <p>6.5.3 Condoms are not needed in a relationship where you can trust your partner</p>	<p>Activities 6.1 and 6.2 were focused on to emphasize behavioural skills as of vital importance in performing prevention acts (IMB model). It is important to keep in mind that participants must reach a stage of behavioural intention according to the ARRM and TPB, to change risky behaviour, be able to negotiate safe sex and maintain positive behaviour change (6.3, 6.4, 6.4.1).</p> <p>Sexual communication is difficult and requires a good background in basic communication skills. It was important to ensure a level of self-efficacy be reached, which is critical in the use of condoms to facilitate behaviour change (6.4). Support was provided in the activity to enhance the motivation of participants and help them realize that using condoms was in their self-interest (SCT). SCT states that participants’ knowledge, their ability to use it, and the anticipation of success may contribute to behaviour change. According to SCT, the belief of personal efficacy is central in personal change which motivated the inclusion of activities 6.5, 6.5.1, 6.5.2, 6.5.3, 6.4.1 and 6.4.2, to convince participants that the use condoms were beneficial to them. Skills in negotiating condom use are necessary to move participants (TTM), from the preparation stage to the action stage with respect to safe sex practices.</p>

SESSION PURPOSE AND GOALS	ACTIVITIES	REASONS
<p>Session 7- Empowerment of participants</p> <p>The objectives of this session were to empower women with negotiation skills in a male dominated environment and to effectively engage and convince men to practise safe sex.</p> <p>Another purpose of this session was to establish proper skills in condoms use among participants.</p> <p style="text-align: right;">TURN OVER</p>	<p>7. The correct use of condoms</p> <p>7.1 Participants were invited to touch anatomical models to experience their shape, and practically apply the instructions to put on a male condom and inset a female condom. (Instructions were transcribed into Braille and Braille and large print notes were provided).</p> <p>7.2 The correct use of condoms was demonstrated by using models of sexual organs (penile model and a vaginal model).</p> <p>A step by step approach was followed and was practised by each and every participant (Participants were separated into single gender groups, to encourage open discussions).</p> <p>7.3 Adolescents who were totally blind and adolescents who were partially sighted worked separately to solve problems they experienced with the use of condoms.</p> <p>7.4 Group discussions dealing with issues including</p> <p>7.4.1 Who must take responsibility for safe sex?</p> <p>7.4.2 Two pairs role played the negotiation of condoms use based on the skills they acquired in the previous sessions.</p> <p>7.5 Group discussion:</p> <p>7.5.1 Group discussions, dealt with possible scenarios when they engaged sexual partners on the issue of condom use.</p>	<p>Activities were undertaken to ensure participants had the behavioural skills to protect themselves, (activity 7.1, 7.2, and 7.3). This was done in accordance with the Transtheoretical model, which states that specific needs and the stage of each individual in the group needs to be targeted for actual behaviour change.</p> <p>The inclusion of items 7.4.1 and 7.4.2 focused on gender roles and their impact on sexual relationships, with the intention to equip male and female participants and lead them to realize the impact of destructive gender and sexual norms and encourage equal gender relationships.</p> <p>We demonstrated and discussed the female condom as an empowering tool for women (activity 7.4.1, 7.5.1). Male participants were engaged to challenge the sexual division of power through discussions, and to encourage them to make a paradigm shift that acknowledged women as co-responsible for safe-sex practices and therefore entitled to negotiate safe sex and condom use.</p> <p>The activities aimed to empower female participants and to encourage the acquisition of skills that would increase volitional control for risk reduction and their ability to effectively negotiating condom use.</p>

SESSION PURPOSE AND GOALS	ACTIVITIES	REASONS
<p>Session 8 - Behaviour change - maintenance strategies.</p> <p>The objectives of this session were to facilitate and strengthen personal self-efficacy beliefs and behaviour change self-management techniques.</p> <p>Participants were briefed around skills they acquired in the programme and encouraged to implement those risk reduction strategies and maintain safe-sex practices over a long period.</p> <p>The final goal of this session was to empower female participants to prevent as far as was possible any form of abuse, rape or forced sex with their partner.</p>	<p>8. All the different topics covered in the programme were reviewed by the facilitator and participants could ask any question or even practise the correct use of condoms if they wanted.</p> <p>8.1 Group discussion on the effect of condoms on the sexual process</p> <p>8.1.1 How can continuity in the pre-sex intimacy phase be maintained without influencing decisions taken, for example to have sex or not to have sex</p> <p>8.2 Open discussion on HIV infection and the culture of not using condoms - Does trust in your partner mean that condoms don't have to be used?</p> <p>8.3 Group discussion:</p> <p>8.3.1 Debate on why women should carry condoms</p> <p>8.3.2 Provision of information on skills they could use in threatening situations, and pointers on how to apply negotiation skills in these threatening situations.</p> <p>8.4 Discussion of possible solutions to the problems they experienced with the expiry dates of condoms</p> <p>8.5 The group was also informed around the use of anti-retroviral medication in the prevention of HIV.</p>	<p>Activities in this session focused on the discussion of concerns influenced by peer group attitudes, such as early and risky sexual behaviour and safe sex versus trust relationships.</p> <p>Activities 8.1., 8.1.1, 8.2 reinforced issues covered earlier in the programme.</p> <p>Certain controversial issues (item 8.4), such as the inaccessibility of condoms in terms of the absence of Braille characters on condoms were discussed. This marginalization and discrimination as highlighted by the Social Model of Disability is a great concern for people with visual impairments. A solution proposed by the group was to confirm the expiry dates regularly and to change condoms on a monthly basis.</p> <p>The role of women/girls in the prevention of HIV was again emphasized (items 8.3.1, 8.3.2) by the facilitator, who encouraged them to carry their condoms at all times whether they were sexually active or not. Male participants were encouraged to adopt a more positive view towards women carrying condoms.</p> <p style="text-align: right;">SESSION 8 CONTINUES TURN OVER</p>

SESSION PURPOSE AND GOALS	ACTIVITIES	REASONS
<p>SESSION 8 CONTINUED FROM PREVIOUS PAGE</p>	<p>The session was concluded with feedback on participants' experiences of the programme. Participants were encouraged to abstain for as long as they could and to implement skills for behaviour change.</p> <p>The facilitator underlined the goals of the intervention and emphasized the importance of condoms, if people decided to be sexually active.</p>	<p>Activity 8.5 was included to provide relevant HIV information and to underline that anti-retroviral medication is not a cure for HIV/AIDS.</p>

The eight sessions of the programme, provided data which could modify the programme for future implementation according to the observations made and feedback from the participants (See Chapter 4). This implementation would of course depend on the evaluation of the programme.

4.4.5 Health promotion control condition

The Health promotion intervention consisted of four 90 minute sessions which focused on four domains; smoking, alcohol and drugs, as well as healthy living. It followed a didactic module format coupled with group discussions, listening to tapes and other developmentally appropriate activities.

4.4.5.1 Session 1 - The consequences of smoking

The aim of this session was to empower participants to make healthy choices and to build awareness around the effects of smoking. It was important to let participants know that they had the power to choose their future paths in regard to healthy choices, especially with regard to relationships, alcohol, tobacco and drugs. Discussions were based on skill-building activities to support participants in handling of peer pressure and problem solving.

4.4.5.2 Session 2 - Alcohol abuse

The objectives of this session were to encourage responsible decision-making and to raise awareness around the long term effects of alcohol abuse. Participants were encouraged: “DON’T START DRINKING AT ALL” Participants who had started drinking were encouraged to apply safe and responsible drinking habits. Activities were based on coaching, group discussions and the provision of information.

4.4.5.3 Session 3 - Drug abuse

The aim of this session was to create awareness around the different kinds of drugs (tik, cocaine, and marijuana etc) and how adolescents are at increased risk for drug abuse. This session focused on skills to build resiliency and life skills training like decision-making, personal control and interpersonal communication to handle peer pressure effectively. Social factors that contribute to drug abuse were also discussed. The consequences of substance abuse were also discussed in small groups. Where possible, participants were exposed to some of the drugs that are available on the streets.

4.4.5.4 Session 4 - Healthy living

The objective of this session was to have participants review the stressors in life and how these impacted negatively on the adolescent. The adolescents later discussed behaviour that was risky like substance abuse and deliberate self harm. The focus was on stress management, on the consequences of stress, and on how stress could be managed effectively. Activities included group discussions, listening to relaxation techniques on tape, didactic information, and sharing of experiences by some participants. Participants were introduced to visualization relaxation exercises as a means to teach them how to cope with stress and be able to relax effectively.

The HIV/AIDS Intervention programme and the Health Promotion Programme were conducted at the two institutions in 2004.

The outcome results will be discussed in Chapter 5, and the process data from the intervention group in Chapter 6.

CHAPTER 5 ANALYSIS OF QUANTITATIVE DATA

5.1 Introduction

In the previous chapter we discussed the aim and objectives of the research, the compilation of study groups, the research instruments used in this study, and the unfolding of the research procedure. In study 1, key informant interviews were conducted with respondents, a group with vast experience of the target population, to determine strengths and weaknesses with respect to information, behaviour and skills. The results of the elicitation research were used to create and implement an empirically targeted intervention for people with visual impairments. An instrument was used to determine the effectiveness of the HIV/AIDS intervention. For this purpose, the assessment questionnaire was completed before the intervention, immediately after and three months later.

In this chapter, all empirical data gathered and collated from the pre-test, post-test, as well as the data collected on the three months follow-up will be discussed. A discussion of quantitative results will follow, focusing on the differences amongst the three control groups and one experimental group regarding the three dependent variables; knowledge, attitude and behaviour of participants. The behaviour component was divided into two sections, Behaviour 1 (focusing on risky behaviour) and Behaviour 2 (focusing on the relationship between substance use and risky behaviour). The process of data gathering took place over a period of six months by way of a comprehensive questionnaire, administered according to the procedure as described in the previous chapter.

5.2 Background of the respondents

The respondents were from the two study sites, the Athlone School for the Blind and Pioneer School for the Blind in Worcester. Originally 58 respondents agreed to take part in the study. Eventually only 56 participants completed pre-and post intervention questionnaires and a follow-up questionnaire 3 months later. Two

participants could not be reached to complete the questionnaire with the follow-up assessments as they had moved away, and consequently were omitted from the sample.

The socio-demographic information on the respondents is provided in Table 6. The statistical information on the socio-demographic characteristics of the study sample is provided.

Table 5 Socio-demographic Characteristics of Participants (N= 58)

Groups		Control Group 1		Control Group 2		Control Group 3		Experimental Group		TOTAL	
Variable		Freq	%	Freq	%	Freq.	%	Freq	%	Freq	%
Gender	Male	5	45.45	6	40	6	40	7	41.18	24	41.4
	Female	6	54.55	9	60	9	60	10	58.82	34	58.6
Ethnicity	Black	1	9.09	1	6.67	4	26.67	6	35.29	12	20.7
	Coloured	5	45.45	8	53.33	11	73.33	11	67.71	35	60.3
	White	5	45.45	6	40	*	*	*	*	11	19.0
Current grade	7	1	9.09	*	*	*	*	*	*	1	1.7
	8	3	27.27	*	*	*	*	*	*	3	5.2
	9	7	63.64	*	*	*	*	*	*	7	12.1
	10	*	*	8	53.33	*	*	14	82.35	22	37.9
	11	*	*	2	13.33	*	*	3	17.65	5	10.3
	12	*	*	5	33.33	15	100	*	*	20	32.8
Visual status	Partially Sighted	8	72.73	11	73.33	9	60	9	52.94	37	63.8
	Blind	3	27.27	4	26.67	6	40	8	47.06	21	36.2
Language	English	2	18.18	1	6.67	2	13.33	3	17.65	8	13.8
	Afrikaans	9	81.82	14	93.33	10	73.33	10	58.82	44	75.9
	Xhosa	*	*	*	*	3	13.33	4	23.53	6	10.3
School	Athlone	*	*	*	*	15	100	17	100	32	55.2
	Pioneer	11	100	15	100	*	*	*	*	26	44.8
Age	15	9	81.8	2	13.3	0	0	0	9	11	19.0
	16	2	18.2	3	20.0	0	0	7	41.2	12	20.7
	17	0	0	3	20.0	3	20.0	5	29.4	11	19.0
	18	0	0	4	26.7	2	13.3	2	11.7	8	13.8
	19	0	0	2	13.3	2	13.3	3	17.7	7	12.1
	20	0	0	1	20.0	3	20.0	0	0	4	6.9
	21	0	0	0	0	3	20.0	0	0	3	5.1
	22	0	0	0	0	1	6.75	0	0	1	1.7
	23	0	0	0	0	1	6.75	0	0	1	1.7

Fifty-eight adolescents and young adults consented to participate in this study and completed the research instrument before and after the intervention, but the last analysis three months later could only be done on 56 participants. The socio-demographic characteristics of the total study sample (N=58) as reflected in Table 6 (p. 120) includes seven variables; gender, ethnicity, highest grade achieved and current grade, visual status, language and the school they were from. More females (58.6%) than males (41.4%) took part in the study. The majority were coloured participants (60.3%), blacks constituted 20.7%, while whites constituted 19% of the study sample. Most of the study participants were in grade 10 (37%) and grade 12 (32%), while the other grades, grade 9, (12.1%), grade 11 (10.3%), grade 8 (5.2%) and grade 7 (1.7%) represented 29.3% of the study sample.

The majority of participants (63.8%) were partially sighted while 36.2% of the study sample was totally blind. The three official languages of the Western Cape Province (Afrikaans, English and Xhosa) were represented. 75.9% of participants were Afrikaans speakers, 13.8% English and 10.3% Xhosa speakers. However, all Xhosa respondents in the sample completed the English questionnaire, which is their language of instruction. Participants in the study were from two schools for learners with visual impairments at Athlone School for the Blind (55.2%) and Pioneer School (44.2%). The proportion of participants between the age ranges of 15-19 represented 84.5% while the proportion between the age ranges 20-23 represented 15.5%. Overall the mean age of the study sample (N=58) was 17.40 years (SD=1.99), ranging from 15-23 years. The historical background on the existence of the two schools originated because of racial policies of the previous government, with separate schools for separate race groups.

A number of learners declined to participate in this study. The number of refusals and percentages of learners who did not take part in the study is provided in Table 6 below, followed by a discussion of the reasons for not taking part in the study.

Table 6: Participants Approached and Refusals**N= 13**

Groups	Pioneer School for the Blind		Athlone School for the Blind	
	Control 1	Control 2	Control 3	Exp Group
Grades	(7, 8, 9)	(10, 11, 12)	(12)	(10, 11)
Total number of learners	16	19	18	18
No. of refusals	5	4	3	1
Percentage	31.25	21.05	11.77	5.6

The intention with this research was to include all potential candidates in the study sample. However many learners were not included in the sample because of refusals, and prior academic and other commitments.

All the grade 10's and 11's (N= 17) except for one, at Athlone School for the Blind agreed to take part in the study. The learner was included in the sample, but had to be withdrawn due to absenteeism and she later dropped out of school. They became the experimental group that received the HIV prevention programme. All but three grade 12's within the age range of 15 to 23 (N= 15, out of 18) took part in the study as control group three. One refused to take part in the study while the other two had prior academic commitments. Participants at Pioneer School (grades 7, 8 and 9), were assigned to control group one (N= 1 out of 16) and eleven agreed to take part in the study (N= 11). Of the 19 grades 10-12 learners, fifteen agreed and took part in this study as control group two (N= 15). The participants who constituted the control groups received a health promotions programme. Parents of five learners (3 grade 8's and two grade 10's at Pioneer School) did not give consent to the participation of their children. They refused that their children be exposed to topics of this nature. The other learners could not take part in the study due to prior commitments. It is difficult to determine the effect that the number of learners who did not take part in the study (N= 14, 17.07%) could have had on the outcome results, although we can only speculate that it could have had an impact on the outcome of the study.

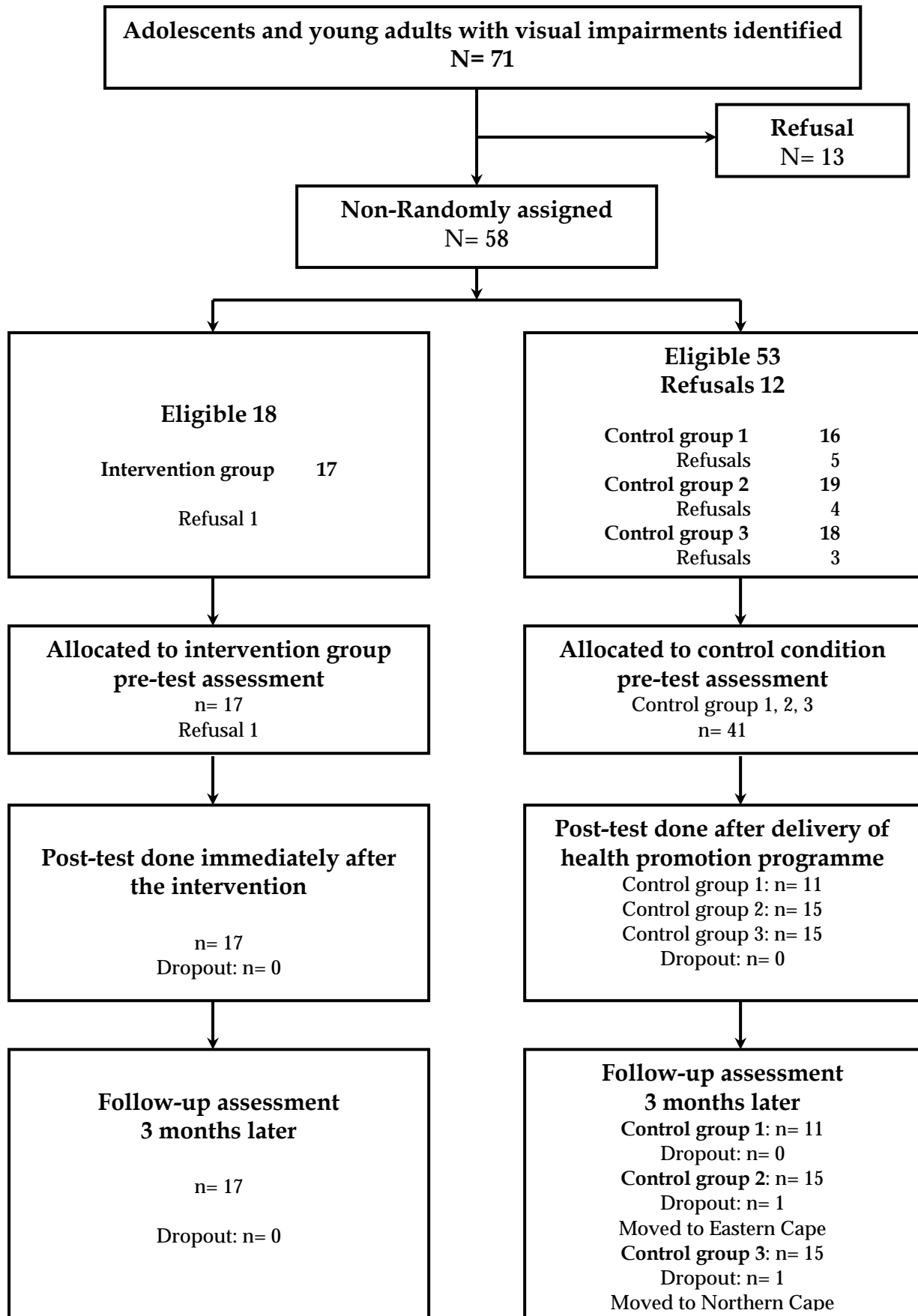


Figure 9 Diagram showing participation in study

A diagram showing participation in the study is illustrated in Figure 9 (p. 123). The diagram illustrates the number of participants that took part in this study, the number of refusals per group and dropouts.

5.3 Internal consistency of measures

The instrument contained a combination of items designed to measure HIV/AIDS knowledge, attitudes and risky sexual behaviour of participants⁴. The instrument contained a combination of items designed to measure HIV/AIDS knowledge, attitudes and risky sexual behaviour of participants. A reliability analysis was done to assess the internal consistency of the measuring construct, attitudes to HIV. The 31-item scale attitudes indicated good reliability at pre-testing (Cronbach's Alpha = 0.83) as well as good test-retest reliability at post-test (Cronbach's Alpha = 0.85). The test-retest reliability at follow-up was also found to be satisfactory, (Cronbach's Alpha = 0.72).

It was not strictly appropriate to assess internal consistency on the knowledge and behaviour items because these instruments measured diverse aspects of knowledge and behaviour, and internal consistency was not a criterion for their use. As other authors do, however, report on the internal consistency of knowledge and behaviour, report on the internal consistency of knowledge and behaviour 1 was done to be consistent with other studies. The reliability of the 56 item knowledge instrument was assessed and found to be satisfactory (Cronbach's alpha = 0.87 at pre-test, 0.82 with the post-test and 0.92 with the follow-up). Risky sexual behaviour was measured with behaviour 1, evaluating their involvement in any risky sexual behaviour. The level of internal consistency in this dependent was satisfactory (17 items, Cronbach's alpha = 0.92, on behaviour in the pre-test, 0.78 at post-test and 0.84 at follow-up).

⁴ As numbers of respondents who provided information on risky behaviour in the context of substance abuse (Behaviour 2) were low, with low reported substance abuse rates, these data are analysed separately using non-parametric methods at the end of this chapter. All parametric data for behaviour refer to Behaviour 1 (risky sexual behaviour).

5.4 Analysis of treatment effects

The initial analysis, the repeated measures multivariate analyses of variance (MANOVA), was performed to determine any interaction between membership of any of the groups, the three dependent variables and time. A power analysis conducted indicated that MANOVA could be used in spite of the small sample size. The observed power of the repeated measures MANOVA using Pillai's trace for time was .965, .862 for times and groups, and .833 for between groups and variables. The repeated measures MANOVA revealed a main interaction effect between variables, time and groups ($F=2.009$, $p<0.05$). Significant interactions were also noted between time and the variables ($F=4.211$, $p<0.01$), between groups and variables ($F=2.611$, $p<0.01$), and also between time and the groups. These results are reflected in Table 7 (page 130).

However, the interaction between time and groups as it stands is difficult to interpret since one would have to create a composite score from the scores on knowledge, attitude and behaviour. Further analysis needed to be conducted to examine in more detail where the significant differences occurred in the repeated measures MANOVA.

Table 7 Repeated measures MANOVA measuring differences between Groups and Time (Pre-test, Post-test, Follow-up) N=56

Effect	Value	F	df	df Error	Sig
Variable * Group	.286	2.611	6	94.00	.022*
Time * Variables	.277	4.211	4	44.00	.006**
Time* Variables* Group	.446	2.009	12	138.00	.028*

The following notation will be used throughout this dissertation: For p-values $p<0.05$: *, $p < 0.01$: **, $p < 0.001$: *** and if the relationship is non-significant, $p>0.05$: °

A detailed layout of the repeated measures MANOVA is included in the appendix (Appendix 6).

In order to determine if the HIV/AIDS intervention had a positive effect on the participants' knowledge of HIV/AIDS, attitudes to HIV/AIDS and intentions to engage in safer sexual behaviour, repeated measures MANOVA's were performed on the four groups' knowledge, attitudes and behaviour measurements at each of the three intervals, pre-test, post-test and 3 months follow-up. In cases where the repeated measures MANOVA's results revealed significant differences, we conducted repeated measures ANOVA's to look at differences within groups across time (for example the time and variables interaction), as well as MANOVA's to examine differences between groups on the dependent variables at each of the times.

5.5 Comparison of groups on the three variables separately at pre-test, post-test and follow-up

A preliminary comparison of group equivalency was done in order to determine whether any statistically significant differences existed between the groups before the intervention was introduced. We used the MANOVA to examine the differences between the four groups on the various variables at pre-test, post-test and follow-up. Three MANOVA's were conducted for each of the times we measured.

5.5.1 Pre-test

Pre-test scores for the four groups (three control groups and one experimental group) were compared on knowledge, attitude and behaviour, using a multivariate analysis of variance (MANOVA). These results are revealed in Table 8.

Table 8 MANOVA Pre-test Results of differences between the Four Groups at Pre-test on Knowledge, Attitude and Behaviour 1 N=56

Variable	Value	F	df	df Error	P-value
Groups	.189	1.190	9	159.00	.305 °

Results were not significant, Pillai's Trace ($F= 1.190$, $p>0.05$) yielding that there were no significant differences across groups on any of the three variables at pre-intervention.

5.5.2 Post-test

In order to determine whether the HIV/AIDS intervention was effective, it was important to compare the groups on the three variables at the different time intervals. In Table 9 below differences between the four groups were compared with the three variables over time.

Table 9 MANOVA Results of differences between the Four Groups at Post-test on Knowledge, Attitude and Behaviour 1 N=56

Variable	Value	F	df	df Error	P-value
Group	.483	3.394	9	159.00	.001**

Significant overall main effects were found on the post-test. The results in the MANOVA indicated significant differences across groups, using Pillai's Trace criterion, ($F= 3.394$, $p<0.01$) on the dependent variables (knowledge, attitudes and behaviour). These significant multivariate findings were followed by univariate tests to identify the specific variables on which differences were present. These findings are revealed in Table 10.

Table 10 Results of differences between the Four Groups at Post-test on Knowledge, Attitude and Behaviour 1 N=56

Source	Dependent Variable	df	F	Effect size (η^2)	Sig
Contrast	Post-test knowledge	3	6.742	.276	.001**
	Post-test attitudes	3	1.126	.060	.347 ^o
	Post-test behaviour 1	3	4.654	.209	.006**

Further examination of the univariate F-tests as revealed in Table 10 indicated that there were differences between the groups on both knowledge ($F=6.742$, $p<.001$) and

behaviour ($F=4.654$, $p<0.01$). Findings in Table 10 revealed no significant attitudinal differences at posttest ($F=1.126$, $p>.05$). The partial eta-squared statistic (effect size) showed that the proportion of the variance in the scores between groups at post-test explained by the intervention was .276 for knowledge and .209 for behaviour. The effect size between groups at post-test was moderately small. The intervention had a moderate effect on knowledge and a small effect on behaviour. The significant univariate findings on post-test knowledge and behaviour were followed by Scheffé post hoc comparisons of the groups on post-test knowledge and behaviour. Analysis on the Scheffé multiple comparisons test as revealed in Table 11 and Table 12, confirmed the significant changes that occurred at post-test on knowledge and behaviour.

Table 11 Scheffé Multiple Comparisons on Knowledge, at Post-test of the four groups N=56

Dependent Variable	Group (I)	Group (J)	Mean difference (I - J)	Std Error	Sig
Post-test Knowledge	Control 1	Control 3	-19.88	5.11554	.004**
		Exp. Group	-20.20	4.87296	.002**

Findings on the Scheffé post hoc analyses revealed significant mean differences for knowledge between control group 1 and control group 3 ($p<0.01$, mean difference=19.88), and control group 1 and the experimental group ($p<0.01$, mean difference=20.20). Results revealed that control group 1 scored significantly lower than control group 3 and the experimental group on knowledge, and also shown that largest mean difference exists between control group 1 and the experimental group. The experimental group scored higher than any of the other groups on the knowledge variable, which may be attributed to the HIV/AIDS intervention.

In Figure 10 these mean differences are illustrated.

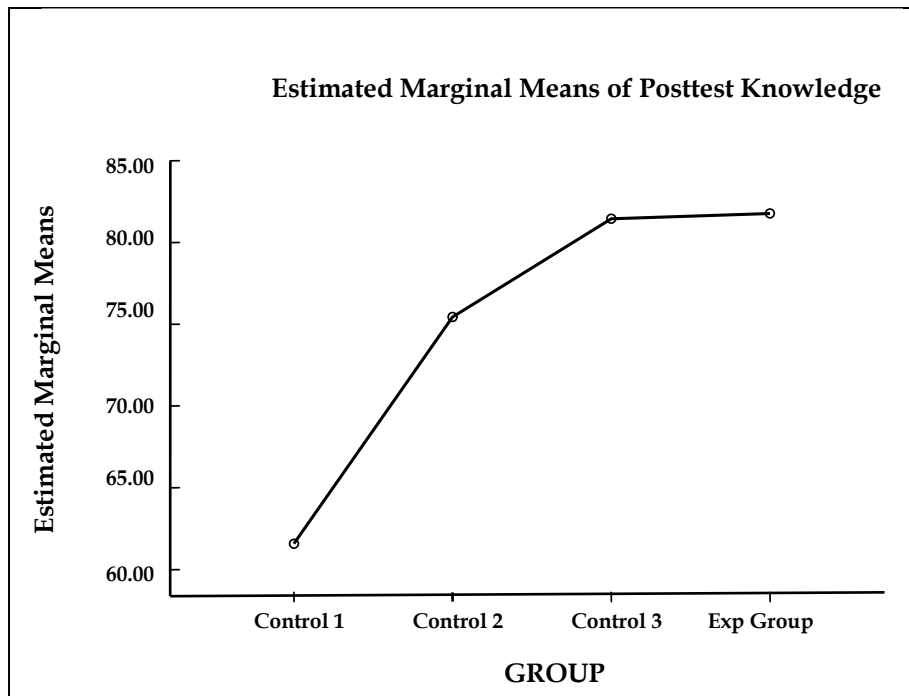


Figure 10 Knowledge Mean differences between groups in the post-test

Significant univariate findings on behaviour as revealed in Table 10 were followed by planned Scheffé post hoc comparisons (Table 12), which compare mean differences to determine where the changes on behaviour 1 occurred.

Table 12 Scheffé Multiple Comparisons on Behaviour 1 at Post-test of the Four Groups N=56

Dependent Variable	Group (I)	Group (J)	Mean difference (I - J)	Std Error	Sig
Post-test Behaviour 1	Control 3	Control 1	2.94	.939	.028*
		Control 2	2.74	.843	.021*

The Scheffé post hoc comparison results revealed in Table 12 confirmed that significant changes exist on behaviour 1 in the post-test between control groups 3 and Control group 1 ($p < 0.05$, mean difference = 2.94) and control group 3 and control group 2 ($p < 0.01$, mean difference = 2.74). The largest mean difference exists between control group 3 and control group 1 indicating that control group 3 engaged more in

high risk sexual behaviour than control group 1 (lower scores are indicative of higher risk behaviour). Mean differences yielded in Figure 11, revealed that control group 3 engaged more in high risk sexual behaviour which make them more vulnerable for contracting HIV/AIDS.

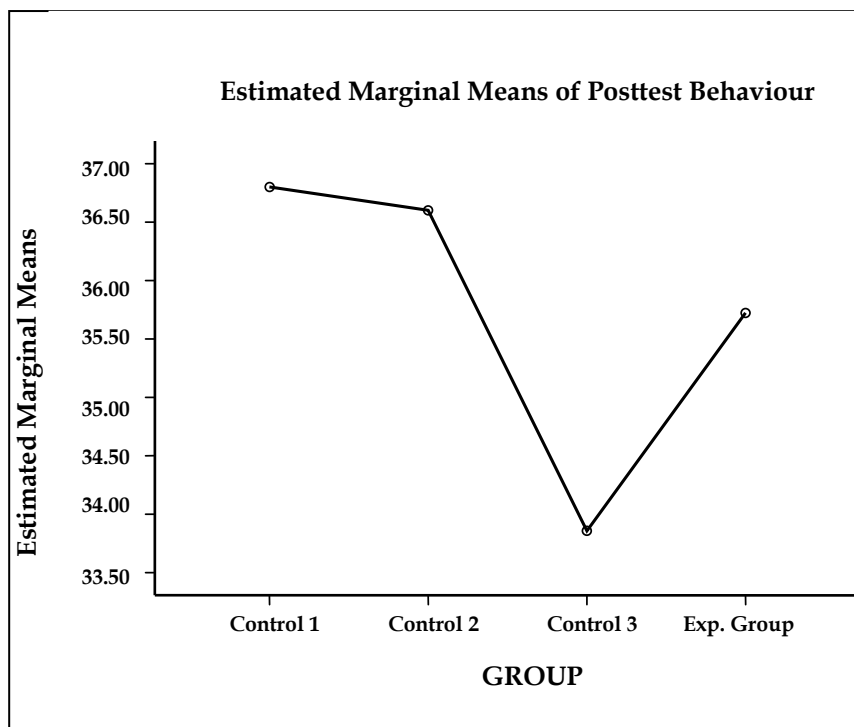


Figure 11 Means on behaviour 1 difference between groups in the post-test

5.5.3 Follow-up

It was important to determine whether the groups maintained their knowledge of HIV, demonstrated a positive attitude towards HIV/AIDS and reduced sexual risk behaviour at follow-up. A MANOVA was conducted on the follow-up data to determine differences between the four groups. These results are revealed in Table 13.

Table 13 MANOVA Results of Differences between the Four Groups at Follow-up on Knowledge, Attitude and Behaviour 1 N=56

Variable	Value	F	df	Error df	P-value
Group	.378	2.351	9	147.00	.017*

Results in Table 13 yielded significant differences across groups, Pillai's Trace criterion, ($F=2.351$, $p<0.05$), on the three dependent variables (knowledge, attitudes and behaviour). In order to determine where these significant differences were present, separate univariate F-tests were conducted.

In Table 14 results of the differences between the four groups were compared at follow-up.

Table 14 Results of Differences between the Four Groups at Follow-up on Knowledge, Attitude and Behaviour 1 N=56

Source	Dependent Variable	df	F	Effect size (η^2)	Sig
Contrast	Follow-up knowledge	3	571.136	.164	.031**
	Follow-up attitudes	3	364.194	.138	.062 °
	Follow-up behaviour 1	3	22.164	.139	.060 °

Further assessment of the univariate F-test results indicated that the only significant differences between groups was evident on knowledge ($F=3.197$, $p<0.05$). The effect size (eta-squared) of knowledge differences between groups was .164, indicating that the amount of explained variance attributed to the intervention on knowledge at follow-up was relatively small. However, Scheffé post hoc comparisons in Table 15 did not confirm any significant mean differences on knowledge, even though large mean differences existed between the experimental group and control group 2 (mean = 11.32) and the experimental group and control group 1 (mean differences = 10.49), indicating that the experimental group scored higher at follow-up than control group 1 and 2, but as this was not statistically significant we must attribute observed differences to chance rather than to the intervention.

Table 15 Scheffé Multiple Comparisons on Knowledge at Follow-up of the Four Groups N=56

Dependent Variable	Group (I)	Group (J)	Mean difference (I - J)	Std Error	Sig
Post-test Knowledge	Exp group	Control 1	10.94	5.327	.252 °
		Control 2	11.32	4.824	.153 °

A plot illustrating the mean differences of all the groups at follow-up is depicted in Figure 12.

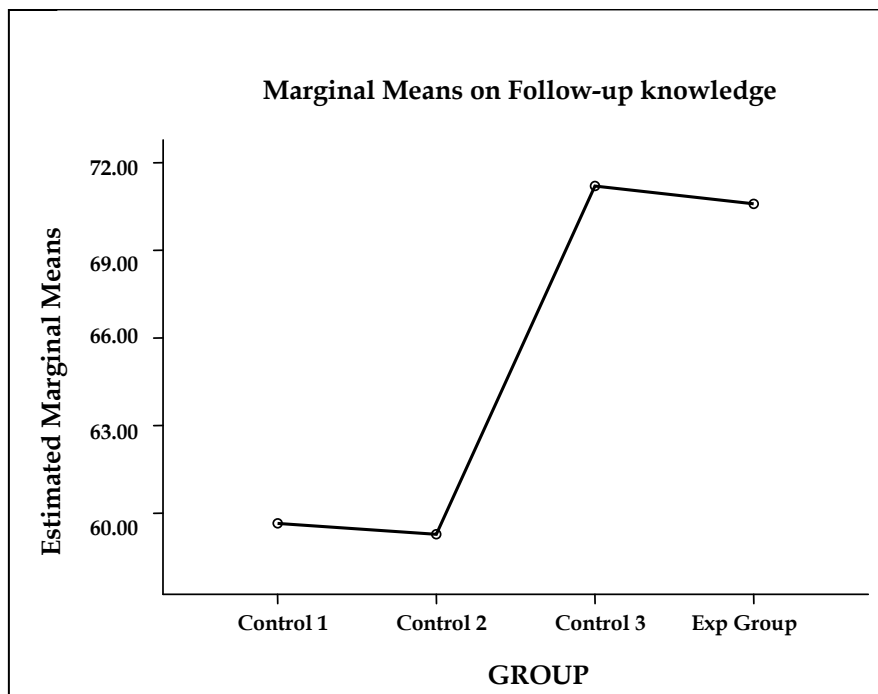


Figure 12 Knowledge mean differences between groups at follow-up

5.6 Investigation of Diffusion at Athlone School for the Blind

The hypothesis was made that a diffusion of innovation would take place due to contact between the control group and the experimental group at Athlone School for the Blind, and that this control group (Control group 3) would score higher in the post-test than would either of the other control groups. In order to investigate this

hypothesis we collapsed control groups 1 and 2 into one group and ran the same analysis again (see Table 16) to ascertain whether any significant difference could be found between them.

Table 16 Differences between the three Control Groups (Control groups 1 and 2 (New Group), Control group 3 and the Experimental group on Knowledge in the Post-test and Follow-up N=56

Variable	Value	F	df	Error df	P-value
Group	.394	3.456	6	98.00	.004**

The MANOVA revealed significant differences across groups, on the Pillai's Trace criterion, ($F=3.456$, $p < 0.01$), on the three dependent variables (knowledge, attitudes and behaviour). These findings were investigated by univariate F-tests in Table 17 to assess whether there were differences between the groups.

Table 17 Results of Differences between the New group (Control group 1 and 2) Control group 3 and the Experimental group on Knowledge at Follow-up N=56

Source	Dependent Variable	df	F	Effect size (η^2)	Sig
Contrast	Follow-up knowledge	2	856.292	.121	.011*
	Follow-up attitudes	2	478.289	.164	.040*
	Follow-up behaviour 1	2	30.330	.127	.034*

Examination of the univariate F-tests results indicated that there were differences between the groups on all three dependent variables, knowledge ($F=4.890$, $p < 0.05$), attitudes ($F=3.41$, $p < 0.05$) and behaviour ($F=3.634$, $p < 0.05$). The partial eta-squared statistic showed that the proportion of the variance in the scores between the New group and the intervention group at follow-up explained by the intervention was .121 for knowledge, and .164 for attitude, while the effect for behaviour 1 at follow-up was .127. The effect size between groups at follow-up was relatively small. These significant findings were followed by Scheffé post hoc comparisons on knowledge, attitudes and behaviour in Table 18, 19 and 20.

Table 18 Scheffé Multiple Comparisons on Knowledge at Follow-up of the three groups (Control group 1 and 2), Control group 3 and the Experimental group N=56

Dependent Variable	Group (I)	Group (J)	Mean difference (I - J)	Std Error	Sig
Follow-up Knowledge	Exp group	Control 1/2	11.16	4.195	.037*
		Control 3	0.61	4.989	.993 ^o

The results in Table 18 on knowledge revealed that the experimental group differed significantly from control groups 1 and 2 combined at follow-up. Results revealed that diffusion did occur on knowledge at follow-up at Athlone School for the Blind, with the experimental group that scored significantly higher on knowledge than the new group (control group 1 and 2) that were collapsed together, but not significantly better than control group 3 (mean = 0.61, $p > 0.05$).

A plot illustrating the mean differences on knowledge between the experimental group and control group 1 and 2 (New group) is depicted in Figure 13 (page 136). The plot illustrates that the experimental group was significantly more knowledgeable than the combination of control groups 1 and 2.

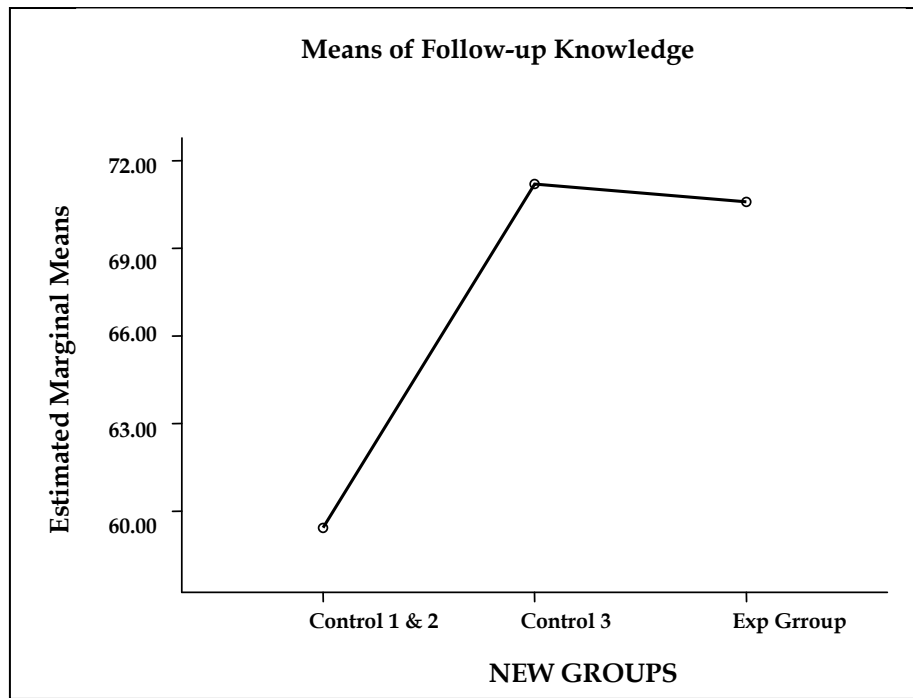


Figure 13 Comparison of knowledge means for the groups

In Table 19 below, Scheffé multiple comparisons on attitudes to HIV/AIDS of the groups are revealed.

Table 19 Scheffé Multiple Comparisons on Attitude at follow-up of the three groups (Control group 1 and 2), Control group 3 and the Experimental group
N=56

Dependent Variable	Group (L)	Group (J)	Mean difference (I - J)	Std Error	Sig
Follow-up Attitudes	Control 1/2	Control 3 Exp Group	10.17	4.175	.061 ^o

No significant differences were evident on attitudes to HIV/AIDS. These means were plotted in Figure 14, and revealed that the largest apparent mean differences were evident between the combined new group (control groups 1 and 2) and control group 3, though it is not possible to interpret this finding as it was not statistically significant.

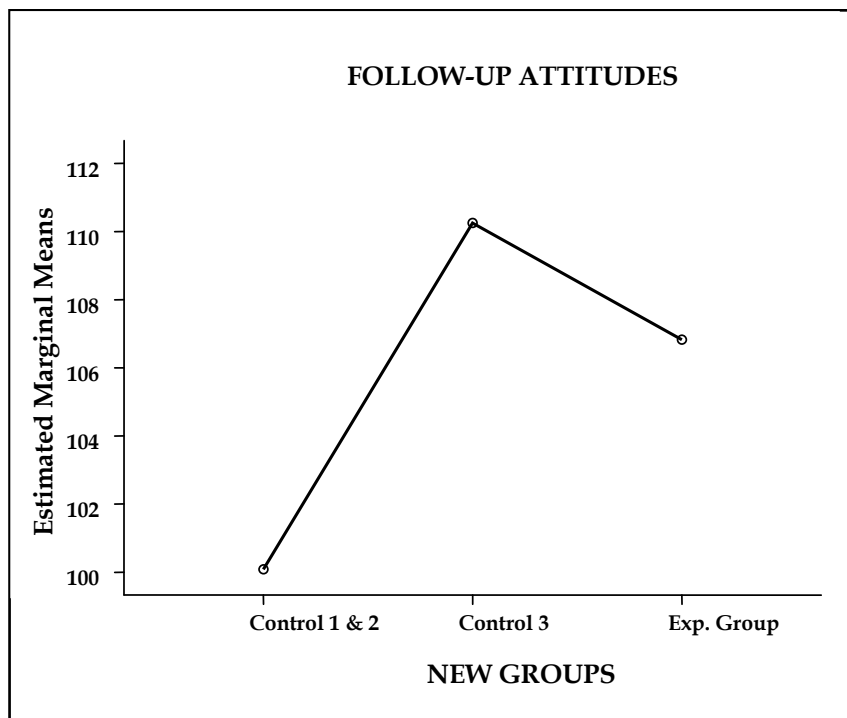


Figure 14 A plot of mean differences between groups

In Table 20 means of the groups on behaviour 1 were compared at follow-up.

Table 20 Scheffé Multiple Comparisons on Behaviour 1 at Follow-up of the three groups (Control group 1 and 2), Control group 3 and the Experimental group N=56

Dependent Variable	Group (I)	Group (J)	Mean difference (I - J)	Std Error	Sig
Follow-up Behaviour	Control 1/2	Control 3	2.75	1.021	.034*

A comparison of behaviour 1 means between control group 3 and a combination of control groups 1 and 2 (new group) revealed significant differences (mean difference= 2.75, $p < 0.05$). These mean differences are illustrated in Figure 15. Assessment of the mean differences depicted in Figure 15 revealed that control group 3 engaged significantly more in high risk behaviour than control group 1 and 2 combined. An important finding revealed in figure 15 indicates that control group 3 engage less in risk taking behaviour than the experimental group.

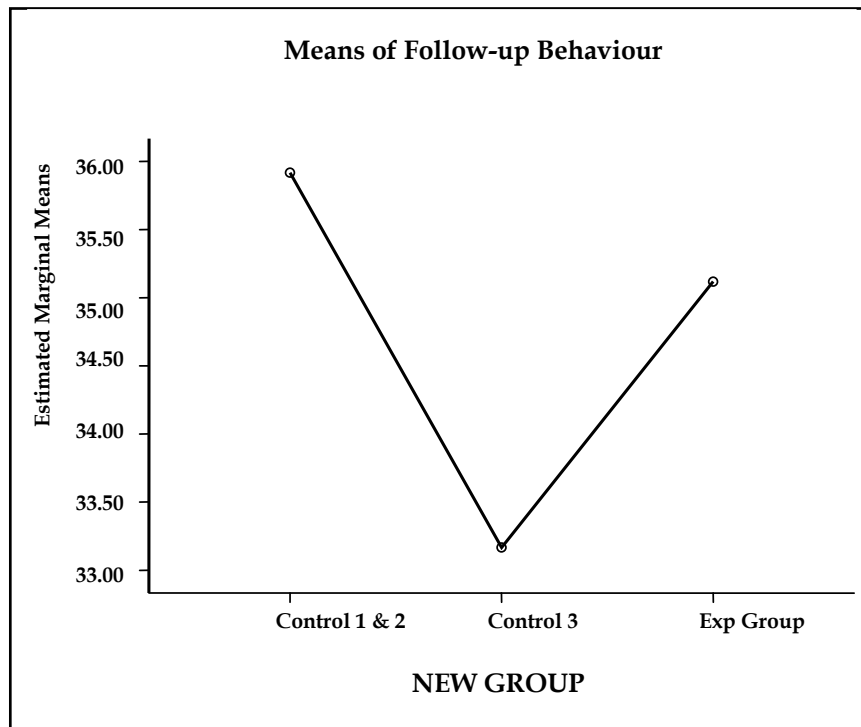


Figure 15 Behaviour 1 mean differences between control groups (1 and 2), control group 3 and the experimental group

5.7 Within-group changes on knowledge, attitudes and behaviour 1 over time

All comparisons of variables (knowledge, attitudes and behaviour 1) within groups across Time were done by using repeated measures ANOVA to determine what changes occurred within each group.

5.7.1 Knowledge

Changes in knowledge over time and differences among groups were assessed using repeated measures ANOVA as conducted in Table 21.

Table 21 Repeated Measures ANOVA on Knowledge for each Group across Time (Pre-test, Post-test, Follow-up) N=56

Group	Value	F	df	df Error	Sig
Group 1	.049	.205	2	8.00	.819 ^o
Group 2	.452	5.366	2	13.00	.020*
Group 3	.591	8.658	2	12.00	.005**
Exp. Group	.572	10.695	2	16.00	.001**

The repeated measures ANOVA's revealed significant differences across Time on knowledge for all the groups, except for participants in group 1 who exhibit no significant changes from baseline to follow-up on knowledge, Pillai's Trace criterion, ($p > 0.05$, $F=0.205$). Significant changes are exhibited across time for group 2, Pillai's Trace, ($F=5.366$, $p < 0.05$), group 3 ($F=8.658$, $p < 0.01$) and the experimental group ($F=10.695$, $p < 0.01$). Significant multivariate findings on the repeated measures analyses were followed by an examination of the univariate tests to determine where the significant differences were, i.e. whether time 1 differed significantly from time 2 etc.

5.7.1.1 Significant changes on knowledge of HIV/AIDS over Time within groups

Findings on knowledge of HIV/AIDS given in Table 22 indicated that changes occurred within control group 2 between pre-test and follow-up knowledge ($F=4.922$, $p < 0.05$). A significant difference ($F=11.162$, $p < 0.05$) was also revealed between post-test and follow-up knowledge.

Table 22 Within-Subjects Contrasts on Knowledge for Control group 2 over Time (Pre-test, Post-test, Follow-up) N=56

Variable	Time	df	F	Sig
Time	Pre-test vs Post-test	1	1.903	.189 ^o
	Pre-test vs Follow-up	1	4.922	.044*
	Post-test vs Follow-up	1	11.162	.005**
Error	Pre-test vs Post-test	14		
	Pre-test vs Follow-up	14		
	Post-test vs Follow-up	14		

Figure 16 revealed the significant change within group 2 over time, revealing a significant increase in HIV/AIDS knowledge from baseline to post-test. A significant decrease in HIV knowledge, lower than baseline, was depicted from post-test to follow-up.

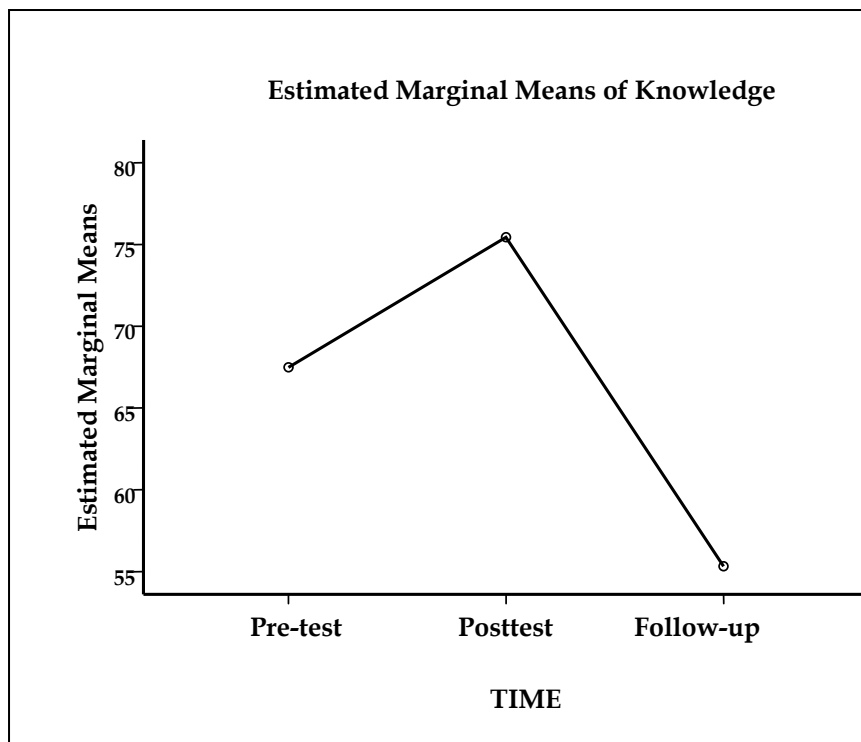


Figure 16 Differences on knowledge across time (pre-test, post-test and follow-up within control group 2

In Table 23 changes on knowledge of HIV/AIDS of control group 3 was conducted. Results revealed significant changes ($F= 14.093$, $p< 0.05$).

Table 23 Within-Subjects Contrasts on Knowledge for Control group 3 over Time (Pre-test, Post-test and Follow-up) N=56

Variable	Time	df	F	Sig
Time	Pre-test vs Post-test	1	6.790	.022*
	Pre-test vs Follow-up	1	1.919	.189 °
	Post-test vs Follow-up	1	14.093	.002**
Error	Pre-test vs Post-test	13		
	Pre-test vs Follow-up	13		
	Post-test vs Follow-up	13		

No significant differences occur from baseline to follow-up for control group 3. Significant knowledge differences were however noted between pre-test and post-test ($F=6.790$, $p<0.05$), post-test and follow-up ($F=14.093$, $p<0.01$). These changes are plotted in figure 17.

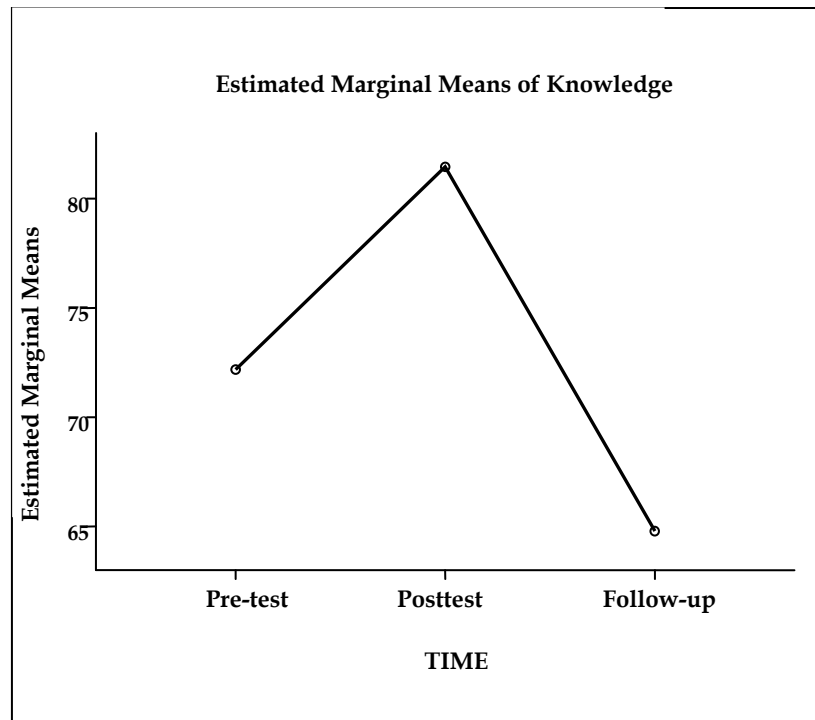


Figure 17 Changes in the knowledge of control group 3 at pre-test, post-test and follow-up

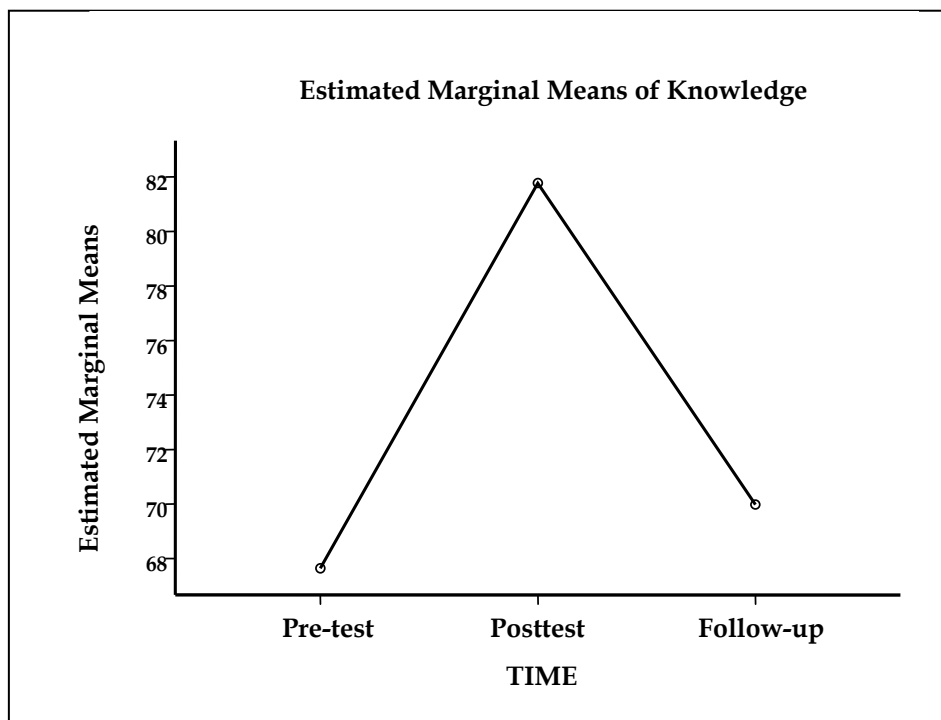
Figure 17 depicts the positive change from baseline to post-test. A significant decrease in knowledge of HIV/AIDS was demonstrated from post-test to the 3 months follow-up.

We hypothesized that the experimental group would increase their knowledge of HIV/AIDS at post-test and follow-up and perform significantly better than the control groups. Results in the repeated measures MANOVA revealed significant changes across time on knowledge. We therefore investigated the change over time with a repeated measure ANOVA in Table 24 below.

Table 24 Within-Subjects Contrasts on Knowledge for the Experimental Group over Time **N=56**

Variable	Time	df	F	Sig
Time	Pre-test to Post-test	1	17.075	.001**
	Pre-test vs Follow-up	1	.758	.396 °
	Post-test vs Follow-up	1	19.878	.000***
Error	Pre-test vs Post-test	17		
	Pre-test vs Follow-up	17		
	Post-test vs Follow-up	17		

Significant differences were noted between pre-test and post-test ($F=17.075$, $p<0.001$), and post-test and follow-up scores on knowledge of HIV/AIDS, ($p<0.001$, $F= 19.878$). These differences are shown in Figure 18.

**Figure 18 Plot of differences within the experimental group over time**

A significant increase in the HIV knowledge of the experimental group was evident from pre-test to post-test as illustrated in Figure 18. This knowledge was not maintained and a significant decrease in knowledge between post-test and follow-up was revealed.

5.7.2 Attitudes to HIV/AIDS

In Table 25, attitude differences for each of the four groups over time were compared. Results yielded no significant change in the attitudes of control group 1, ($F=0.896$, $p>0.05$). No significant changes were demonstrated on attitudes over time by control group 3, ($F=0.003$, $p>0.05$).

Table 25 Repeated Measures ANOVA on Attitudes for each Group across Time (Pre-test, Post-test, Follow-up) N=56

Group	Value	F	df	df Error	Sig
Group 1	.183	.896	2	8	.445 ^o
Group 2	.565	7.800	2	12	.007*
Group 3	.001	.003	2	10	.997 ^o
Exp. Group	.435	6.171	2	16	.010*

Using Pillai's Trace criterion, significant changes were revealed for control groups 2 and the experimental group. Control group 2 exhibited differences across time for attitude, ($F=7.800$, $p<0.01$). Results shown that the experimental group exhibited differences across time for attitudes ($F=6.171$, $p<0.05$). This investigation was followed by an examination by univariate test to determine where the differences were; for example, whether performances on time 1 differed significantly from time 2 of time 3 within the two groups.

5.7.2.2 Significant changes on attitudes to HIV/AIDS over time within group

Table 26 shows significant changes on attitudes to HIV/AIDS which occurred in control group 2.

Table 26 Within-Subject contrast on Attitudes Control Group 2 over Time (Pre-test, Post-test, Follow-up) **N=56**

Variable	Time	df	F	Sig
Time	Pre-test vs Post-test	1	.002	.964 ^o
	Pre-test vs Follow-up	1	15.409	.002*
	Post-test vs Follow-up	1	7.197	.019*
Error	Pre-test vs Post-test	13		
	Pre-test vs Follow-up	13		
	Post-test vs Follow-up	13		

The results in Table 26 revealed that significant differences occurred between pre-test and follow-up attitudes to HIV/AIDS, ($F=15.409$, $p<0.01$). Significant differences were also noted between post-test and follow-up attitudes ($F=7.197$, $p<0.05$). These attitude changes are depicted in Figure 19.

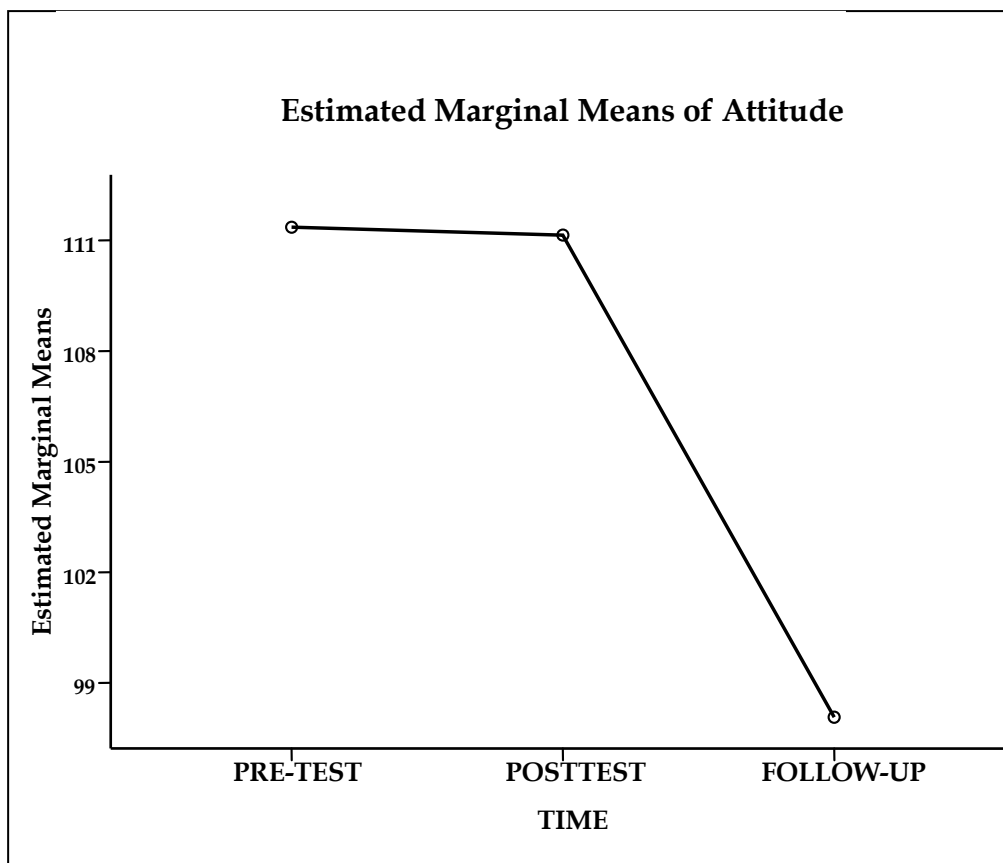


Figure 19 Plot of differences on attitudes to HIV/AIDS of control group 2 over time

In Figure 19 the changes in attitude to HIV/AIDS of control group 2 were illustrated. The plot revealed that baseline attitudes were not significantly different at post-test, and then declined sharply at follow-up. At the 3 months follow-up a significant change was demonstrated on attitudes towards HIV/AIDS.

Results on attitudes in the repeated measure multivariate analysis of variance (MANOVA) also indicated significant changes within the experimental group. In order to determine where the change occurred, a repeated measures ANOVA was conducted as revealed in Table 27.

Table 27 Within subject Contrast on Attitudes for the Experimental group over Time (Pre-test, Post-test and Follow-up) N=56

Variable	Time	df	F	Sig
Time	Pre-test vs Post-test	1	13.093	.002**
	Pre-test vs Follow-up	1	.215	.684 °
	Post-test vs Follow-up	1	6.496	.021*
Error	Pre-test vs Post-test	17		
	Pre-test vs Follow-up	17		
	Post-test vs Follow-up	17		

Findings in Table 27 revealed significant differences between pre-test and post-test ($F=13.093$, $p<0.05$) as well as from post-test and follow-up ($F=6.496$, $p<0.05$). These changes are depicted in Figure 20, which yielded an increase in attitude scores between pre-test and post-test, but was not maintained in the follow-up. After an initial increase in attitudes from baseline to post-test, positive attitudes changes decreased to a level lower than baseline when measured at follow-up.

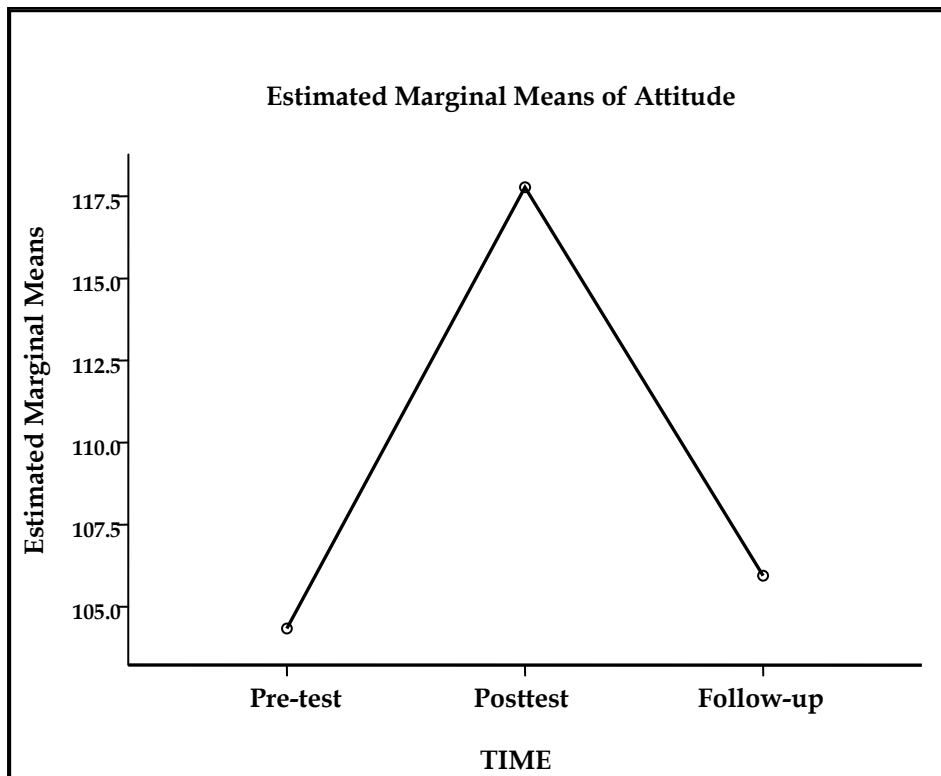


Figure 20 Changes in attitudes of the experimental group at pre-test, post-test and follow-up

5.7.3 Behaviour 1

In order to determine if the HIV/AIDS intervention had a positive effect on the experimental conditions' intentions to engage in safer sexual behaviour a repeated measures ANOVA was performed on the four groups' behaviour measurements over the three intervals, pre-test, post-test and follow-up, as shown in Table 28.

Table 28 Repeated measures ANOVA results on Behaviour 1 for each Group across Time (Pre-test, Post-test, Follow-up) N=56

Group	Value	F	df	df Error	Sig
Group 1	.247	1.478	2	9	.279 °
Group 2	.301	2.583	2	12	.117 °
Group 3	.172	1.042	2	10	.388 °
Exp. Group	.161	1.342	2	14	.293 °

There were no significant changes within groups in terms of their behaviour as indicated in Table 28.

5.8 Changes in behavioural intentions and practices in the context of substance abuse

5.8.1 Comparisons of groups on the behaviour 2 scale over time

To assess whether the HIV/AIDS intervention programme and health promotion programme could be responsible for a decrease in risky sexual behaviour in relation to substance use and significant changes on the scores of the behaviour 2, chi-square analyses were conducted (more complex analyses could not be undertaken because of low numbers). The analyses were used to determine whether there were any associations between groups in terms of behaviour 2 items. No significant differences were found between groups at the three time intervals (pre-test, post-test and follow-up). Very few participants of the four groups engaged in risky behavioural practices. Most of the participants reported engaging in risk taking behaviour like drinking alcohol, which can contribute to their vulnerability for HIV/AIDS infection and engaging into sexual intercourse without a condom after drinking alcohol. Pre-test results revealed that 63% of the four groups indicated that they tried alcohol before, 63% in the post-test and 55.4% in the follow-up assessment. 55% of participants indicated that they tried alcohol in the last three weeks. In the post-test 31% and the follow-up, 30.4% reported that they enjoyed drinking alcohol in the last three weeks. Although there were no significant differences between the groups, ($p>0.05$), there were indications that some participants do engaged into risky sexual behaviour although the numbers were very low.

Frequency charts of participants indicating that they tried drinking alcohol before are depicted in the Figure 21 (pre-test), Figure 22 (post-test) and Figure 23 (follow-up). High scores are indicative of high risk behaviour.

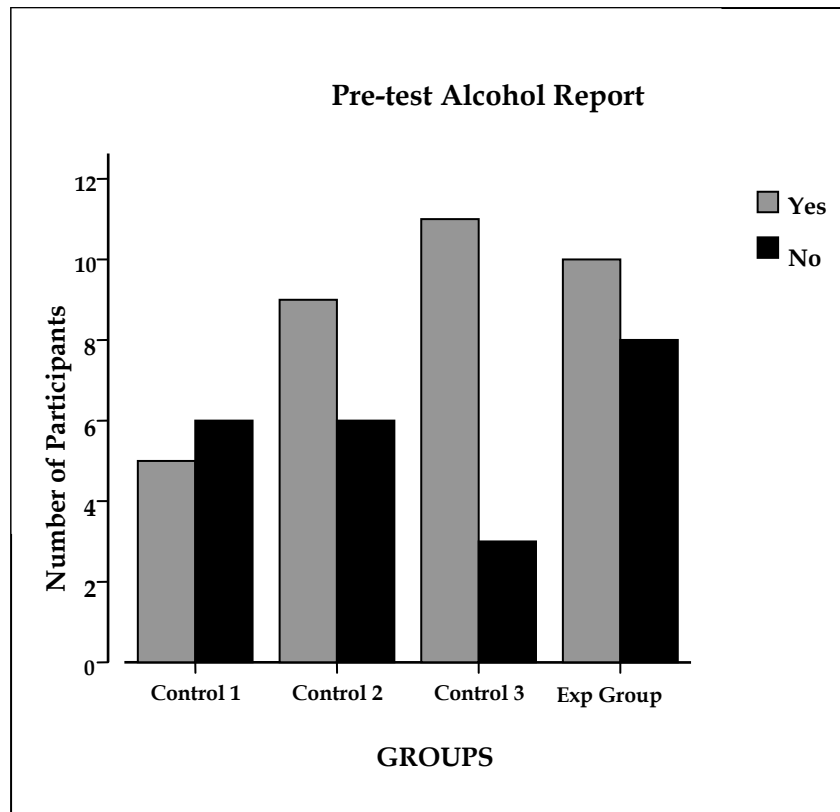


Figure 21 Frequency chart on alcohol use of the four groups at pre-test

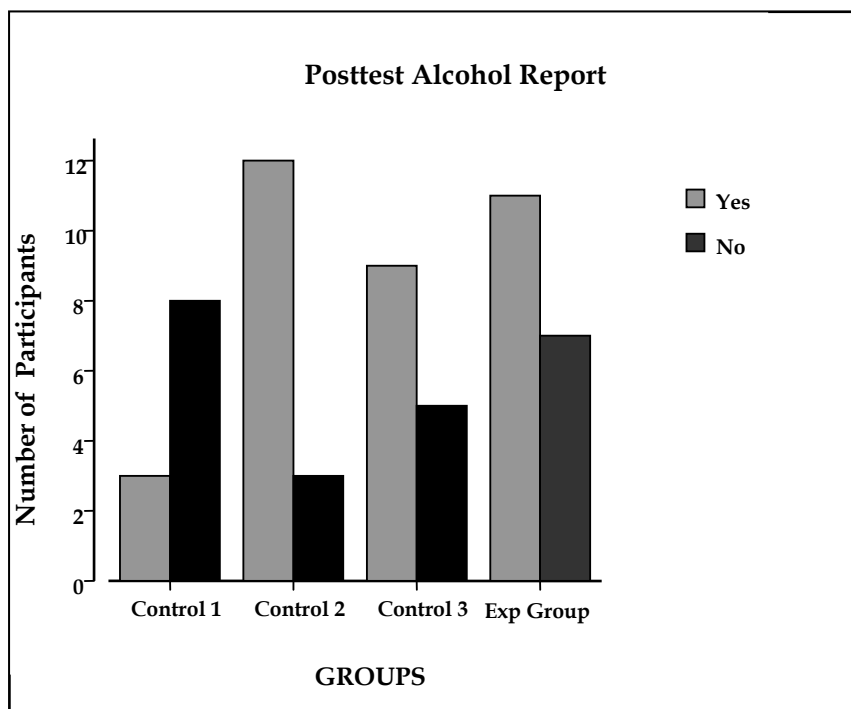


Figure 22 Frequency chart on alcohol use of the four groups at post-test

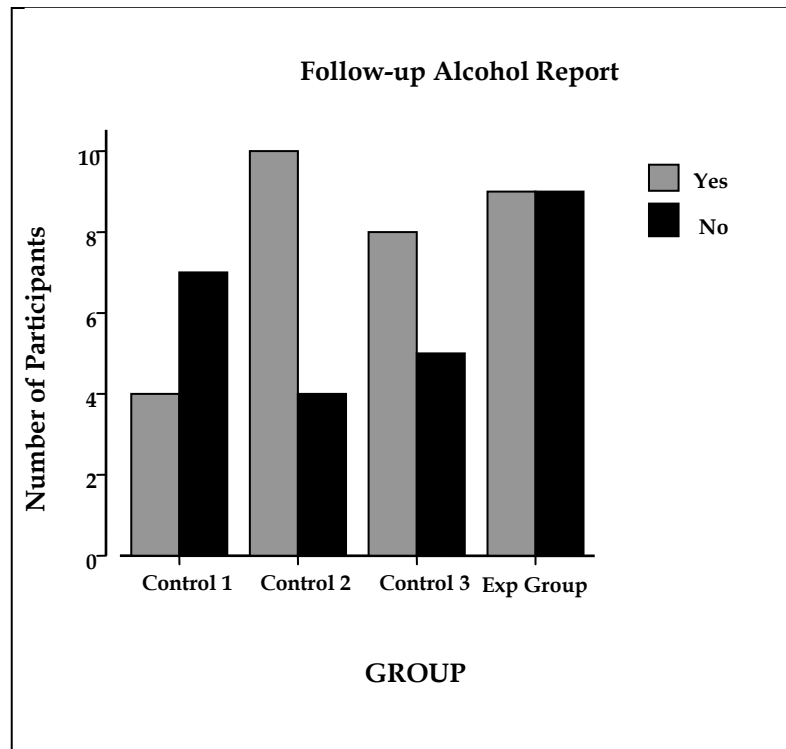


Figure 23 Frequency chart on alcohol use of the four participating groups at follow-up

There were no significant differences between the groups in terms of their use of alcohol.

The only other risky behavioural practice that a number of participants of the four groups engaged in was sexual intercourse with condoms after drinking alcohol. Of all the participants in the four groups, 25%, N=10(40) in the pre-test 18.8%, N=9(32), in the post-test and 25.7%, N=9(35) in the follow-up indicated that they enjoyed sexual intercourse with a condom after drinking alcohol. These frequencies are plotted in Figures 24, 25 and 26.

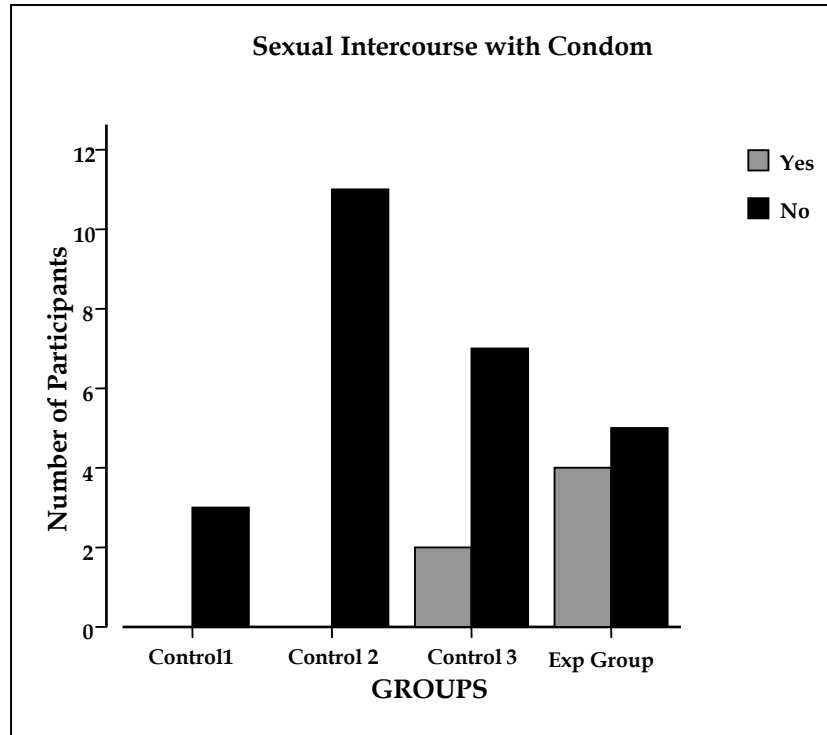


Figure 24 Pre-test frequency chart on sexual intercourse with a condom after drinking alcohol

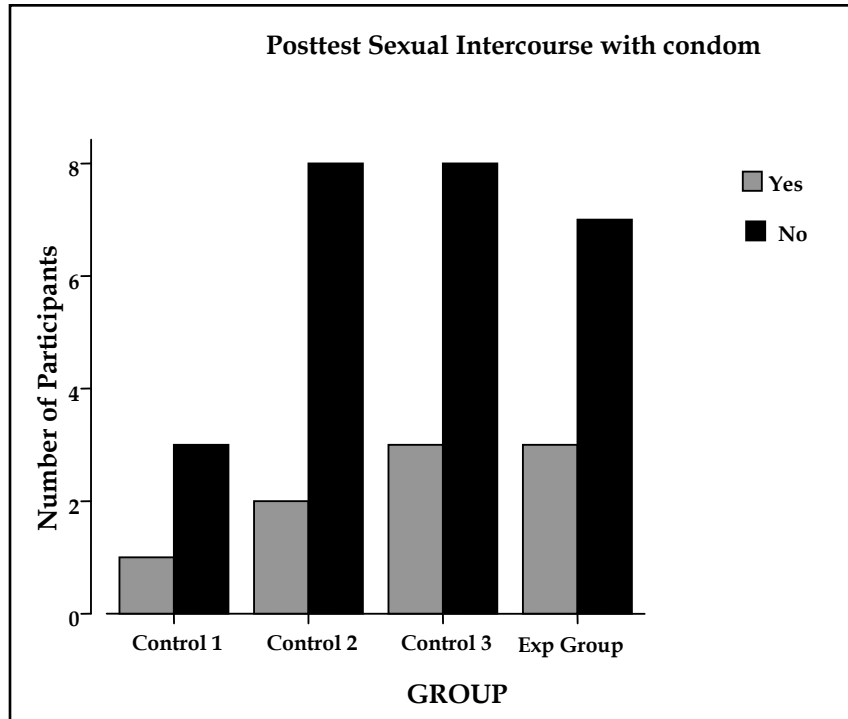


Figure 25 Post-test Frequency chart on sexual intercourse with a condom after using alcohol

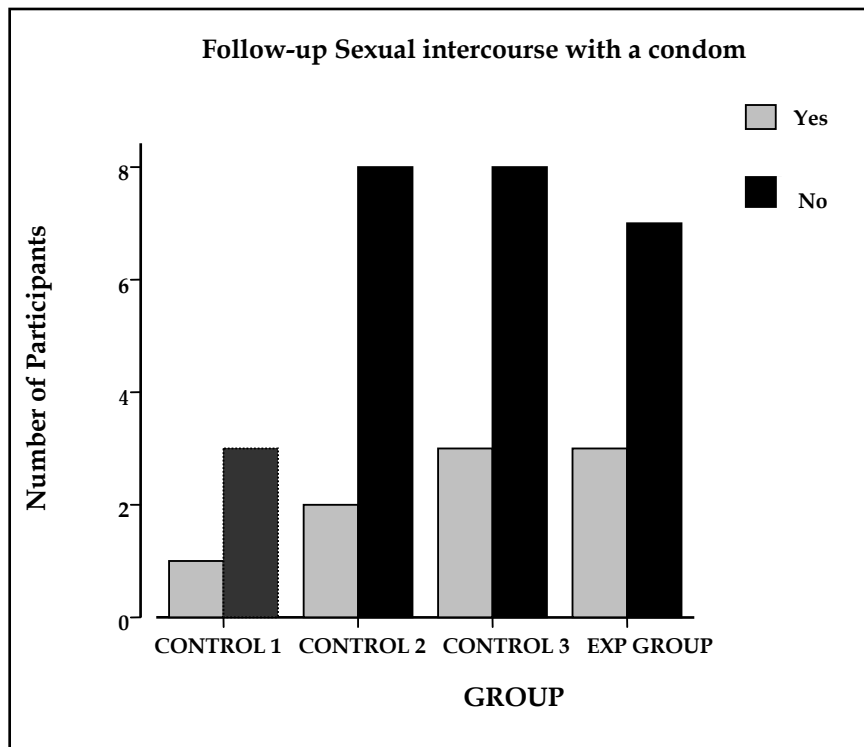


Figure 26 Follow-up frequency chart on sexual intercourse with a condom after drinking alcohol

5.9 Concluding comments

The HIV intervention programme focused on developing knowledge, skills, attitudes, and behaviours that could reduce the risk of HIV/AIDS infection. The results of this study revealed that participants in the HIV prevention programme (Experimental group), tailored for adolescents and young adults with visual impairments, demonstrated a statistically significant improvement in their HIV/AIDS knowledge.

The repeated measures MANOVA indicated an interaction between variables, time and groups. This was followed by 12 repeated measure ANOVA's and three individual MANOVA's. A detailed layout of the repeated measures MANOVA is included in the appendix (Appendix 6). Figures 27, 28 and 29 depict interaction plots of the means for each of the variables at pre-test, post-test and follow-up, with separate lines representing each of the groups. Each plot gives an overall illustration of changes that occurred of each group on each variable over time.

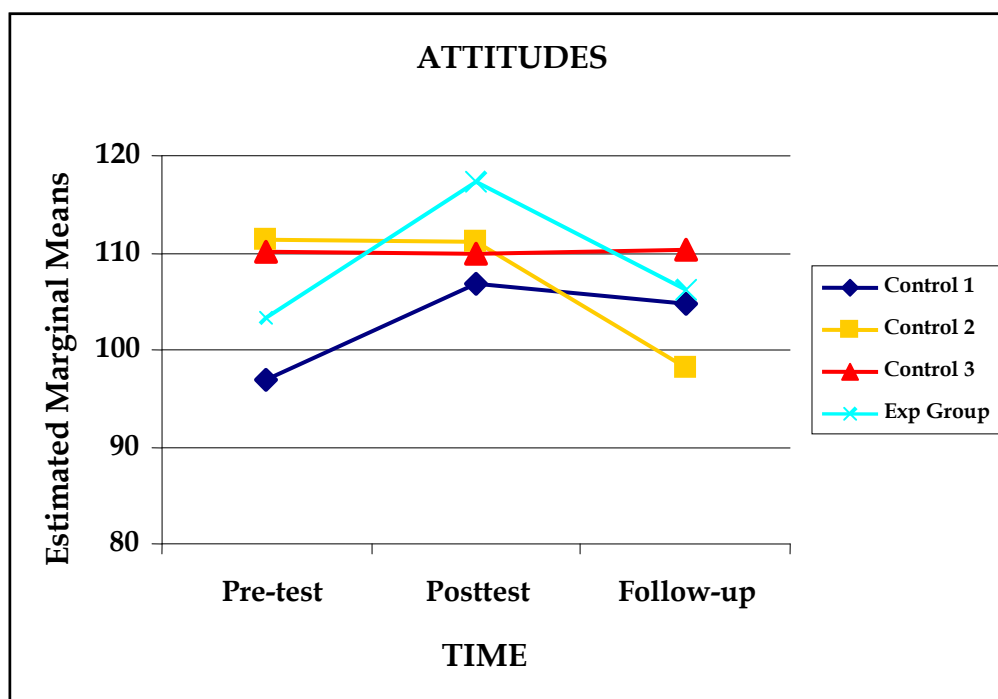


Figure 27 Illustration of group differences on attitudes over time

Figure 27 depicts the interaction plot of the mean attitude scores of the four groups over time. The plot showed an increase from pre-test to post-test with a sharp decline in the scores for almost all the groups from post-test to follow-up. Very small attitude change was observed for control group 3.

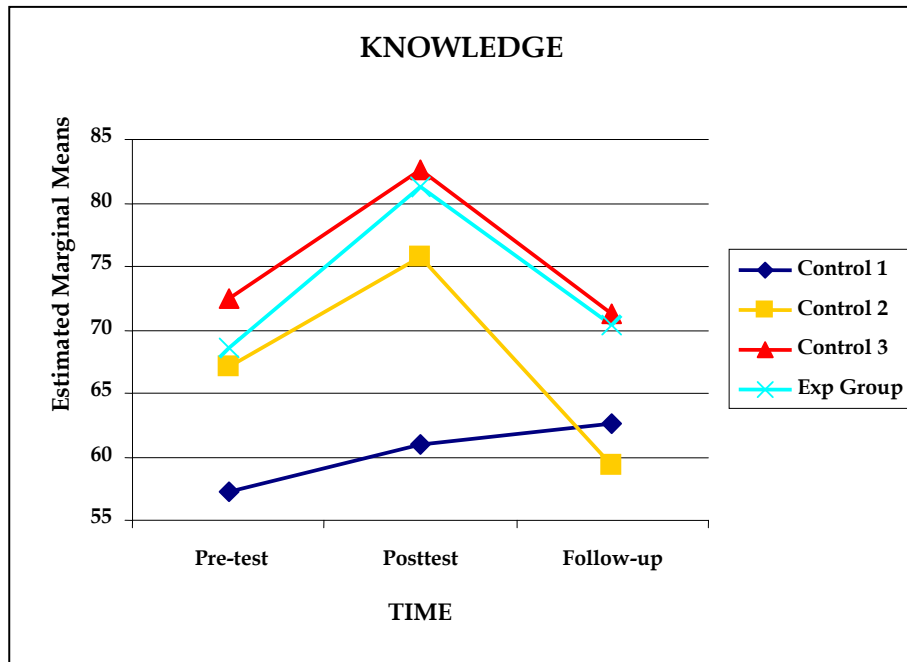


Figure 28 Group differences on HIV/AIDS knowledge over time

The significant interaction on knowledge is illustrated in Figure 28. Results revealed significant changes for all the groups except for control group 1 at post-test. Lower scores on knowledge in these figures are indicative of a lack of HIV/AIDS information, which implies that they are therefore at a significant risk for HIV/AIDS infection.

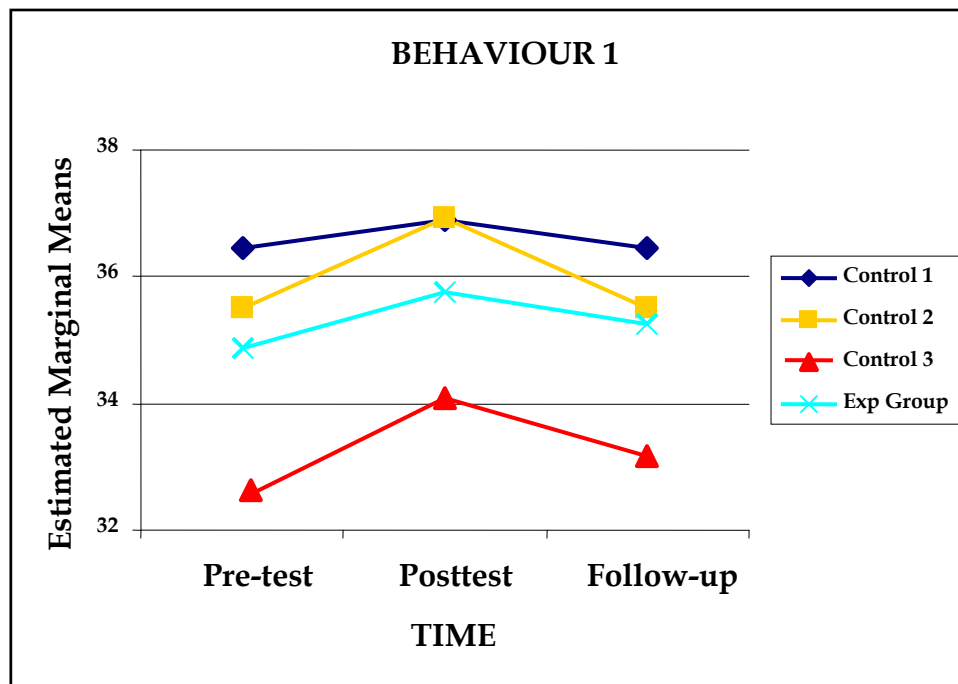


Figure 29 Plot of means on behaviour 1 between groups over time

Differences for all the groups are depicted in Figure 29 at pre-test, post-test and follow-up. Apparent changes are revealed from pre-test to post-test with a decrease at follow-up for all the groups.

Comparisons of the groups at pre-test revealed that no significant differences could be discerned regarding the dependent variables, (knowledge, attitude and behaviour 1), indicating randomization. Statistically significant differences were observed with the post-test and follow-up assessment on knowledge.

The experimental group showed changes across time for knowledge with a significant increase at post-test followed by a marked decrease from post-test to follow-up. Results therefore revealed that the experimental group did not maintain their knowledge or positive attitude in the 3 months follow-up. Statistically significant increases in HIV/AIDS knowledge and attitudes to HIV/AIDS were shown by control group 2 at post-test with a decrease from post-test to follow-up. Changes were observed for control group 3 across time on knowledge at post-test

which also decreased from post-test to follow-up. Results indicated that control group 1 remain unchanged across time and evidenced no significant improvement on any of the variables, knowledge, attitudes of HIV/AIDS and behaviour 1 from pre-intervention to follow-up.

At follow-up differences were revealed for knowledge, but post hoc analyses indicated no individual group differences. We then collapsed control groups 1 and 2 into one group and ran the analysis again. Differences were evident for both knowledge and behaviour 1. The results showed that the experimental group obtained significantly higher scores on knowledge of HIV/AIDS than a combined group 1 and 2. There was no significant difference between the experimental group and control group 3. These findings suggested that the intervention had a positive effect on all participants at School 1 (Athlone School) (which may be explicable partly by a diffusion effect), and that though all participant groups changed regarding knowledge, the change for the experimental group was greater. The theory of diffusion as hypothesized was confirmed on knowledge of HIV/AIDS, when a significantly higher score was recorded by the experimental group compared to the combination of control group 1 and 2, but no significant higher score for the experimental group versus control group 3.

Another statistically significant finding is the attitude change that was observed across control groups 2 and the experimental group at post-test. This positive attitude was not maintained at follow-up. This may be related to a lack of motivation of the participants and the fact that attitude change is a process that may possibly requires continuous intervention. Contrary to expectation, no statistically significant differences were found between the experimental condition and the three control groups on Behaviour 1 variable. The intervention did not affect a significant decrease in participants' engagement in risky sexual behaviour. Significant behaviour 1 findings indicated higher risk behaviour among control group 3.

On the behaviour 2 variable no statistically significant differences between groups could be found. Very few participants reported engaging in risky sexual behaviour which can increase their vulnerability for HIV/AIDS infection. The results however revealed that some participants do engage into risky sexual behaviour that put them at risk for HIV/AIDS infection

CHAPTER 6 ANALYSIS OF THE QUALITATIVE DATA

In the previous session results of the outcome study were discussed and certain conclusions were made. As indicated earlier, the process information provided in the group discussions was analysed according to the methodology as set out in section 4. The interpretation and analysis of the process information are discussed below.

6.1 Findings

Four themes emerged from the data with sub-themes, which provide qualitative insight into some of the findings of the quantitative results. The four themes which derived from the data were:

1. Knowledge of and attitudes towards HIV/AIDS
2. Sexual behaviours
3. Needs and goals
4. The meaning of being visually impaired.

Although the four themes are presented separately in the following discussion, the themes are not totally independent, and aspects or components of themes are often interrelated.

The four main themes with sub-themes are explained in Figure 30 (p. 161) below.

MAIN THEMES	SUB-THEMES
1. HIV/AIDS (Thoughts of participants)	1.1 Knowledge of and attitudes towards HIV/AIDS, 1.2 Myths about HIV/AIDS
2. Participants thoughts about disability	2.1 Needs and personal goals 2.2 Being a person with visual impairment living in a community 2.3 The rights of people with visual impairment and access to health resources 2.4 HIV/AIDS risks for people with visual impairment
3. Interface between HIV/AIDS and people with visual impairment	3.1 Sexual urges as a natural drive 3.2 Protective measures 3.3 Pressure to have sex 3.4 Cultural beliefs 3.5 Fear and anxiety

Figure 30 Description of Themes and Sub-Themes

In the discussions below all relevant process information and issues are revealed, which give us some insight into the social interactions and concerns of participants

during the sessions. However, many of the opinions expressed reflect arguments or contributions of participants' as reported in small group discussion.

6.2 Discussion of themes on HIV/AIDS knowledge and issues pertaining to sexual behaviours

In this section two categories were identified which reveal the knowledge and feelings of participants regarding HIV/AIDS and the sexual behaviours in which they possibly engaged. Many of these issues and concerns are not unique to adolescents with disabilities, but are also present among some of the major concerns among non-disable adolescents. Within the first category four main themes emerged with sub-themes and will be discussed below.

6.2.1 Theme 1: HIV/AIDS (Thoughts of participants)

6.2.1.1 Knowledge of and attitudes towards HIV/AIDS

Knowledge and attitude towards HIV was the first emerging sub-theme. It was important to assess participants' knowledge and attitudes as these are of vital importance for positive behaviour change. Campbell, Foulis, Maimane and Sibiyi (2005), SCT and the IMB model concur that accurate knowledge about health risks is an important precondition in any intervention to enhance positive behaviour change. The assessment of participants' knowledge started by asking them for one word descriptives of the term HIV/AIDS, participants mentioned words such as "virus", "disease" and "death and dying". A further exploration of their knowledge about HIV/AIDS revealed that they knew what HIV/AIDS could do to the human body. As one participant stated:

HIV/AIDS destroys your immune system...weakens your body, later you can't fight the disease anymore ... your body is too weak and then you dying of AIDS.

This is an indication that the participants were well aware of the implications and effects of contracting HIV/AIDS. Participants were divided into two groups and their responses as reported showed a basic knowledge of what people could have told them previously or what they had heard in the media about HIV/AIDS. On the other hand participants knew how they could not get infected with HIV/AIDS. As one respondent stated:

You cannot get AIDS from kissing, hugging and using the same cutlery” and with regard to antiretroviral drugs “... Nevirapine, I’ve heard a story that it’s safe to use.

These types of responses, concerning what they had heard about HIV/AIDS, reflected not only their basic knowledge of HIV/AIDS, but also their attitudes towards people who had contracted the HIV/AIDS virus.

The attitudes of the participants towards people with HIV/AIDS were clearly revealed by statements linking the virus to particular behaviours based on what they had heard. Firstly, there was the assumption that only certain people would get HIV/AIDS as they mentioned that only, “prostitutes”, “gay people”, “people in jail”, [acting] “cheap”, “dirty people” and those “cheating on your partner” would get AIDS.

Secondly, they stated that people indulging in certain behaviours would get HIV/AIDS. For example participants stated that “blades”, “unsafe sex”, [using] “drugs”, “... hanging out with those boy[s] ...”, in other words being promiscuous, [committing] “rape” and adultery were behaviours most likely to result in contracting HIV/AIDS.

At this initial stage of enquiry, there was no real clarity as to the depth of knowledge of the participants. What was revealed was a basic knowledge of HIV/AIDS and how the disease was contracted, and thus how they felt about people with HIV/AIDS. They expressed the need to validate their knowledge and wanted to learn everything about HIV/AIDS. Another finding revealed in this theme on

knowledge and attitudes was that some of their initial knowledge was based on myths which will be discussed below.

6.2.1.2 Exploring myths about HIV/AIDS

Myths are a direct relation to knowledge, but are a 'false' kind of knowledge. They are based on what has been told or heard in a variety of contexts, and by definition lack real truth. False views or myths may either instil fear or result in risk-taking behaviour. The danger is that myths often motivate negative behaviour and compete with safe sex messages. There were some myths expressed, but participants were not quite sure if the stories they had been told or heard were true. This was reflected in a response from participant who said, "some people said you only live 3 to 6 months". Another said:

"Some people ... there where I stay say you get AIDS if you sleep with dirty people...

It was found that prior knowledge, based on myths, assisted the participants to create a picture of HIV/AIDS infected people. As one participant stated; HIV/AIDS can occur "... if you sleep with dirty people". Another stated "... those people believe that they can be cured if they have sex with a virgin"; but then asks the question "... is this true?

This in a sense shows that these young people, although absorbing what others say, can, and do question the validity of what is told. This becomes important because it means that they do reflect and criticize the assumptions and beliefs of others, and through engagement, reassessment of personal and cultural beliefs could take place. Fears and anxieties can be related to myths in communities. These featured very strongly in the data. Fear and anxieties can sometimes have an impact on behaviour of people. One participant for example conveyed to the group that one must be extra careful to prevent any infection. She said:

I'm convinced that there are people taking revenge on society and going around and infecting other people with HIV.

6.3 Theme 2: Participants' thoughts about disability

6.3.1. Needs and personal goals

Adolescence is usually a stage when boys and girls have the need to be accepted by friends and significant others. Acceptance is commonly regarded as a meaningful precursor to development into responsible adults. Goals are also important and there are risks of social isolation, greater dependency, and low self-esteem, all of which take on a particular salience for adolescents with visual impairments.

6.3.2 Personal goals and HIV/AIDS

The adolescents in this group had obvious dreams and hopes about their futures, and they need support and guidance to become successful in life. They are part of society and their needs are the same as those of sighted youth. They expressed their future goals in the following ways:

...I want to complete matric...

...not having a baby before the time...

...make my mother happy...

...work for my own money...

...marry a wife, live easily and be happy...

...I want to achieve something in life...

...I want to travel the world ...

...I want to ...study further after matric...

In general, their expression of needs and goals were the same as one would find with any other sighted adolescent, but the biggest difference would be their need for acceptance. One participant particularly expressed this need by stating, “we are ‘normal people’ and ...we must be accepted.”

Others said;

We are not accepted...we are not treated the same;

People treat us differently.

These expressions revealed the fact that although these adolescents with visual impairments had the same basic needs and goals as any other adolescents, a key need was to be accepted, with acceptance, they hoped, leading possibly to an easier path to attain their goals.

Due to negative perceptions of society reinforced by negative interaction with sighted people, adolescents with visual impairments may, because of this marginalization, develop a negative self-concept, dysfunctional cognitions and emotions that inhibit skill development to deal effectively with real-life situations (Kim, 2003). Participants admitted that being diagnosed as HIV positive would change their lives dramatically and that it would be difficult to reach their goals. This was especially obvious after students met the HIV infected person after the second session. One participant felt it would be “sad” to contract the disease and thus would opt for not getting married.

6.3.3 Being a person with visual impairments living in a community

Commonly-held perceptions of people with visual impairments in society may contribute to reduced opportunities, increased vulnerability, and stigmatization. This may put adolescents with visual impairments at a disadvantage if they are compared with their sighted peers and low self-concept development may result as reflected in the following quote;

We blind people do experience many problems. People treat us differently; they look to us in strange ways. We are affected personally, socially...

Participants felt that people in the community should change their perceptions of people with visual impairments, because in reality they as people with visual impairments were like any other individual; they had the same needs, wants and expectations as anyone else.

Many of the participants had had difficult experiences and felt saddened and very hurt by the name calling and the manner in which they were treated. They felt that something needed to be done about people's actions. Girls with Albinism in the group said people called them ugly names such as "boere⁵, baboons, monkeys, witmense⁶, white ghosts, white kaffers⁷, blinde molle⁸, Albino's⁹". The participants felt they were "treated differently", with disrespect and people in the community were "scared" of them. The impression that a significant proportion of participants had was that people in the community treated them as if they were "mentally impaired", people tended to "make fun" of them and no one "wanted to play with" them. They stated that people said:

When we die, we do not go to heaven as other people...our soul just disappear after we die.

One participant, because of these types of experiences, stated:

That's why I don't leave the house when I'm at home.

⁵ 'boere' (literally, 'farmers' in Afrikaans) is a term used in a negative sense to describe white people during Apartheid era in particular, and was also sometimes used more narrowly to refer to Apartheid police.

⁶ 'Witmense' (literally 'white people' in Afrikaans) was a term previously used to identify white South Africans and is still sometimes used in a derogatory way. The term can be distinguished from 'blankes', which has the same denotative meaning but was part of official Apartheid terminology.

⁷ 'kaffers' is a derogatory term used to describe black Africans. In South Africa today it is considered to form part of hate speech.

⁸ 'blinde molle' (literally 'blind moles' in Afrikaans is a term used to describe a person who has visual problems).

⁹ 'Albino' is a term used for a person who has a visual condition due to Albinism. It is considered a stigmatization and non-person-centered term.

Other participants found the experiences difficult and therefore, “difficult to be at home”. Home in this case is the community in which he/she lives.

It is generally understood that ‘home’ should be a place of peace, acceptance and love for a child, but some participants thus felt marginalised in their own communities because they were treated differently.

Participants reacted in different ways to the issue of community perceptions. One participant was not quite sure if he was accepted:

I really don’t know if people accept me, I really don’t know...

Others stated;

...we must confront those people, I know it needs guts, but we must fight and be strong to make sure that we are accepted.

This reaction could be interpreted as a reaction of anger towards community perceptions of the people with visual impairments. Some participants believed that people’s perceptions would change eventually and stated:

It will take time, but they will get use to us and accept us in our communities.

These experiences raise concerns about the rights of people with visual impairments, including rights to access of resources, especially with regard to protective measures against contracting HIV/AIDS.

6.3.4 The rights of people with visual impairments and their access to health resources

People need to have access to resources and have the right to access those resources in the fight against HIV/AIDS. In the exploration of participants’ knowledge, sexual behaviours and community perceptions it has become clear that these adolescents with visual impairments believed they had far less access to resources than sighted

people. They did not have access to vital protective preventive measures against HIV/AIDS and other sexual diseases. Another problem was that they never had access to information because of the inaccessibility of vital resources. Participants indicated that the following were some of the problems they experienced;

We have no idea how to use a condom” and if the condoms had an expiry date.

Another participant stated:

We need to be informed about the availability of condoms in public places and to have writings on condoms in Braille.

Their biggest concern was their right as people with visual impairments to refuse to be tested for HIV/ADS. Two participants raised this concern and indicated that they were not quite sure about their rights because they had been previously asked by hospital staff to be tested. In this particular instance participants seemed to distrust the hospital staff or the whole process of being tested for HIV/AIDS. Their sense of distrust came from the fact that they would not be able to see what the hospital staff would be doing. It seemed as if participants generalized their previous bad experience of hospitals (for example, many went to hospital with some sight and returned blind after operations) with their views of hospitals in general and did not trust hospital staff. Some participants mentioned that staff said one thing, but actually did something else. This raised the question of who actually decides for the people with visual impairments to have an HIV test, which in turn underlines previously mentioned experiences of being treated differently, non-acceptance and feelings of inadequacy, and thus being perceived as unable to make decisions and to take responsibility. This is superimposed on the usual difficulties adolescents face with autonomy concerning their health.

From the perspective of the person with visual impairments, if they have consistently been treated in an authoritarian way in health settings, they could

generalise this experience and would therefore feel blocked from making their own choices and decisions. This concern is revealed in a statement of one participant who asked:

What are our rights as people with visual impairments and who must decide that I must be tested for HIV? Is HIV testing optional? Yes many people at the hospital asked me that question. I can't see, they can easily test me, saying that they are doing something else. You can't trust some of these people ...

The revelations of threats to rights and lack of access to resources could increase risk-taking behaviour for adolescents, due to lack of information and lack of trust in authorities which could temper adolescent risk-taking behaviour.

6.4 Theme 3: Interface between HIV/AIDS and adolescents with visual impairments

Before the data under this theme are presented, it is useful to be reminded briefly about key features of sexual behaviour in adolescence.

Adolescent sexual risk behaviour is usually influenced by several developmental transitions. According to Pedlow and Carey (2004) and Campbell (2005) adolescents are more likely than adults to engage in risky sexual behaviour, they are unlikely to use condoms with first sexual intercourse, and they may lack sexual communication and negotiation skills for safe sex. These difficulties contribute to risky behaviour and increased chances for HIV infection. Another phenomenon of adolescence is that adolescent relationships tend to be short, and many adolescents change partners very quickly, which further contributes to their vulnerability to HIV infection. Adolescence is a complex stage when cognitive and emotional changes and development of interpersonal skills take place, which have implications for sexual risk taking and risk reduction. Pedlow and Carey (2004) note that cognitive

functioning; a lack of life experience and skills, and social influences affects adolescents' ability to appraise their risk for HIV infection and to enact protective behaviours.

6.4.1 Sexual urges as a natural drive

In the discussion of sexual relationships, participants were quite clear about what they would do with a partner if faced with the possibility of contracting HIV/AIDS.

The biggest concern for male participants was the issue of being a "man". In a sense sex for the males was a way of proving their manhood, and sex was seen as a natural urge, and as one participant puts it: "... sex is a natural thing ..." and therefore it would be difficult to stop especially since "... you cannot stop when you are hot ...". Some of the male participants indicated that to refuse having sex with a female would mean to risk being humiliated. One participant expressed this in the following way:

What will a girl think of me ... if I refuse ... she will think I'm a sissy

(meaning that he could be viewed as not being male). Female participants felt that it would be better to "...stay without sex" instead of proving your manhood in order to prevent contracting HIV/AIDS.

6.4.2 Protective measures

Central to sexual behaviours and HIV/AIDS was the use of protective measures, especially the use of condoms as one protective measure. Much was said by participants regarding prevention or protection from HIV/AIDS. At first the participants had heard from other people "... because everybody talks about condoms ...", but participants also felt that their knowledge of protective measures, especially what to use against contracting HIV/AIDS, was limited. The difficulties of using a condom were expressed because they had not been shown how to use

condoms. One participant informed the group that he once saw on TV how someone explained how to use a condom:

but I am blind and I could not follow what they were saying.

Another one plainly stated:

I have no idea how to use a condom. We only heard from others about condoms, but it's embarrassing when you are among guys, you don't want to look stupid.

Although there was interest in learning about using a condom, one participant felt that condoms were not that safe, especially if the person was blind:

No, no, no, I don't believe in condoms, because its not 100% safe. When you cannot see, you have more problems.

Clearly, in the early stages of the programme participants indicated that they had limited knowledge of using a condom and thus protective measures and that their visual impairments posed its own difficulties. The participants felt that abstinence would possibly be the best option, but their sexual urges posed a problem. They felt that being faithful to one partner was extremely important as well as both having a "... HIV test before having sex". Some participants believed that sexual urge was too great to control and therefore there was no time to think of the possibility of contracting HIV/AIDS.

A range of protective measures were also explored in the context of prevention strategies to prevent HIV/AIDS infection. A few participants mentioned some of the options and expressed these as follows:

...You can wait until you get married...

...You can use condoms...

...You can go for HIV test before having sex...

...The sexual history of your partner is important...

...I think you can still have sex, without using condoms, but stick to one partner...

Participants agreed that the main issue was to be “aware of the dangers of the disease so that the spread of the virus can be stopped”. The males rather than the females felt that they would find more difficulties in not having sex. They were concerned that if they were to insist on protection measures such as condoms, this would reduce their chances ever of having sex.

6.4.3 Pressure to have sex

Adolescence is a time when peers are very important and thus peer pressure plays a major role in encouraging sexual behaviours. Peer pressure refers to the perceptions and beliefs of those friends in their lives that influence individual behaviour. According to Pedlow and Carey, (2004) and Zwane, Mngadi and Nxumalo (2004) individual decision-making normally conforms to the social norm where peers influence adolescents’ attitudes, values, and sexual risk behaviour and their risk for HIV infection. The influence of peers became a debatable topic in the group. On the one hand some participants felt that they were pressurised to do what their peers were doing with regard to sex. If they were not able to conform and live up to the expectations of their peers, they would be seen as “different”. One participant emphasized this point by stating:

We are under pressure, here at school and when we are with our friends, talks amongst the boys are around things like how many times they had sex, how nice it is, and I also don’t want to be different.

I also want to experience that.

Evidently the participants had experienced pressure to perform and meet the ‘group’s’ requirements if they wanted to fit in. On the other hand, there were other participants who felt that friends should not “...force you into sex”. The participants

agreed, however, that feelings were central to the first sexual experience. It became clear that, according to participants, the chances for sexual risk-taking were increased by factors in addition to peer pressure. Other problem behaviours such as alcohol and drug use were identified as key factors in encouraging risky sexual behaviours. One participant for example stated:

Many people have sex when under the influence of alcohol and drugs because when you are under the influence, because their responsibility is fading and you also have sex with multiple partners.

The issue of pressure to have sex can in summary be understood in two ways. First, there is the obvious peer pressure, and second, there appears to be the perception that increased alcohol and drug use increases chances of risky sex.

6.4.4 Cultural beliefs

Culture was raised as a major issue in respect of sexual behaviours and contracting HIV/AIDS. Culture was closely linked to the issue of 'maleness' as highlighted earlier. In many cultural contexts gender and power issues influence women's sexual decision-making. This was reported to be a reality in communities where participants live. One participant explained:

The custom in my culture is that African men can have more than one sexual partner, so the girls don't have a choice.

Another participant agreed with the previous participant and said;

Yes, we can have sex especially when coming from the bush¹⁰, I want to have sex, and I want it 'flesh to flesh' (i.e. sex with no condom) and I will negotiate that with a girl.

A female participant mentioned,

¹⁰ 'Coming from the bush' means after male initiation rituals are completed, a tradition of African South Africans.

People in our community don't speak openly and freely about HIV/AIDS. It's a no-talk topic, like an open secret.

It can thus be assumed, from these explicit statements that implicitly, the participant's culture would complicate sexual decision-making, result in risk-taking behaviours and increase exposure to HIV/AIDS.

Prescribed gender roles for women with respect to sex were also mentioned:

We also believe in the custom that young girls need to be tested before getting married, to see if they are virgins

and

Culturally women are not supposed to show affection in public because respect is very important ... In our Xhosa culture flirting and kissing in public is not allowed in front of my mother, I can't do that. I must practise our culture at all time.

(female participants' words)

This is an indication of how sex is a 'no talk' topic; is hidden in communities and households. Adolescents and girls in particular may not be skilled from a young age by parents on how to negotiate about sex and concomitant problems adolescents might encounter, because, first, the expectation is that they do not have sex, and, second, it is taboo to talk about sex

6.4.5 Fears and anxiety

Fears and anxieties about sex became apparent as the participants, especially the male participants, expressed their fear of not finding someone to have sex with, since sighted people do not easily engage in relationships with someone who is blind. The male participants also felt that if they were first to consider all the

precautionary measures necessary to avoid contracting the disease then they would “never have sex”. As one participant stated:

...we as young men will never have sex if you are getting to the point of having sex and then ask, ‘Did you go for an AIDS test?’ Condoms must always be available.

Another, referring to the perception that men and boys with visual impairments were less likely to find sexual partners than would other men and boys, said:

If I get the opportunity I will take it with both my hands and enjoy it.

The female participants feared being “easy targets” because they were blind and therefore were more liable to get infected than sighted girls. The following were some of the expressions of the participants:

Yes, they [blind girls] enjoy attention and many men will take advantage of them”;

...many guys feel that disabled people are easy targets...easy sex

...sighted guys take blind girls for granted. They will push for unprotected sex if they don’t have a condom.

Participants were anxious about going to a community clinic because they found it “embarrassing” because they could not see condoms on display and had to ask for assistance. They were embarrassed because of the perceptions of people who would look at them “in a very strange ways, thinking:

You are blind and I don’t know where the condoms are...yes they look at you in a very strange way as if they are thinking, look at this blind man, what does he want to do with condoms?

Thus, it is worth mentioning that though in the HIV field there is concern about the stigmatization of people infected with HIV, there is discrimination and

marginalisation of people with visual impairments, particularly in the area of sexuality, according to these participants.

6.4.6 HIV/AIDS risks for people with visual impairments

It has already been discussed in the literature (Section 3) that people with disabilities may well be a high risk group for HIV infection. These risks are related to pre-existing factors of inaccessibility, disabling barriers of society (attitudinal and/or physical) a lack of knowledge, and other socio-cultural factors. What became clear was that the adolescents with visual impairments reported that they were likely to indulge in risk-taking behaviour and thus possibly contract HIV/AIDS. These people with visual impairments seemed to regard themselves to be more at-risk than sighted people. One participant stated:

I am a blind person, anyone can prick me with an infected needle and I can get AIDS

Another participant also highlighted that concern by saying:

I am blind and not always aware of open wounds where I walk or on my partner.

This emphasizes how the lack of sight posed a risk for people with visual impairments to contract the disease. The above statements made by participants are an indication that they felt vulnerable for contracting HIV/AIDS.

These issues need to be considered over and above concerns such as pressure to have sex and many sexual partners, in the case of males, pressure to 'perform' sexually as part of proving masculinity, and the influence of alcohol and drugs, all of which have been discussed earlier.

6.5 FURTHER FINDINGS OF THE QUALITATIVE DATA

6.5.1 The findings of the qualitative process information

The aim of this section is to develop a critical understanding of the data and experiences of the participants. The researcher further interprets the process data, investigating all the relevant process issues and interactions of participants and make meaning of the statements made by participants.

6.5.1.1 Knowledge and attitudes towards HIV/AIDS

Participants in the group seemed to be familiar with the main ways in which the virus is transmitted, but their general knowledge of HIV/AIDS was fairly low and based on certain myths and stereotypes. The increased knowledge of participants facilitated positive attitudes towards HIV/AIDS and people infected with HIV. The participants felt they had acquired more knowledge, especially when they reflected on their responses at the beginning of the programme. As one participant put it:

Personally I have learned a lot, you know my view...what I said in the beginning of the programme.... that I don't believe in condoms and now I changed my view.

The experiences as revealed by the HIV positive presenters seemed to be experienced as important to participants. Participants obtained first hand information from the presenters and got some insight into the lives of HIV positive people and how they handled the issue of non-acceptance in their respective communities. In addition to the facilitation process, meeting an HIV infected person enabled a change of attitude towards people with HIV/AIDS, and once again, disabling the cultural myths regarding HIV/AIDS and sexual behaviours of people. This was especially evident in the way participants engaged with the HIV positive representative during and after the session.

In a sense participants with visual impairments could identify and understand the difficulties experienced by HIV positive individuals, for example the perceptions held by people regarding people infected with HIV/AIDS and the isolation, non-acceptance, disrespect and inadequacy due to their HIV status. This was reflected in the comment of the HIV positive person who said,

I experience rejection in my community because of the stigma around HIV/AIDS, especially amongst Africans this stigma is very much alive. I think that is why many black people are suffering and dying of AIDS.

These are the same issues people with visual impairments are dealing with on a daily basis.

The role-plays enabled participants to acquire good communication and negotiation skills, especially when a girl is faced with a boy who would want to force sex upon her and thus risk contracting HIV/AIDS. The role-plays also provided the opportunity to find a solution when faced with a decision that may affect cultural beliefs and behaviours. Role-plays seemed to provide a good indication of the real difficulties young people are faced with in communities and how vulnerable they are for HIV infection. Central to these challenges were the issues of manipulation to have sex and the possibility of rape, especially when in an unsafe environment, and thus participants were sensitized to the predicament which faced females with visual impairments. A positive behaviour change reflecting participants' acknowledgement of their risks for HIV infection was revealed in a statement by one of the participants who said:

I never walk alone, I'm always with a friend and at home I am with my mother or another family member, so, nobody can rape me.

This shows that some of the participants realised their vulnerability and is an indication that knowledge obtained by participants could possibly facilitate positive behaviour changes among participants to minimize their risk for HIV infection.

6.5.1.2 Protection against HIV infection

Participants' attitudes towards condoms seemed to change after a few sessions (whether this was attributable to the intervention is to a degree questioned by the quantitative data). The intervention intended to ensure that participants knew how to use condoms correctly and consistently and were motivated to use them. Positive attitudes towards condom use were however reflected in participants' active participation in the technical sessions. For the participants the experience with a condom became real when they were exposed to it. At first they refused to touch the condoms and reacted negatively:

I don't want to touch a condom; it is gross and doesn't smell nice

Another responded,

No man, this condom stinks.

However, after further exploration of the condom a common response is exemplified by one student saying:

I want two male condoms.

Thus, there appeared to be a mind shift in this short exploratory experience, which was initiated by HIV positive presenters who informed them of the usefulness of condoms. They moved from not wanting to touch a condom to wanting to know more and this is what they were able to do. Participants felt they had to practise more because many of them could not see at all:

We need more time to practise how to put on a condom or to insert a female condom.

Participants agreed that the main issue was to be aware of the dangers of the disease so that the spread of the virus can be stopped.

Besides condoms, participants identified other important 'preventative strategies' which could prevent HIV infection, like to have trust in your partner (which in fact could increase HIV risk), and only having one partner, abstaining from sex and

getting tested for HIV to prevent the disease from spreading. In the group appropriate trust in your partner was emphasized, which was a contentious issue as especially girls indicated that nobody could be trusted and that trust in your partner did not to remove precautionary measures to prevent the risk of HIV infection.

In the final session participants agreed that this method of protection (condoms) offered dual protection, not only for the prevention of HIV/AIDS or other diseases like STIs, but also to prevent pregnancy. The female participants very eagerly participated in these sessions as they realised the value of female condoms as an empowering tool for women and how it could assist them in taking charge in their relationships, help them in negotiating safe sex and ensure that they did not get infected:

If I can speak on behalf of myself, the blind and sighted people in darkness, I will say that the fedimon (female condom) is better to use during sexual intercourse. It will guide you during sexual intercourse, to know where the vagina is and no time is wasted because she can put it on long before the time.

6.5.1.3 Perception of their own vulnerability

Their fears and anxieties about sexual relationships were further discussed when they were told by the HIV positive presenters that they still enjoyed sex, which posed a further threat because people with HIV could not be easily identified and they lived 'normal' lives:

I have to agree, if I have seen you on the street, nobody will say that you are HIV positive;

You are in excellent condition. No one will be able to tell that you are HIV positive except if you tell them.

They therefore agreed that some form of protection needed to be used at all times when engaged in any sexual encounter as you did not know who was infected. In the group females tended to be more aware of the dangers of engaging in unprotected sex, while boys were grappling with issues of sexual gain, their physical needs and how difficult it would be to refuse sex if it was available in the absence of condoms. This however was an indication that situations like these could possibly interfere in safe sex behaviour changes among males and result in inconsistent condom use.

The participants realised that they needed to be extra careful because they were more at risk due to their visual problems, and could therefore not touch anyone as he/she might have open wounds. This they only realised after touching the first HIV positive presenter when he invited them to touch him and to feel how warm his body was. On reflection one participant said in one of the sessions;

I realised now that we touch him without thinking, and many of us cannot see at all. If he had an open wound and one of us also had an open wound, that person could be infected.

Various other factors were identified that contribute to HIV risk behaviours. Low self-esteem for example, among adolescent with visual impairments could be enhanced by the fact that they did not fit the traditional standards of beauty, which related to their visual problem. These feelings of unattractiveness resulted inevitably in feelings of inferiority and had a profound impact on their self-esteem. This was further intensified by negative perceptions they experienced in their communities, which further lead to isolation, discrimination and vulnerability, as girls with visual impairments tended to enjoy the attention of sighted boys who might exploit them. Participants had different views regarding physical beauty and acceptance by others. A positive attitude change was reflected by a girl who stated very strongly:

Anyone who is interested in me must take me as I am, otherwise he must leave!

A change in the behaviour of participants was observed as they seemed to realise that they were a vulnerable group for HIV infection. This is important as this could motivate participants to act responsibly regarding their sexual behaviour. Research by Steyn, Myburgh and Poggenpoel (2006) highlighted the fact that adolescents will not be motivated to be sexually responsible and acquire healthy sexual attitudes and behaviour if they do not acknowledge that they are a high risk group for HIV infection.

6.5.1.4 Culture

Participants learned that cultures of others must be respected and that cultural values could complicate safe sex practices, but argued that with good communication and negotiation skills, partners could be convinced to engage in safer sex. Participants were more inclined to agree that they needed to be aware of the consequences of getting involved in a sexual relationship. Although certain cultures enforced certain beliefs in their respective sexual relationships, they were very much male orientated and enforced the idea of “being a man”. However, some participants agreed that women also had the right to play a role in sexual relationships. Many African girls stated that they did not agree with these cultural values in which males dominate sexual relationships. They revealed their disapproval as follows;

I'm an African female, but I will not take a man who has more than one wife;

Another stated;

As a black [African] female I think I have a say over my body.

Some male participants also challenged the notion that girls did not have a say in any sexual relationship by emphasising the threat of HIV infection.

I like that...but I am sure that it cannot happen under the current circumstances with HIV and other diseases, it is now very dangerous to do that.

The attitude of some African [female] participants indicated that the times were changing and that they were taking control of their bodies and their lives. They underlined the importance of gender equity and thus sought ways of protecting themselves, which may be different from the cultural context in which they lived. Girls in the group seemed, thus, especially empowered to take charge of their relationships and indicated that everybody, including the males, should carry condoms with them. Participants indicated that they should not bother about what other people had to say because they were protecting themselves against the possibility of contracting HIV/AIDS, especially since sex was a reality of life:

There are cases when we [men] don't have any condoms with us and if girls have condoms with them it can help a lot ... then we still continue with the job. The fact is, you cannot say that you will never have sex because you never know when the opportunity arises, it sometimes just happen, and it is important that you must be covered in that case.

6.5.1.5 Participants' reaction towards pressures to have sex

Some, but not all, participants agreed that thinking about the consequences and controlling behaviours before engaging in a sexual relationship were extremely important. All participants learned the importance of responsible decision-making and how to deal with pressures (peer-pressure) and indicated that alcohol and drug use were risk factors for subsequent sexual risk taking, which put them at risk for HIV infection. They agreed that peers and alcohol and drug use could have a negative effect on their decision-making and possible HIV infection. Along with responsibility was the issue of trust and honesty. They were aware that honesty and trust in their partners were important, but that they also needed to apply preventative measures in their relationships. Participants expressed the need for acceptance in their communities, but realised that society would not protect them

against infection and that they needed to act responsibly and take charge to protect themselves against HIV infection. They also agreed that as adolescents with visual impairments they needed to be extra careful and not just accept what they were told, as one participant stated;

Safety before love, we must protect ourselves.

Some participants believed that people's perceptions would change eventually:

It will take time, but they will get used to us and accept us in our communities.

In the final session, participants indicated that they were convinced that they would be able to resist unprotected sex and that they became empowered to make decisions responsibly because they were informed:

I am very glad that I could be part of this programme. I've learned a lot and I think I can also help other learners in protecting themselves from getting infected.

6.5.2 Conclusion

Various components served as guiding principles in this study. Self-empowerment and efficacy within the appropriate socio-cultural context was the focus of the intervention. The programme intended to assist adolescents with visual impairments to gain accurate knowledge on HIV/AIDS, to develop positive coping mechanisms to deal with difficult situations, and to resist risk-taking behaviours and prevent HIV infection.

In the research process there seemed to the researcher to be a shift from the limited information that participants had been previously told or heard, to an exploration of HIV/AIDS in its totality. Participants projected a sense of empathy with people infected with HIV/AIDS. High levels of AIDS knowledge and AIDS risk sensitization among participants seemed to be present at the end of the programme.

Male participants for example no longer felt that girls carrying condoms were “sluts”, “willing” “easy” or “desperate” if they suggested the use of condoms before having sex. They also indicated that females as well as males needed to ‘take charge’ and be responsible in a relationship to prevent infection or the spread of HIV/AIDS. It is an empirical question whether these views would transfer from the situation of the programme to others, and a methodological question as to why this more positive picture, apparently linking substantial attitudinal changes to the programme content, is not reflected in the quantitative post-test data.

The results of this study provide interesting insight into the lives of adolescents with visual impairments. The intervention provided an opportunity for participants to discuss their own vulnerability and to consider the extent to which they were capable to negotiate safer sex and to convince their partners to use condoms. These participants were very proud to be part of this intervention programme, which was the first that they knew of for people with visual impairments. Through this qualitative study one could get a clear sense of the experiences and perceptions of participants, which was useful in informing future research.

The issues and concerns of participants revealed encouraging information and provided greater insight into those issues that needs to be focused on in future programme planning. We do not know if positive information facilitated any actual positive change in the behaviour of participants, or if they would use condoms consistently, but we have a better sense of these adolescents’ concerns, and eagerness to learn more.

SECTION 4: DISCUSSION**CHAPTER 7: INTERPRETATION OF THE FINDINGS AND
RECOMMENDATIONS FOR FUTURE RESEARCH****7.1 Introduction**

The dearth of research on people with disabilities and HIV motivated this HIV intervention study, which focused on adolescents with visual impairments, a neglected group who are subjected to social isolation, oppression, discrimination and social injustice. In this study an HIV prevention programme was developed based on cognitive theories, health promotion theories and theories developed in reaction to the HIV/AIDS epidemic, and piloted among adolescents with visual impairments.

Quantitative and qualitative research methods were used. The aim was firstly, to assess the effect of the intervention programme on the HIV/AIDS-related knowledge, attitudes and behaviour of participants in the experimental group based at the Athlone School for the Blind. In order to establish these effects, a quantitative study was conducted to determine whether the HIV intervention was efficacious. We sought to determine whether there were any significant changes in the knowledge, attitudes and behaviour of participants that could be attributed to the intervention.

Secondly, because there is so little literature on HIV prevention and visual impairments, a qualitative study was undertaken in order to describe aspects of what happened in the intervention process and to get a sense of the experiences of the intervention group. The focus was primarily on what participants said, and did not constitute an evaluation of the process. In retrospect, it would have been helpful to ask participants formally to describe the experience and to give their views on its strengths and weaknesses; this evaluation was unfortunately not undertaken.

The research data were collected and analyzed using both quantitative (KAB questionnaire at three different times; pre-test, post-test and a follow-up 3 months later; see Chapter 5), and qualitative approaches (Key informant study, see Section 2; as well as focus groups information on the training session - Section 6).

In order to provide a context for the discussion which follows, it is important first to have a clear idea of the limitations of the study.

7.2 Limitations of the research

Despite some favourable outcomes, which will be discussed later in this chapter, various limitations were found that need to be considered in the outcome of this study.

- Random sampling and random assignment are important components in the ideal design of an intervention and outcome evaluation. Random sampling was not used in the recruitment of programme participants. Regarding selection of participants for this study the universe of all grade 10, 11 and 12 students at Athlone School for the Blind were used; at Pioneer School for the Blind all grade 7, 8 and 9 learners were also approached to form part of the study population. There are no other schools for learners with visual impairments in the Western Cape. Random selection was therefore not applicable, because the entire universe of students was used.
- The design of this study was unusual, with one experimental group and one control group at Athlone School for the Blind, and two control groups at Pioneer School for the Blind. The reasons for this unusual design was firstly related to the researcher's concern about HIV/AIDS and how it may affect adolescents with visual impairments and therefore motivated the incorporation of as many participants as possible. Secondly, the design intended to determine possible diffusion effects related to the contact between the intervention group and

control group 3. At Pioneer School one control group in similar grades was older, so we looked at a second, younger control group. This allowed us the possibility to explore age effects, which could provide formative information for future research. All the participants who volunteered were eventually included in this study, because we were especially interested to see how the responses of the different control groups differed from one another, and how they differed from that of the intervention group.

- It needs to be emphasized that although significant indicators were found with respect to positive HIV knowledge and changes in attitudes, this sample size was relatively small. There are two major problems with small samples. Firstly, as Durrheim and Painter (2006) emphasize, small sample sizes may increase the likelihood that the sample is not representative of the population, and conclusions drawn from these findings can therefore not be generalized to the whole population. In this study the entire population of grade 10, 11 and 12 learners in schools for the blind in the Western Cape were approached to participate, so the issue of representivity is not in question, although the data cannot be generalized to out of school youth or youth in mainstream schools. The second major problem with small sample sizes as Tredoux and Smith (2006) note is the possibility of accepting the null hypothesis H_0 when it could have been rejected with a larger sample. This may have been a problem in this study findings.
- Due to logistical and resource reasons the number of sessions in the health promotion programme was minimized to 4 sessions. The control groups therefore received less attention than the intervention group. This is an unfortunate drawback of my research study.
- The researcher is an insider who was trying to learn more about the research study from the participants' point of view. It is not certain whether the status of the investigator (Deputy Principal-Psychology) who conducted the HIV

intervention programme could have had an impact on the findings in this study and contributed to the low attrition rate at Athlone School. It may well have had an impact on willingness to participate in the study, as evidenced by a higher rate of participation at Athlone School as opposed to Pioneer School. However, this HIV intervention was done in real-world circumstances, where the services of another psychologist to conduct this intervention were not easily available. There was only one other psychologist who had familiarity with working in schools for adolescents with visual impairment, and she was employed at the other study site, Pioneer School. As far as I was able to ascertain, there are currently no other psychologists in the province familiar with working in schools for learners with visual impairments. I therefore decided to conduct the programme myself to ensure that the programme maintained fidelity to its design (described in detail in Chapter 4), and because I wanted, as part of the qualitative study to get as good a sense of the experiences of participants as I could. Although I make no claim to understand and have answers to all the issues pertaining to adolescents with visual impairments, it needs to be mentioned that I have some expertise in conducting HIV/AIDS interventions and as a psychologist have years of experience of working among people with visual impairments. The facilitator's experience of HIV/AIDS and adolescents with visual impairments was an advantage as I was arguably better equipped to understand and interpret their non-verbal behaviour than would another person have been. I am also fairly well informed around disability issues in general, and around these issues as they interface with HIV/AIDS issues, and issues of sexuality. The learners could have found problematic to discuss such issues with a less experienced and less informed facilitator. Nevertheless there remains a problem with the presenter of the programme having a dual relationship with some of the participants.

- A further limitation was that I also conducted the health promotion programme of the two control groups (control groups 1 and 3). The person responsible for the other control group, control group 2, was a registered professional nurse.

Though we did our best not to influence outcome unfairly, we could have subtly influence respondents' relative experiences of both programmes (intervention and control) and hence subtly influenced outcome data. Had there been stronger evidence that students in the experimental group scored very differently on all measures at outcome from those control groups, this limitation would have to have been more seriously considered.

- Another limitation of this research is that self-reported information on risky sexual behaviour may be subjected to error or misreporting. It is possible that underreporting of possible engagement in various high-risk sexual activities or safe sexual activities occurred, or that possible positive behaviour change that happened because of participation in the intervention was not reported. This is a common problem with research of this nature. This study was dependent on self-reported data on risky behaviour which could be influenced by social desirability processes. In this research it was found that low levels of risk behaviour were reported which could be accounted for by social desirability bias.
- Another limitation of this study is that no dismantling study was conducted. This implies that the components of the intervention process were not examined to determine which components were responsible for the change in knowledge (Lindegger, 2006). Due to this limitation, it is difficult to determine how the time spent on the health promotion programme and the HIV intervention programme or the different components of the intervention and the intervention process contributed to changes in the intervention group and the differences between the intervention and control condition. The possibility that uncontrolled effects may have influenced these findings can therefore not be ignored.
- Although discussion on the role men and women in sexual relationships was exercised, the focus was mainly on the empowerment of women to negotiate safer sex with their partners. This was done in the light of increase of HIV/AIDS infection among women. The fact that the empowerment of males did not

receive the same attention as the empowerment of women was another limitation of this study.

- Participants were not requested formally to evaluate the programme after the last session, although the general feeling expressed during the last session indicated that they found it a helpful learning experience. They also recommended that it be delivered to other adolescents with visual impairments, especially younger learners. Although there are always research questions about the validity of evaluation by participants, as many people tend to report participation in any programme as valuable in the short term, it still would have been insightful to get a sense of their experience of the programme, and when the follow-up data were collected it would have been possible to have gained a sense of how they viewed the programme in retrospect.

7.3 Interpretation of results

Important in any research is to ascertain whether there are any differences between participating groups before the introduction of any intervention. It is important to note that the groups were not randomly selected for reasons as stated above, and participants were recruited based on their availability. However, pre-test comparison results (see page 127) yielded no significant difference between the experimental and control groups with respect to knowledge, attitudes and risky sexual behaviour. Therefore no differences were observed among the groups at pre-test and no imbalances in the post- and follow-up results could therefore be ascribed to the sampling procedure.

Data were collected using both quantitative outcome data and qualitative process information.

Various hypotheses were made, all of which were tested using quantitative research procedures. Firstly, the researcher hypothesized that after the intervention; the intervention group, who received the HIV intervention, would evidence an increase

in their HIV/AIDS knowledge, and demonstrate a more positive attitude towards use of condoms and people infected with HIV/AIDS. The researcher also hypothesized that the intervention group would perform statistically significantly better in terms of the identification and reporting of risky sexual behaviour, and that their results would reveal increased intentions to effect behaviour changes significantly more than the control groups that received the health promotion programme. In this section the results regarding changes on the three dependent variables; knowledge, attitude and behaviour, will be interpreted and discussed. Important is to remember that this was a pilot study which was developed and tested to ascertain the effects of a tailored HIV intervention among adolescents with visual impairments. Very little is known about the research topic; the findings should therefore be interpreted cautiously.

7.3.1 Changes on knowledge

In the comparison of the intervention group, who participated in the intervention, with three other control groups, who received a health promotion intervention, the intervention condition showed changes in their awareness and HIV/AIDS knowledge. The results indicate that participants in the intervention group displayed statistically significant improvement in HIV/AIDS knowledge in the post-test, although this knowledge decreased in the follow-up. The HIV/AIDS knowledge of the intervention group was not maintained over time. The findings were optimistic, yielding a positive effect of the intervention on the knowledge of the intervention group, although not in the longer term. Changes in knowledge may provide an essential basis to facilitate any effect on attitude and possible behaviour changes.

Although the groups were tested for equivalency on the pre-test measure and no differences were found, the knowledge results of control group 1 were significantly lower than that of the other control groups at post-test. This low score could be ascribed to the fact that they were the youngest group, and from the lower grades

(grades 7-9), who were arguably less exposed to HIV/AIDS information, and their HIV/AIDS knowledge on sexuality was also very poor. Generally, the HIV/AIDS knowledge of the control condition also increased (although statistically not significantly for group 1) which could not readily be accounted for by the attention they received, but could be the result of other factors beyond the control of the researcher (for example, HIV education in school). Although no conclusive statements can be made, we speculate that significant changes on knowledge for control groups 2 and 3 could possibly be accounted for indirectly by the health promotion programme they received. As HIV/AIDS is an important component of health promotion, participants of control groups 2 and 3, being exposed to health issues in general, could have become more conscious of health issues. This could have led to greater curiosity about the concern with health issues not discussed in the health promotion (control) sessions which positively influenced significant post-test changes on knowledge and attitudes to HIV/AIDS. Another factor was that the intervention group and control group 3 were based at the same study site, which could be another reason for the significant increase in the knowledge of control group 3.

Participants displayed a good understanding of how HIV/AIDS is transmitted and how to prevent HIV/AIDS infection, results confirm findings by other researchers (Jengjyk, 2000; Kelly & Kalichman, 2000; Lopez et al., 2000 and Rogers, 2000) that knowledge alone is not sufficient to overcome the contributing factors that increase risky sexual behaviour. The findings are consistent with other school-based adolescent intervention studies on knowledge (Kinsler, Sneed, Morisky & Ang, 2004; Slonim-Nevo, 2001; and Walker, Gutierrez, Torres & Bertozzi, 2006) which found that intervention had a significant impact on knowledge of HIV. Walker et al. (2006) also reported that school-based preventive interventions are mostly successful in educating participants, but fail in changing their sexual behaviour.

7.3.2 Attitude changes

In addition to knowledge, attitudes to HIV/AIDS are an important determinant to indicate the intentions of participants to engage in safe sex behaviour. In order to ascertain whether any attitude changes took place, comparisons between the intervention group and control groups were conducted. The comparison of the four groups on attitudes towards people infected with HIV and the use of condoms revealed significant difference between groups in the post-test. One could have expected that the input from HIV positive presenters, who brought a sense of real-life experience into the programme, and updated information participants received from HIV positive presenters who shared their experiences and informed them about the benefits of using condoms, was responsible for the significant changes that took place in the intervention group in the post-test. But results also indicated statistically significant changes on attitudes of control group 2 at post-test with a sharp decrease at follow-up, so it is unclear what the active ingredient in attitude change was.

There was not an overwhelming effect of significant attitude changes, although there is some evidence of positive attitudes towards condom use and intentions to practice safe sex over time (post-test), but it was unfortunately not maintained at follow-up. This finding is different to findings in similar interventions (Butler et al., 2005; Kinsler et al., 2004) where significant longer term changes were found on attitudes towards HIV positive people and condoms, consistent condom use, and other protective measures like outcourse sexual activities or abstinence. We can only speculate that findings in this study can most probably be related to the fact that participants did not feel efficacious in negotiating condom use with their partners, they perceive barriers to using condoms which can be linked to their own concerns and the attitude of non-disabled people towards people with disabilities. Results revealed that adolescents in the intervention group progressed to the action phase for safe sex practices. Complaints that condoms usually interfere with sexual

enjoyment and sexual decision-making, also inhibit the progress of participants to the action and maintenance stages.

7.3.3 Changes in behavioural intentions and practices

The findings on behaviour were somewhat different from findings on HIV knowledge and attitudes. We hypothesized that the increased knowledge of the intervention group and positive attitudes would be associated with significant behaviour change. In this study a marked disparity existed between adolescents' awareness (knowledge of HIV), their positive attitudes toward prevention measures and people infected with HIV, and the results with regard to behavioural practices. Results revealed that no behaviour changes were observed for the intervention group. These study findings were also consistent with intervention research (Walker et al., 2006) which reported no significant impact on sexual behaviour. We find that adolescents in the intervention group were less likely to report sexual intercourse, unprotected sex and risky sexual behaviour while using drugs. This finding was also confirmed in an intervention study of Villarruel, Jemott and Jemmott (2006).

Contrary to what was hypothesized, therefore, and the high knowledge levels of the intervention group and their positive attitude as reflected in the post-test were not accompanied by an increase in intentions to engage in safer sexual behaviour (such as condom use), or to decrease possible risky sexual behaviour and substance use. This intervention study failed to report a statistically significant difference over time between the experimental group and control groups. However, this finding confirms research which suggests that reported sexual risk behaviour may have limited validity and repeatability (Silveira & Santos, 2006). This finding concurs with research that has shown that knowledge alone often proves insufficient to facilitate positive behaviour change (Wutoh et al., 2006); but that understanding one's personal vulnerability can spur positive changes (Dodoo & Ampofo, 2001; Morris, Ulmer & Chimnani, 2003). Results also yielded very little evidence of behaviour change over time for all the groups, as participants did not report a

decrease in reporting unsafe sexual behaviour and a decrease in risky sexual behaviour related to substance abuse.

No significant behaviour changes or intentions to engage less in risky sexual behaviour related to substance use were revealed in the results of the control groups. Comparison results on behaviour 1 revealed that control group 3 reported engaging significantly more in risk taking behaviour than a combination of control groups 1 and 2. Reasons for this result could be attributed to the fact that on average they were the oldest group and that many of them are most probably sexually active and therefore more inclined to sexual risk-taking behaviour than the other control groups.

According to the principles of the IMF model, participants need, in addition to knowledge and motivation, to have the ability to process certain skills (for example, use of condoms and negotiation for condom use) in their repertoire, as well as the ability to engage in AIDS preventive behaviour. Research by Williams et al. (2000) and findings in the literature on gender and power issues (section 2) underline that perceived vulnerability of individuals alone does not mediate behaviour change, HIV and STI protection and health related beliefs; but that broader issues related to social, cultural and normative attitudes and values about sexuality are equally important determinants that influencing participants' sexual behaviour and their attitude towards HIV protection and infection.

7.4 Diffusion of innovation

One aim of the study design was also to ascertain whether contact between participants would result in diffusion. Therefore a control group was selected at Athlone School for the Blind (control group 3) to determine if participants of the intervention group would share the HIV information they acquired during the focus group discussions with their peers in control group 3. The researcher hypothesized that it would be impossible to control the contact between the experimental group

and control group, as they were living together in the hostels, traveling together and they may have been friends who normally shared their experiences with each other. The researcher hypothesized that, because of the close contact between the experimental group and control group 3, diffusion would take place and that control group 3 would outscore the other control groups regarding the three dependent variables (knowledge, attitude and risky sexual behaviour) in the post-test and follow-up, although still lower than that of the intervention group.

With the collapsing of control groups 1 and 2 into one group and comparing those with control group 3 and the intervention group significant differences were revealed. As hypothesized, the HIV knowledge of the intervention group was significantly higher than that of the other two control group combined. The experimental group did not significantly differ from control group 3 at post-test. We cannot be sure why the diffusion occurred - we can only speculate that the intervention group spread what they had learnt to their peers. This certainly was an important finding contributing to the diffusion of the intervention.

We anticipated that positive attitude changes and safe sex behaviour changes would be found among control group 3 due to contact with the intervention group. However, results revealed no statistically significant changes for control group 3 regarding attitudes to HIV/AIDS, and no statistically significant differences between control group 3 and the experimental group regarding positive risky sexual behaviour changes could be found.

If we consider together that we have some tentative evidence here for diffusion of knowledge but not of attitudes and behaviour, it is worth exploring more systematically in future (and especially in dismantling studies) whether indirect exposure to intervention may be sufficient to change knowledge but that for attitudinal and behavioural changes, direct exposure to interventions may be required.

7.5 Qualitative findings

The purpose of the qualitative analysis was to gain a sense of the real world experience of participants with a view to providing formative information for future work. The qualitative process information was designed to make sense of their feelings, experiences and thoughts as reflected in the data. Several categories or themes that emerged from the data will be highlighted in this discussion to address the issues and concerns of participants.

7.5.1 Knowledge of HIV/AIDS

The findings of the process information revealed that participants initially had some prior factual knowledge on HIV/AIDS although various myths were present. Many participants had never been exposed to condoms and were concerned about HIV contraction and protection against HIV/AIDS. Responses and feedback of the participants indicated that they learnt a lot through interactive discussions and role plays in the interactive workshops.

It appeared that participants absorbed relevant HIV-related information which is essential to facilitate protective behaviour against HIV infection. They were eager to obtain credible sexual and HIV/AIDS information, and expressed the need to be informed about every aspect related to the topic, especially protective measures. Participants were concerned about certain myths regarded HIV, which they discussed and those myths could be corrected in the sessions.

7.5.2 Sexual behaviour

Contributions made by participants as observed in the exploratory sessions on condom use, demonstrated their eagerness to learn as much as they could about condoms, which was further reinforced with role-plays focusing on real-life situations which they could be confronted with. Comments by participants during

the sessions on condom use were encouraging and it appeared that the interactive training sessions which focused on vital social skills were experienced as useful. Participants acknowledged that condoms (male and female) were important tools in the prevention of HIV infection. They all agreed on and emphasized the importance of consistent protection during sexual intercourse. During the sessions, I observed that the HIV positive presenters were well accepted by participants, even when close proximity was required, which was very encouraging. It appeared from responses that the intervention had a positive effect on participants, though it is not possible to attribute the impact to the intervention, as all groups changed attitudinally.

It is difficult to say whether these positive responses may result in consistent use of condoms over a longer period or whether they would motivate participants to resist risky sexual practices, because statements made by certain male participants indicated that consistent condom use would be compromised when they have the opportunity to enjoy sex in the absence of condoms. It appears from what these participants said that protection measures would not be maintained at all times. They for example argued that if you had trust in your partner you would not need to use a condom. This could negatively influence precautionary measures. They also gave the impression that sex should be indulged in at every possible opportunity, as it might never come again, even if condoms were not available. Participants also reported external factors such as alcohol intoxication and drug related impairment among adolescents with visual impairments as key factors in contributing to risky sexual behaviours.

Participants had mixed views around the abilities of males to protect themselves against HIV/AIDS. A few males were worried that they would appear less manly if they would refuse to have sex with a woman if they did not have condoms. Males in the intervention group furthermore expressed the view that the use of condoms interfered with sexual enjoyment. They argued that difficult access to condoms or information on expiry dates would make the consistent use of condoms difficult to maintain. Some of the males highlighted the advantage of the female condom which

could be inserted long before sexual intercourse and indicated that it could help to prevent risky sexual behaviour. Participants mentioned that they wanted to be empowered around protective measures. Female participants eagerly took part in sessions on how to use the female condom, to ensure that they could have more control over sexual risk and to protect themselves against HIV infection. They noted the usefulness of female condoms as an empowering tool in the negotiation of condom use.

It also appeared from female responses that protection against HIV infection was for them a priority. They emphasized the idea that condoms must be used consistently, and rejected the view of male participants that all sexual urges must be acted on.

7.5.3 Vulnerability to HIV/AIDS

After carefully analysing the views of participants, it appears that they became aware of their vulnerability personally, and acknowledged that adolescents with visual impairments are at risk for HIV infection. However, responses especially from male participants, suggested some problems, specifically around the annoying interruption caused by condoms, which they felt would interfere with the sexual act. From responses of some male participants it appeared that intentions for consistent condom use would be compromised because male participants argued that the time wasted on putting on a condom could give females the opportunity to change their minds, leading eventually to no sexual gain for them. Although participants indicated that problems related to condom use were significantly reduced after the practical skills they acquired in condom use activities, self-efficacy skills in the use of condoms and the negotiation of condom use with their partners, it is difficult to say if skills acquired would contribute to a possible increase in condom use and other protective skills.

Participants from an indigenous African cultural background reported that males were according to their culture entitled to more than one wife or sexual partner, and

that females had very little control over their bodies when it came to sexual decision-making. This could increase vulnerability to HIV infection. Certain female participants, on the other hand, and especially African females, challenged cultural values that promote unequal sexual relationships and favour men, and argued that these influences have a negative impact on safe sexual relationships. They revealed their concern with gender role differences which contribute to power imbalances even in relationships of adolescents. These participants also indicated that they would not share their husbands with other women and argued that they did have a say over their bodies. Participants also suggested that the increased vulnerability for contracting HIV/AIDS is because of the fact that in many black communities sex is a 'no talk' topic and people did not speak openly and freely about it. The views of these participants are encouraging and needs to be strengthened to assist them in protecting themselves against HIV infection.

The pressure of friends and their beliefs reportedly have a great impact on the sexual behaviour of some participants. Many participants acknowledged that they were under pressure to initiate sexual intercourse and sexual relationships in order to conform to expectations of their peers. Responses of participants highlighted the fact that peer influences, for example to have sex, and the importance of sexual gain for instant self-esteem gratification, especially among male adolescents, may contribute to HIV risk-taking behaviour and limit possible behaviour changes. The need to be part of the group apparently sometimes resulted in risky sexual intercourse at a young age.

7.5.4 Visual impairment and HIV risk

Participants discussed environmental factors that they believe increased the HIV risk of adolescents with visual impairments. This was reflected in opinion statements of a number of male participants who noted their concern with the attitudes and negative perceptions of health professionals, which they felt were not conducive to the promotion of health behaviour, for example safe sex. They argued that

professionals' negative attitudes towards people with disabilities could be positively associated with inconsistent condom use, risky sexual intercourse and HIV infection. They also found the negative perceptions and attitudes of professional health care workers towards the sexual needs of people with disabilities embarrassing. This would make it difficult to discuss sexual matters with professionals. Participants generally agreed that these negative perceptions could be avoided if condoms were available at accessible places and that concomitant problems related to condoms, like the expiry date, could be addressed to minimize the need to call on others' assistance in such a personal activity. Participants generally agreed that they were a vulnerable group, because they could not see blood that might be infected. Some participants indicated that they refused to be alone as it was too dangerous.

Participants mentioned commonly-held perceptions of communities that contributed to personal isolation, stigmatization and low self-esteem. These contextual factors were viewed as increasing their vulnerability and influencing risk taking behaviour. Participants indicated that many adolescents with visual impairments tended to engage in dangerous activities like unprotected sex and having sex while intoxicated, in order to be accepted by others and to enjoy the attention of sighted males and females who might exploit them. Thahane, Myburgh and Poggenpoel (2005) corroborate that adolescents with visual impairments see themselves as inferior beings. They experience social rejection because they are not accepted by their sighted peers while even family members make them feel void inside and affect them mentally, emotionally and psychologically. Davies (1996) underlines that a lack of social skills interferes with the acceptance of adolescents with visual impairments by sighted peers and affects their ability to pursue desired relationships in appropriate assertive ways. We therefore find that participants referred to negative perceptions and humiliation by people in their communities against especially people with Albinism, which negatively affected their self-esteem and placed them at-risk for engaging in unprotected sex, being exploited and raped and, hence for contracting HIV infection.

Participants agreed that people with visual impairments needed more time to develop self-efficacy skills particularly around their ability to use male and female condoms.

The qualitative process information shed some light on the issues and concerns of participants. It certainly broadened our views and gave us a sense of contextual and environmental factors that may affect vulnerability and risk for HIV infection. From the comments and responses of participants it appeared that they felt that they learned a lot and that they now have some skills to protect themselves against HIV infection. It is not possible to say whether this learning experience may facilitate consistent condom use or whether participants would be motivated to resist risky sexual practices.

7.6 Summary

Participants took part in group discussions contributing to an understanding of issues pertaining to people with visual impairments and HIV prevention, and in turn were instrumental in this pilot study. The researcher intended to empower participants through participation in this intervention programme and expose them to real-life experiences.

One would hope that an increase in knowledge would be an important resource and that a positive attitude towards condoms and people infected with the HIV virus would enable youth to develop coping skills, skills that could be translated into safer sexual behaviour and decrease risky sexual behaviour related to substance abuse. The expectation was that empowerment would enable participants to perceive themselves to be more self-efficacious to confront risky situations and minimize their vulnerability to unprotected sex and HIV infection. However, researchers suggest that though knowledge is a factor influencing sexual behaviour and necessary for the development of certain attitudes (for example for developing empathy toward people infected with HIV), it is not sufficient for AIDS behaviour change (Donovan

& Ross, 2000; Perez & Dabis, 2003; Singh, 2003). Findings in this study are similar to others, which also found that positive results on acquired knowledge and attitudes did not translate into safer sexual behaviour change.

Only some of the goals of the HIV intervention were accomplished. The intervention accomplished the acquisition of knowledge, which was maintained over an extended period. On the other hand the intervention did not facilitate statistically significant changes in attitudes towards consistent condoms use and positive attitudes towards people infected with HIV. Sample size may be one reason why it was not possible to demonstrate changes in behaviour. There are also other possible reasons why no significant changes occurred on attitude and behaviour of the intervention group. There may for example be problems with self-efficacy in general. It is also possible that participants did not have enough time to practise new behaviours. According to Rosenthal and Moore, (1991) and Steyn, et al. (2006) the lack of change in behaviour amongst adolescents may be because they do not personalize the risk of HIV infection. Adolescents may perceive themselves as invulnerable, and may underestimate their risk for HIV infection, and negative consequences of drug experimentation. Irrespective of what adolescents know and feel about HIV; their actual behaviour may be different from what they report, and many adolescents engage in risk taking sexual activities. Sexual processes and health behaviours in addition are influenced by various factors and are therefore not determined by narrow cognitive control (Mcdermott, 1998).

Adolescents also lack experience in the handling of social and emotional issues and are more susceptible for sociocultural influences and pressures, even when they are exposed to the best cognitive interventions and skills (Pedlow & Carey, 2004). This further underlines the fact that HIV prevention is not only about behaviour change, but needs to acknowledge the social vulnerability and the context of the individual, which often undermine the likelihood that acquired knowledge and positive attitude changes be translated into positive behaviour changes. The non-significant behaviour changes as reported in this study concur with previous research and

suggest that to change behaviour (even reported behaviour) is far more complicated than merely changing knowledge (Rosenthal & Moore, 1991). The fact that no significant differences in attitude and behaviour variables were found may be because many of the participants experienced close residential supervision, overprotection at home, and school and are therefore not confronted with sexual activities or drug use. This however is an assumption that can only be generalized to participants in this group, as the same study in other contexts may lead to other findings.

According to the IMB model, the level of motivation of participants to practise safer sex, and the motivation to maintain increased HIV/AIDS knowledge and a positive attitude towards people with HIV are all important. Findings in this research concur with other research findings that motivation does not emerge automatically from knowledge and changes in an individuals' attitude and perception of his/her risks.

Another possible explanation for the non-significant behaviour change is the floor effect observed (Cohen & Swerdlik, 2002), which might be because participants in all the groups reported a low level of engagement in risky sexual behaviour related to substance abuse. Another contributing factor might be that none of the participants knew any person with visual impairments who has died of AIDS or publicly disclosed his/her HIV positive status. This situation might reinforce the myth that people with disabilities are "free" of the HIV virus. The fact that they did not experience or see any evidence of HIV infection amongst their peers could create some distance from the AIDS epidemic and create the impression that the epidemic does not impinge on their personal lives. It is possible that participants do not feel threatened to change their sexual habits, as HIV infection seems unlikely.

7.7 Implications of the above findings

A number of conclusions can be drawn from this research. The fact that no significant change in intention to engage in safe sex behaviour was revealed after an

increase in knowledge and positive attitude revealed in the post-intervention assessment, is a matter of concern. An encouraging finding of this research is that the knowledge of participants increased significantly; however, it was not maintained in the follow-up. However, the concerns of the intervention group about HIV infection and their perception of self-risk were not positively related to their reports of behaviours that actually put them at risk. It is encouraging that diffusion which possibly occurred could reach much larger numbers and contribute to a decrease in HIV risk behaviours among people with visual impairments. Diffusion of innovation can be used effectively, especially among small groups of people with visual impairments, who are socially well linked.

7.8 RECOMMENDATIONS

7.8.1 Recommendations based on quantitative data

- Build-in of booster sessions - Findings in this research study concur with other research (Pedlow & Carey, 2004; Steyn, et al., 2006) that it is difficult in HIV/AIDS research to change the attitudes of especially adolescent participants over a longer term. Although findings suggest an increase in HIV knowledge for the intervention group and control groups 2 and 3 and attitude changes towards condoms and people infected with HIV for the intervention group as well as control group 2 no statistically significant changes which occurred at post-test were maintained in the follow-up. It may be possible that knowledge, attitude and behaviour skills could be reinforced and may significantly higher than that of the control groups with the inclusion of follow-up training and by establishing mechanisms for ongoing support, and to examine the possible deteriorating effect of time on the intervention. The intention would be to ensure that positive behaviour changes be reinforced, internalized and maintained.

It is not at this stage possible to tell whether booster sessions would result in an improvement in the attitudes and behaviour of participants, and that those

positive attitudes would facilitate the adoption of safer sexual behavioural skills and behaviour changes, but it is worth exploring, as research has found that movement towards positive behaviour change is a gradual process (Pedlow & Carey, 2004; Rosenthal & Moore, 1991).

- Although we do not know the reasons for the limited changes in attitude at follow-up and behaviour at all three time intervals, we can only speculate that because participants did not know of any person with visual impairments who was openly living with HIV, they might think they are not at-risk for HIV infection. Future interventions may usefully include HIV positive presenters with visual impairments in order to increase the immediacy of HIV for participants.

- The non-significant behavioural changes and limited knowledge and attitude changes at follow-up accentuate the need to focus more strongly on socio-cultural factors and external factors like peer-pressure and disability-specific issues (lack of accessible information for adolescents with visual impairments, poverty, overprotection, lack of social skills, delays in the understanding of social and physical aspects of sexuality due to their visual problem, low self-esteem and difficulty in interpersonal relation) that might affect risky sexual behaviour among participants.

7.8.2 Recommendations based on the process information

- **Training and use of visually impaired facilitators** - While the concerns and issues of participants were addressed in this study, nothing was mentioned around the involvement of people with visual impairments in the designing and conducting of HIV intervention programmes. The principle of inclusion, participation and self-determination is a principled position and part of the HIV strategy of the South African National Council for the Blind, and was also recommended by participants in the key informant study. Watermeyer (2000)

has argued that members of a minority group (in this case people with visual impairments) may demonstrate greater empathy, rapport and commitment to the issues experienced by clients from the same minority group. Although I cannot from the research data determine whether having facilitators with visual impairments would contribute to greater openness and have a significant impact on the knowledge, attitudes and behaviour of participants, it is worthwhile to explore the inclusion of individuals with visual impairments in the design and delivery of intervention programmes.

Facilitators with visual impairments are likely to be informed around the needs of people with visual impairments, feel comfortable in that context and may easily gain the trust of participants, and obtain useful results. The inclusion of facilitators with visual impairments as co-facilitators may be an advantage in programme delivery, as they may have a closer relationship with the target group, identify with them, increase their perception of vulnerability, and may be instrumental in facilitating a change in their behaviour. It is important to remember that the establishment of trust relationships depends on the acknowledgement of people with visual impairments as equal members in the group and that their contributions are valued.

- A suggestion made by participants in the workshop sessions was that the implementation of HIV intervention programmes at a younger age may be beneficial, particularly when they enter high school, just before they express interest in relationships, whether they are sexually active or not. It may be helpful to intervene before these adolescents develop unhealthy and risky sexual behaviour that may persist into adulthood. Facilitators need to be mindful of the developmental level, risk behaviours, and unique learning characteristics of people with visual impairments in the planning and implementation of any intervention in school settings. The HIV intervention therefore would be adapted in order to adequately address the needs of the group in the light of their developmental level.

- The issue of trust in your partner in sexual relationships was emphasized by participants in the qualitative process information. If I were to repeat this programme again in the future, a stronger focus would be placed on this issue, and especially questioning the belief that using a condom means that you do not trust your partner. Addressing this issue is very important in any HIV intervention programme.
- In this study training sessions were 90 minutes long. Participants suggested that the sessions needed to be longer to allow ample time to absorb information and to practice skills-training activities. Longer time for sessions would be in line with usual practice in educational settings where extra time is commonly given for intensive training of students with disabilities (Salamanca report, 1994; Van Tilburg & Ter Pelle, 2000; White Paper 6 on Inclusive Education, 2001). It is therefore suggested that sessions of at least 120 minutes be experimented with. Longer practical sessions could give participants more time to experiment with the condoms and other skills training activities.
- Another outcome of this study, which was not included in the aim of this research, was the concern of participants that health professionals at public health facilities treated them differently from sighted peers, leading to embarrassment, a situation not conducive to the promotion of health behaviour among people with visual impairments. This finding highlights the point that social structures that impede health development (sexual identity and safer sexual behaviour) of people with visual impairments must be addressed. It is therefore recommended that exploratory research be conducted to determine whether professional health workers need further training around the needs of people with visual impairments, particularly with regards to sexuality and HIV/AIDS related issues, to increase their awareness and to encourage them to network with agencies servicing people with visual impairments and foster formal connections between health institutions and those agencies. In this regard, Mgwili and Watermeyer (2006) have recently reported that women with

physical disabilities are stigmatised at reproductive health care clinics in South Africa. They suggested that discomfort around issues of disability and sexuality may have far-reaching implications for the quality of care people with disabilities may receive from public health facilities, especially when matters of sexual health are at stake.

- According to Biennial reports of the South African National Council for the Blind (2003 and 2005), adolescents and youth with visual impairments are at high risk for HIV infection, especially in more impoverished and rural parts of the country. I suggest that this programme, with modifications, be implemented and evaluated among other adolescent groups with visual impairments in those areas, to examine its level of effectiveness and to explore the possibilities of raising the awareness and improving the protection skills of adolescents with visual impairments living in more poorly-resourced areas to protect themselves against HIV infection.
- The fact that this is, as far as I know, the first outcome evaluated HIV intervention study piloted for people with visual impairments, highlights the importance of training of people in HIV prevention to address the needs of this group. This study demonstrated that schools may be good sites to conduct such programmes. Staff members at schools and people in management at community-based organizations serving people with visual impairments should be properly trained about HIV/AIDS-related issues and to create awareness of HIV risks and prevention.
- Schools for learners with visual impairments and organizations servicing youth with visual impairments should be targeted as intervention sites as they provide a good opportunity to reach numerous adolescents and young adults with visual impairments. Schools serve as important vehicles for disseminating HIV/AIDS related information to the community of people with visual impairments. All

interventions should be evaluated, and programmes modified. Clearly, the intervention in this study did not produce the most desirable results.

7.9 Recommendations for further research

The findings of this pilot study generated useful information for the planning and design of future interventions and to facilitate future research in this area. It also underlines the need for additional research on the risky sexual behaviour of adolescents with visual impairments. This intervention programme offers several unique strengths, which will be useful in similar research projects and will be used to inform researchers, service providers and policy makers of the experiences of adolescents with visual impairments facing the threat of HIV infection. This study has also disclosed certain components that need improvement in facilitating attitude changes and to enhance skills acquisition to the advantage of this marginalized group. The focus on their perceived vulnerability needs more emphasis by focusing on participants; possibly by allowing them more time to participants to investigate and experience their own vulnerability.

- The intervention programme primarily targeted knowledge of HIV/AIDS, attitudes towards HIV positive people and acceptance of condoms and behavioural skills as it was important in this pilot study to provide guidelines for future research. Lessons learned in this research should be considered in programme planning. This programme, tailored and adapted, can be implemented nationally to prevent the spread of HIV/AIDS among people with visual impairments, but all modifications should be carefully evaluated. It cannot from this study be claimed by any means that a globally effective 'off the shelf' product has been developed.
- Further research on the needs of adolescents with visual impairments especially their need for acceptance, which may possibly lead to sexual risk behaviour is important, as this could provide a more in-depth insight into the sexual practices

of people with visual impairments that may inform researchers of those critical areas that need to be addressed in intervention programmes targeting younger groups.

- External factors (for example, peer pressure to have sex and having sex whenever an opportunity present itself) that could contribute to the non-significant change in HIV risk behaviour, which was highlighted by participants, need to be considered. Greater emphasis needs to be placed on environmental factors that impact on the opinions, decision-making and behaviour of adolescents. The effect of factors like the complexities of peer influences and instant self-esteem gratification issues on the perceived vulnerability of participants and sexual risk taking behaviour need to be included in follow-up intervention programmes. Other factors that need to be investigated are disability specific issues, like the dependence of people with visual impairments on others (for example issues like transport and mobility) and the relationship of these factors to unprotected sex and possible HIV infection.
- To address the low levels of safe sex behaviour intentions, more attention needs to be given to the issue of the overall vulnerability of participants when intervention programmes are planned.

7.10 Conclusion

The intervention successfully raised the consciousness and knowledge levels about HIV/AIDS among participants, but the changes were not maintained at follow-up. Changes in behaviour were not observed as outcomes of the intervention. This pilot programme did however contribute to an understanding of some of the issues and factors shaping the sexuality of adolescents with visual impairments. These insights may assist researchers in developing further programmes aimed at preventing and reducing HIV infection among young people with visual impairments.

The lack of HIV intervention programmes tailored for people with visual impairments as confirmed by this research suggests that further work should be done to extend the research to youth with visual impairments in other provinces as well as to adults with visual impairments. Due to the marginalization of HIV intervention among people with visual impairments as confirmed in the literature (Groce, 2004) and the concerns of organizations for people with visual impairments in South Africa, and also considering the current increase in HIV infection in South Africa over the last decade, the dissemination and implementation of this prevention programme on a broader scale is of vital importance. Although a gradual improvement in societal attitudes towards the sexuality of people with disabilities was noted by Di Giulio (2003), this was not reflected in the experiences of participants in this study. While we have reached a point of some understanding of the issues underlining HIV risk behaviours for people with visual impairments with this research, the lack of availability of HIV interventions among this population group underscores the seriousness of the problems faced by people with visual impairments. This in turn highlights the urgent need for further investigation and development of intervention programmes.

Although HIV-related information, motivation and behavioural skills form a cornerstone of HIV prevention (DiClemente, Crosby & Wingood, 2002), HIV risk reduction in all HIV interventions need to be considered in the light of situational, demographic, and sociocultural factors, so that we can more fully address the unique circumstances of people with visual impairments. Considering the scant information on the prevalence of HIV among people with visual impairments it is essential that prevalence data be collected. Given what we know about HIV risk, though, it is not unreasonable to suggest that HIV intervention programmes for people with visual impairments be implemented widely, even ahead of detailed prevalence data.

The quantitative data gave us an indication of the effects of the programme at post-test and follow-up and show that participants' knowledge of HIV and risky sexual

behaviour improved. However, it may not accurately reflect the complexities of the behavioural process that impacted on the results and why certain components worked well and others not. The qualitative process information therefore provided some insight into the issues and concerns of participants. It also yielded information that needs to be emphasized in future research among people with visual impairments.

Despite the limitations of this research, this study appears to be, as far as we know, one of very few studies providing empirical evidence of an HIV intervention for people with visual impairments. We hope that this HIV intervention provides insight into the vulnerability and needs of people with visual impairments with respect to HIV prevention.

Finally, we hope that findings based on the experiences of participants in this study will enhance the awareness of society around the sexual behaviour of people with visual impairments and acknowledge the needs of this vulnerable group in contracting HIV infection, rather than to treat them with stereotyped expectations and reinforce traditional values pertaining to people with visual impairments.

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APPENDICES

Appendix 1

QUESTIONNAIRES FOR VISUALLY IMPAIRED (PARTIALLY SIGHTED) ADOLESCENTS

INSTRUCTIONS: (THE RESEARCHER/TRAINEE READS THE INSTRUCTIONS WITH THE PARTICIPANTS)

The aim of the questionnaire is to investigate the participant's knowledge, attitudes and behaviour on sensitive issues such as HIV/AIDS and sexual experience in the context of an increasing HIV/AIDS pandemic. It is requested from you to provide honest information as we wish to achieve the best results and be able to focus on those areas in the prevention of HIV/AIDS that are important to you.

This Questionnaire consists of FOUR (4) sections

Read the instructions through carefully, and answer ALL the questions. Choose one answer that best reflects your opinion or behaviour. For the completion of this questionnaire it would be expected of you to:

Make a **CIRCLE** around the number which best coincides with your viewpoint; and

You are **not** expected to fill in your name, and your answers will be **CONFIDENTIAL**. Nobody will ever know that you have completed this questionnaire.

If anything is not clear to you, you may request some clarity from the researcher by raising your hand.

THANK YOU FOR YOUR COOPERATION

PLEASE TURN OVER

1. KNOWLEDGE OF HIV/AIDS

You are expected to indicate whether you agree or not with the statements below. You have to make use of the following scale:

1. YES
2. NO
3. DON'T KNOW

Make a **CIRCLE** around the number which best coincides with your view

1. I understand the instructions and know exactly what to do	1	2	3
2. It is possible to get AIDS from donating blood	1	2	3
3. HIV causes AIDS	1	2	3
4. AIDS can be caused by witchcraft	1	2	3
5. Blood and semen (cum) are two examples of unsafe body fluids	1	2	3
6. A pregnant woman who has AIDS can infect her unborn baby with the virus	1	2	3
7. A baby can become HIV positive through breastfeeding	1	2	3
8. Currently there is no cure for AIDS	1	2	3
9. Though not 100% guaranteed against getting AIDS, condoms are one of the best protections against HIV/AIDS	1	2	3

10. AIDS is no longer a “gay” disease	1	2	3
11. AIDS is preventable	1	2	3
12. It is possible to get AIDS from having unsafe sex just once	1	2	3
13. It is safe to share a toothbrush with a person who has AIDS	1	2	3
14. Do you think HIV/AIDS can be transmitted by			
14.1 Casual sex	1	2	3
14.2 Syringes and needles	1	2	3
14.3 Sharing clothes	1	2	3
14.4 Sneezing	1	2	3
14.5 Coughing	1	2	3
14.6 Using toilet seats	1	2	3
14.7 Donating/giving blood	1	2	3
14.8 Kissing	1	2	3
14.9 Mosquito bites	1	2	3
14.10 Swimming in the same water as an infected person	1	2	3
14.11 Sharing eating utensils	1	2	3
14.12 Shaking hands	1	2	3
14.13 Receiving blood transfusion	1	2	3
14.14 Being circumcised with the same blade	1	2	3
14.15 Sharing tattoo needles	1	2	3
14.16 Sharing a razor with someone who is HIV-positive	1	2	3
14.17 Touching someone who has AIDS	1	2	3
15. Do you think that the following people can get AIDS?			
15.1 Homosexuals	1	2	3
15.2 Commercial sex workers (prostitutes)	1	2	3
15.3 Injecting drug addicts	1	2	3
15.4 Heterosexuals	1	2	3
15.5 Married couples	1	2	3
15.6 Gay people	1	2	3
15.7 Pregnant women	1	2	3
16. Condoms reduce the risk of getting the AIDS virus	1	2	3

17. Condoms interfere with sexual excitement and physical sensation	1	2	3
18. Someone could pass on HIV/AIDS while appearing very healthy	1	2	3
19. Most people who have the AIDS virus show signs of being sick right away	1	2	3
20. Women can't get AIDS through sexual intercourse	1	2	3
21. Birth control pills protect a woman from getting the AIDS Virus	1	2	3
22. You can get AIDS with your first sexual intercourse	1	2	3
23. AIDS can be cured by having sex with a virgin	1	2	3
24. Do condoms have an expiry date?	1	2	3
25. Condoms can be re-used	1	2	3
26. I know how to use a condom	1	2	3
27. I am aware of the window period after which you need to be re-tested to see if you are HIV-positive	1	2	3
28. Taking a test for HIV one week after having unprotected sex will tell a person if she or he has HIV	1	2	3
29. Do you personally know somebody among your friends or family who has HIV/AIDS?	1	2	3

30. Do you think you are at risk of HIV/AIDS infection?	1	2	3
31. Pulling out the penis before a man climax/comes keeps a woman from getting HIV	1	2	3
32. A woman can get HIV if she has anal sex with a man (By anal sex we mean putting a penis in another person's anus [butt])	1	2	3
33. A person can get AIDS from oral sex (By oral sex we mean one person's mouth touching the penis or vagina of another person)	1	2	3
34. There is a female condom that can help decrease a woman's chances of getting HIV	1	2	3
35. Having sex with more than one partner can increase a person's chances of being infected with HIV	1	2	3
36. All pregnant women infected with HIV will have babies born with AIDS	1	2	3
37. Using Vaseline or baby oil with condoms lowers the chances of getting HIV	1	2	3
38. Showering , or washing one's genitals/private parts, after sex keeps a person from getting HIV	1	2	3
39. A woman cannot get HIV if she has sex during her period	1	2	3
40. There is a vaccine that can stop adults from getting HIV	1	2	3

B. ATTITUDES

You are expected to indicate to what extent you agree or disagree with the statements made below. You have to make use of the following scale:

- 1. Strongly disagree**
- 2. Disagree**
- 3. Undecided**
- 4. Agree**
- 5. Strongly agree**

Make a circle around the number which best coincides with your view.

1. In my opinion, condoms are too much trouble	1 2 3 4 5
2. Condoms are unreliable	1 2 3 4 5
3. Condoms are pleasant to use	1 2 3 4 5
4. Condoms are adding to the excitement of foreplay	1 2 3 4 5
5. I would be willing to try a condom, even if I have never used one before	1 2 3 4 5
6. There is no reason why women should be embarrassed to suggest a condom	1 2 3 4 5
7. I think proper use of condoms can enhance sexual pleasure	1 2 3 4 5
8. I see no reason to be embarrassed by the use of condoms	1 2 3 4 5
9. I just don't like the idea of using condoms	1 2 3 4 5

10. Condoms are inconvenient	1	2	3	4	5
11. Condoms are uncomfortable	1	2	3	4	5
12. I would be comfortable suggesting that my partner and I use a condom	1	2	3	4	5
13. Using a condom makes sex unenjoyable	1	2	3	4	5
14. Condoms ruin the sex act	1	2	3	4	5
15. Women think men who use condoms are jerks	1	2	3	4	5
16. The thought of using a condom is disgusting	1	2	3	4	5
17. Having to stop to put on a condom takes the romance out of sex	1	2	3	4	5
18. I think condoms are an excellent means of contraception	1	2	3	4	5
19. There is no reason why a man should be embarrassed to suggesting using a condom	1	2	3	4	5
20. Most women don't like their partners to use condoms	1	2	3	4	5
21. Condoms seem safer to me than any other form of contraception, except abstinence	1	2	3	4	5
22. If a women /girl carries condoms with her, it usually means she has more than one sex partner	1	2	3	4	5

23. I will sleep in the same room as someone infected with HIV/AIDS	1 2 3 4 5
24. I will share a meal with someone who is HIV positive	1 2 3 4 5
25. I will talk to someone with HIV/AIDS	1 2 3 4 5
26. I will treat a family member with HIV/AIDS well	1 2 3 4 5
27. I will not be infected by being in the same room as an HIV infected person	1 2 3 4 5
28. People who are infected through prostitution or drug use get what they deserve	1 2 3 4 5
29. I will treat a classmate/colleague/friend the same as usual if I know he/she has HIV/AIDS	1 2 3 4 5
(If you do use condoms don't answer this question)	
30. The reason why I do not use condoms is because;	
30.1 It's embarrassing to ask for condoms at clinics or to buy condoms	1 2 3 4 5
30.2 I don't know how to use a condom	1 2 3 4 5
30.3 I only have sex with one regular partner	1 2 3 4 5
30.4 I have never seen a condom	1 2 3 4 5
31. I would respect my partner if he or she suggested using a condom	1 2 3 4 5
32. If I don't have a condom, I would have sexual intercourse anyway	1 2 3 4 5

PLEASE TURN OVER

C. BEHAVIOUR

Read through the questions below and make a **CROSS (X)** in the **YES** block if you agree with the question or a **CROSS (X)** where there is a **NO** if you disagree

	YES	NO
1.1 Have you ever had vaginal sexual intercourse (putting a penis in a vagina) with a person you don't know very well?		
1.2. Have you had vaginal sexual intercourse (putting a penis in a vagina) with a person you don't know very well in the last three weeks ?		
2.1 Have you ever had vaginal sexual intercourse with a person that you do know very well?		
2.2 Have you had vaginal sexual intercourse with a person you do know very well, in the last three weeks ?		
3.1 Have you ever had vaginal sexual intercourse without a condom?		
3.2 Did you have vaginal sexual intercourse without a condom in the last three weeks ?		
4.1 Have you ever had vaginal sexual intercourse with a condom?		
4.2 Did you have vaginal sexual intercourse with a condom in the last three weeks .		
5.1 Have you ever given oral sex (when a person's mouth is touching the penis or vagina of another person) to your partner without a condom?		

	YES	NO
5.2 Have you given oral sex (when a person's mouth is touching the penis or vagina of another person) to your partner in the last three weeks ?		
[This question applies to men only]		
6.1 Have you ever had anal sex (putting your penis in another persons anus [butt]) without a condom?		
[This question applies to men only]		
6.2 Did you have anal sex (putting your penis in another persons anus [butt]) without a condom in the last three weeks ?		
7.1 Have you ever received anal sex without a condom? [when a man put his penis in your anus] [butt]?		
7.2 Did you receive anal sex without a condom in the last three weeks ? (when a man put his penis in your anus [butt].)?		
8.1 Have you ever had sexual intercourse with someone besides your steady partner?		
8.2 Did you have sexual intercourse with someone besides your steady partner in the last three weeks ?		
9.1 Have you ever tried:	YES	NO
9.1.1 Alcohol	.....	.....
9.1.2 Marijuana (hash, dagga)	.....	.....
9.1.3 Cocaine	.....	.....
9.1.4 Any drug injected with a needle (shot-up)	.....	.....
9.1.5 Any other drugs	.....	.....

	YES	NO
9.2 Did you try in the last three weeks		
9.2.1 Alcohol
9.2.2 Marijuana (hash, dagga)
9.2.3 Cocaine
9.2.4 Any drug injected with a needle (shot-up)
9.2.5 Any other drugs
If you answer is NO to all the above don't answer 10, 11, 12, 13, 14, and 15		
10.1 Have you ever had sexual intercourse with a condom after drinking alcohol?		
10.2 Did you have sexual intercourse with a condom after drinking alcohol in the last three weeks ?		
11.1 Have you ever had sexual intercourse without a condom after drinking alcohol?		
11.2 Did you have sexual intercourse without a condom after drinking alcohol in the last three weeks ?		
12.1 Have you ever had sexual intercourse with a condom after smoking marijuana (dagga)?		
12.2 Did you have sexual intercourse with a condom after smoking marijuana (dagga) in the last three weeks ?		
13.1 Have you ever had sexual intercourse without a condom after smoking marijuana (dagga)?		
13.2 Did you have sexual intercourse without a condom after smoking marijuana (dagga) in the last three weeks ?		

	YES	NO
14.1 Have you ever had sexual intercourse without a condom after using any other drugs?		
14.2 Did you have sexual intercourse without a condom after using any other drugs in the last three weeks ?		
15.1 Have you ever had sexual intercourse with a condom after using any other drugs?		
15.2 Did you have sexual intercourse with a condom after using any other drugs in the last three weeks ?		
16.1 Have you ever exchanged sex for money or drugs?		
16.2 Did you exchange sex for money or drugs in the last three weeks ?		

PLEASE TURN OVER

4. DEMOGRAPHIC INFORMATION

4.1 Gender: Male
Female

4.2 Age :

4.3 Ethnicity: Black
Coloured
White
Other

4.4 If you are still at school, what grade are you in now?

4.5 Visual status: Partially sighted :

Blind :

4.6 Language : English
Afrikaans
Xhosa
Other

VRAELYSIE VIR VISUEEL-GESTREMDE ADOLESENTE (SWAKSIENDES)

**INSTRUKSIES: (DIE NAVORSER /MEDE-NAVORSER LEES DIE
INSTRUKSIES AAN DIE DEELNEMERS)**

Die doel van die vraelys is om die deelnemers se kennis, houdings en gedrag te ondersoek oor sensitiewe aspekte soos HIV/VIGS en seksuele ervaring, in die konteks van 'n toenemende HIV/VIGS pandemie. Ons verlang van jou om eerlike inligting te verskaf om sodoende die beste resultate te bereik en ons instaat te stel om vanuit die bevindinge op daardie areas in die HIV/VIGS voorkomingsprogram te fokus wat vir jou belangrik is.

Die vraelys bestaan uit VIER (4) AFDELINGS

Lees die instruksies noukerig deur en beantwoord ALLE vrae. Kies een antwoord wat die beste jou opinie/mening of gedrag reflekteer. Volg die instruksies in die beantwoording van die vraelys deur;

'n Sirkel te maak om die nommer wat die beste ooreenstem met jou standpunt; en

Jou naam mag nie op die antwoordstel ingevul word nie aangesien jou naam en antwoorde konfidensieel is. Niemand sal ooit weet dat jy die vraelys voltooi het nie. Indien iets onduidelik is mag jy navraag doen vir uitklaring met die navorsers deur jou hand op te steek.

DANKIE VIR JOU SAMEWERKING

BLAAI OM ASSEBLIEF

1. KENNIS VAN HIV/VIGS

Van jou word verwag om aan te dui tot welke mate jy met die onderstaande stellings saamstem of daarmee verskil.

4. JA

5. NEE

6. WEET NIE

Maak 'n **SIRKEL** om die nommer wat die beste met jou siening ooreenstem:

1. Ek verstaan die instruksies en weet presies wat om te doen	1	2	3
2. Dit is moontlik om VIGS op te doen deur bloed te skenk	1	2	3
3. HIV veroorsaak VIGS	1	2	3
4. Toordery kan VIGS veroorsaak	1	2	3
5. Bloed en semen is two voorbeelde van onveilige liggaams vleistowwe	1	2	3
6. 'n Swanger vrou wat met VIGS geinfekteer is kan haar ongebore baba met die virus besmet	1	2	3
7 'n Baba kan as gevolg van borsvoeding HIV positief raak	1	2	3
8. Daar is huidiglik gee teenmiddel vir VIGS nie	1	2	3
9. Alhoewel kondome nie 100 persent waarborg verskaf nie, is dit een van die beste beskermings teen VIGS	1	2	3

10. VIGS is nie meer 'n siekte vir alleenlik 'gays nie	1	2	3
11. VIGS kan voorkom word	1	2	3
12. Is dit moontlik om VIGS op te doen deur slegs eenkeer seks te hê?	1	2	3
13. Is dit veilig om 'n tandeborsel te deel met 'n persoon wat met VIGS geïnfecteer is?	1	2	3
14. Dink jy dat HIV/VIGS kan oorgedra word deur:			
14.1 Gewone seks	1	2	3
14.2 Gebruikte spuitnaalde	1	2	3
14.3 Saandra van klere	1	2	3
14.4 Nies	1	2	3
14.5 Hoes	1	2	3
14.6 Gebruik van toilet vlakke	1	2	3
14.7 Skenk van bloed	1	2	3
14.8 Soen	1	2	3
14.9 Muskiet byt	1	2	3
14.10 Te swem in dieselfde water as die HIV geïnfecteerde persoon	1	2	3
14.11 Saam gebruik van eetgerei	1	2	3
14.12 Handskud	1	2	3
14.13 Ontvang van bloed	1	2	3
14.14 Om besny te word met dieselfde lem/mes	1	2	3
14.15 Gemeenskaplike gebruik van tattoeer naalde	1	2	3
14.16 Die saamgebruik van 'n skeermes met 'n HIV positiewe persoon	1	2	3
14.17 Om 'n persoon wat met VIGS besmet is aan te raak	1	2	3
15. Dink jy dat die volgende persone VIGS kan opdoen?			
15.2 Homoseksuele persone	1	2	3
15.2 Prostitute	1	2	3
15.3 Dwelmverslaafdes wat hulself inspuit	1	2	3
15.4 Heteroseksuele persone	1	2	3
15.5 Getroude paartjies	1	2	3
15.6 Gay persone	1	2	3
15.7 Swanger vroue	1	2	3

16. Kondome verminder die risiko om met VIGS geïnfekteer te word	1	2	3
17. Kondome affekteer seksuele genot en fisiese sensasie	1	2	3
18. Iemand kan baie gesond voorkom en steeds die VIGS virus oordra	1	2	3
19. Die meeste mense wat met VIGS besmet is toon tekens van die siekte vanaf die begin	1	2	3
20. Vrouens kan nie VIGS opdoen deur seksuele omgang nie	1	2	3
21. Voorbehoed tablette beskerm 'n vrou teen besmetting van die VIGS virus	1	2	3
22. Jy kan met VIGS geïnfekteer word tydens jou eerste seksuele ervaring	1	2	3
23. Jy kan van VIGS genees word deur seks te hê met 'n maagd	1	2	3
24. Het kondome 'n verval datum?	1	2	3
25. Kondome kan meer as eenkeer gebruik word	1	2	3
26. Ek weet hoe om 'n kondoom te gebruik	1	2	3
27. Ek is bewus van die venster periode waarna jy weer getoets moet word om te bepaal of jy HIV positief is	1	2	3
28. HIV toetsing een week na onbeskermd seks gee jou 'n aanduiding of jy HIV positief is	1	2	3
29. Weet jy persoonlik van iemand in jou vriendekring wat met die HIV/VIGS geïnfekteer is?	1	2	3

30. Dink jy, jy loop 'n risiko vir HIV besmetting?	1	2	3
31. Wanneer 'n man sy penis onttrek voordat hy sy klimaks bereik verhoed dit dat die vrou met HIV besmet word	1	2	3
32. 'n Vrou kan met die HIV virus besmet word as sy anale seks het met 'n man (Met anale seks bedoel ons die insit van die penis in 'n ander persoon se anus)	1	2	3
33. 'n Persoon kan met VIGS besmet word deur orale seks (Met orale seks bedoel ons dat die een persoon se mond tas die penis of vagina van die ander persoon)	1	2	3
34. Daar is 'n vroulike kondoom wat die vrou se kans vir HIV besmetting verminder	1	2	3
35. Seksuele omgang met meer as een maat verhoog 'n persoon se kans om met die HIV virus besmet te word	1	2	3
36. Alle verwagte vroue wat met VIGS besmet is sal babas hê wat met die VIGS virus gebore word	1	2	3
37. Die gebruik van vaseline of baba olie met kondome verlaag die kans vir HIV besmetting	1	2	3
38. Jy kan nie met HIV besmet word as jy jou geslagsdele afwas nadat jy seks gehad het nie	1	2	3
39. 'n Vrou kan nie met die HIV virus geïnfecteer word as sy seks het tydens haar maanstonde nie	1	2	3
40. Daar is 'n teenmiddel wat volwassenes beskerm teen besmetting van die HIV virus	1	2	3

2. HOUDINGS

Van jou word verwag om aan te dui tot welke mate jy met die onderstaande stellings saamstem of daarmee verskil. Jy moet van die volgende skaal gebruik maak:

6. Verskil sterk

7. Verskil

8. Onseker

9. Stem saam

10. Stem sterk saam

Maak 'n **SIRKEL** om die nommer wat die beste met jou siening ooreenstem

1. Volgens my gee kondome te veel probleme	1	2	3	4	5
2. Kondome is onbetroubaar	1	2	3	4	5
3. Kondome is aangenaam om te gebruik	1	2	3	4	5
4. Kondome verskaf ekstra genot tydens die voorspel tot seks	1	2	3	4	5
5. Ek is bereid om kondome te gebruik alhoewel ek nog nooit voorheen een gebruik het nie	1	2	3	4	5
6. Daar is geen rede waarom vroue in die verleentheid moet wees as hulle die gebruik van 'n kondoom voorgestel het nie	1	2	3	4	5
7. Ek dink die effektiewe gebruik van kondome kan seksuele genot verbeter	1.	2	3	4	5
8. Ek sien geen rede waarom die gebruik van kondome 'n verleentheid is nie	1.	2	3	4	5

9. Ek hou geensins van die idee om kondome te gebruik nie	1	2	3	4	5
10. Die gebruik van kondome is ongerieflik	1	2	3	4	5
11. Kondome is ongemaklik	1	2	3	4	5
12. Ek sal gemaklik wees met die gedagte om voor te stel dat ek en my maat 'n kondoom moet gebruik	1	2	3	4	5
13. Die gebruik van 'n kondoom maak seks onaangenaam	1	2	3	4	5
14. Kondome vernietig die waarde van die seksdaad	1	2	3	4	5
15. Vroue dink mans wat kondome gebruik is sussies	1	2	3	4	5
16. Net die gedagte om kondome te gebruik is waglik	1	2	3	4	5
17. Om te stop om 'n kondoom aan te sit haal die romanse uit seks	1	2	3	4	5
18. Ek dink kondome is 'n uitstekende middel vir geboortebeperking	1	2	3	4	5
19. Daar is geen rede waarom 'n man verleë moet wees as hy die gebruik van 'n kondoom voorstel nie	1	2	3	4	5
20. Die meeste vroue hou nie daarvan as hul metgesel kondome gebruik nie	1	2	3	4	5
21. Buiten weerhouding blyk kondome die veiligste metode van voorbehoed te wees	1	2	3	4	5

22. As 'n meisie/vrou kondome met hulle dra beteken dit dat hulle meer as een seksgesmaat het	1	2	3	4	5
23. Ek sal in dieselfde kamer slaap as iemand wat met die HIV/VIGS virus geïnfekteer is	1	2	3	4	5
24. Ek sal 'n eetmaal met iemand deel wat HIV positief is	1	2	3	4	5
25. Ek sal praat met iemand wat met die HIV/VIGS virus geïnfekteer is	1	2	3	4	5
26. Ek sal 'n familielid met HIV/VIGS goed behandel	1	2	3	4	5
27. Ek kan nie geïnfekteer word deur saam met 'n HIV besmette persoon in dieselfde kamer te wees nie	1	2	3	4	5
28. Mense wat deur prostitusie of dwelms besmet is kry wat hulle toekom	1	2	3	4	5
29. Ek sal 'n klasmaat/kollega/ vriend dieselfde behandel as ek weet hy het HIV/VIGS	1	2	3	4	5
(As jy kondome gebruik, moenie die vraag beantwoord nie).					
30. Die rede waarom ek nie kondome gebruik nie is omdat:					
30.1 Dit 'n verleentheid is om vir kondome te vra by klinieke of om dit te koop	1	2	3	4	5
30.2 Ek nie weet hoe om kondome te gebruik nie	1	2	3	4	5
30.3 Ek slegs met een gereelde maat seks het	1	2	3	4	5
30.4 Ek nog nooit 'n kondoom gesien het nie	1	2	3	4	5

31. Ek sal my maat respekteer as hy of sy die gebruik van 'n kondoom aanbeveel	1	2	3	4	5
32. As ek nie 'n kondoom het nie sal ek steeds seksuele omgang hê	1	2	3	4	5

3. GEDRAG

Lees deur die onderstaande vrae en maak 'n KRUIS (X) in die JA blok as jy met die vraag saamstem of 'n KRUIS (X) in die NEE blok as jy nie met die vraag saamstem nie.

	JA	NEE
1.1 Het jy al ooit enige vaginale seks (insit van 'n penis in 'n vagina) met 'n persoon gehad wat jy nie baie goed geken het nie?		
1.2. Het jy al ooit enige vaginale seks (insit van 'n penis in 'n vagina) met 'n persoon gehad wat jy nie baie goed geken het nie, in die laaste drie weke?		
2.1 Het jy al ooit vaginale seks gehad (insit van 'n penis in 'n vagina) met 'n persoon wat jy baie goed ken?		
2.2 Het jy al ooit vaginale seks gehad (insit van 'n penis in 'n vagina) met 'n persoon wat jy baie goed ken in die laaste drie weke?		
3.1 Het jy ooit al vaginale seks gehad sonder 'n kondoom?		
3.2 Het jy ooit al vaginale seksuele omgang gehad sonder 'n kondoom in die laaste drie weke?		

	JA	NEE
4.1 Het jy o oit al vaginale seksuele omgang gehad met 'n kondoom?		
4.2 Het jy o oit al vaginale seksuele omgang gehad met 'n kondoom in die laaste drie weke ?		
5.1 Het jy al o oit orale seks gegee (wanneer jou mond die penis of vagina van 'n ander persoon aanraak) aan jou maat sonder 'n kondoom?		
5.2 Het jy al o oit orale seks gegee (wanneer jou mond die penis of vagina van 'n ander persoon aanraak) aan jou maat gegee in die laaste drie weke ?		
[Die vraag is vir mans alleenlik]		
6.1 Het jy al o oit anale seks (die insit van jou penis in die anus van 'n ander persoon) sonder 'n kondoom?		
[Die vraag is vir mans alleenlik]		
6.2 Het jy al o oit anale seks (die insit van jou penis in die anus van 'n ander persoon) sonder 'n kondoom in die laaste drie weke ?		
7.1 Het jy al o oit anale seks ontvang sonder 'n kondoom? [wanneer 'n man sy penis sit in jou anus]		
7.2 Het jy al o oit anale seks ontvang sonder 'n kondoom in die laaste drie weke ? [wanneer 'n man sy penis sit in jou anus]		
8.1 Het jy o oit al seksuele omgang gehad met iemand buiten jou gereelde maat?		

	JA	NEE
8.2 Het jy ooit al seksuele omgang gehad met iemand buiten jou gereelde maat in die laaste drie weke?		
9.1 Het jy ooit al die volgende probeer? 9.1.1 Alkohol 9.1.2 Dagga 9.1.3 Kokaien 9.1.4 Enige dwelms waarmee jy jou met 'n naald inspuit 9.1.5 Enige ander dwelms
9.2 Het jy die volgende probeer in die laaste drie weke? 9.2.1 Alkohol 9.2.2 Dagga 9.2.3 Kokaien 9.2.4 Enige dwelms waarmee jy jou met 'n naald inspuit 9.2.5 Enige ander dwelms As jou antwoord NEE is vir al die bostaande vrae by nommer 9.1 en 9.2 moenie vrae 10, 11, 12, 13, 14, and 15 antwoord nie
10.1 Het jy al ooit seksuele omgang gehad met 'n kondoom nadat jy alkohol gedrink het?		
10.2 Het jy al ooit seksuele omgang gehad met 'n kondoom nadat jy alkohol gedrink het in die laaste drie weke?		
11.1 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy alkohol gedrink het?		
11.2 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy alkohol gedrink het in die laaste drie weke?		

	JA	NEE
12.1 Het jy al ooit seksuele omgang gehad met 'n kondoom nadat jy dagga gerook het?		
12.2 Het jy al ooit seksuele omgang gehad met 'n kondoom nadat jy dagga gerook het in die laaste drie weke ?		
13.1 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy dagga gerook het?		
13.2 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy dagga gerook het in die laaste drie weke ?		
14.1 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy enige ander dwelms gebruik het?		
14.2 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy enige ander dwelms gebruik het in die laaste drie weke ?		
15.1 Het jy al ooit seksuele omgang gehad met 'n kondoom nadat jy enige ander dwelms gebruik het?		
15.2 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy enige ander dwelms gebruik het in die laaste drie weke ?		
16.1 Het jy ooit al seks verruil vir geld of dwelms?		
16.2 Het jy ooit al seks verruil vir geld of dwelms in die laaste drie weke ?		

BLAAI OM ASSEBLIEF

4. DEMOGRAFIESE INFORMASIE

4.1 Geslag: Manlik
Vroulik

4.2 Ouderdom:

4.3 Ras: Swart
Kleurling
Blank
Ander

4.4 Indien jy steeds op skool is in watter graad is jy nou?

4.5 Visuele status: Swaksiende :

Blind :

4.6 Taalvoorkeur Engels
Afrikaans
Xhosa
Ander

Appendix 2

QUESTIONNAIRES FOR VISUALLY IMPAIRED (BLIND) ADOLESCENTS

**INSTRUCTIONS: (THE RESEARCHER/TRAINEE READS THE INSTRUCTIONS
WITH THE PARTICIPANTS)**

The aim of the questionnaire is to investigate the participant's knowledge, attitudes and behaviour on sensitive issues such as HIV/AIDS and sexual experience in the context of an increasing HIV/AIDS pandemic. It is requested from you to provide honest information as we wish to achieve the best results and be able to focus on those areas in the prevention of HIV/AIDS that are important to you.

This Questionnaire consists of FOUR (4) sections

Read the instructions through carefully, and answer ALL the questions. Choose one answer that best reflects your opinion or behaviour. For the completion of this questionnaire it would be expected of you to:

Please write down the number which best coincides with your viewpoint

You are **not** expected to fill in your name, and your answers will be **CONFIDENTIAL**. Nobody will ever know that you have completed this questionnaire. If anything is not clear to you, you may request some clarity from the researcher by raising your hand.

THANK YOU FOR YOUR COOPERATION

PLEASE TURN OVER

1. KNOWLEDGE OF HIV/AIDS

You are expected to indicate whether you agree or not with the statements below. You have to make use of the following scale:

- 7. YES
- 8. NO
- 9. DON'T KNOW

Please write down the number of each statement and next to it the number which best coincides with your view

1. I understand the instructions and know exactly what to do	1	2	3
2. It is possible to get AIDS from donating blood	1	2	3
3. HIV causes AIDS	1	2	3
4. AIDS can be caused by witchcraft	1	2	3
5. Blood and semen (cum) are two examples of unsafe body fluids	1	2	3
6. A pregnant woman who has AIDS can infect her unborn baby with the virus	1	2	3
7. A baby can become HIV positive through breastfeeding	2	2	3
8. Currently there is no cure for AIDS	1	2	3
9. Though not 100% guaranteed against getting AIDS, condoms are one of the best protections against HIV/AIDS	1	2	3

10. AIDS is no longer a “gay” disease	1	2	3
11. AIDS is preventable	1	2	3
12. It is possible to get AIDS from having unsafe sex just once	1	2	3
13. It is safe to share a toothbrush with a person who has AIDS	1	2	3
14. Do you think HIV/AIDS can be transmitted by			
14.1 Casual sex	1	2	3
14.2 Syringes and needles	1	2	3
14.3 Sharing clothes	1	2	3
14.4 Sneezing	1	2	3
14.5 Coughing	1	2	3
14.6 Using toilet seats	1	2	3
14.7 Donating/giving blood	1	2	3
14.8 Kissing	1	2	3
14.9 Mosquito bites	1	2	3
14.10 Swimming in the same water as an infected person	1	2	3
14.11 Sharing eating utensils	1	2	3
14.12 Shaking hands	1	2	3
14.13 Receiving blood transfusion	1	2	3
14.14 Being circumcised with the same blade	1	2	3
14.15 Sharing tattoo needles	1	2	3
14.16 Sharing a razor with someone who is HIV-positive	1	2	3
14.17 Touching someone who has AIDS	1	2	3
15. Do you think that only the following people can get AIDS?			
15.1 Homosexuals	1	2	3
15.2 Commercial sex workers (prostitutes)	1	2	3
15.3 Injecting drug addicts	1	2	3
15.4 Heterosexuals	1	2	3
15.5 Married couples	1	2	3
15.6 Gay people	1	2	3
15.7 Pregnant women	1	2	3

16. Condoms reduce the risk of getting the AIDS virus	1	2	3
17. Condoms interfere with sexual excitement and physical sensation	1	2	3
18. Someone could pass on HIV/AIDS while appearing very healthy.	1	2	3
19. Most people who have the AIDS virus show signs of being sick right away	1	2	3
20. Women can't get AIDS through sexual intercourse	1	2	3
21. Birth control pills protect a woman from getting the AIDS virus	1	2	3
22. You can get AIDS with your first sexual intercourse	1	2	3
23. AIDS can be cured by having sex with a virgin	1	2	3
24. Do condoms have an expiry date?	1	2	3
25. Condoms can be re-used	1	2	3
26. I know how to use a condom	1	2	3
27. I am aware of the window period after which you need to be re-tested to see if you are HIV-positive?	1	2	3
28. Taking a test for HIV one week after having unprotected sex will tell a person if she or he has HIV	1	2	3
29. Do you personally know somebody among your friends or family who has HIV/AIDS?	1	2	3

30. Do you think you are at risk of HIV/AIDS infection?	1	2	3
31. Pulling out the penis before a man climax/comes keeps a woman from getting HIV	1	2	3
32. A woman can get HIV if she has anal sex with a man (By anal sex we mean putting a penis in another person's anus [butt])	1	2	3
33. A person can get AIDS from oral sex (By oral sex , we mean one person's mouth touching the penis or vagina of another person)	1	2	3
34. There is a female condom that can help decreases a woman's chance of getting HIV	1	2	3
35. Having sex with more than one partner can increase a person's chance of being infected with HIV	1	2	3
36. All pregnant women infected with HIV will have babies born with AIDS	1	2	3
37. Using Vaseline or baby oil with condoms lowers the chances of getting HIV	1	2	3
38. Showering , or washing one's genitals/private parts, after sex keeps a person from getting HIV	1	2	3
39. A woman cannot get HIV if she has sex during her period	1	2	3
40. There is a vaccine that can stop adults from getting HIV	1	2	3

PLEASE TURN OVER

B. ATTITUDE

You are expected to indicate to what extent you agree or disagree with the statements made below. You have to make use of the following scale:

- 1 Strongly disagree
- 2 Disagree
- 3 Undecided
- 4 Agree
- 5 Strongly agree

Please write down the number of each statement and next to it the number, which best coincides with your view.

1. In my opinion, condoms are too much trouble	1	2	3	4	5
2. Condoms are unreliable	1	2	3	4	5
3. Condoms are pleasant to use	1	2	3	4	5
4. Condoms are adding to the excitement of foreplay	1	2	3	4	5
5. I would be willing to try a condom, even if I have never used one before	1	2	3	4	5
6. There is no reason why women should be embarrassed to suggest a condom	1	2	3	4	5
7. I think proper use of condoms can enhance sexual pleasure	1	2	3	4	5
8. I see no reason to be embarrassed by the use of condoms	1	2	3	4	5

9. I just don't like the idea of using condoms	1	2	3	4	5
10. Condoms are inconvenient	1	2	3	4	5
11. Condoms are uncomfortable	1	2	3	4	5
12. I would be comfortable suggesting that my partner and I use a condom	1	2	3	4	5
13. Using a condom makes sex unenjoyable	1	2	3	4	5
14. Condoms ruin the sex act	1	2	3	4	5
15. Women think men who use condoms are jerks	1	2	3	4	5
16. The thought of using a condom is disgusting	1	2	3	4	5
17. Having to stop to put on a condom takes the romance out of sex	1	2	3	4	5
18. I think condoms are an excellent means of contraception	1	2	3	4	5
19. There is no reason why a man should be embarrassed to suggesting using a condom	1	2	3	4	5
20. Most women don't like their partners to use condoms	1	2	3	4	5
21. Condoms seem safer to me than any other form of contraception, except abstinence	1	2	3	4	5

22. If a women /girl carries condoms with her, it usually means she has more than one sex partner	1	2	3	4	5
23. I will sleep in the same room as someone infected with HIV/AIDS	1	2	3	4	5
24. I will share a meal with someone who is HIV positive	1	2	3	4	5
25. I will talk to someone with HIV/AIDS	1	2	3	4	5
26. I will treat a family member with HIV/AIDS well	1	2	3	4	5
27. I will not be infected by being in the same room as an HIV infected person	1	2	3	4	5
28. People who are infected through prostitution or drug use gets what they deserve	1	2	3	4	5
29. I will treat a classmate/colleague/friend the same as usual if I know he has HIV/AIDS	1	2	3	4	5
(If you do use condoms don't answer this question)					
30. The reason why I do not use condoms is because:					
30.1 It's embarrassing to ask for condoms at clinics or to buy condoms	1	2	3	4	5
30.2 I don't know how to use a condom	1	2	3	4	5
30.3 I only have sex with one regular partner	1	2	3	4	5
30.4 I have never seen a condom	1	2	3	4	5
31. I would respect my partner if he or she suggested using a condom	1	2	3	4	5

32. If I don't have a condom, I would have sexual intercourse anyway	1 2 3 4 5
--	-------------------

PLEASE TURN OVER

D. BEHAVIOUR

Read through the questions below and write down YES if you agree with the question or NO if you disagree next to the number of each question.

	YES	NO
1.1) Have you ever had vaginal sexual intercourse (putting a penis in a vagina) with a person you don't know very well?		
1.2. Did you have vaginal sexual intercourse (putting a penis in a vagina) with a person you don't know very well in the last three weeks ?		
2.1 Have you ever had vaginal sexual intercourse with a person that you do know very well?		
2.2 Did you have vaginal sexual intercourse with a person you do know very well, in the last three weeks ?		
3.1 Have you ever had vaginal sexual intercourse without a condom?		
3.2 Did you have vaginal sexual intercourse without a condom in the last three weeks ?		
4.1 Have you ever had vaginal sexual intercourse with a condom?		
4.2 Did you have vaginal sexual intercourse with a condom in the last three weeks ?		

	YES	NO
5.1 Have you ever given oral sex (when a person's mouth is touching the penis or vagina of another person) to your partner without a condom?		
5.2 Have you given oral sex (when a person's mouth is touching the penis or vagina of another person) in the last three weeks ?		
[This question applies to men only]		
6.1 Have you ever had anal sex (putting your penis in another persons anus [butt]) without a condom?		
[This question applies to men only]		
6.2 Did you have anal sex (putting your penis in another persons anus [butt]) without a condom in the last three weeks ?		
7.1 Have you ever received anal sex without a condom? [when a man put his penis in your anus] [butt]		
7.2 Did you receive anal sex without a condom in the last three weeks ? [when a man put his penis in your anus [butt]]?		
8.1 Have you ever had sexual intercourse with someone besides your steady partner.		
8.2 Did you have sexual intercourse with someone besides your steady partner in the last three weeks ?		

WRITE DOWN THE ITEMS WITH YOUR RESPON NEXT TO IT	YES	NO
<p>9.1 Have you ever tried:</p> <p>9.1.1 Alcohol</p> <p>9.1.2 Marijuana (hash, dagga)</p> <p>9.1.3 Cocaine</p> <p>9.1.4 Any drug injected with a needle (shot-up)</p> <p>9.1.5 Any other drugs</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>WRITE DOWN THE ITEMS WITH YOUR RESPON NEXT TO IT</p> <p>9.2 Did you try In the last three weeks</p> <p>9.2.1 Alcohol</p> <p>9.2.2 Marijuana (hash, dagga)</p> <p>9.2.3 Cocaine</p> <p>9.2.4 Any drug injected with a needle (shot-up)</p> <p>9.2.5 Any other drugs</p> <p>If you answer is NO to all the above don't answer 10, 11, 12, 13, 14, and 15</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>10.1 Have you ever had sexual intercourse with a condom after drinking alcohol?</p>		
<p>10.2 Did you have sexual intercourse with a condom after drinking alcohol in the last three weeks?</p>		
<p>11.1 Have you ever had sexual intercourse without a condom after drinking alcohol?</p>		
<p>11.2 Did you have sexual intercourse without a condom after drinking alcohol in the last three weeks?</p>		
<p>12.1 Have you ever had sexual intercourse with a condom after smoking marijuana (dagga)?</p>		

	YES	NO
12.2 Did you have sexual intercourse with a condom after smoking marijuana (dagga) in the last three weeks ?		
13.1 Have you ever had sexual intercourse without a condom after smoking marijuana (dagga)?		
13.2 Did you have sexual intercourse without a condom after smoking marijuana (dagga) in the last three weeks ?		
14.1 Have you ever had sexual intercourse without a condom after using any other drugs?		
14.2 Did you have sexual intercourse without a condom after using any other drugs in the last three weeks ?		
15.1 Have you ever had sexual intercourse with a condom after using any other drugs?		
15.2 Did you have sexual intercourse with a condom after using any other drugs in the last three weeks ?		
16.1 Have you ever exchanged sex for money or drugs?		
16.2 Did you exchange sex for money or drugs in the last three weeks ?		

PLEASE TURN OVER

4. DEMOGRAPHIC INFORMATION

4.1 **Gender:** Male
Female

4.2. **Age :**

4.3 **Ethnicity:** Black
Coloured
White
Other

4.4 If you are still at school, what grade are you in now?

4.5 **Visual status:** Partially Sighted :
Blind :

4.6 **Language :** English
Afrikaans
Xhosa
Other

VRAELYSTE VIR VISUEEL-GESTREMDES ADOLESENTE (BLINDES)

**INSTRUKSIES: (DIE NAVORSER /MEDE-NAVORSER LEES DIE
INSTRUKSIES AAN DIE DEELNEMERS)**

Die doel van die vraelys is om die deelnemers se kennis, houdings en gedrag te ondersoek oor sensitiewe aspekte soos HIV/VIGS en seksuele ervaring, in die konteks van 'n toenemende HIV/VIGS pandemie. Ons verlang van jou om eerlike inligting te verskaf om sodoende die beste resultate te bereik en ons in staat stel om vanuit die bevindinge op daardie areas in die HIV/VIGS voorkomingsprogram te fokus wat vir jou belangrik is.

Die vraelys bestaan uit VIER (4) AFDELINGS

Lees die instruksies noukeurig deur en beantwoord ALLE vrae. Kies die antwoord wat die beste jou opinie/mening of gedrag reflekteer. Volg die instruksies in die beantwoording van die vraelys

Skryf neer die nommer wat die beste ooreenstem met jou standpunt

Jou naam mag nie op die antwoordstel ingevul word nie aangesien jou naam en antwoorde konfidensieel is. Niemand sal ooit weet dat jy die vraelys voltooi het nie. Indien iets onduidelik is mag jy navraag doen vir uitklaring met die navorser deur jou hand op te steek.

DANKIE VIR JOU SAMEWERKING

BLAAI OM ASSEBLIEF

1. KENNIS VAN HIV/VIGS

Van jou word verwag om aan te dui tot welke mate jy met die onderstaande stellings saamstem of daarmee verskil.

10. JA

11. NEE

12. WEET NIE

Skryf die nommer van elke stelling neer en skryf langsaan die nommer neer wat die beste met jou siening ooreenstem:

1. Ek verstaan die instruksies en weet presies wat om te doen	1	2	3
2. Dit is moontlik om VIGS op te doen deur bloed te skenk	1	2	3
3. HIV veroorsaak VIGS	1	2	3
4. Toordery kan VIGS veroorsaak	1	2	3
5. Bloed en semen is twee voorbeelde van onveilige liggaams vleistowwe	1	2	3
6. 'n Swanger vrou wat met VIGS geïnfekteer is kan haar ongebore baba met die virus besmet	1	2	3
7 'n Baba kan as gevolg van borsvoeding HIV positief raak	1	2	3
8. Daar is huidiglik gee teenmiddel vir VIGS nie	1	2	3
9. Alhoewel kondome nie 100 persent waarborg verskaf nie, is dit een van die beste beskerming teen VIGS	1	2	3

10. VIGS is nie meer 'n siekte vir alleenlik gays nie	1	2	3
11. VIGS kan voorkom word	1	2	3
12. Is dit moontlik om VIGS op te doen deur slegs eenkeer seks te hê?	1	2	3
13. Is dit veilig om 'n tandeborsel te deel met 'n persoon wat met VIGS geïnfecteer is?	1	2	3
14. Dink jy dat HIV/VIGS kan oorgedra word deur:			
14.1 Gewone seks	1	2	3
14.2 Gebruikte spuitnaalde	1	2	3
14.3 Saamdra van klere	1	2	3
14.4 Nies	1	2	3
14.5 Hoes	1	2	3
14.6 Gebruik van toilet vlakke	1	2	3
14.7 Skenk van bloed	1	2	3
14.8 Soen	1	2	3
14.9 Muskiet byt	1	2	3
14.10 Te swem in dieselfde water as die HIV geïnfecteerde persoon.	1	2	3
14.11 Saam gebruik van eetgerei	1	2	3
14.12 Handskud	1	2	3
14.13 Ontvang van bloed	1	2	3
14.14 Om besny te word met dieselfde lem/mes	1	2	3
14.15 Gemeenskaplike gebruik van tattoeer naalde	1	2	3
14.16 Die saamgebruik van 'n skeermes met 'n HIV positiewe persoon	1	2	3
14.17 Om te raak aan 'n persoon met VIGS besmet is.	1	2	3
15. Dink jy dat die volgende persone VIGS kan opdoen?			
15.1 Homoseksuele persone	1	2	3
15.2 Prostitute	1	2	3
15.3 Dwelmverslaafdes wat hulself inspuit	1	2	3
15.4 Heteroseksuele persone	1	2	3
15.5 Getroude paartjies	1	2	3
15.6 Gay persone	1	2	3
15.7 Swanger vroue	1	2	3

16. Kondome verminder die risiko om met VIGS geïnfekteer te word	1	2	3
17. Kondome affekteer seksuele genot en fisiese sensasie	1	2	3
18. Iemand kan baie gesond voorkom en steeds die VIGS virus oordra	1	2	3
19. Die meeste mense wat met VIGS besmet is toon tekens van die siekte vanaf die begin	1	2	3
20. Vrouens kan nie VIGS opdoen deur seksuele omgang nie	1	2	3
21. Voorbehoed tablette beskerm 'n vrou teen besmetting van die VIGS virus	1	2	3
22. Jy kan met VIGS geïnfekteer word tydens jou eerste seksuele ervaring	1	2	3
23. Jy kan van VIGS genees word deur seks te hê met 'n maagd	1	2	3
24. Het kondome 'n verval datum?	1	2	3
25. Kondome kan meer as eenkeer gebruik word	1	2	3
26. Ek weet hoe om 'n kondoom te gebruik	1	2	3
27. Ek is bewus van die venster periode waarna jy weer getoets moet word om te bepaal of jy HIV positief is	1	2	3
28. HIV toetsing een week na onbeskermdede seks gee jou 'n aanduiding of jy HIV positief is	1	2	3

29. Weet jy persoonlik van iemand in jou vriendekring wat met die HIV/VIGS geïnfecteer is?	1	2	3
30. Dink jy, jy loop 'n risiko vir HIV besmetting?	1	2	3
31. Wanneer 'n man sy penis onttrek voordat hy sy klimaks bereik verhoed dit dat die vrou met HIV besmet word	1	2	3
32. 'n Vrou kan met die HIV virus besmet word as sy anale seks het met 'n man (Met anale seks bedoel ons die insit van die penis in 'n ander persoon se anus)	1	2	3
33. 'n Persoon kan met VIGS besmet word deur orale seks (Met orale seks bedoel ons dat die een persoon se mond tas die penis of vagina van die ander persoon)	1	2	3
34. Daar is 'n vroulike kondoom wat die vrou se kanse vir HIV besmetting verminder	1	2	3
35. Seksuele omgang met meer as een maat verhoog 'n persoon se kanse om met die HIV virus besmet te word	1	2	3
36. Alle verwagte vroue wat met VIGS besmet is sal babas hê wat met die VIGS virus gebore word	1	2	3
37. Die gebruik van vaseline of baba olie met kondome verlaag die kanse vir HIV besmetting	1	2	3
38. Jy kan nie met HIV besmet word as jy jou geslagsdele stort of was nadat jy seks gehad het nie	1	2	3
39. 'n Vrou kan nie met die HIV virus geïnfecteer word as sy seks het tydens haar maanstonde nie	1	2	3
40. Daar is 'n teenmiddel wat volwassenes beskerm teen besmetting van die HIV virus	1	2	3

2. HOUDINGS

Van jou word verwag om aan te dui tot welke mate jy met die onderstaande stellings saamstem of daarmee verskil. Jy moet van die volgende skaal gebruik maak:

- 1 Verskil sterk**
- 2 Verskil**
- 3 Onseker**
- 4 Stem saam**
- 5 Stem sterk saam**

Skryf die nommer van elke stelling neer en skryf langsaan die nommer neer wat die beste met jou siening ooreenstem

1. Volgens my gee kondome te veel probleme	1	2	3	4	5
2. Kondome is onbetroubaar	1	2	3	4	5
3. Kondome is aangenaam om te gebruik	1	2	3	4	5
4. Kondome verskaf ekstra genot tydens die voorspel tot seks	1	2	3	4	5
5. Ek is bereid om kondome te gebruik alhoewel ek nog nooit voorheen een gebruik het nie	1	2	3	4	5
6. Daar is geen rede waarom vroue in die verleentheid moet wees as hulle die gebruik van 'n kondoom voorgestel het nie	1	2	3	4	5
7. Ek dink die effektiewe gebruik van kondome kan seksuele genot verbeter	1	2	3	4	5

8. Ek sien geen rede waarom die gebruik van kondome 'n verleentheid is nie	1	2	3	4	5
9. Ek hou geensins van die idee om kondome te gebruik nie	1	2	3	4	5
10. Die gebruik van kondome is ongerieflik	1	2	3	4	5
11. Kondome is ongemaklik	1	2	3	4	5
12. Ek sal gemaklik wees met die gedagte om voor te stel dat ek en my maat 'n kondoom moet gebruik	1	2	3	4	5
13. Die gebruik van 'n kondoom maak seks onaangenaam	1	2	3	4	5
14. Kondome vernietig die waarde van die seksdaad	1	2	3	4	5
15. Vroue dink mans wat kondome gebruik is sussies	1	2	3	4	5
16. Net die gedagte om kondome te gebruik is waglik	1	2	3	4	5
17. Om te stop om 'n kondoom aan te sit haal die romanse uit seks	1	2	3	4	5
18. Ek dink kondome is 'n uitstekende middel vir geboortebepkering	1	2	3	4	5
19. Daar is geen rede waarom 'n man verleë moet wees as hy die gebruik van 'n kondoom voorstel nie	1	2	3	4	5
20. Die meeste vroue hou nie daarvan as hul metgesel kondome gebruik nie	1	2	3	4	5

21. Buiten weerhouding blyk kondome die veiligste metode van voorbehoed te wees	1	2	3	4	5
22. As 'n meisie/vrou kondome met hulle dra beteken dit dat hulle meer as een seksmaat het	1	2	3	4	5
23. Ek sal in dieselfde kamer slaap as iemand wat met die HIV/VIGS virus geïnfekteer is	1	2	3	4	5
24. Ek sal 'n eetmaal met iemand deel wat HIV positief is	1	2	3	4	5
25. Ek sal praat met iemand wat met die HIV/VIGS virus geïnfekteer is	1	2	3	4	5
26. Ek sal 'n familielid met HIV/VIGS goed behandel	1	2	3	4	5
27. Ek kan nie geïnfekteer word deur saam met 'n HIV besmette persoon in dieselfde kamer te wees nie	1	2	3	4	5
28. Mense wat deur prostitusie of dwelms besmet is kry wat hulle toekom	1	2	3	4	5
29. Ek sal 'n klasmaat/kollega/ vriend dieselfde behandel as ek weet hy het HIV/VIGS	1	2	3	4	5
(As jy kondome gebruik, moenie die volgende vraag beantwoord nie)					
30. Die rede waarom ek nie kondome gebruik nie is omdat;					
30.1 Dit 'n verleentheid is om vir kondome te vra by klinieke of om dit te koop	1	2	3	4	5
30.2 Ek nie weet hoe om kondome te gebruik nie	1	2	3	4	5
30.3 Ek slegs met een gereelde maat seks het	1	2	3	4	5
30.4 Ek nog nooit 'n kondoom gesien het nie	1	2	3	4	5

31. Ek sal my maat respekteer as hy of sy die gebruik van 'n kondoom aanbeveel	1	2	3	4	5
32. As ek nie 'n kondoom het nie sal ek steeds seksuele omgang hê	1	2	3	4	5

3. GEDRAG

Lees deur die onderstaande vrae en skryf neer, JA as jy met die vraag saamstem of NEE as jy nie met die vraag saamstem nie. Skryf eers die nommer van elke vraag neer en langsaan jou antwoord, JA of NEE.

	JA	NEE
1.1 Het jy al o oit enige vaginale seks (insit van 'n penis in 'n vagina) met 'n persoon gehad wat jy nie baie goed geken het nie?		
1.2. Het jy al o oit enige vaginale seks (insit van 'n penis in 'n vagina) met 'n persoon gehad wat jy nie baie goed geken het nie, in die laaste drie weke ?		
2.1 Het jy al o oit vaginale seks gehad (insit van 'n penis in 'n vagina) met 'n persoon wat jy baie goed ken?		
2.2 Het jy al o oit vaginale seks gehad (insit van 'n penis in 'n vagina) met 'n persoon wat jy baie goed ken in die laaste drie weke ?		
3.1 Het jy o oit al vaginale seks gehad sonder 'n kondoom?		
3.2 Het jy o oit al vaginale seksuele omgang gehad sonder 'n kondoom in die laaste drie weke ?		

	JA	NEE
4.1 Het jy o oit al vaginale seksuele omgang gehad met 'n kondoom?		
4.2 Het jy o oit al vaginale seksuele omgang gehad met 'n kondoom in die laaste drie weke ?		
5.1 Het jy al o oit orale seks gegee (wanneer jou mond die penis of vagina van 'n ander persoon aanraak) aan jou maat sonder 'n kondoom?		
5.2 Het jy al o oit orale seks gegee (wanneer jou mond die penis of vagina van 'n ander persoon aanraak) aan jou maat gegee in die laaste drie weke ?		
[Die vraag is vir mans alleenlik]		
6.1 Het jy al o oit anale seks (die insit van jou penis in die anus van 'n ander persoon) sonder 'n kondoom?		
[Die vraag is vir mans alleenlik]		
6.2 Het jy al o oit anale seks (die insit van jou penis in die anus van 'n ander persoon) sonder 'n kondoom in die laaste drie weke ?		
7.1 Het jy al o oit anale seks ontvang sonder 'n kondoom? [wanneer 'n man sy penis sit in jou anus]		
7.2 Het jy al o oit anale seks ontvang sonder 'n kondoom in die laaste drie weke ? [wanneer 'n man sy penis sit in jou anus]		
8.1 Het jy o oit al seksuele omgang gehad met iemand buiten jou gereelde maat?.		
8.2 Het jy o oit al seksuele omgang gehad met iemand buiten jou gereelde maat in die laaste drie weke ?		

	JA	NEE
<p>9.1 Het jy ooit al die volgende probeer?</p> <p>9.1.1 Alkohol</p> <p>9.1.2 Dagga</p> <p>9.1.3 Kokaien</p> <p>9.1.4 Enige dwelms waarmee jy jou met 'n naald inspuit</p> <p>9.1.5 Enige ander dwelms</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>9.2 Het jy die volgende probeer in die laaste drie weke?</p> <p>9.2.1 Alkohol</p> <p>9.2.2 Dagga</p> <p>9.2.3 Kokaien</p> <p>9.2.4 Enige dwelms waarmee jy jou met 'n naald inspuit</p> <p>9.2.5 Enige ander dwelms</p> <p>As jou antwoord NEE is vir al die bostaande vrae to nommer 9.1 en 9.2, moenie vrae 10, 11, 12, 13, 14, and 15 antwoord nie</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p>10.1 Het jy al ooit seksuele omgang gehad met 'n kondoom nadat jy alkohol gedrink het?</p>		
<p>10.2 Het jy al ooit seksuele omgang gehad met 'n kondoom nadat jy alkohol gedrink het in die laaste drie weke?</p>		
<p>11.1 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy alkohol gedrink het?</p>		
<p>11.2 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy alkohol gedrink het in die laaste drie weke?</p>		

	JA	NEE
12.1 Het jy al ooit seksuele omgang gehad met 'n kondoom nadat jy dagga gerook het?		
12.2 Het jy al ooit seksuele omgang gehad met 'n kondoom nadat jy dagga gerook het in die laaste drie weke ?		
13.1 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy dagga gerook het?		
13.2 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy dagga gerook het in die laaste drie weke ?		
14.1 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy enige ander dwelms gebruik het?		
14.2 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy enige ander dwelms gebruik het in die laaste drie weke ?		
15.1 Het jy al ooit seksuele omgang gehad met 'n kondoom nadat jy enige ander dwelms gebruik het?		
15.2 Het jy al ooit seksuele omgang gehad sonder 'n kondoom nadat jy enige ander dwelms gebruik het in die laaste drie weke ?		
16.1 Het jy ooit al seks verruil vir geld of dwelms?		
16.2 Het jy ooit al seks verruil vir geld of dwelms in die laaste drie weke ?		

BLAAI OM ASSEBLIEF

4. DEMOGRAFIESE INFORMASIE

4.1 **Geslag:** Manlik
Vroulik

4.2 **Ouderdom:**

4.3 **Ras:** Swart
Kleurling
Blank
Ander

4.4 **Indien jy steeds op skool is in watter graad is jy nou?**

4.5 **Visuele status:** Swaksiende :

Blind :

4.6 **Taalvoorkeur** Engels
Afrikaans
Xhosa
Ander

Appendix 3

PARENT INFORMATION SHEET AND CONSENT FORM

Title: The development and evaluation of a pilot school-based programme for prevention of HIV/AIDS among visually impaired and blind South African adolescents

RESEARCHER: JOHN PHILANDER (DEPARTMENT OF PSYCHOLOGY)

TEL: (021) 951 2234

The University and those conducting this research subscribe to the ethical conduct of research and to the protection of the interests and comfort of participants. This form and the information it contains are therefore given to you for your own protection and full understanding of the procedures. Your signature of this form will simply mean that you are fully aware of the procedures of this research project and that you have received adequate opportunity to consider the information in this document.

Description: I am a student at the University of Stellenbosch (Psychology Department) and am currently doing research to investigate the needs of visually impaired people when it comes to HIV/AIDS prevention. We would like to investigate the needs amongst visually impaired youth between the ages of 15 to 23. All the learners in grades 9 to 12 were identified to take part in this study. Participation in this study requires the completion of a questionnaire before and after the intervention and three months later. All the learners in those grades will be exposed to some health education over an eight week period.

All children in your child's age range/grade have been selected as possible participants. We would like to ask your permission for your child's participation in this research. Please be informed that the governing bodies, principals and the

Western Education department (WCED) have already been approached to seek permission, and they have all granted permission.

Benefits of this research: This study is the first comprehensive data gathering initiative regarding the knowledge, attitudes and behaviour about HIV/AIDS amongst visually impaired youth, which will provide the basis for the design of prevention programmes and in that way combat the spread of HIV/AIDS infections. We cannot guarantee that your child will benefit in any way from this study. Your willingness to allow you child to take part, however, may in the future help the visually impaired sector and society as a whole to understand this research topic better.

Risks, stress and discomfort: There are no foreseeable risks in participating in this study. However the topic of HIV/AIDS may make some people feel uncomfortable. Very direct questions will be asked about sex, but everything will be confidential. If your child feels uncomfortable or upset at any stage, referrals will be made to appropriate services.

Privacy: Your child's privacy will be maintained, as any information obtained during this study will be kept confidential. Knowledge of their identity is not required and personal opinions will not be reflected in any of the results. Recorded material will be handled with utmost confidentiality and be stored in a secure location during and after the completion of the research.

Time involvement: The research will be done during the school year during an appropriate time as negotiated with the different study sites. Your child will therefore be involved once a week over a period of five months. Sessions will only be 90 minutes per week. After the eight week programme a post-intervention questionnaire will be completed three months later.

Payment: Your child will receive no payment for his/her participation in this study.

Participation rights: If you decide that your child can be part of this study after reading this form, please understand that participation is voluntary and you and your child have the right to withdraw your consent or discontinue participation at any time without penalty. Your child has the right to refuse to answer particular questions or not to be tape-recorded. Your child's rights will be respected at all times and your decision to prevent him/her from participating will have no effect on the quality of services he/she receives.

If it happens that your child is dissatisfied or wants to ask any questions about his/her rights as a participant with anything regarding the research, you may register your concern with Prof L. Swartz at (021) 467 4490, the researcher at (021) 952 4207 or the Ethics Committee of the University of Stellenbosch at (021) 808 4623

.....
.....

I give consent for my child to participate in this study.

Name: _____ Signature: _____

Date: _____

INLIGTINGS BLAD AAN OUERS EN TOESTEMMINGS VORM

Title: The development and evaluation of a pilot school-based programme for prevention of HIV/AIDS among visually impaired and blind South African adolescents

NAVORSER: JOHN PHILANDER

(DEPARTEMENT SIELKUNDE) TEL: (021) 951 2234

Die Universiteit en diegene wat die navorser onderneem is onderworpe aan die etiese navorsings kode en die beskerming van die belange en gesondheid van respondente. Dié vorm en inligting wat dit bevat word daarom aan u verskaf om u ten volle in te lig oor die prosedures wat gevolg sal word en vir u eie beskerming. U handtekening op die vorm sal eenvoudig beteken dat u ten volle bewus is van die etiese prosedures en protokol van die navorsingsprojek en dat u voldoende geleentheid gegun word om die informasie in die dokument te bestudeer.

Beskrywing: Ek is huidiglik 'n student aan die Universiteit van Stellenbosch (Sielkunde Departement), en doen navorsing om die behoeftes van visueel-gestremdes in terme van die voorkoming van HIV/VIGS te ondersoek. Die ondersoek fokus veral op die visueel-gestremde jeug tussen die ouderdomme van 15 tot 23 jaar.

Alle leerders in grade 9 tot 12 was vir die studie geïdentifiseer. Deelname aan die studie vereis die voltooiing van 'n vraelys voor en na die intervensie program en drie maande later. Al die leerders in die onderskeie grade sal blootgestel word aan 'n Opvoedkundige Gesondheidsprogram oor 'n agt weke periode. Al die leerders in u kind se ouderdomsgroep of graad is geselekteer as moontlike deelnemers. Ons wil daarom u goedkeuring verkry vir u kind se deelname aan die studie. Ons wil u graag inlig dat die Beheerliggaam, Prinsipaal en die Wes-Kaap Onderwysdepartement (WKOD) al reeds ingelig en genader is vir toestemming om

die ondersoek te onderneem. Toestemming is daarom reeds by al die genoemde instansies verkry.

Voordele van die navorsing: Dié studie is die eerste omvattende data versamelings inisiatief wat fokus op die kennis, houdings en gedrag van visueel-gestremdes ten opsigte van HIV/VIGS. Dit sal 'n basis verskaf vir die ontwerp van voorkomingsprogramme en sodoende bydra tot die bekamping van die verspreiding van HIV/VIGS besmettings. Ons kan egter nie verseker dat u kind in enige opsig deur deelname aan die studie bevoordeel sal word nie, maar u bereidwilligheid om goedkeuring te verleen dat u kind aan die ondersoek deelneem, mag in die toekoms die visueel-gestremdes sektor en die breë gemeenskap help om die onderwerp wat ondersoek word, beter te verstaan.

Risiko's, stres en ongemak: Geen risiko's word deur deelname aan die studie voorsien nie. Dit mag tog gebeur dat sommige mense ongemaklik mag voel om oor 'n onderwerp soos HIV/VIGS te praat. Direkte vrae oor seks sal in die ondersoek ter sprake wees, maar alles sal vertroulik hanteer word. Indien u kind ter enige tyd a.g.v die ondersoek onsteld sal wees of ongemaklik sal voel, sal hy/sy vir ondersteuning na toepaslike ondersteuningsdienste verwys word.

Privaatheid: Die privaatheid van u kind sal beskerm word en alle inligting versamel tydens die ondersoek sal vertroulik gehanteer word. U kind se identiteit word nie verlang nie en persoonlike standpunte sal nie in enige resultate gereflekteer word nie. Alle data wat op bande opgeneem is sal met die grootste vertroulikheid en omsigtigheid hanteer word en in veilige bewaring gehou word tydens en na die ondersoek.

Tydbepaling: Die navorsing word gedoen tydens die verloop van die skool jaar, binne 'n spesifieke tyd soos onderhandel word met die verskillende skole betrokke by die ondersoek. U kind sal daarom een keer per week betrokke wees oor 'n

periode van vyf maande. Die tydsduur van die sessies sal ongeveer 90 minute per week wees. Na die agt weke program sal 'n post-intervensie vraelys afgelê word.

Betaling: U kind sal nie vir sy/haar deelname aan die studie betaal word nie.

Regte van deelnemers: Indien u nadat u die vorm gelees het, besluit dat u kind deel van die studie kan wees, wil ons dit benadruk dat deelname aan die studie vrywillig is en dat u en u kind die reg het om jul toestemming terug te trek of om deelname aan die studie te beëindig sonder enige nadelige gevolge. U kind het die reg om nie sekere vrae te beantwoord nie of om op band opgeneem te word nie. U kind se regte sal ten alle tye gerespekteer word en indien u sou besluit dat hy/sy nie deel van die ondersoek moet uitmaak nie, sal dit geen invloed hê op die kwaliteit van dienste wat aan hom/haar verskaf word nie. Indien dit sou gebeur dat u kind ontevrede is of enige navraag wil doen oor hom/haar regte as deelnemer omtrent enigiets aangaande die ondersoek, kan u, u klagtes aanmeld by Prof. L. Swarts by (021) 467 4490, die navorser by (021) 952 4207, of die Etiese komitee van die Universiteit by (021) 808 4623

.....
.....

Hiermee verleen ek toestemming dat my kind aan die ondersoek/studie mag deelneem

Naam: _____ **Handtekening:** _____

Datum: _____

Appendix 4

PARTICIPANT ASSENT DOCUMENT FOR RESEARCH STUDY

Title of the Study: The development and evaluation of a pilot school-based programme for prevention of HIV/AIDS among visually impaired and blind South African adolescents

You are being invited to take part in a research study because we are trying to learn more about the knowledge, attitudes and sexual behaviour of visually impaired adolescents and young adults. You will be one of about eighty people who will be part of this study.

Who is doing the research: The person in charge of this study is Mr. John Philander, based at Athlone School for the Blind (Principal Investigator) and a student at the University of Stellenbosch. He is being guided in this research by Professor L. Swartz (Supervisor). There will be other people on the research team assisting at different times during the study.

Purpose of this study: The purpose of the investigation is to determine the effect of HIV/AIDS on visually impaired people and to design a preventative programme based on their needs. By doing this study, we hope to learn more about the sexual knowledge, behaviour and attitudes of visually impaired adolescents and young adults and ensure that their needs around the prevention of HIV/AIDS are realized. This will be achieved after the design, implementation and evaluation of a pilot HIV prevention programme.

Participation in this study requires the completion of a questionnaire before and after the intervention and three months later. An experimental group of 20 participants will be exposed to a HIV intervention programme over an eight week period from May to July 2004. Those who are part of the control groups will

participate in a Health promotion programme over a four week period from May to June 2004.

Possible risks and discomforts: To the best of our knowledge, the things you will be doing have no risks.

Benefits from taking part in the study: There is no guarantee that you will get any benefit from taking part in this study. Your willingness to take part, however, may, in the future, help society as a whole to understand this research topic much better.

Participant rights: If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights and you can stop at any time during the study. If you decide not to take part in this study, your decision will have no effect on the quality of services you receive. If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to end your participation in the study.

If you have questions about the study, you can contact the investigator at (021) 951 2234 or Supervisor at (021) 4674420. If you have any questions about your rights as a research participant, contact the Ethics Committee at the University of Stellenbosch at 808-257-9428 or the Psychology Department at 1-866-400-9428. We will give you a copy of this consent form to take with you.

Payment: There are no costs associated with taking part in this study and you receive no payment to take part in the study.

Privacy: Your information will be combined with information from other people taking part in the study. You will not be identified in any written and published materials. The completion of any questionnaires will be anonymous which means

that no one, not even members of the research team, will know that the information you give came from you.

Date: Name of Participant:

Age : Signature of Participant:

Assent obtained by:

Signature:

Printed Name and Title:

**TOESTEMMING VORM VAN DEELNEMERS VIR DEELNAME
AAN NAVORSINGS ONDERSOEK**

Titel van die studie: The development and evaluation of a pilot school-based programme for prevention of HIV/AIDS among visually impaired and blind South African adolescents

Jy word uitgenooi om deel te neem aan 'n navorsingsondersoek aangesien ons probeer om meer te leer omtrent die kennis, houdings en gedrag van visueel-gestremde adolessente en jong volwassenes. Jy sal een van ongeveer tagtig persone wees wat deel vorm van die ondersoek.

Wie doen hierdie navorsing: Die persoon in beheer van die studie is Mnr. John Philander, werksaam by die Athlone Skool vir Blindes (Hoof Onderzoekbeampte) wat huidiglik 'n student is aan die Universiteit van Stellenbosch. Hy word in die ondersoek begelei deur Prof. L Swartz (Supervisor). Daar sal ander persone van die ondersoekspan wees wat tydens die ondersoek by die studie betrek sal word.

Doel van die ondersoek: Die doel van die studie is om die effek van HIV/Vigs op visueel-gestremdes te bepaal en om 'n Voorkomingsprogram gebaseer op hul behoeftes te ontwerp. Deur dié ondersoek hoop ons om meer te leer omtrent die seksuele kennis, houdings en gedrag van visueel-gestremde adolessente en jong volwassenes en om te verseker dat hul behoeftes in die daarstelling van 'n HIV/Vigs voorkomingsprogram inag geneem word. Dit sal bereik word na die ontwerp, implementering en evaluering van 'n loots HIV voorkomingsprogram. Deelname aan die studie vereis die voltooiing van 'n vraelys, deelname aan 'n Opvoedkundige Gesondheidsprogram en die voltooiing van 'n verdere vraelys wat na die program volg. Die studie vind plaas tussen Junie en Desember 2004.

Moontlike risiko's en ongemak: Volgens ons kennis sal die dinge waaraan jy blootgestel word nie enige risiko's inhou nie.

Voordele van deelname aan die studie: Daar is geen waarborg dat jy deur deelname enige voordeel uit die studies sal trek nie. Jou bereidwilligheid om aan die studie deel te neem sal die samelewing help om die navorsingonderwerp beter te verstaan.

Betaling/kompensasie: Daar is geen kostes verbonde aan u deelname aan die studie nie en jy sal geen betaling vir jou deelname ontvang nie.

Privaatheid: Jou inligting sal met informasie van ander deelnemers aan die studie gekombineer word. Jy sal ook nie geïdentifiseer word in enige geskrewe, getikte of gepubliseerde materiaal nie. Vir die voltooiing van enige vraelyste sal jy anoniem bly, wat beteken dat geen een, nie eens lede van die navorsingspan, sal weet dat sekere inligting vanaf jou afkomstig is nie.

Regte van deelnemers: As jy besluit om deel te neem aan die ondersoek moet dit vrywilliglik wees. Jy sal geen voorregte of regte ontnem word as jy nie wil deelneem nie en jy kan ter eniger tyd tydens die studie jou deelname beëindig. As jy besluit om nie aan die studie deel te neem nie sal jou besluit geen effek hê op die kwaliteit diens wat jy ontvang nie. As jy besluit om wel aan die studie deel te neem sal jy steeds die reg hê om ter enige tyd te besluit om jou deelname te beëindig. Jy sal geensins anders behandel word as jy jou deelname aan die studie beëindig nie.

As jy enige vrae omtrent die studie het kan jy die Hoof ondersoekbeampte kontak by (021) 951 2234 of Prof Swarts (Supervisor) by (021) 467 4490. As jy enige vrae het omtrent jou regte as 'n navorsings- respondent kan jy die Etiek komitee kontak by (021) 808 4623 of die Sielkunde Departement by (021) 808 4840. Ons sal jou 'n afskrif van die vorm gee om saam met jou te neem.

Datum Naam van Deelnemer Ouderdom

Handtekening

Toestemming verkry by: Handtekening:

Print Naam en Titel:

Appendix 5

ETHICS COMMITTEE APPLICATION FORM UNIVERSITY OF STELLENBOSCH

APPLICATION¹ TO THE University of Stellenbosch RESEARCH ETHICS COMMITTEE

FOR CLEARANCE OF NEW/REVISED RESEARCH PROJECTS

CLEARANCE NUMBER (for office use only): _____

THIS APPLICATION MUST BE TYPED (IN ARIAL 10) OR HANDWRITTEN IN CAPITALS

NAME: Prof. / Dr / Mr / Ms Mr John Philander

POSITION / PROFESSIONAL STATUS: Doctoral Student

AFFILIATION: RESEARCH PROGRAMME/INSTITUTION²: (University of Stellenbosch)
Postal address: University of Stellenbosch,
Private Bag X9182, Cape Town, 8000

TELEPHONE AND EXTENSION NO. Code: (021)
No. 952 4207

FAX NO. Code: (021)
No. 951 5118

E-MAIL ADDRESS: johp@adept.co.za

TITLE OF RESEARCH PROJECT: (Do *not* use abbreviations)

THE DEVELOPMENT AND EVALUATION OF A PILOT SCHOOL-BASED PROGRAMME FOR
PREVENTION OF HIV/AIDS AMONG VISUALLY IMPAIRED AND BLIND SOUTH AFRICAN
ADOLESCENTS

WHERE WILL THE RESEARCH BE CARRIED OUT? Under the Psychology Department of the University of Stellenbosch at the following sites

Athlone School for the Blind in Bellville-South
Pioneer School for the Blind in Worcester
(Both Institutions are in the Western Cape)

All the following sections must be completed³. Please tick all relevant boxes.

1. FUNDING OF THE RESEARCH: How will the research be funded? Self

2. PURPOSE OF THE RESEARCH:
Degree/diploma (state which) DPhil. (Psychology)
Institution: University of Stellenbosch

3. AIMS AND OBJECTIVES OF THE RESEARCH (Please list objectives):

- To design, implement and evaluate a preventive programme on a selected group

of adolescents with visual impairments, so as to provide a basis for the development of such programmes for people with visual impairment.

- To record process information on the needs and experiences on people with visual impairment. This qualitative information may be of some use for the design of future preventive programmes and activities.

4. SUMMARY OF THE RESEARCH (give a brief outline of the research plan – in not more than 200 words):

Firstly, a Key Informant study with influential people based at community service providers and other people in the visually impaired and disability sector will be conducted through a structured interview. These interviews will be tape recorded, transcribed and analysed. This will be followed by a study of knowledge, attitudes and behaviour amongst visually impaired adolescents between the ages of 15 and 23 at the Athlone School for the Blind and Pioneer School who will complete a questionnaire. An independent researcher will be responsible for this process. Key areas crucial for the enhancement of HIV/AIDS prevention among the visually impaired will be identified and included in the design of a HIV/AIDS prevention programme of eight sessions. An experimental group at Athlone School for the Blind will be exposed to an intensive HIV prevention programme while three control groups, two at Pioneer School and one at Athlone School, will be selected and exposed to an Health promotion programme of four sessions. This part of the research will be conducted by the researcher and all the sessions will be video-taped. One co-researcher will be responsible for recording the proceedings. All the data and observations made by the co-researchers will be analyzed.

5. NATURE AND REQUIREMENTS OF THE RESEARCH

5.1 How should the research be characterised? (Please check/tick ALL appropriate boxes.)

- 5.1.1 Personal and social information collected directly from participants/subjects
- 5.1.2 Participants/subjects to undergo physical examination
- 5.1.3 Participants/subjects to undergo psychometric testing
- 5.1.4 Identifiable information to be collected about people from available records
- 5.1.5 Anonymous information to be collected from available records
- 5.1.6 Literature, documents or archival material to be collected on individuals/groups

5.2 Participant/Subject Information Sheet⁴ attached? (For written and verbal consent)
 Yes No

5.3 Informed Consent Form⁵ attached? (For written consent). Yes No

Consent will be verbal Yes No

Informed consent is not necessary⁶ Yes No

If no, state why not:

5.4 If a questionnaire, interview schedule or observation schedule/framework for ethnographic study will be used in the research, it must be attached.

Is it attached? (If not, the application cannot be considered.) Yes No

6. PARTICIPANTS/SUBJECTS IN THE STUDY

6.1 If humans are being studied, state *where* they are selected:

Athlone School for the Blind, Bellville-South in Cape Town
 Pioneer School for Blind, Worcester, Boland in the Western Cape

6.2 Participants/subjects will be asked to volunteer and/or they will be selected

State how the participants/subjects will be selected, and/or who will be asked to volunteer:

1. Two paid experienced co-researchers will be recruited.
2. Key informants who will participate in the study will be selected with the support of a key Informant who has been working within this sector for more than thirty years. Verbal consent will be sought for, telephonically or electronically. They will be requested to complete a consent form before or after the interview is conducted.

An Application to conduct the research at the two schools was sent to the Western Cape Department of Education (WCED). Permission has already been granted. The two schools will be informed and their cooperation will be requested. The adolescents at schools will then be informed before the time about the purpose of the research and the contribution they can make to the development of an HIV preventative programme for visually impaired people in South Africa. Consent forms will be sent to the guardians/ parents in order to obtain consent for their children's participation.

Are the participants/subjects subordinate to the person doing the recruiting?

Yes No

If yes, justify the selection of subordinate subjects:

6.4.1.1 Will control participants/subjects/patients be used? Yes No

If yes, explain how they will be selected:

Owing to the small number of learners almost all the learners in the grades 11 and 12 (Experimental group) and grades 9/10 (Control group) at Athlone School for the Blind will be selected. All the grades 11/12 (Control group) and grades 9/10 (control group) will be selected. The proviso will be that all of them will be between the ages of 15 and 23.

6.4 What records, if any, will be used, and how will they be selected?

N/A

6.5 What is the *age range* of the participants/subjects in the study? 15 - 23

6.5.1 **If between 14 and 18 years,** (a) assent form for guardian attached? Yes No
 (b) consent form for participant/subject attached?

Yes No

6.5.2 **If younger than 14 years,** (a) consent form for guardian attached? Yes No
 (b) assent form for participant/subject attached?

Yes No

6.6 Demographic profile of participants/subjects. (Check/tick ALL appropriate boxes.)

(a) Sex: Male Female

(b) Population group: African Coloured/Griqua Indian/Asian White

(c) Language group/s: Afrikaans, English and Xhosa

6.7 Number of non-patient participants/subjects: N/A ; patients: ; controls: .

6.8 Will the research *benefit* the participants/subjects in any direct way?

Yes No

If yes, explain in what way:

The subjects (experimental group) will be exposed to an intensive HIV preventative programme. Their participation may change their sexual behaviour, create a social consciousness and make a significant contribution to their development. Even the control groups will be exposed to a Health promotion programme that may be advantageous to them.

6.9 Will participation or non-participation *disadvantage* them in any way? Yes No

If yes, explain in what way:

7. PROCEDURES

7.1 Mark research procedure(s) that will be used:

Reviews: Literature Documentary Personal records
Personal information: Interviews Survey Participant observation

Other (describe):

How will the data be stored? Data will be stored at the University

Social and related:

- Interview form/schedule (*must be attached*)
- Questionnaire (*must be attached*)
- Observation schedule/framework (*must be attached*)

Medical and related:

- Examination (state below nature and frequency of examination)
- Blood sampling; venous; arterial (state below amount to be taken and the frequency of blood sampling), and safe storage required?
- Biopsy/Gene identification
- Substance administration (state below name[s] of substance[s] and dose[s] and frequency of administration)
- X-rays – NOT FOR HSRC ETHICS COMMITTEE!
- Isotope administration (state below name[s] of isotope[s] and frequency)

Other procedures (provide details, and indicate clearly whether *medical-related*)

Use the space below to elaborate on procedures marked above:

[FOR MEDICAL OR RELATED PROCEDURES (OTHER THAN EXAMINATION AND BLOOD SAMPLING) PLEASE SUBMIT APPLICATION TO MRC OR OTHER MEDICAL ETHICS COMMITTEE.]

7.3 RISKS OF THE PROCEDURE(S) participants/patients/controls will/may suffer:

- No risk Discomfort Pain
- Possible complications Side effects from agents used
- Persecution Stigmatisation
- (Negative) labelling Other potential risks

If you have checked any of the above, except "No risk", provide details here:

HIV/AIDS is a sensitive issue and people hold certain viewpoints which may result in labelling by others in the group. Because of the stigmatisation of people infected by HIV, some discomfort might exist amongst the participants in the experimental group. It is possible that some parents/guardians might prevent their children from taking part in this study.

8. RESEARCH PERIOD

(a) When will the research commence? **June 2004**

(b) Over what approximate time period will the research be conducted?

From: June 2004

To: December 2004

9. GENERAL

9.1 Has permission of relevant authority/ies been obtained? Yes No N/A
If yes, state name/s of authority/ies:

Western Cape Education Department (WCED)
Principals and governing bodies of Athlone School for the Blind and Pioneer School

9.2 Confidentiality: How will *confidentiality* be maintained to ensure that participants/ subjects/patients/ controls are not identifiable to persons not involved in the research?

Questionnaire and interviews will be anonymous.
Data will not reflect personal details.

9.3 Results: To whom will result be made available, *and* how will the findings be reported to the research participants?

The results will be made available to the Western Cape Education Department and the visually impaired community. Furthermore they will be made available in academic journals.

9.4 There will be financial costs to:

Participant/subject/patient	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Institution	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Other	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

9.5 Explain any box marked "yes":
Research proposal/protocol attached? Yes No See attached

9.6 Any other information which may be of value to the Committee should be provided here:

Date: 14 April 2004

Applicant's Signature:.....

Who will supervise the project?

Name: Prof L Swartz

Programme/Institution/Department: Psychology
Department, University of Stellenbosch

Date:

Signature:.....

Director/Head/Research Coordinator of Department/Institute in which study is conducted:

Name:

Date:

Signature:.....

The development and evaluation of a pilot school-based programme for prevention of HIV/AIDS among visually impaired and blind South African adolescents

JOHN PHILANDER

RESEARCH PROJECT PROTOCOL

AIM AND OBJECTIVES

The purpose of the investigation is to determine the effect of HIV/AIDS on visually impaired people and to design a preventative programme based on their needs. This will be realized by the following objectives:

- To thoroughly research the knowledge, attitudes and sexual behaviour of visually impaired adolescents and young adults at two institutions in the Western Cape: Athlone School for the Blind in Bellville–South and Pioneer School in Worcester.
- Determine the needs of the visually impaired that can influence the design of prevention programme and can communicate meaningfully to the target group.
- Design, implement and evaluate a prevention programme on a selected group of visually impaired persons, which can provide a basis for the development of prevention programme for people with visual impairment.

METHODOLOGY

Firstly, a Key Informant study with influential people at community service providers and other people in the visually impaired and disability sector will be conducted through a structured interview. These interviews will be tape recorded, transcribed and analysed. This will be followed by a study of knowledge, attitudes and behaviour amongst visually impaired adolescents between the ages of 15 and 23 at the Athlone School for the Blind and Pioneer

School who will complete a questionnaire. An independent researcher will be responsible for this process. Key areas crucial for the enhancement of HIV/AIDS prevention among the visually impaired will be identified and included in the design of a HIV/AIDS prevention programme of eight sessions. An experimental group at Athlone School for the Blind will be exposed to the intensive HIV prevention programme while three control groups, two at Pioneer School and one at Athlone School, will be selected who will be exposed to an health promotion programme of four sessions. This part of the research will be conducted by the researcher and all the sessions will be video-taped. One co-researcher will be responsible for recording the proceedings. All the data and observations made by the co-researchers will be analyzed. A pre-assessment and post-assessment of the capacity of the intervention to determine the effectiveness of the program and to obtain qualitative information from the participants will be conducted. The effectiveness of this programme will be followed by a delayed assessment three months later, followed by an evaluation of the preventive programme afterwards.

ETHICS

The research focuses on people as the object of investigation. We undertake to respect their privacy, and confidentiality will be ensured by anonymous data gathering. In order to meet the ethical requirements regarding scientific norms and practices of professionalism and honesty, the data will be collected by an independent researcher (methodologist) to ensure the validity and confidentiality of results. Acknowledgement of researchers and writers will be added and reflected in the reference list.

RESEARCH TEAM

The researcher will be supported by two other researchers who will be fully informed around the aim and objectives of this study. One of their duties will be to document all observations and responses during the completion of the questionnaires and intervention.

ANALYSIS OF DATA

The Key Informant study will be thematically analyzed and pointers will be used to support the design of a pilot HIV prevention programme for visually impaired people. All questionnaires of the second study and other data collected during the intervention will be interpreted and analyzed by the researcher. Empirical findings will be processed and documented and will be used to make certain conclusions regarding the knowledge, attitudes and sexual behaviour of visually impaired youth. This will in actual fact provide some basis for the third study which will provide qualitative information and may disclose other areas that needs to be adapted or added to the programme. A post-assessment questionnaire three months later will also be conducted that will also give an indication of the effectiveness of the intervention. This will be analyzed to determine the long term effectiveness of the intervention programme. Conclusions made by the researcher will be verified by the valuable input of my supervisor who is part of the planning and data collecting process of this study. This whole process will be crystallized in a well researched pilot programme that can be used for future programmes of research on HIV/AIDS and visual impairment.

Appendix 7

Multivariate Tests measuring equivalency among groups

Pretest Multivariate tests

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.992	2167.261(a)	3.000	51.000	.000
	Wilks' Lambda	.008	2167.261(a)	3.000	51.000	.000
	Hotelling's Trace	127.486	2167.261(a)	3.000	51.000	.000
	Roy's Largest Root	127.486	2167.261(a)	3.000	51.000	.000
group	Pillai's Trace	.189	1.190	9.000	159.000	.305
	Wilks' Lambda	.816	1.201	9.000	124.271	.300
	Hotelling's Trace	.218	1.204	9.000	149.000	.297
	Roy's Largest Root	.182	3.215(b)	3.000	53.000	.030
	Root					

a Exact statistic

b The statistic is an upper bound on F that yields a lower bound on the significance level.

c Design: Intercept+group

Posttest Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.997	5312.280(a)	3.000	51.000	.000
	Wilks' Lambda	.003	5312.280(a)	3.000	51.000	.000
	Hotelling's Trace	312.487	5312.280(a)	3.000	51.000	.000
	Roy's Largest Root	312.487	5312.280(a)	3.000	51.000	.000
group	Pillai's Trace	.483	3.394	9.000	159.000	.001
	Wilks' Lambda	.565	3.655	9.000	124.271	.000
	Hotelling's Trace	.687	3.792	9.000	149.000	.000
	Roy's Largest Root	.540	9.535(b)	3.000	53.000	.000
	Root					

a Exact statistic

b The statistic is an upper bound on F that yields a lower bound on the significance level.

c Design: Intercept+group

Follow-up Multivariate Tests

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.995	2925.893(a)	3.000	47.000	.000
	Wilks' Lambda	.005	2925.893(a)	3.000	47.000	.000
	Hotelling's Trace	186.759	2925.893(a)	3.000	47.000	.000
	Roy's Largest Root	186.759	2925.893(a)	3.000	47.000	.000
group	Pillai's Trace	.378	2.351	9.000	147.000	.017
	Wilks' Lambda	.644	2.518	9.000	114.536	.011
	Hotelling's Trace	.518	2.629	9.000	137.000	.008
	Roy's Largest Root	.447	7.300(b)	3.000	49.000	.000

a Exact statistic

b The statistic is an upper bound on F that yields a lower bound on the significance level.

c Design: Intercept+group

Appendix 8

Repeated measure multivariate analysis of variance (MANOVA)

Multivariate Tests(c)

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.280	8.966(a)	2.000	46.000	.001
	Wilks' Lambda	.720	8.966(a)	2.000	46.000	.001
	Hotelling's Trace	.390	8.966(a)	2.000	46.000	.001
	Roy's Largest Root	.390	8.966(a)	2.000	46.000	.001
time * group	Pillai's Trace	.303	2.795	6.000	94.000	.015
	Wilks' Lambda	.710	2.862(a)	6.000	92.000	.013
	Hotelling's Trace	.390	2.924	6.000	90.000	.012
	Roy's Largest Root	.336	5.258(b)	3.000	47.000	.003
Variables	Pillai's Trace	.983	1364.217(a)	2.000	46.000	.000
	Wilks' Lambda	.017	1364.217(a)	2.000	46.000	.000
	Hotelling's Trace	59.314	1364.217(a)	2.000	46.000	.000
	Roy's Largest Root	59.314	1364.217(a)	2.000	46.000	.000
variables * group	Pillai's Trace	.286	2.611	6.000	94.000	.022
	Wilks' Lambda	.715	2.799(a)	6.000	92.000	.015
	Hotelling's Trace	.397	2.980	6.000	90.000	.011
	Roy's Largest Root	.394	6.179(b)	3.000	47.000	.001
time * variables	Pillai's Trace	.277	4.211 (a)	4.000	44.000	.006
	Wilks' Lambda	.723	4.211(a)	4.000	44.000	.006
	Hotelling's Trace	.383	4.211(a)	4.000	44.000	.006
	Roy's Largest Root	.383	4.211(a)	4.000	44.000	.006
Time * variables * group	Pillai's Trace	.446	2.009	12.000	138.000	.028
	Wilks' Lambda	.596	2.099	12.000	116.705	.022
	Hotelling's Trace	.608	2.161	12.000	128.000	.017
	Roy's Largest Root	.474	5.448(b)	4.000	46.000	.001

a Exact statistic

b The statistic is an upper bound on F that yields a lower bound on the significance level.

c Design: Intercept+group

Within Subjects Design: time+variables+time*variables

Appendix 9

9.1 Multivariate analysis on Knowledge, Attitudes and Behaviour 1 for Groups

9.1.1 Knowledge for control group 1

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.049	.205(a)	2.000	8.000	.819
	Wilks' Lambda	.951	.205(a)	2.000	8.000	.819
	Hotelling's Trace	.051	.205(a)	2.000	8.000	.819
	Roy's Largest Root	.051	.205(a)	2.000	8.000	.819
	Root					

a Exact statistic

b Design: Intercept

Within Subjects Design: time

9.1.2 Knowledge for control group 2

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.452	5.366(a)	2.000	13.000	.020
	Wilks' Lambda	.548	5.366(a)	2.000	13.000	.020
	Hotelling's Trace	.826	5.366(a)	2.000	13.000	.020
	Roy's Largest Root	.826	5.366(a)	2.000	13.000	.020
	Root					

a Exact statistic

b Design: Intercept

Within Subjects Design: time

9.1.3 Knowledge for control group 3

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.591	8.658(a)	2.000	12.000	.005
	Wilks' Lambda	.409	8.658(a)	2.000	12.000	.005
	Hotelling's Trace	1.443	8.658(a)	2.000	12.000	.005
	Roy's Largest Root	1.443	8.658(a)	2.000	12.000	.005
	Root					

a Exact statistic

b Design: Intercept

Within Subjects Design: time

9.1.4 Knowledge for experimental group

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.572	10.695(a)	2.000	16.000	.001
	Wilks' Lambda	.428	10.695(a)	2.000	16.000	.001
	Hotelling's Trace	1.337	10.695(a)	2.000	16.000	.001
	Roy's Largest Root	1.337	10.695(a)	2.000	16.000	.001
	Root					

a Exact statistic

b Design: Intercept

Within Subjects Design: time

9.2 Attitudes to HIV/AIDS

9.2.1 Attitudes for control group 1

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.183	.896(a)	2.000	8.000	.445
	Wilks' Lambda	.817	.896(a)	2.000	8.000	.445
	Hotelling's Trace	.224	.896(a)	2.000	8.000	.445
	Roy's Largest Root	.224	.896(a)	2.000	8.000	.445
	Root					

a Exact statistic

b Design: Intercept

Within Subjects Design: time

9.2.2 Attitudes for control group 2

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.565	7.800(a)	2.000	12.000	.007
	Wilks' Lambda	.435	7.800(a)	2.000	12.000	.007
	Hotelling's Trace	1.300	7.800(a)	2.000	12.000	.007
	Roy's Largest Root	1.300	7.800(a)	2.000	12.000	.007
	Root					

a Exact statistic

b Design: Intercept

Within Subjects Design: time

9.2.3 Attitudes for control group 3

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.001	.003(a)	2.000	10.000	.997
	Wilks' Lambda	.999	.003(a)	2.000	10.000	.997
	Hotelling's Trace	.001	.003(a)	2.000	10.000	.997
	Roy's Largest Root	.001	.003(a)	2.000	10.000	.997
	Root					

a Exact statistic

b Design: Intercept

Within Subjects Design: time

9.2.4 Attitudes for experimental group

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.435	6.171(a)	2.000	16.000	.010
	Wilks' Lambda	.565	6.171(a)	2.000	16.000	.010
	Hotelling's Trace	.771	6.171(a)	2.000	16.000	.010
	Roy's Largest Root	.771	6.171(a)	2.000	16.000	.010
	Root					

a Exact statistic

b Design: Intercept

Within Subjects Design: time

9.3 Behaviour 1 scores for groups

9.3.1 Behaviour scores for control group 1

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.247	1.478(a)	2.000	9.000	.279
	Wilks' Lambda	.753	1.478(a)	2.000	9.000	.279
	Hotelling's Trace	.328	1.478(a)	2.000	9.000	.279
	Roy's Largest Root	.328	1.478(a)	2.000	9.000	.279
	Root					

a Exact statistic

b Design: Intercept

Within Subjects Design: time

9.3.2 Behaviour 1 scores for control group 2

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.301	2.583(a)	2.000	12.000	.117
	Wilks' Lambda	.699	2.583(a)	2.000	12.000	.117
	Hotelling's Trace	.431	2.583(a)	2.000	12.000	.117
	Roy's Largest Root	.431	2.583(a)	2.000	12.000	.117
	Root					

a Exact statistic

b Design: Intercept

Within Subjects Design: time

9.3.3 Behaviour scores for control groups 3

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.172	1.042(a)	2.000	10.000	.388
	Wilks' Lambda	.828	1.042(a)	2.000	10.000	.388
	Hotelling's Trace	.208	1.042(a)	2.000	10.000	.388
	Roy's Largest Root	.208	1.042(a)	2.000	10.000	.388
	Root					

a Exact statistic

b Design: Intercept

Within Subjects Design: time

9.3.4 Behaviour 1 scores for experimental group

Effect		Value	F	Hypothesis df	Error df	Sig.
Time	Pillai's Trace	.161	1.342(a)	2.000	14.000	.293
	Wilks' Lambda	.839	1.342(a)	2.000	14.000	.293
	Hotelling's Trace	.192	1.342(a)	2.000	14.000	.293
	Roy's Largest Root	.192	1.342(a)	2.000	14.000	.293
	Root					

a Exact statistic

b Design: Intercept

Within Subjects Design: time

Appendix 10

Multivariate Tests of the new group (combined control group 1 and 2)

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.994	2794.973(a)	3.000	48.000	.000
	Wilks' Lambda	.006	2794.973(a)	3.000	48.000	.000
	Hotelling's Trace	174.686	2794.973(a)	3.000	48.000	.000
	Roy's Largest Root	174.686	2794.973(a)	3.000	48.000	.000
New group (1 &2)	Pillai's Trace	.349	3.456	6.000	98.000	.004
	Wilks' Lambda	.663	3.647(a)	6.000	96.000	.003
	Hotelling's Trace	.489	3.830	6.000	94.000	.002
	Roy's Largest Root	.447	7.300(b)	3.000	49.000	.000

a Exact statistic

b The statistic is an upper bound on F that yields a lower bound on the significance level.

c Design: Intercept+new group (group 1 and 2)

Appendix 11

Table Frequency Distribution of positive Behaviour 2 Test Scores

Variable	Control 1		Control 2		Control 3		Exp Group		Total		df	Value	Sig
	N	%	N	%	N	%	N	%	N	%			
9.1 Have you ever tried:													
9.1.1 Alcohol													
Pretest	5	8.6	9	15.5	11	19	10	17.2	35	60.3	3	3.136	.371 °
Posttest	3	5.2	12	20.7	9	15.4	11	19	35	60.3	3	7.545	.056 °
Follow-up	4	7.1	10	17.9	8	14.3	9	16.1	31	55.4	3	3.479	.323 °
9.1.2 Marijuana (hash, dagga)													
Pretest	2	2.8	6	10.3	3	5.2	4	6.9	15	25.9	3	2.170	.538 °
Posttest	0	0	3	5.2	4	6.9	2	3.4	9	15.5	3	4.337	.227 °
Follow-up	0	0	5	8.9	1	1.8	3	5.4	9	16.1	3	6.793	0.79 °
9.1.3 Cocaine													
Pretest	0	0	0	0	0	0	0	0	0	0	*	*	*
Posttest	0	0	0	0	0	0	0	0	0	0	*	*	*
Follow-up	1	1.8	0	0	0	0	0	0	1	1.8	3	4.165	2.44 °
9.1.4 Any drug injected with a needle (shot-up)													
Pretest	0	0	2	3.4	1	1.7	0	0	3	5.2	3	3.729	.292 °
Posttest	0	0	0	0	0	0	0	0	0	0	*	*	*
Follow-up	0	0	1	1.8	1	1.8	0	0	2	3.6	3	2.234	.525 °
9.1.5 Any other drugs													
Pretest	1	1.7	1	1.7	2	3.4	2	3.4	6	10.3	3	.483	.923 °
Posttest	0	0	1	1.7	3	5.2	1	1.7	5	8.6	3	4.240	.23 °
Follow-up	1	1.8	2	3.6	3	5.4	1	1.8	7	12.5	3	2.281	.516 °

9.2 Did you try in the last three weeks

9.2.1 Alcohol

Pretest	3	7.5	3	7.5	7	17.5	9	22.5	22	55	3	3.693	.297 °
Posttest	3	5.2	5	8.6	4	6.9	6	10.3	18	31	3	.194	.979 °
Follow-up	4	7.1	4	7.1	3	5.4	6	10.7	17	30.4	3	.610	.894 °

9.2.2 Marijuana (hash, dagga)

Pretest	1	2.5	2	5	1	2.5	2	5	6	15	3	.714	.870 °
Posttest	0	0	1	1.7	1	1.7	2	3.4	4	6.9	3	1.315	.725 °
Follow-up	1	1.8	2	3.6	1	1.8	0	0	4	7.1	3	2.530	.470 °

9.2.3 Cocaine

Pretest	0	0	1	2.5	0	0	0	0	1	2.5	3	3.077	.380 °
Posttest	0	0	0	0	0	0	0	0	0	0	*	*	*
Follow-up	1	1.8	0	0	0	0	0	0	1	1.8	3	4.165	.244 °

9.2.4 Any drug injected with a needle (shot-up)

Pretest	0	0	1	2.5	0	0	0	0	1	2.5	3	3.077	.380 °
Posttest	0	0	0	0	0	0	0	0	0	0	*	*	*
Follow-up	0	0	1	1.8	0	0	0	0	1	1.8	3	3.055	.383 °

9.2.5 Any other drugs

Pretest	1	2.5	1	2.5	1	2.5	2	5	5	12.5	3	.604	.896 °
Posttest	0	0	1	1.7	0	0	0	0	1	1.7	3	2.917	.405 °
Follow-up	1	1.8	3	5.4	0	0	1	1.8	5	8.9	3	4.217	.239 °

10.1 Have you ever had sexual intercourse with a condom after drinking alcohol?

Pretest	0	0	3	7.5	5	12.5	2	5	10	25	3	4.219	.239 °
Posttest	0	0	0	0	2	6.3	4	12.5	6	18.8	3	7.202	.066 °
Follow-up	1	2.9	2	5.7	3	8.6	3	8.6	9	25.7	3	.282	.963 °

10.2 Did you have sexual intercourse with a condom after drinking alcohol in the last three weeks

Pretest	0	0	1	2.5	4	10	0	0	5	12.5	3	7.390	.060 °
Posttest	0	0	0	0	1	3.1	1	3.1	2	6.3	3	1.659	.646 °
Follow-up	1	2.9	1	2.9	0	0	1	2.9	3	8.6	3	2.461	.482 °

11.1 Have you ever had sexual intercourse without a condom after drinking alcohol?

Pretest	0	0	0	0	2	5	1	2.5	3	7.5	3	2.670	.445 °
Posttest	0	0	0	0	2	6.3	3	9.4	5	15.6	3	5.030	.170 °
Follow-up	1	2.9	2	5.7	2	5.7	3	8.6	8	22.9	3	.482	.923 °

11.2 Did you have sexual intercourse without a condom after drinking alcohol in the last three weeks?

Pretest	0	0	1	2.5	1	2.5	1	2.5	3	7.5	3	.508	.917 °
Posttest	0	0	0	0	1	3.1	1	3.1	2	6.3	3	1.659	.646 °
Follow-up	0	0	1	2.9	0	0	1	2.9	2	5.7	3	1.591	.661 °

12.1 Have you ever had sexual intercourse with a condom after smoking marijuana (dagga)?

Pretest	1	2.5	2	5	2	5	0	0	5	12.5	3	2.819	.420 °
Posttest	0	0	0	0	1	3.1	1	3.1	2	6.3	3	1.659	.646 °
Follow-up	1	2.9	1	2.9	0	0	0	0	2	5.7	3	4.375	.224 °

12.2 Did you have sexual intercourse with a condom after smoking marijuana (dagga) in the last three weeks?

Pretest	1	2.5	1	2.5	2	5	0	0	4	10	3	2.593	.459 °
Posttest	0	0	0	0	0	0	1	3.1	1	3.1	3	2.638	.451 °
Follow-up	0	0	1	2.9	0	0	0	0	1	2.9	3	2.574	.462 °

13.2 Have you ever had sexual intercourse without a condom after smoking marijuana (dagga)?

Pretest	0	0	1	2.5	2	5	0	0	3	7.5	3	3.003	.391 °
Posttest	0	0	0	0	0	0	1	3.1	1	3.1	3	2.638	.451 °
Follow-up	1	2.9	1	2.9	0	0	0	0	2	5.7	3	4.375	.224 °

13.3 Have you ever had sexual intercourse without a condom after smoking marijuana (dagga)?

Pretest	1	2.5	2	5	0	0	1	2.5	4	10	3	3.077	.380 °
Posttest	0	0	0	0	0	0	1	3.1	1	3.1	3	2.638	.451 °
Follow-up	0	0	1	2.9	0	0	0	0	1	2.9	3	2.514	.462 °

14.1 Have you ever had sexual intercourse without a condom after using any other drugs?

Pretest	0	0	1	2.5	3	7.5	1	2.5	5	12.5	3	2.760	.430 °
Posttest	0	0	0	0	1	3.1	1	3.1	2	6.3	3	1.659	.646 °
Follow-up	1	2.9	1	2.9	1	2.9	0	0	3	8.6	3	2.345	.504 °

14.2 Did you have sexual intercourse without a condom after using any other drugs in the last three weeks?

Pretest	0	0	0	0	1	2.5	0	0	1	2.5	3	2.393	.495 °
Posttest	0	0	0	0	0	0	1	3.1	1	3.1	3	2.638	.451 °
Follow-up	1	2.9	1	2.9	0	0	0	0	2	5.7	3	4.375	.224 °

15.1 Have you ever had sexual intercourse with a condom after using any other drugs?

Pretest	1	2.5	2	5	2	5	0	0	5	12.5	3	2.819	.420 °
Posttest	0	0	0	0	1	3.1	1	3.1	2	6.3	3	1.659	.646 °
Follow-up	1	2.9	1	2.9	0	0	0	0	2	5.7	3	4.375	.224 °

15.3 Did you have sexual intercourse with a condom after using any other drugs in the last three weeks?

Pretest	0	0	0	0	0	0	1	2.5	1	2.5	3	2.130	.546 °
Posttest	0	0	0	0	0	0	1	3.1	1	3.1	3	2.638	.451 °
Follow-up	0	0	1	2.9	0	0	0	0	1	2.9	3	2.574	.462 °

16.1 Have you ever exchanged sex for money or drugs?

Pretest	0	0	2	5	1	2.5	1	2.5	4	10	3	1.781	.619 °
Posttest	0	0	0	0	0	0	1	2.9	1	2.9	3	2.862	.413 °
Follow-up	1	2.5	1	2.5	0	0	0	0	2	5	3	5.263	.154 °

16.2 Did you exchange sex for money or drugs in the last three weeks?

Pretest	0	0	1	2.5	0	0	1	2.5	2	5	3	1.619	.655 °
Posttest	0	0	0	0	0	0	1	2.9	1	2.9	3	2.862	.413 °
Follow-up	0	0	0	0	0	0	0	0	0	0	*	*	*

For p-values $p < 0.05$: *, $p < 0.01$: **, $p < 0.001$: *** and if the relationship is non-significant, $p > 0.05$: °

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Western Cape Education Department
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Mr John Philander
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Dear Sir

RESEARCH PROPOSAL: SEXUAL KNOWLEDGE, ATTITUDES AND BEHAVIOUR OF PEOPLE WITH VISUAL IMPAIRMENT AND THE DEVELOPMENT OF A PILOT PROGRAMME FOR THE PREVENTION OF HIV/AIDS.

Your application to conduct the above-mentioned research in schools in the Western Cape has been approved subject to the following conditions:

1. Head Office Officials, principals, educators and learners are under no obligation to assist you in your investigation.
2. Head Office Officials, principals, educators, learners and schools should not be identifiable in any way from the results of the investigation.
3. You make all the arrangements concerning your investigation.
4. Educators' programmes are not to be interrupted.
5. The Study is to be conducted from **1st February 2004 to 30th September 2004.**
6. No research can be conducted during the fourth term as schools are preparing and finalizing syllabi for examinations (October to December 2004).
7. Should you wish to extend the period of your survey, please contact Dr R. Cornelissen at the contact numbers above quoting the reference number.
8. A photocopy of this letter is submitted to the Head Office Official where the intended research is to be conducted.
9. Your research will be limited to the following school(s): **Athlone and Pioneer Schools of the Blind.**
10. A brief summary of the content, findings and recommendations is provided to the Director: Education Research. The Department receives a copy of the completed report/dissertation/thesis addressed to:

**The Director: Education Research
Western Cape Education Department
Private Bag X9114
CAPE TOWN
8000**

We wish you success in your research.

Kind regards.

Signed: Ronald S. Cornelissen
for: **HEAD: EDUCATION DATE:
14 January 2004**