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What is Primary School Learners Knowledge and Fears on HIV/AIDS?

BY

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A thesis submitted to the Department of Psychology, Faculty of Humanities, University of the Witwatersrand, Johannesburg, in partial fulfillment of the requirements for the degree of Masters of Arts (Psychology) by Coursework and Research Report.

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ABSTRACT

The primary objective of this study was to explore what primary school learners' knowledge and fears of HIV/AIDS were. The researcher surveyed 633 primary school learners from four primary schools in Lenasia (Gauteng, South of Johannesburg). Learners were drawn from Grade 6 (n=292; 46%) and Grade 7 (n=341; 54%). The majority of learners ranged from 11 years to 15 years of age, with a mean age of 12.22 years (*SD* = 0.89). Quantitative methods were employed to analyse the data collected. Most of the assumptions for a parametric test were met, except for the sample distribution, which seemed to have been slightly skewed, i.e. the sample consisted of more Black learners (*n*=407) than Indian learners (*n*=226). Concurring with recent evidence, this study found knowledgeability about AIDS among respondents to be moderately high; however, it was evident that learners held misconceptions concerning HIV/AIDS. The answers provided by learners in this study indicated that the awareness of the severity of the disease was higher amongst Black learners than Indian learners. Those learners who were more knowledgeable about AIDS were not necessarily less fearful of contracting AIDS. The results derived from the two-way ANOVA and regression models indicate that there appears to be a significant gender difference, as more females were worried of getting AIDS than males. These were just some of the main findings of the study. The limitations of the study were also discussed.

DECLARATION

I declare that this research report is my own, unaided work. It is submitted in partial fulfillment for the degree of Masters of Arts (Psychology) by coursework and Research Report at the University of Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination in any other university.

Naeema Yusuf Hoosain

24th day of April 2006

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Chapter One

LITERATURE REVIEW

1.1 Introduction

Worldwide, adolescents have been recognized as a high-risk group for HIV-infection. One of the most important reasons for this is the early age at which many children now become sexually active (DiClemente & Hein, cited in Le Roux, 1994). Studies of adolescent sexual activity show that this is the case in South Africa as well (Moore & Rosenthal, 1991).

It is estimated that around 4 million South Africans are currently HIV infected and (Love Life, 2001) it is estimated that around 200 000 South Africans are currently living with AIDS. HIV is a disease that mostly affects younger people with around half of all adults who acquire HIV becoming infected before they turn 25. In South Africa, where 53% of the populations are under 25 years old, teenage infection levels are increasing at an alarming rate (Love Life, 2001). Globally some 1.2 billion people are between the ages of 10 and 19. Eighty-seven per cent of these adolescents live in developing countries.

A survey of 1600 children and adolescents in four poor areas of the Zambian capital, Lusaka, found that more than 25% of children aged 10 years said they had already had sex (this figure rose to 60% among 14-year-olds). In South Africa, 10% of respondents in a study in six provinces said they had started having sex at age 11 years or younger (van Dyk, 2001). The South African Department of Health used the results of the above studies as the basis for its recommendation that sex education should be for children at around the age of 12 so that it might benefit them before many of them became sexually active (NGLS, 1994).

A survey among adolescents in KwaZulu Natal reported that 76% of girls and 90% of boys are sexually experienced by the time they are 15 years old. In the Free State

Province of South Africa, teenagers reported that they were sexually active at around 12 years of age (Coombe, 2000). Findings from a national survey of South African teenagers, published in 2001, suggest that about one-third of boys and girls, aged 12 to 17 years, had had sexual intercourse and that one in five of this group reported having their first sexual experience at the age of 12 years or younger (Love Life, 2001).

One survey of middle school children in the sixth, seventh and eighth grades showed that about 30% of these children have had intercourse and that the average starting age was 11.1 years in males and 11.7 years in females (Schinazi & Nahmias, 1988). These statistics may be surprising to those who do not deal directly with the care of children and adolescents (Schinazi & Nahmias, 1988).

"We have two dovetailing trends here that are, in large part, driving the HIV/AIDS crisis. One is that young people have sex, something the world must acknowledge as a pre-condition to mounting effective prevention programmes," said Carol Bellamy, UNICEF Executive Director. "The other is that young people actually don't have the proper knowledge to protect themselves. The tragic consequence is that they are disproportionately falling prey to HIV" (UNAIDS, 2000, p. 341).

The studies above highlight the fact that adolescents are still confused about the cause, transmission and prevention of HIV/AIDS (DiClemente, Zorn & Temoshok, 1986; Strunin & Hingson, 1987) and it is the ignorance combined with widespread sexual activity that is alarming (Feldman & Elliot, 1990). According to the joint report, 'Young people and HIV/AIDS: Opportunity in crises' compiled by UNAIDS
(2000), UNICEF (2004) and The World Health Organisation (WHO) (1997), findings show that young people around the world are poorly informed about the risks of HIV/AIDS, the means of transmission and their own vulnerability.

Further analysis of studies of adolescent sexual risk-taking in several developing countries, found sexual debut as early as nine years being reported in Zimbabwe. In Chile, a third of young people reported having had sex before the age of 15 years.

Today's young people in Cambodia were becoming sexually active at younger ages than in the past. In Costa Rica and Colombia, a trend among youth to have a wider repertoire of practices (anal and oral sex) was noted (Helitzer-Allen, 1994).
In a survey conducted by the Gauteng Advertiser (2003) at five high schools in Lenasia (the same area where the researcher collected her data), it appears that most learners aged between 10 and 12 years already understand the concept of sex. From the survey it was deduced that the majority of teenagers do know about safe sex but that a shocking 90% could not define AIDS or the effects of AIDS on the human body. A shocking 70% of teenagers were sexually active and 50% of these sexually active teenagers had sex without protection. Another thought-provoking point is that at least 65% said that the bombardment of information on sex led them to want to experiment (Gauteng Advertiser, 2003, no.5).

In addition, an extensive literature search revealed only sparse data about the AIDS - related knowledge and attitudes of children and adolescents, and it has been noted that the knowledge level of primary school learners are essentially unstudied (Brown & Fritz, 1988 a).

1.2 Rationale

Primary school learners in the adolescent phase were studied for a number of reasons:

- There is substantial evidence that children are approaching their sexually active stage at a much earlier age and thus are an important group to educate (Petosa & Wessinger, 1990).

- Adolescents are in the process of learning sexual behaviour and are therefore much more receptive to adopting safer practices than older people who are habituated to established, mostly unsafe, sexual practices (Petosa & Wessinger, 1990).

- Thirdly, an increasing number of people are becoming HIV infected, therefore the chances of knowing an infected person is increasing. In all probability, within the next five to ten years, many learners will know someone who is HIV infected or who has AIDS. It is important for learners to know that they cannot get infected through casual contact, and that people with AIDS need compassion and care, just like any other person with an illness (Miller & TellJohan, 1992).

1.3 Aims

The aims of this study were:

1. To find out what are the key demographic factors that predict which adolescents (males, females, Indian and Black learners) have knowledge about HIV/AIDS.
2. To examine where primary school learners are getting their AIDS information from.
3. To examine what primary school learners' knowledge on HIV/AIDS is.
4. To find out what are the myths and misconceptions that learners hold regarding the disease.
5. To find out what are the gender and race differences in HIV/AIDS knowledge.
6. To examine what primary school learners' fears on HIV/AIDS are.
7. To determine what percentage of adolescents believe that there is a cure for HIV/AIDS.

1.4 Adolescence

Adolescence is defined as the time period from ages 10 to 19 years. The word "adolescent" [*] means someone who is growing up - someone who is neither a child nor an adult but in between - a person who may be biologically adult but socially immature (Schinazi & Nahmias, 1988). Adolescence is characterised by impulsiveness, a desire for immediate gratification and a tendency to question authority, especially when

[*] The terms "adolescents," "teenagers," "youth" "young adults" and "young people was used interchangeably" in this study.

pronouncements or advice from such sources disagree with the adolescent's own limited personal experiences (Schinazi & Nahmias, 1988). Adolescents also generally feel that they are not vulnerable to bad or catastrophic events that happen to others. The willingness of this group to experiment with drugs and sex along with strong peer pressure place it at special risk for HIV infection (Schinazi & Nahmias, 1988). Moreover, we know far less in a systematic way about adolescents than about other age groups and even less about early adolescence, from 10 to 14 years, than about the later years, 15 to 19 years.

The unique psychological characteristics of adolescence are also important to consider, since teenagers should be the first group to be targeted by AIDS education programmes. Most critical is the ability to think abstractly, the cognitive stage of formal operations (Osbourne, Kistner & Helgemo, 1993).

A final period of cognitive development described by Piaget, the stage of formal operations, begins around age 11 or 12 years and is consolidated throughout adolescence (Whitt, Dykstra & Taylor, 1979). They become capable of holding many variables in mind at the same time, of conceiving ideals and contrary-to-fact propositions. But in the young adolescent, these newly attained formal operations are not fully under control. The capacity to conceive many different alternatives is not immediately coupled with the ability to assign priorities and to decide which choice is more or less appropriate than others (Whitt, Dykstra & Taylor, 1979).

1.5 Changing contexts of development

Most people would argue that being an adolescent today is a different experience than it was even a few decades ago. Both the perception of this change and the change itself attest to the powerful influence of social contexts on adolescent development. Where, with whom, and how adolescents spend their time and invest their energies affect who they are and what they will become. Thus, the study of adolescence cannot be taken completely out of the societal setting in which it occurs, especially when that society is itself undergoing change (Feldman & Elliot, 1990).

Changes in social attitudes toward and expectations of adolescents have occurred in many spheres of adolescent life. A few examples readily serve to make the point: The proliferation of entertainment and leisure activities has also altered the adolescent experience: television, videocassette recorders, and markedly decreased social censorship have combined to expand dramatically the range of experiences to which the typical adolescent is exposed (Feldman & Elliot, 1990).

Adolescents are changing physically, maturing sexually, becoming increasingly able to engage in complex reasoning, and markedly expanding their knowledge of themselves and the world about them. These and many other factors foster an urge in them to gain more control over how and with whom they spend their time (Feldman & Elliot, 1990).

As adolescents become adults, they consider sexual relations, and they seek information and clues about sexual life from a variety of sources, including parents, peers, religious leaders, health providers, teachers, magazines, books and mass media. As this society has become more diverse, the number of roles and choices available to most teenagers has increased dramatically. The tendency of the early adolescent to focus on the here and now further complicates the decision-making process. Sadly, the ever greater freedom of adolescence carries with it more risks and costs of errors in judgement (Feldman & Elliot, 1990).

Changing sociological trends in recent years have placed additional stresses on adolescents. Reduced supervision resulting from one-parent families, households where both parents work, and an increase in parental role models who use drugs openly, alcohol in excess and live-in “significant others” are an indication of our increasingly permissiveness society (Schinazi & Nahmias, 1988). The easy availability of drugs and pornographic material has further aggravated these stresses. As a result, adolescents now face multiple potential problems ranging from drugs, alcohol, sexual abuse, rape and incest, to pregnancy and sexually-transmitted diseases. Directly or indirectly, each of these conditions may help to introduce and spread HIV infection among adolescents (Schinazi & Nahmias, 1988).

Because the symptoms of AIDS may not appear for 5 to 7 years after the initial infection with HIV, these young adults may have been infected as younger adolescents. Adolescents' cognitive developmental stage can also increase their risk for HIV infection. The most striking development in research on adolescent thinking in recent years has been a renewed interest in the role of knowledge and the relationship of knowledge to cognitive processes (Feldman & Elliot, 1990).

1.6 Knowledge and thinking

It is said that from early adolescence on, thinking tends to involve abstract rather than merely concrete representation; to become multidimensional rather than limited to a single issue; to become relative rather than absolute in the conception of knowledge; and to become self-reflective and self-aware. It should be emphasized that most of the evidence for such shifts comes from controlled situations in which complex problems are posed to participants and ample time for deliberation is afforded them. This probably tends to overestimate the sophistication of adolescent's thinking in everyday matters, which often tends to pose time-limited, dynamic, and personally stressful cognitive challenges (Feldman & Elliot,1990).

1.7 Content knowledge

Substantial research indicates that adolescents often have strong misconceptions about the world. Some of the clearest evidence comes from science education. These misconceptions have been shown to exist in many topic areas, and they pose particular difficulties for education (Feldman & Elliot, 1990). Often the beliefs are deeply held, and the appearance of contrasting evidence or alternative views may have less impact than we might expect. This is referred to as the resistance to changing one's "hard core'' of ideas (Feldman & Elliot, 1990).

Understanding more about these misconceptions, especially for purposes of instruction, should be a significant focus of future research. It is not clear whether such

misconceptions are well organized in coherent but misguided theories, or whether they tend to be local and unsystematic beliefs. In either case, if we are to help adolescents move toward more systematic and correct understandings, we must contend with their existing mental models. According to Brown, Nassau and Barone, (1990), misconceptions in teenagers may be due to a variable combination of poorly developed abstraction abilities, heightened anxiety, and the use of defense mechanisms that limit data seeking. Defenses used to reduce anxiety, such as repression, isolation, or denial of AIDS relevance, could lead adolescent teenagers to avoid attending to AIDS information.

In addition, inaccurate or incomplete information and cognitive limitations can impede adolescents' learning about AIDS prevention. Given the volume of AIDS information that appears daily on radio, television, and in periodicals, the lack of classroom educational programmes may not fully account for adolescent misinformation or resistance to behavioural change (Remafedi, 1988). Cognitive patterns, characterised by concrete and dichotomous thinking, may contribute to misunderstanding. For example, the possibility of an apparently healthy and robust person transmitting a potentially fatal illness is a paradox that is difficult to comprehend, even for adults (Remafedi, 1988).

Sometimes information is not presented in a manner that people can understand. Even where much information is available it often sits side by side with confusion. Health information that adolescents read or receive from friends, neighbours, family members and the media may be inaccurate or never clearly defined for a variety of reasons (Quackenbush & Villareal, 1988) which will now be discussed.

1.8 The influence of the media on HIV/AIDS knowledge

In the rapidly changing urban environment, young people derive most of their information about the world, what to expect and how to behave, from their peers, and increasingly from mass media. Studies of communication also indicates that the media are a useful vehicle of information but insufficient by themselves as a means of persuasion (Nelkin, 1987). Studies have indicated that people seek information through

the media to guide their personal behaviour but that they use this information mainly when it corresponds to prior inclinations or when it is reinforced by their social situation and the beliefs and attitudes of their reference group (Nelkin, 1987). The tension between parents, who tend to see them as children in need of protection, and the outside world, which makes demands on them as adults, reflects the central dilemma of modern adolescents. Information in the mass media is not always successful because large numbers of underprivileged South Africans do not have access to radio and television sets or to newspapers. And even when they have, they still experience difficulties, because of inadequate education, to make sense of complex concepts such as the idea that one can carry a disease for many years, not actually suffer from it, and yet continue to infect all one's sexual partners (van Niekerk, 1991).

Surveys of AIDS knowledge and attitudes in diverse populations have revealed that radio and television have been the major sources of AIDS information for most people. Magazines and newspapers were generally the next most common source. It is apparent from gaps in reported knowledge and the persistence of misconceptions, however, that the media may not have been used as effectively as it might be. AIDS information has emerged in fragmented, often conflicting news headlines over the years (Warwick, Aggleton, and Homans, 1988).

Consider the example of television. The average adolescent watches some twenty thousand television advertisements each year. Both the content and the formal features of these messages encourage the processing of information in ways that are generally opposite to what we seek to develop through schooling. The pace at which the information is offered is highly accelerated, so that rational or reflective thought cannot be employed (Schall & Padayachee, 1990).

To give the media credit, on the other hand, there are periodic attempts to raise public awareness about HIV/AIDS. However, these programmes often generate panic, which means that important information related to the dangers of HIV/AIDS and the methods of transmission and prevention, is not retained. Those that are not gripped by panic may feel

so overwhelmed that they believe prevention to be impossible. Moreover, some media presentations about HIV/AIDS are so implausible that they cause skepticism and undermine realistic warnings and the provision of information in other forms (Schall & Padayachee, 1990).

1.9 The influence of friends and peers on HIV/AIDS knowledge

Children in the primary school phase develop a sense of autonomy and independence from their parents, and friends play increasingly important roles in their lives. Children are also exposed to information about sex, violence and death by television programmes, videos, films and the Internet (van Dyk, 2001). The misconception often exists that young children are not aware of HIV and AIDS. What in fact happens is that as their social contacts broaden and as they are increasingly exposed to mass media, they hear more and more about AIDS. Because of their limited cognitive abilities, children do not always understand what they see and hear and they therefore often have many questions about HIV and AIDS (van Dyk, 2001).

Because the child in the senior primary school phase is less egocentric and more sensitive towards others, the peer group begins to play a bigger role in the child's social development. Children become increasingly sensitive to peer group pressure and they want to please their friends (Davidson, 1988). Friends usually influence the child in two ways in this stage: (1) they often are the source of misinformation, myths and half - truths about sex, HIV and AIDS, and (2) they often coerce the child into experimentation with harmful behaviour (Davidson, 1988).

Young people are recognised to be at higher risk of AIDS because of their particularly strong sense of invulnerability, their tendency to experiment with sex and drugs, and the possibility that they have been sheltered from adult sources of information (Moore & Rosenthal, 1991). Melton (cited in Strunin & Hingson, 1987) suggests that because of their age, adolescents have rarely had any personal experience with the health consequences of their behaviour. Peers, who are an extremely important influence in

adolescence, may also subtly or blatantly encourage participation in high- risk behaviours.

1.10 Formal Education- The role of the school

The National AIDS Information and Education Project (NAIEP) (1996) points out in its AIDS prevention guide that AIDS is not a disease of a particular group or of a particular lifestyle, but a disease spread largely through ignorance. Education about HIV/AIDS and methods of transmission and prevention is thus a vital strategy in the fight against the disease.

Research (National intelligence Council, 2003; AVERT: Kanabus, 2000; Essex, 1996) shows that a cure for AIDS will not be found in the near future: the disease will therefore have to be halted through prevention. In Africa, one must deal with a population with relatively low literacy levels. Not only does this inhibit the possibility of effective communication about the disease in general, it also undermines the ability of the general population to make sense of the strange and dangerous reality that you may be a carrier and spreader of the infection without actually (yet) being ill yourself (CDC, 1988; Pilot Project on Lifeskills, 1999).

Effective education about HIV/AIDS depends on the existence or development of an enabling environment. To complicate matters further, some sectors of society are opposed to educational programmes in the schools that talk about sex methods that provide protection against AIDS infection (Rosenstock, Strecher & Becker, 1988). In Indonesia, for example, several obstacles have impeded efforts to educate young people about HIV/AIDS. Cultural taboos exist that discourage communication about sex, particularly between men and women. In addition, tabloid journalists have engaged in sensationalist reporting about HIV/AIDS, in a manner that reinforces stereotypes, stigma and social condemnation of sexuality outside of marriage (Bennett, cited in van Niekerk, 1991). By contrast, government and community efforts in Uganda have opened a broad national forum of discussion about HIV/AIDS and sexuality. One school health education

programme in the Soroti district of Uganda improved access to information, peer interaction, and the performance quality of the existing school health education system. A cross section of students with an average age of 14 years reporting that they had been sexually active fell from approximately 43 percent to 11 percent after two years of programming (Shuey, Babaishangire, Omiat & Bagarukayo, 1999).

Today's young people tend to absorb their knowledge haphazardly from family and other peers, school, television, movies and the Internet. The result is ignorance, partial information, mistaken beliefs and myths. The best solution, for adolescents, is formal sex education (Gilbert, 1994). Qualitative studies have repeatedly shown that accurate information at the right time and appropriate age encourages responsible behaviour and tends to delay the onset of sexual activity. The important features are that information is available, accurate and appropriate for the adolescent's age and stage of development. Young people will act on such information (UNFPA, 2003).

Some adults believe that teaching adolescents about sex and sexuality will encourage them to be sexually active earlier. However, UNAIDS studies have showed that this is not the case. In fact, when young people are provided with accurate information on sex and HIV/ AIDS, they are more likely to delay sexual activity and use condoms when they finally do have sex (Dowsett & Aggleton, 1999).

Many primary school facilitators* believe they should not teach HIV and AIDS education because the disease only affects adults. Unfortunately, in 1989, more than 18 000 individuals between ages 20 and 29 in the United States were diagnosed with AIDS. Again, many primary school facilitators will respond that 20 to 29 year olds are adults, and they are correct. However, because a person can be HIV infected for ten or more years before signs or symptoms of AIDS appear, a significant number of these young people were infected when they were adolescents. Many teenagers engage in behaviours that will increase their risk of infection (Miller & TellJohann, 1992).

* Facilitators are the correct term that is now used in place of teachers.

Formal education is but one cultural agent that socialises adolescent thinking, and it may not be the most powerful. One of the largest gaps in research is in the sustained investigation of a host of factors that socialise young people (Feldman & Elliot, 1990). For example, there is a group of researchers which agree with the common belief that the foundation for all forms of learning is laid by the parents, and that the teachers only add to that foundation. Devenish, Funnel and Greathead (1992) supported the view that the family is the place where every AIDS prevention programme must start and supported all programmes at school as the integral part of AIDS preventive interventions. A study by Davdaviciene (cited in Devenish, Funnel & Greathead, 1992) supported the view that teachers are reluctant to accept responsibility for AIDS education at schools, since they lack the necessary knowledge of up to date methods usually used oversees, training and material support. This has exacerbated disputes over the attendance of children with AIDS in public schools (Nelkin, 1987). Devenish, Funnel and Greathead (1992) accepted though that teachers can play a significant role and can teach adolescents about risks of HIV/AIDS and sexuality.

1.11 Informal education -The role of parents /and family

It would seem logical that the home would be the place where people could learn about values and relationships. Research in this area is limited. A study conducted by Sigelman, Mukati, Woods and Alfeld (cited in Whitt, 1995) suggested that parents are reluctant to talk to their children about HIV/AIDS related issues. Three main reasons have been identified for this problem:

- Firstly, discussion about issues related to sex is often considered taboo (Grazioli, 1997).

- Secondly, parents feel uncomfortable talking to their children about sex and drugs and are not sure how to go about addressing the subjects appropriately. “Such fears are often rooted in parents’ ignorance of their own sexuality. Ignorance of what would constitute a safe and effective sexuality education programme

hampers parental discernment and aggravates parental fears." (Grazioli, 1997, p.339).

- Thirdly, many parents do not have a great deal of knowledge about HIV/AIDS, and cannot provide their children with information about the disease (NAIEP, 1996). Consequently, children's knowledge about the disease is largely obtained from sources other than parents.

Evian (1991) predicted that many of these concerns above are based on fear and lack of knowledge on the part of parents themselves, as is the case within the school setting. Thus, the young are generally poorly informed about health issues and demonstrate significant misperceptions.

1.12 Acquisition of myths and misperceptions regarding HIV/AIDS

Children between the ages of 10 and 12 years are very prone to the acquisition of myths. They get confused between fact and fantasy and between hypotheses and reality (Davidson, 1988). One of the reasons for this may be the fact that children at this age are not yet fully capable of hierarchical classification (van Dyk, 2001). Therefore, misperceptions abound, and in turn, result in risky behaviour.

Some of the myths associated with the disease may be a result of the confusion surrounding terminology related to AIDS (Goodwin & Roscoe, 1988). Apprehension about contracting AIDS has had a significant impact on both the high-risk individual and the general public. Despite the growing number of educational programmes across the country, misinformation and, thus, the fear of contracting AIDS persist. Accurate information about AIDS is confounded by generally accepted misconceptions which the disease has created (Goodwin & Roscoe, 1988).

The fact that HIV can be contracted casually has often been uncritically reported by the press. The misleading terms such as "AIDS virus" or "AIDS carrier" add to the confusion. Although newspapers are not the primary source of information for people, they strongly influence those who do read them. If misinformation is added without

correction or denial, ideas such as that of casual contagion are reinforced rather than dispelled (Panos Dossier, 1990).

Studies of young people from 40 countries indicate that more than half of young people have misconceptions about how HIV is transmitted. In Ukraine, while 100 percent adolescent females know about AIDS, only 21 per cent know of three methods of prevention. In Botswana, where one in three people is living with HIV/AIDS, virtually all young people have heard of AIDS and more than 75 per cent know the three primary means of protection. Still, 62 per cent of girls had at least one major misconception about how HIV is spread. Far too many young people think they can tell if someone is HIV positive simply by looking at them (UNFPA, 2003).

Much of the knowledge on this issue comprises what is known about learners' intentions in general. It is clear that knowledge of AIDS, fear of AIDS and perceptions of people with AIDS will have an inevitable effect on the intentions of learners (Miller, 1994). It is no secret that people with HIV and AIDS have been at the receiving end of much discrimination and stigmatisation. This is due in part to the many myths and misconceptions surrounding HIV/AIDS (Evian, 1991).

Persistent myths and ignorance about the ways in which HIV is transmitted also trigger damaging attitudes. Among learners above the age of 18 years at a New Delhi high school, those with the most negative views of the epidemic were the least likely to have been exposed to HIV information, a survey shows (Pramanik & Koopman, 2002). They have been conditioned into thinking that only 'bad' people contract HIV according to a study conducted by Stanford University in California and the Moulana Azad Medical School in New Delhi. The study notes that more than half the teenagers surveyed wanted access to HIV information but since they have been told that such education is immoral due to its association with the Indian taboo of sex, they will not ask for it overtly (Pramanik & Koopman, 2002). As has been highlighted previously, it is extremely important to eradicate myths and misconceptions because they may lead to severe anxiety and fear in children.

Illogical thinking about AIDS, it can now be seen, occurs for several reasons: because of simple ignorance of the disease, because of pre-existing prejudices in society that are inflamed by it, and because of the failure of most people to resolve the basic fears it awakens in them (Gluckman & Vilmer, cited in Feldman & Elliot, 1990).

1.13 Fear of AIDS

One of the major affective components associated with attitudes towards HIV/AIDS is that of fear. Fear of contagion is always a threat caused by a relative lack of knowledge about an illness, such as is the case with AIDS (Coleman, 1986; Sontag, 1979). Not to say that there is a lack in knowledge about HIV/AIDS. On the contrary, our knowledge about the virus and the disease that follows has increased exponentially in a very short time. However, it is the elusive nature of the virus that prevents knowledge of a cure or vaccine, which does not appear imminent on the horizon (Schoub, 2002). Dealing with this precarious fact is cause for much of the anxiety related to HIV/AIDS.

Despite numerous surveys revealing a fairly high and widespread awareness of AIDS information, there remains a resistance to normal social contact with HIV infected people. For example in one of the studies mentioned above, learners did not acknowledge that AIDS could affect them directly, and attributed the problem to prostitutes and 'promiscuous' people in 36.4% of responses, and to 'white' people in 23.8% of responses. Learners expressed intolerance, fear and rejection of people with AIDS, and only 6.4% would accept an affected person into their classroom (Campbell & Mbizvo, 1994).

Fear can have an enormous effect on decision-making. Herek and Glunt (1988) argue that the anxiety provoked by AIDS is likely to foster a hyper-vigilant style of decision-making. Although their hypothesis was never tested empirically, the fact that fear and anxiety evoked by AIDS can have an effect on decision-making and behaviour cannot be denied. In a study with university students, examining the relationships between knowledge concerning AIDS, empathy for persons who have contracted the disease, and

fear of AIDS, a statistically significant relationship was found between the three variables. Greater knowledge and greater empathy were associated with lower fear (Royse, Dhooper & Hatch, 1987). The study highlighted the pervasiveness of the fear of AIDS, as none of the control variables age, sex, race, or student's status emerged as statistically significant predictors of fear.

In spite of their lack of understanding of what AIDS really is, one of the main characteristics of young children's perception of AIDS is an overwhelming fear of the disease (Quackenbush & Villarreal, 1998; Walsh & Bibace, 1990). This fear of AIDS may be ascribed to their emotional development. A child's fear of the diseases is rather vague, supernatural and imaginative - and this in itself contributes to feelings of helplessness and being unable to exercise control over contracting diseases. These feelings of helplessness may lead to endless irrational fears and feelings of vulnerability in children. Exposure to television, pictures in magazines and frightening stories from parents and friends also serve to increase a child's fear of AIDS (van Dyk, 2001).

Sex and issues surrounding sex are seldom value-free: our society has still not learnt to deal with the subject in a responsible and open manner. It is therefore not surprising that there is so much conflict and intrigue regarding sexual matters and AIDS has firmly slotted into these societal insecurities, which contribute to discrimination, stigmatisation and blame (Evian, 1991).

It is interesting to note that developing a concept of a 'high-risk' group prompts others in society (not associated with the group) to distance themselves from the disease and feel 'safe' from infection (Evian, 1991). Fear and panic promote and fuel the discriminatory and blame process. Ignorance and misunderstanding are the root causes of this fear and panic. For people with HIV and AIDS, the above issue can have devastating effects (Evian, 1991).

1.14 Fear and Anxiety

Studies conducted in the early 1990s continued to support the findings that human service workers and the public remained anxious and unsure of their risk of contracting the virus. Anxiety related to HIV/ AIDS appeared to be related to the fear of possible contraction of the virus despite the fact that a few cases of occupational transmission have been documented (Douglas et al., Seltzer, Treiber & Shaw, cited in All, Fried, Roberto, Shaw & Richter, 1997). Persons with AIDS have been frequently perceived as being responsible for their illness. Additionally, persons with AIDS have been viewed as social deviants. HIV prevention efforts have been plagued above all by silence brought on by the denial and stigmatization that is associated with the disease (Love Life, 2001).

The denial and stigmatization that is associated with the disease are more often than not, caused by ignorance and fear of AIDS in the community and the moralistic and often judgmental views community members (including many people with AIDS themselves) have about AIDS – equalling 'bad' with HIV positive and 'good' with HIV negative. Addressing these misconceptions not only would tackle one of the heaviest burdens on the welfare of persons with AIDS, but would also make sense from a prevention perspective (Strode & Grant, 2001).

Education has been found to be one way to reduce anxiety and fear and increase knowledge about HIV/AIDS, but recent studies have shown that these educational programmes need to provide contact with persons with HIV/AIDS as well (All & Fried, McCann, cited in All et al, 1997).

1.15 Fear and Stigma

Fear is important to a discussion of how and why stigma persists. Certain physical characteristics or illnesses elicit fear because the etiology of the attribute or disease is unknown, unpredictable, and unexpected (Sontag, 1979). It seems that what gives stigma its intensity and reality is fear. The nature of the fear appears to vary with the type of

stigma. For most stigmas stemming from physical or mental problems, people experience fear of contagion even though they know that the problem cannot be developed through contact. This fear usually stems from not knowing about the etiology of a condition, its predictability, ands its course (Singleton & Asher, cited in Sontag, 1979).

As children develop, their schemas and expectations regarding people become increasingly complex and information- rich, but children continue to encounter individuals who are unfamiliar, are dissimilar to themselves, or are sources of uncertainty, and their responses differ (Strode & Grant, 2001). Richter (cited in Strode & Grant, 2001) argues that fear, ignorance and an inability to accept any deviance from the 'norm' constitute the main reasons for prejudice or stigma against people living with HIV/AIDS. Ignorance and a lack of knowledge have lead to fear and irrational behaviour (Strode and Grant, 2001).

The preconditions for change are created by increasing people's awareness and knowledge of the profound threat of AIDS. They need to be provided with a great deal of factual information about the nature of AIDS, its modes of transmission, and how to achieve protection from infection (Rosenstock, Strecher & Becker, 1988). In the sexual domain our society has always had difficulty talking frankly about sex and imparting sexual information to the public at large. Because parents generally do a poor job of it as well, most youngsters pick up their sex education from other, often less trustworthy and reputable, sources outside the home or from the consequences of uninformed sexual experimentation (Rosenstock et al., 1988).

1.16 Perceptions toward people living with HIV/AIDS (PWAs)

Adolescents tend to disassociate themselves from groups that they identify as vulnerable to HIV/AIDS. This is, of course, a defence mechanism because it helps them to cope with their own fear of HIV/AIDS (van Dyk, 2001). Society in general is fearful of the disease and thus of those who live with it. Moreover, HIV/AIDS is commonly associated with a

particular type of lifestyle (generally with promiscuity), and those who become infected are often labeled and judged for this behaviour (Community AIDS Centre, 1990).

People with HIV/AIDS are often avoided, abandoned or rejected by friends, family members, colleagues, employers etc. They are thus left to deal with the physical and emotional pain in isolation. Some PWAs feel that the social void that develops once the disease has been diagnosed is actually worse than the physical suffering they must endure (Community AIDS Centre, 1990). Society needs to be made aware of the importance of treating people who have the disease with compassion and understanding, rather than cruelly or judgmentally, with anger and rejection (NAIEP, 1996).

1.17 Perceptions of personal risk and beliefs about vulnerability

The perception of personal risk appears to be more important than objective knowledge in motivating behavioural change. It has been noted that individuals tend to underestimate their own vulnerability, as this may be a direct result of their level of cognitive development. Furthermore, adolescents may have exaggerated beliefs about their own indestructibility (Mbengashe, 1996). They are unable to foresee the consequences of their actions, and therefore they may be more likely to engage in risky sexual activity (Moore & Rosenthal, 1991; Nickerson, 1990) as they feel that their invulnerability alone will protect them from infection. Since adolescents do not perceive themselves to be susceptible to HIV infection, these individuals are unlikely to alter their high risk behaviours (Cantania, Kegeles & Coates, 1990).

Lack of experience also increases young people's vulnerability to HIV infection; many young people believe themselves to be so removed from danger and risk that precautions are unnecessary, or even absurd. While they may admit that bad things can occur, they rarely believe that a catastrophe like HIV infection could happen to them. A study conducted in Nigeria revealed that 95 percent of girls between the ages of 15 and 19 years "perceived their risk of getting AIDS to be minimal or non- existent," while 93 percent of adolescents surveyed in Haiti considered themselves to be invulnerable

(National Institute of Mental Health, 1998). Young people's particular vulnerability is an important reason for focusing HIV prevention and care efforts on those under the age of 25 years. Most people begin sexual activity during adolescence, with many having sex even before the age of 15 years. Despite clear evidence of sexual activity among young people, traditional biases commonly preclude them from discussing sex with their parents, relatives, friends, teachers, or counsellors (National Institute of Mental Health, 1998). For this reason, they often hold misconceptions about how to protect themselves against HIV infection and how the virus is transmitted.

Studies that illuminate knowledge deficiencies in particular target groups ultimately can be useful for identifying specific educational programme content that dispels myths and moderate unwarranted fears about AIDS (Moore & Rosenthal, 1991). Although projections for the HIV epidemic in South Africa are bleak, it is still possible through concerted prevention efforts to curtail the scale of the epidemic, and to turn the tide over the next 10 years (Love Life, 2004).

Comprehensive and accurate data on learners' knowledge and fears are requisite to understanding and coping with the AIDS crisis, hence the need for such a study. These kinds of studies are important not only for identifying discrepancies that exist and designing and evaluating education and behavioural change programmes, but also for developing effective communication about the sensitive matter of human sexuality. Although it is hoped that the data obtained in this study eventually would facilitate our efforts in establishing healthy behavioural patterns during adolescence which is much easier than changing risky behaviour later on. Around the world the evidence shows that wherever the spread of HIV is slowing or even declining, it is primarily because young men and women are being given the tools and the means to adopt safe behaviours. In fact, in every country where HIV transmission has been reduced, it has been among young people that the most spectacular reductions have occurred. Ultimately, it is not a disease about which little is known; nor is it a disease against which humans have no apparent defense. Most encouraging, it is a disease that is essentially preventable (Unks, 1996).

Chapter Two

METHODOLOGY

2.1 Research Design

The study was exploratory and descriptive in nature, as its aim was to look at the nature and extent of primary school learners' knowledge and fears of HIV/AIDS. The study took the form of a non-experimental research design, since there was no manipulation of the independent variable, no control group, nor was there use of randomisation. This was a correlational study and the drawback of all correlational studies is that no causal conclusions can be drawn from them (Kerlinger, 1985). At best, it may be said that there is an association between the variables in the study.

The use of a particular community in South Africa for the sample, limited the study in terms of population and ecological validity, as it was difficult to infer the results for all primary school populations in South Africa (Hoosain, 2004). In other words, the study had poor external validity.

2.2 Sample size, sampling and data collection

The sample consisted of learners from four primary schools in Lenasia (South of Johannesburg, Gauteng). Learners were drawn from Grade 6 (n=293; 46%) and Grade 7 (n=340; 54%). In terms of race, the entire sample consisted of 226 (36%) Indian learners and 407 (64%) Black learners. In terms of gender, the sample consisted of 359 (57%) female learners and 274 (43%) male learners. The reason for the sample choice was that the researcher had easy access to the sample. This was a convenient sample where approximately 1000 pupils were initially approached to participate in the study; however, only 633 learners accepted to participate in the study.

Non-probability sampling was used. The chief advantage of using non-probability sampling is that it is convenient and economical. Its weakness, however, is that there is

no way to estimate the probability of each learner being included in the sample (Rosenthal & Rosnow, 1991). Participation was voluntary and learners could withdraw at anytime during the administration of the questionnaire.

Twenty questionnaire forms were removed from the analysis. Six forms were removed because there were only six coloured learners in the entire sample. The six coloured learners were considered to be outliers and if they were kept in the sample the results derived from the data would have been skewed. The other 14 questionnaire forms were excluded because of incomplete data on demographic characteristics and key responses related to the questionnaire. The final sample size was 633.

2.3 Measures / Measuring instruments

Data were collected by means of a questionnaire. A questionnaire was used because it was a relatively economical method, in terms of cost and time, of soliciting data from a large number of learners. The particular choice of questionnaire was justified on the basis that it had been developed in South Africa (Rosenthal& Rosnow, 1991). It was previously used in a study (Broekmann, 1997) of a similar nature with 20 Grades 6 and 7 coloured learners in the Westbury area of Johannesburg. The researcher felt that a sample of 20 Grades 6 and 7 learners was not large enough to be generalised to an entire population. Thus, the researcher saw the need to expand the Broekmann study by making use of a much bigger sample. Another difference was that this time the study did not consist of coloured learners but it consisted of Indian and Black learners instead.

Permission was first obtained from Lisa Broekmann who was the author of the questionnaire before it was adapted and implemented. The researcher chose to adapt the questionnaire in order to bring it up to date with the current level of scientific knowledge on HIV/AIDS. While some of the questions remained the same as those in the original questionnaire, other questions were replaced with questions that were drawn from similar surveys done previously in the area of HIV/AIDS. Once the questionnaire was adapted, a

pretest of the questionnaire was carried out on a sample of 20 learners (10 Grade 6 and 10 Grade 7 learners) known to the researcher.

The questionnaire consisted of seven sections, each section containing a number of items (The number of items in each section appears in the brackets below). The seven sections were as follows:

2.3.1) Demographic information (6)
2.3.2) Knowledge, awareness and understanding of HIV/AIDS (5)
2.3.3) Sources of information on HIV/AIDS (1)
2.3.4) Perceived severity of the illness (2)
2.3.5) Methods of HIV/AIDS transmission (29)
2.3.6) Fear of HIV/AIDS (3)
2.3.7) Desire for more information about HIV/AIDS (2)

The sections are described in more detail below.

2.3.1 Demographic Information

The demographic items remained the same as those of the original questionnaire, except for three additional questions, which were as follows: "a) The name of your school, b) Which race/ethnic group do you belong to? and, c) Do you know anybody who had AIDS?"

2.3.2 Knowledge, Awareness and Understanding of HIV/AIDS

This section comprised three questions, each containing a follow-up question. For example, the first question read, 'Have you heard of AIDS?' Learners who said 'yes' to this question were then asked to give a more detailed explanation of it, which was investigated through the open-ended question, "What do you think AIDS is?" The second question asked learners "Have you heard about HIV?" The third question was, "Can

children get AIDS?" The second and the third question followed the same format as the first question.

2.3.3 Sources of Information

Learners were given a list of nine potential sources of information about HIV/AIDS and were requested to identify if any of these sources provided them with information on the disease. This question was extracted from a study that was undertaken by Price, Desmond and Kukulka (1985) on junior and senior secondary school learners' perceptions and misperception of AIDS. Learners in this section were allowed to tick off as many information source options that they had had access to up until now. Learners were given one point for every option that they ticked off. The results were presented in a table and were then ranked, with '1' being the highest chosen option and '10' being the lowest chosen option.

2.3.4 Perceived severity of the Illness

This section on the perceived severity of the illness was made up of two questions. The purpose of the first question was to assess learners' perceptions of the severity of the illness, based on a list of activities that were given, to indicate whether or not a person with AIDS (PWAs) could take part in those activities. Learners had to put a tick if they said 'yes' or a cross if they said 'no' as to whether PWAs could take part in the list of activities that were given.

Question 2 was an additional question. It was taken from a study performed by Mathews et al. (1990) based on the knowledge, attitudes and beliefs about AIDS in township school learners in Cape Town. The question read, 'Can AIDS be cured?' Three points were given for a 'no' response (which was the correct response), two points was given for a 'not sure' response and one point was given for a 'yes' response.

2.3.5 Methods of transmission of HIV/AIDS

To determine learners' knowledge of methods of transmission, 28 pictures were taken from the original questionnaire by Broekmann (1997). An additional picture testing learners' knowledge on mother-to-child transmission (MTCT) was added, making it a total of 29 pictures. A score of '1' was assigned for every correct response and a score of '0' for every incorrect response. Certain items were reversed scored. The Total Knowledge Scale (which was the main scale) was derived by summing the correct responses for each of the 29 items, yielding a summary score. Thus, the maximum possible score a subject could receive was 29.
The Total Knowledge Scale was further divided into three subscales, namely:

a.) the Symptomatic Scale, which consisted of three items (viz. having sex with a condom*, having sex without a condom and from mother to baby via breast milk*).

b.) the Blood Transmission Scale, which consisted of eight items (viz. sharing needles and syringes, having blood transfusions*, pricking yourself with a needle that no-one else has used*, sharing blades and razors, mixing blood as blood brothers, tattooing and ear piercing, being bitten by a mosquito and donating blood*) and,

c.) the Myths and Misconception Scale, which consisted of 18 items (viz. shaking hands*, crying*, sharing food*, using toilets*, living in a house with a person who has AIDS*, sharing cups and glasses*, holding hands*, sharing sheets or towels*, standing next to a person who is coughing or sneezing*, visiting a doctor*, visiting a dentist*, sharing cutlery*, kissing someone with AIDS*, visiting a hospital*, sharing a toothbrush*, sharing a telephone*, swimming* and hugging a person who has AIDS*).

* These items were reverse scored.

2.3.6 Fear of HIV/AIDS

There were three items which comprised the section on the fear of HIV/AIDS that assessed learners' concerns and fears about contracting the disease. This section was thought to be very important and relevant for the study and was supported by evidence from a study conducted by Broekmann (1997), which indicated there is widespread fear about AIDS amongst learners, which in turn has given rise to prejudice against people with the disease.

In addition, the study conducted by Broekmann (1997) indicated that Grade 7 learners who had more knowledge on HIV/AIDS, displayed greater fear of the disease than Grade 6 learners. It thus seemed that the more children knew about the nature and severity of the disease, the more fearful they became of it. The researcher wanted to observe if similar trends would occur in this study.

This section was particularly important, since evidence in a Lovelife brochure in 2001 pointed to the fact that children *are* fearful of the disease and of *those* infected with it. It was also found that fear of contracting the disease through some form of casual, everyday contact causes reluctance to interact with PWAs in any way. The brochure stated further that fear increases the isolation experienced by HIV/AIDS sufferers, making the disease even more unbearable (Community AIDS Centre, 1990). It is for these reasons that the researcher chose to closely examine primary school learners' fears about HIV/AIDS.

Questions 1 and 3 of this section were allocated three points for a 'yes' response (which was the correct response), two points for a 'not sure' response and one point was given for a 'no' response.

Question 2 was reverse scored due to the nature of the question being asked. In this case, three points were given for a 'no' response (which was the correct response), two points were given for a 'not sure' response and one point was given for a 'yes' response. The scores that learners received on all three items were summed. Learners who had received

a score of 3, 4, or 5 were considered not very fearful; a score of 6 meant that learners were moderately fearful and a score of 7, 8, or 9 meant that learners were very fearful of the disease or interacting with people who have the disease.

2.3.7 Desire for more information about HIV/AIDS

The questionnaire was expanded to incorporate a section on whether learners desired more information on HIV/AIDS. This section was taken from a study conducted by Temoshok, Sweet and Zich (1987), which indicated that the desire for more information about AIDS was significantly correlated with more knowledge. Learners in the study were asked to choose whether they would like to receive more information from their teachers or the media.

2.4 Procedure

Permission had to be obtained before data collection from the University of Witwatersrand Committee for Research on Human Subjects, the Gauteng Department of Education (GDE), and the principals and school staff of the respective schools (see appendix A, B, and C respectively). In addition, the researcher obtained permission from the parents of the learners that were participating in the study. Consent was obtained from the previous researcher (Lisa Broekmann) to utilise and adapt the questionnaire.

Only once permission was obtained from all of the relevant authorities, were learners in Grades 6 and 7 approached. With the help of the principal, vice principal and teachers of the schools, the learners were given an envelope containing an information sheet and a consent form for parents. In the information sheet parents were told about the details of the study and the ethical obligations of the researcher. Only those learners whose parents consented were allowed to participate in the study (Hoosain, 2004). The questionnaire took about 20 minutes to complete. After the questionnaire was completed, half an hour was set aside for learners to ask questions, either pertaining to the questionnaire or other questions related to HIV/AIDS. Consequently, the total session (questionnaire and

question and answer session) for each grade usually lasted 40 to 45 minutes (Hoosain, 2004).

2.5 Data analysis

The qualitative aspect of the thesis i.e. Section 3.3.2 was analysed by means of content analyses in the researcher's honours thesis and thus was not revisited in this study. The data that was analysed in this study was quantitative in nature. All the quantitative data entries were coded. Certain items were reverse scored. The data were entered and stored in an excel spread sheet and then imported into the SAS statistical package.

The analysis included descriptive statistics which were used to describe the demographics of the sample. All the data that were analysed were controlled for by race and gender so that the researcher could examine the race and gender differences for the different variables being studied. Simple statistics, which included frequencies, mean scores and standard deviations, were calculated for the four knowledge scales, including the three fear items. To assess the internal consistency of the instrument items for the four knowledge scales and the fear items, a Chronbach alpha formula was applied to measure the reliability of the items in the scale.

The purpose of running cross tabulations was to look for the relationship between variables in the study, such as, knowing someone with AIDS, cure for AIDS, sources of information, perceived severity of the illness and fear of the disease.

A two-way ANOVA for the three Knowledge Scales was calculated to find out whether race or gender was significant in relation to the myths and misconceptions surrounding the disease and whether race or gender determined whether learners appeared to be more knowledgeable of the disease on a whole. The point of the two-way ANOVA for the Myths and Misconception Scale versus the variable 'attendance at school' was to see if those learners who held more myths and misconceptions were more or less willing to attend school and to see whether it was significant for race or gender. The two-way

ANOVA for the three fear items were calculated to find out whether race or gender was significant for any of the three fear items. All ANOVAs were based on alpha being set at a 0.05 level of significance.

A logistic regression method was used because it first provided an interpretable linear model for a categorical dependent variable, i.e. the total knowledge scale, the three subscales and the fear scale. The purpose of this was to assess the strength of association between variables while adjusting for possible confounders such as age, gender and race. Since the knowledge scale succeeded in reaching significance at the p=0.01 level for the three predictors viz. age, gender and race, the total knowledge scale was categorized into four categories/cut-off points based on the quartiles of learners' scores on the Total Knowledge Scale. The four categories/cut-off points as observed in the output were as follows: 0, 1, 2 and 3, where '0' represented all scores on the total knowledge scale between 1 and 22, '1' represented scores of 23 and 24, '2' represented scores of 25 and 26 and '3' represented all scores that were 27 and above.

Chapter Three

RESULTS

The focus of this section is to provide an account of the results obtained from the quantitative analysis.

3.1 Demographics of the sample

Table 1. Demographics of the sample

		Grade 6	Grade 7	Total
Race	Indian learners	n=111	n=115	**226**
	Black learners	n=182	n=225	**407**
Gender	Male	n=123	n=151	**274**
	Female	n=170	n=189	**359**

With regard to race, the entire sample comprised 226 Indian learners (i.e. 111 in *Grade 6* and 115 in *Grade 7*) and 407 Black learners (i.e. 182 in *Grade 6* and 225 in *Grade 7*). For gender, the entire sample consisted of 274 male learners (i.e. 123 in *Grade 6* and 151 in *Grade 7*), and 359 female learners (i.e. 170 in *Grade 6* and 189 in *Grade 7*).

3.2 Do you know anyone who has AIDS?

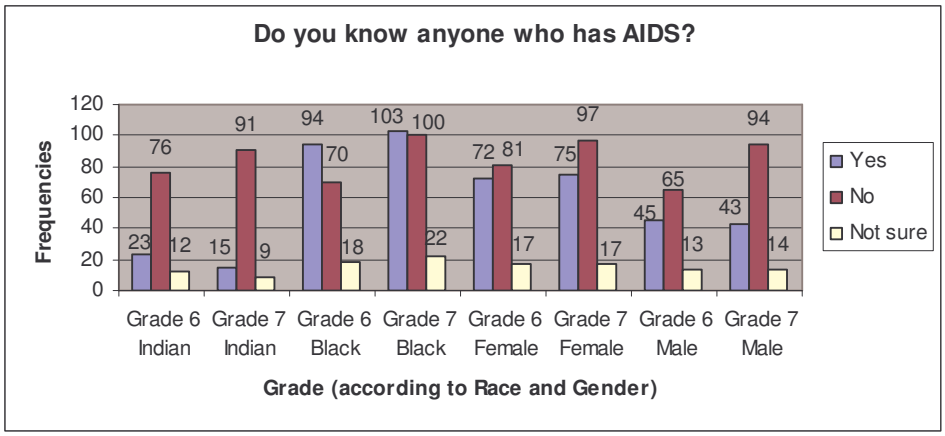


Figure 1. Do you know anyone who has AIDS?

One-hundred-and-three *Grade 7* Black learners in Figure 1 reported that they knew someone who had AIDS, compared to only 15 *Grade 7* Indian learners. The difference was just as large for *Grade 6* learners with 94 *Grade 6* Black learners saying that they knew someone who had AIDS, compared to only 23 *Grade 6* Indian learners who said the same. The difference in responses for the variable in Figure 1, i.e. 'Do you know anyone who has AIDS?' was obviously greater for race than it was for gender.

3.3 Is there a cure for AIDS?

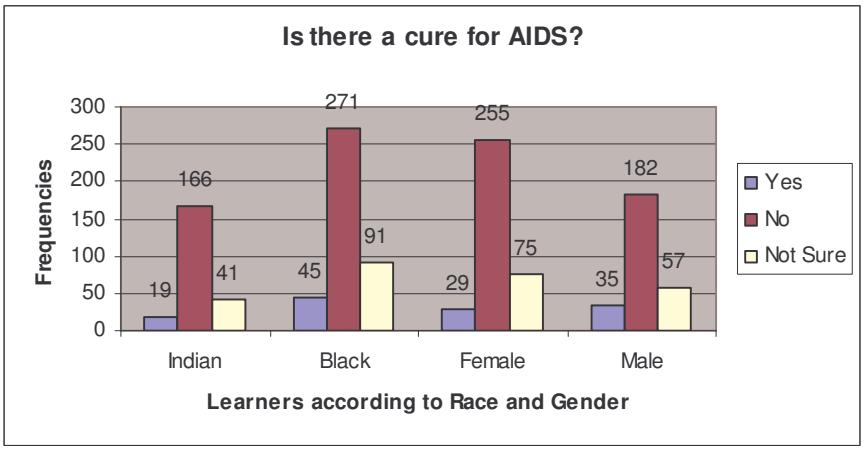


Figure 2. Is there a cure for AIDS?

It appears that the majority of learners were aware that there was no cure for AIDS (see Figure 2). It was disturbing, however, to find that 45 Black learners and 35 male learners thought that there *was a cure* for AIDS, while 91 Black learners and 75 female learners were not sure if there was a cure for AIDS or not.

3.4 Sources of information on HIV/AIDS

Table 2. Sources of Information on HIV/AIDS

Sources of information	Race		Gender	
	Indian	Black	Female	Male
Television	190 (2)*	372 (1)	319 (2)	243 (1)
Radio	114 (7)	315 (4)	243 (5)	186 (5)
Newspaper	167 (3)	333 (3)	286 (3)	214 (3)
Magazines	121 (5)	236 (8)	215 (7)	142 (8)
Books	113 (8)	269 (6)	226 (6)	156 (6)
Parents	164 (4)	304 (5)	275 (4)	193 (4)
School	210 (1)	364 (2)	333 (1)	241 (2)
Friends	116 (6)	208 (9)	186 (9)	138 (9)
Doctor	99 (9)	240 (7)	188 (8)	151 (7)
Somewhere else	9 (10)	20 (10)	21 (10)	8 (10)

Indian learners mentioned their sources of information about HIV/AIDS in descending order as follows: school (210), television (190), newspapers (167), parents (164) and magazines (121), while Black learners listed their sources of information in descending order as follows: television (372), school (364), newspapers (333), radio (315) and parents (304), respectively. In terms of gender, the sources of information about HIV/AIDS for females in descending order were school (333), television (319), newspapers (286), parents (275) and radio (243), respectively. The sources of information for males in descending order were television (243), school (241), newspapers (214), parents (193) and radio (186), respectively. All learners in the sample chose 'somewhere else' (i.e. they heard about HIV from sources other than the ones that were listed in the questionnaire) as their tenth source of information.

* The numbers in the brackets denote the rank (i.e. '1' being the highest chosen option and '10' being the lowest chosen option) for each source of information

3.5 Perceived severity of the illness

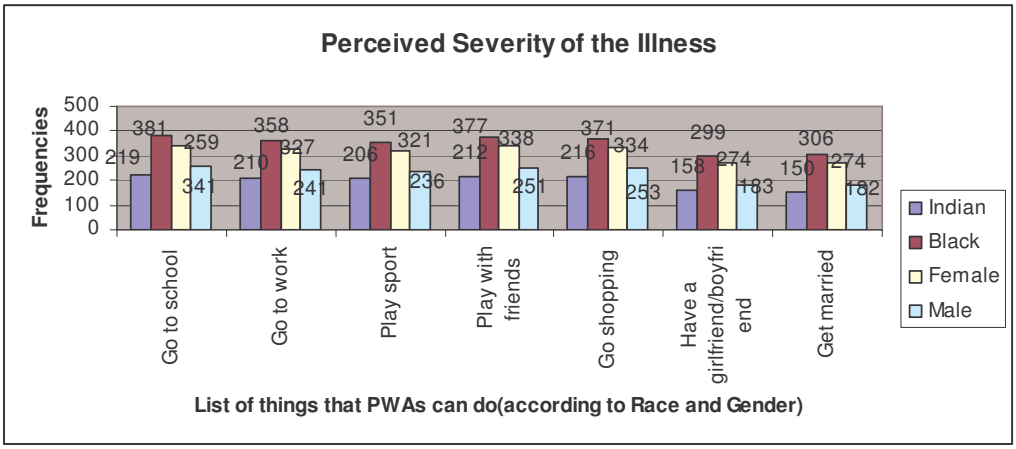


Figure 3. Perceived severity of the illness

This item was designed to investigate perceptions of the gravity of HIV/AIDS as a condition, where learners were given a list of activities, each of which had to be individually marked to indicate whether or not a PWA could take part in it. The answers provided by the learners in the sample indicate that Black learners perceived the disease as being much more serious than Indian learners. Just over half (381) of the Black learners believed that PWAs could attend school and play with friends (377) and only 299 Black learners felt that it was alright for PWAs to date (i.e. have a girlfriend /boyfriend) or be married (306). Two-hundred-and-nineteen Indian learners said that it was acceptable for PWAs to attend school and 216 Indian learners said that they could go shopping. Only about a quarter (158) of Indian learners in the sample felt that it was acceptable for PWAs to date and 150 Indian learners felt that it was alright for PWAs to marry. In Figure 3, the highest scores generally seem to have been for female learners than male learners. Approximately half of the female learners believed that PWAs could attend school (341) and go shopping (334), while the lowest scores seem to have been for dating (274) or getting married (274). Two-hundred–and-fifty-nine males in the sample thought that it was alright for PWAs to attend school and 253 males said that it was alright to go shopping. The lowest response for males appeared to have been for dating (183) or getting married (182).

3.6 Simple statistics for the four Knowledge Scales

Table 3. Simple statistics for the four Knowledge Scales

	Mean	Median	Mode	Std dev	Possible Min Score	Possible Max Score	Max Scor	Cronbach alpha
Symptomatic Scale	2.45	3	3	0.47	0	4	3	0.35
Blood Transmission Scale	5.34	6	6	1.45	0	8	8	0.39
Myths and Misconception Scale	15.67	17	17	3.41	0	18	18	0.86
Total Knowledge Scale	23.46	25	26	4.69	0	29	29	0.86

Chronbach's alpha for the Symptomatic Scale (0.35) was low because the scale only consisted of four items. The Blood Transmission Scale also had a low Cronbach's alpha (0.39) because it consisted of only eight items. Only 3% of learners in the sample managed to get all eight items on the Blood Transmission Scale correct. Cronbach's alpha was high (0.86) for the Myths and Misconception Scale because there were 20 items that comprised the scale. Only 26% of the learners answered all 18 items correctly on the Myths and Misconception scale. For the Total Knowledge Scale, only one Black learner in the sample provided correct responses for all 29 items. Cronbach's alpha for the Total Knowledge Scale was high (0.86). The scale comprised a sufficient number of items (29 items). There were certain items in the Total Knowledge Scale that seem to have correlated very poorly, with the total Cronbach's alpha score of 0.86. Those items were related to the problem of transmission of the disease, i.e. from mother to baby via breast milk (0.19), tattooing (0.18), getting pricked by a needle that has not been used by anyone (-0.13), donating blood (0.04), standing next to a person who is sneezing (0.17), and sharing a toothbrush (0.07). These items appeared to have weak correlations and if used in the future, should either be revised or entirely deleted from this scale.

3.7 Two-way ANOVA for three of the Knowledge Scales

Table 4. Two-way ANOVA for the three Knowledge Scales

	Blood Transmission Scale		**Myths & Misconceptions Scale**		**Total Knowledge Scale**	
Sources	Mean Square	Pr > F	Mean Square	Pr > F	Mean Square	Pr > F
Gender	0.50	0.62	65.39	0.01*	106.0	0.02*
Race	3.48	0.19	0.31	0.86	4.07	0.66
Gender * Race	3.60	0.19	0.21	0.89	4.31	0.65

p >0.05*

The Two-way ANOVA in Table 4 above was not calculated for the Symptomatic Scale since there were too few items (i.e. only four items) that comprised the scale. Based on the alpha being set at a 0.05 level of significance, it appears that gender was significant on the Myths and Misconception Scale as well as the Total Knowledge Scale. This meant that more female learners than male learners were aware of the myths and misconceptions surrounding the disease and also appeared to be more knowledgeable of the disease on a whole.

3.8 Two-way ANOVA for the Myths and Misconception Scale vs. attendance at school

Table 5. Two-way ANOVA for the Myths and Misconception Scale vs. 'attendance at school'

	Myths and Misconception Scale	
Sources Attendance at school	Mean Square	Pr > F
Gender	66.05	0.02*
Race	0.01	0.98
Gender * Race	1.23	0.74

p> 0.05 *

In Table 5, the variable 'gender' appeared to be significant for the Myths and Misconception Scale. This meant that more female learners than male learners, who held misconceptions about the disease, were likely to be worried about attending school if they knew that someone at school had AIDS.

3.9 Two-way ANOVA for the three fear items

Table 6. Two-way ANOVA for the three fear items

	Fear of contracting AIDS		**Attendance at School**		**Proximity to someone with AIDS**	
Sources	Mean Square	Pr > F	Mean Square	Pr > F	Mean Square	Pr > F
Gender	6.71	0.00*	0.40	0.03*	0.35	0.44
Race	1.03	0.24	0.19	0.13	0.09	0.69
Gender * Race	0.08	0.74	0.01	0.69	0.10	0.67

p > 0.05*

Based on alpha being set at a 0.05 level of significance in Table 6, we find that gender was significant for the following variables: 'Fear of contracting AIDS.' This meant that more female than male learners were worried of getting AIDS. Gender was significant for the variable 'Attendance at school' as well. This meant that more female learners than male learners were willing to attend school if they knew that someone at school had AIDS.

3.10 The fear items

Table 7. The degree of fearfulness

	Frequency	**Percentage**
Not Fearful (3, 4, 5)	n = 497	78%
Not Sure (6)	n = 63	10%
Fearful (7, 8, 9)	n = 73	12%

The scores for the three fear items in Table 7 were compressed or combined into three categories, namely, 'not fearful', 'not sure' and 'fearful.' The mean for the three fear

items combined was 4.74, the standard deviation was 1.26, the median was 5 and the mode was 5. It is evident from Table 6 that the majority of learners (497) were not fearful of the disease or PWAs. Seventy-three learners appeared to be fearful of HIV/AIDS and PWAs, while 63 learners seemed to be unsure of their fear of the disease and PWAs.

1. Fear of contracting AIDS (1st item for fear)

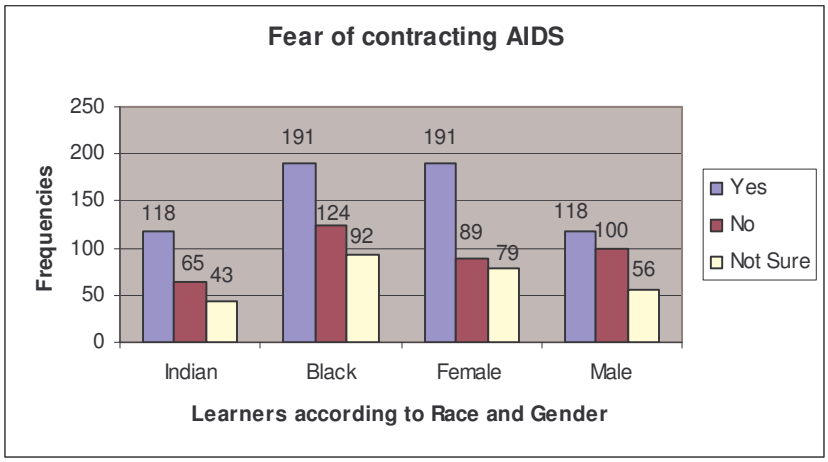


Figure 4. Fear of contracting AIDS

In Figure 4, it appears that more Black learners (191) were worried about contracting AIDS than Indian learners (118). On the other hand, it appears that more females (191) were worried about contracting AIDS than males (118).

2. Attendance at school (2nd item for fear)

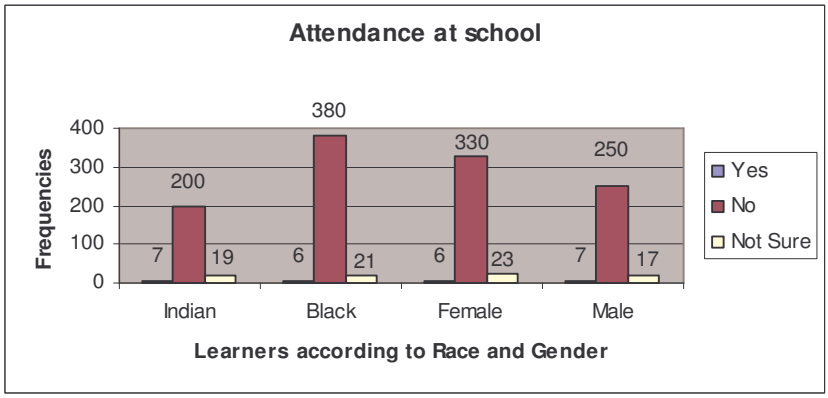


Figure 5. Fear of attending school

Very few learners in the sample said that they would attend school if they knew that someone at school had AIDS (see Figure 5). The majority of the sample, particularly the Black learners (380) and female learners (330), reported that they would not attend school if they knew that someone at school had AIDS.

3. Proximity to someone with AIDS (3rd item for fear)

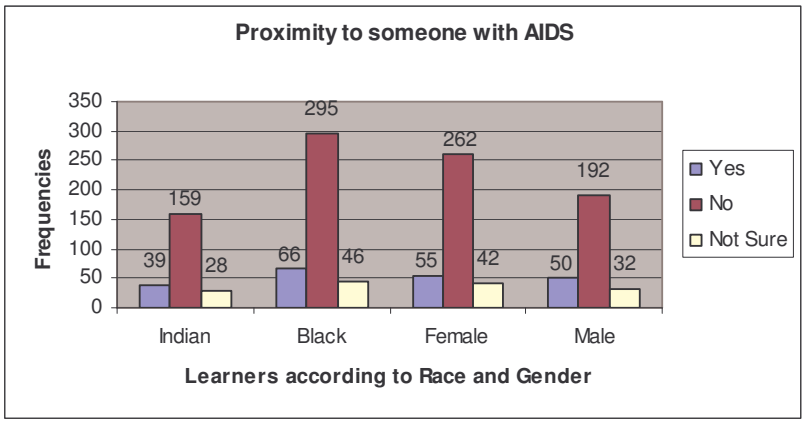


Figure 6. Fear of being in proximity to someone with AIDS

As reflected in Figure 6 above, very few learners (both Grades 6 and 7) said that they would sit next to someone at school if they knew that the person had AIDS. This contradicted what the majority of the learners, particularly the Black learners (380) and female learners (330), had reported in Figure 5, i.e. that they would not go to school if they knew that someone at school had AIDS. For example, 66 Black learners had agreed to sit next to someone at school if the person had AIDS (Figure 6), yet only 6 Black learners said that they would attend school if they knew that someone at school had AIDS?

3.11 Cross tabulations for each of the fear items against each other.

Table 8. Cross tabulation for, 'fear of attending school' (2nd item) vs. 'fear of being in proximity to someone with AIDS' (3rd item).

		Proximity to someone with AIDS			
Attendance at school		Yes	Not Sure	No	**Total**
	Yes	92	49	439	**580**
	Not sure	8	24	8	**40**
	No	5	1	7	**13**
	Total	**105**	**74**	**454**	**633**

The cross-tabulation in the Table 8 depicts further whether learners would still sit next to someone with AIDS at school if they knew that the person at school had AIDS. The results in Table 8, indicates that 439 learners who agreed that they would go to school if they knew that someone at school had AIDS, would actually have refused to sit next to someone at school who had AIDS. The statement above appears to concur with the results in Figures 5 and 6.

Table 9. Cross tabulation for, 'fear of contracting AIDS'(1st item) vs. 'fear of attending school'(2nd item).

		Attendance at School			
Fear of contracting AIDS		Yes	Not Sure	No	**Total**
	Yes	289	16	4	**309**
	Not sure	115	18	2	**135**
	No	176	6	7	**189**
	Total	**580**	**40**	**13**	**633**

The cross tabulation in Table 9 indicates that 289 learners from the sample, who despite the fact that they were worried that they might get AIDS, said that they would actually

attend school even though they knew that someone at school had AIDS. One-hundred-and-fifteen learners who were not sure if they were worried about contracting the disease in the future said that they would attend school, even though they knew that someone at school had AIDS and 176 learners who said that they were not worried of contracting the virus said that they would attend school even if they knew that someone at school had AIDS.

Table 10. Cross tabulation for, 'fear of contracting AIDS' (1st item) vs. 'fear of being in proximity to someone with AIDS'(3rd item)

	Proximity to someone with AIDS			
Fear of contracting AIDS	Yes	Not Sure	No	**Total**
Yes	52	34	223	**309**
Not sure	26	26	83	**135**
No	27	14	148	**189**
Total	**105**	**74**	**454**	**633**

The cross-tabulation in Table 10 indicates that 223 learners who appeared to be worried about contracting the virus said that they would actually sit next to someone who has AIDS, and 148 learners who were not worried about getting AIDS said that they would not sit next to someone whom they knew had AIDS.

3.12 Cross tabulations for, 'Do you know anyone who has AIDS?' vs. the three items for fear.

No significant results were obtained for race or gender on the cross tabulation for the variable 'Do you know anyone who has AIDS?' vs. the first item for fear, namely, 'Fear of contracting AIDS' as well as the third item for fear, namely, 'Proximity to someone with AIDS.' Consequently, the graphs for race (i.e. Indian and Black learners) and gender (i.e. female and male learners), for both the first and third items for fear, are not shown in the results section but are shown in the appendix. Some significant results were observed for Black learners and female learners on the second item for fear, namely, 'attendance at school,' however. The results are reported below in Table 11 and Table 12, respectively.

No significant results were observed for Indian learners and male learners on the second item for fear, namely, 'Attendance at school.' Consequently, the graphs for Indian learners and male learners on the second item for fear are not shown in the results section but are shown in the appendix (see Appendix 3.12)

Table 11. Cross tabulation for, 'Do you know anyone who has AIDS?' vs. 'fear of attending school'(2nd item)

Black learners

		Attendance at school			
		Yes	Not Sure	No	**Total**
Do you knowanyone who has AIDS?	Yes	4	11	182	**197**
	Not sure	0	3	37	**40**
	No	2	7	161	**170**
	Total	**6**	**21**	**380**	**407**

The cross tabulation in Table 11 indicates that 182 Black learners in the sample who knew someone with AIDS said that they would not attend school if the person at school had AIDS. One-hundred-and-sixty-one Black learners who said that they did not know anyone with AIDS said that they would not attend school if the person at school had AIDS. No significant results were obtained for Indian learners (See appendix for table).

Table 12. Cross tabulation for, 'Do you know anyone who has AIDS?' vs. 'fear of attending school'(2nd item)

Female learners

		Attendance at school			
		Yes	Not Sure	No	**Total**
Do you knowanyone who has AIDS?	Yes	2	7	138	**147**
	Not sure	0	5	29	**34**
	No	4	11	163	**178**
	Total	**6**	**23**	**330**	**359**

The cross tabulation in Table 12 indicates that 138 female learners in the sample who knew someone with AIDS said that they would not attend school if the person at school had AIDS. On the other hand, 163 female learners who said that they did not know anyone with AIDS said that they would not attend school if the person at school had AIDS. No significant results were obtained for male learners (See appendix for table).

3.13 Cross tabulations for the variable 'Is there a cure for AIDS?' vs. the three items for fear

No significant results were obtained on the cross tabulation for the variable, 'Is there a cure for AIDS?' vs. the first item for fear, namely, 'fear contracting AIDS'. For this reason, the graphs for race (i.e. for male and female learners) and gender (i.e. for Black and Indian learners) are not shown in the results section but have been placed in the appendix.

Table 13. Cross tabulation for, 'Is there a cure for AIDS?' vs. 'fear of attending school'(2nd item)

Black learners

		Attendance at school			
		Yes	Not Sure	No	**Total**
Is there a cure for AIDS?	Yes	1	2	42	**45**
	Not sure	1	8	82	**91**
	No	4	11	256	**271**
	Total	**6**	**21**	**380**	**407**

The cross tabulation in Table 13 indicates that 256 Black learners in the sample who believed that there was no cure for AIDS said that they would still attend school even if they knew that someone at school had AIDS. No significant results were obtained for Indian learners (See appendix for table).

Table 14. Cross tabulation for, 'Is there a cure for AIDS?' vs. 'fear of attending school'(2nd item)

Female learners

		Attendance at school			
		Yes	Not Sure	No	**Total**
Is there a cure for AIDS?	Yes	0	1	28	**29**
	Not sure	1	9	65	**75**
	No	5	13	237	**255**
	Total	**6**	**23**	**330**	**359**

The cross tabulation in Table 14 indicates that 237 female learners in the sample who believed that there was no cure for AIDS said that they would still attend school, even if they knew that the person at school had AIDS. No significant results were obtained for male learners (See appendix for table).

Table 15. Cross tabulation for, 'Is there a cure for AIDS?' vs. 'fear of being in proximity to someone with AIDS'(3rd item).

Black learners

		Proximity to someone with AIDS			
		Yes	Not Sure	No	**Total**
Is there a cure for AIDS?	Yes	12	6	27	**45**
	Not sure	20	13	58	**91**
	No	34	27	210	**271**
	Total	**66**	**46**	**295**	**407**

The cross tabulation in Table 15 indicates that 210 Black learners in the sample who believed that there was no cure for AIDS said that they would sit next to someone at

school even if they knew that the person at school had AIDS. No significant results were obtained for Indian learners or for female and male learners (See appendix for tables).

3.14 The Logistic procedure for Knowledge as a linear term controlling for each of the three fear items.

1. Fear of contracting AIDS

Table 16. Fear of contracting AIDS (1st item)

	Pr > Chi Sq	Odd Ratios
Age	0.0872	1.18
Gender 1 vs. 2	0.0130	1.51
Race 1 vs. 2	0.0673	1.38
Knowledge Scale	0.0007	1.07

The response variable in Table 16 was 'Are you worried that you will get AIDS?' There were two response levels: those that said that they were worried (309) and those that said that they were not worried (324) that they will get AIDS. The predictor variables were age, gender, race and the Total Knowledge Scale. It appears that gender and the Total Knowledge Scale are significant predictors for the response variable, 'Are you worried that you will get AIDS?' The odd ratio estimates for the predictor variable, namely, gender, revealed that females are 1.5 times more likely than males to be worried that they will get AIDS. For the predictor variable, 'race', it appears that Indian learners are 1.4 times more likely than Black learners to be worried that they will get AIDS.

2. Attendance at school

Table 17. Fear of attending school (2nd item)

	Pr > Chi Sq	Odd Ratios
Age	0.3093	1.19
Gender 1 vs. 2	0.9043	1.04
Race 1 vs. 2	0.0810	0.60
Knowledge Scale	0.0407	1.05

The response variable in Table 17 was, 'Would you go to school if you knew that someone at school had AIDS?' There were two response levels: those that said that they

would go to school (580) and those that said that they would not go to school (53) if a person at school had AIDS. The predictor variables were age, gender, race and the Total Knowledge Scale. It appears that the Total Knowledge Scale was a significant predictor for the response variable, 'Will you go to school if you knew that someone at school had AIDS?' The odd ratio estimates revealed that for the predictor variable, 'gender', females are more likely than males not attend school if a person at school had AIDS. For the predictor variable, 'race', it appears that Indian learners are half as (0.5 times) likely than Black learners to attend school if they knew that the person at school had AIDS.

3. Proximity to someone with AIDS

Table 18. Fear of being in proximity to someone with AIDS (3rd item)

	Pr > Chi Sq	Odd Ratios
Age	0.1227	1.21
Gender 1 vs. 2	0.5660	0.88
Race 1 vs. 2	0.5549	1.15
Knowledge Scale	0.0087	0.95

The response variable in Table 18 was, 'Would you be scared to sit next to someone if they had AIDS?' There were two response levels: those that said that they would sit next to someone (n=105) and those that said that they would not sit next to someone (n=528) if they knew that the person had AIDS. The predictor variables were age, gender, race and the Total Knowledge Scale. It appears that the Total Knowledge Scale was a significant predictor for the response variable, 'Will you be scared to sit next to someone if they had AIDS?' The odd ratio estimates revealed that for the predictor variable, 'gender', females were 0.9 more likely than males to be scared to sit next to someone who had AIDS. The odd ratio estimates for the predictor variable, 'race', was 1.1. This meant that Indian learners and Black learners were both equally scared to sit next to someone at school if the person had AIDS.

3.15 The Logistic procedure for the Four Knowledge Scales controlling for each of the three fear items

1. Fear of contracting AIDS

Table 19. Fear of contracting AIDS (1st item)

	Pr > Chi Sq	Odd Ratios
Age	0.1440	1.15
Gender 1 vs. 2	0.0126	1.51
Race 1 vs. 2	0.0768	0.73
Knowledge Scale 0 vs. 3	0.0021	0.41
Knowledge Scale 1 vs. 3	0.5516	0.71
Knowledge Scale 2 vs. 3	0.8209	0.64

The response variable in Table 19 was, 'Are you worried that you will get AIDS?' There were two response levels: those that said that they were worried (309) and those that said that they were not worried (324) that they would get AIDS. The predictor variables were age, gender, race and the four Knowledge Scales. It appears that gender and the Symptomatic Scale are significant predictors for the response variable, 'Are you worried that you will get AIDS?' The odd ratio estimates revealed that for the predictor variable, 'gender', females are 1.5 times more likely than males to be worried that they will get AIDS. For the predictor variable, 'race', it appears that Black learners are 0.7 times more likely than Indian learners to be worried that they will get AIDS. Those learners who scored 0.4, 0.7 and 0.6 on the Symptomatic Scale, the Blood Transmission Scale and the Myths and Misconception Scale, respectively, were more likely to be worried that they will get AIDS.

2. Attendance at school

Table 20. Fear of attending school (2nd item)

	Pr > Chi Sq	Odd Ratios
Age	0.4163	1.15
Gender 1 vs. 2	0.9236	1.03
Race 1 vs. 2	0.0595	1.76
Knowledge Scale 0 vs. 3	0.0127	0.14
Knowledge Scale 1 vs. 3	0.2935	0.21
Knowledge Scale 2 vs. 3	0.3149	0.21

The response variable in Table 20 was, 'Would you go to school if you knew that someone at school had AIDS?' There were two response levels: those that said that they would go to school (580) and those that said that they would not go to school (53) if someone at school had AIDS. The predictor variables were age, gender, race and the four Knowledge Scales. It appears that the Symptomatic Scale was a significant predictor for the response variable, 'Will you go to school if you knew that someone at school had AIDS?' The odd ratio estimates for the predictor variable, 'gender', was 1.03, which revealed that males and females equally, would not attend school if they knew that someone at school had AIDS. For the predictor variable, 'race', it appears that Black learners 1.7 times less likely than Indian learners to attend school if they knew that someone at school had AIDS. Those learners who scored 0.1, 0.2 and 0.2 on the Symptomatic Scale, the Blood Transmission Scale and the Myths and Misconception Scale, respectively, were more likely to be worried that they will get AIDS.

3. Proximity to someone with AIDS

Table 21. Fear of being in proximity to someone with AIDS (3rd item)

	Pr > Chi Sq	Odd Ratios
Age	0.0916	1.23
Gender 1 vs. 2	0.5412	0.87
Race 1 vs. 2	0.5060	0.86
Knowledge Scale 0 vs. 3	0.0020	2.20
Knowledge Scale 1 vs. 3	0.5855	1.38
Knowledge Scale 2 vs. 3	0.0206	0.81

The response variable in Table 21 was, 'Would you be scared to sit next to someone if they had AIDS?' There were two response levels: those that said that they would sit next to someone (n=105) and those that said that they would not sit next to someone (n=528) if they knew that the person had AIDS. The predictor variables were age, gender, race and the four Knowledge scales. It appears that the Symptomatic Scale was a significant predictor for the response variable, 'Will you be scared to sit next to someone if they had AIDS?' The odd ratio estimates revealed that for the predictor variable, 'gender', females are 0.9 times more likely than males to be scared to sit next to sit next to someone who has AIDS. For the predictor variable, 'race', it appears that Black learners are 0.9 times

less likely than Indian learners to sit next to someone who has AIDS. Those learners who scored 2.2, 1.3 and 0.8 on the Symptomatic Scale, the Blood Transmission Scale and the Myths and Misconception Scale, respectively, were more likely to be worried that they would get AIDS.

3.16 Desire for more information

Two independent sample T- test

Table 22. Desire for more information

		T-tests	**Equality of variance**	
Receiving information from my teacher		Pr > t	F value	Pr > F
	Indian learners	0.73	1.03	0.87
	Black learners	0.77	1.49	0.01 *
	Female learners	0.66	1.16	0.35
	Male learners	0.52	1.46	0.05 *
		T-tests	**Equality of variance**	
Receiving information from the media		Pr > t	F value	Pr > F
	Indian learners	0.86	1.00	0.96
	Black learners	0.30	1.24	0.17
	Female learners	0.61	1.07	0.69
	Male learners	0.41	1.20	0.35

p > 0.05 *

In Table 22 the variable, 'receiving information from my teacher', appeared to be significant for Black learners and male learners. This meant that more Black learners than Indian learners and more male learners than female learners preferred to receive information about HIV/AIDS from their teachers. The variable, 'receiving information from the media', did not reveal any significant effects for gender nor race. The researcher assumes that due to the conflicting information about HIV/AIDS that is often portrayed by the media learners in this sample preferred to receive information from their teachers rather than from the media.

The aim of this chapter was to capture an understanding of what learners in this sample know about HIV/AIDS, the transmission of the disease as well as fear of the disease and PWAs. The following chapter will, however, engage in a more in-depth discussion of the data presented in this chapter.

Chapter Four

DISCUSSION

4.1 Descriptive data

The study was conducted using a sample of 633 learners from four primary schools in Lenasia, South of Johannesburg. A volunteer sample was drawn from Grades 6 and 7. The majority of learners ranged from 11 years to 15 years of age, with a mean age of 12.22 years (*SD* = 0.89). Nine percent of the learners in the sample were 15 years of age. These learners were considered to be outliers since many learners are considered to be in high school by the age of 15 years. A possible reason for learners of 15 years of age still being in primary school could have been that they probably started school at a relatively late age or perhaps may have repeated or were repeating a grade.

Most of the assumptions for a parametric test were met, except for the sample distribution, which seemed to have been slightly skewed, i.e. the sample consisted of more Black learners (*n*=407) than Indian learners (*n*=226). Historically speaking, Lenasia has always been characterised as an 'Indian' area as defined by the Apartheid era government. However, since the demise of Apartheid, there has slowly been a movement of other groups into the area (Hoosain, 2004). Hence, the large number of Black learners enrolled at formerly 'Indian' schools. Another reason for the unequal distribution of learners in each grade and in terms of gender and race may have been because not all classes in the schools were equivalent in terms of demographic characteristics. These biases in the sample might have influenced the validity of the results obtained, and the validity of the interpretations made on the basis of the research data (Hoosain, 2004).

4.2 Do you know anyone who has AIDS?

Seventy-five Grade 7 female learners reported that they knew someone with AIDS. This represents a substantial number. The people that they know are perhaps friends or family members who have AIDS. An increasing number of people are becoming HIV infected. Therefore, it is evident that the chances of knowing an infected person are increasing. In

all probability, within the next five to ten years, many learners will know someone who is HIV infected or who has AIDS. According to Miller and TellJohann (1992), it is important for learners to know that they cannot get infected through casual contact, and that people with AIDS need compassion and care, just like any other person with an illness.

4.3 Sources of information

Learners were given a list of nine potential sources of information about HIV/AIDS and were requested to identify if any of these sources provided them with information on the disease. This question was extracted from a study that was undertaken by Price, Desmond, and Kukulka (1985) on junior and senior secondary school learners' perceptions and misperception of AIDS. Learners were allowed to tick off as many information source options that they had had access to. In keeping with the results in the study undertaken by Price et al. (1985), none of the sources identified in this study *singly* provided learners with adequate knowledge; therefore they reported a combination of sources from which they thought they got their information. In a study by Turner, Irwin, Tschann, and Millstein (1993) concerning Autonomy, Relatedness, and the Initiation of Health Risk Behaviors in Early Adolescence, learners were asked to select and prioritize their most important sources of HIV-related information. From a checklist of 15 possible choices, sources ranked in descending order of importance were: school (86%), television (73%), other (e.g. pamplets, posters, leaflets, and/or flyers) (63%), newspapers or magazines (62%), parents (56%).

Another study by Caballero, Villasenor and San Martin (1997) on the information sources accessed by adolescents in Guadalajara city, Mexico, found that 1410 adolescents aged 15 to19 years, of both sexes and of varying socioeconomic strata, received information about HIV/AIDS from television (79%), from radio (39%), from magazines (26%), and from newspapers (16%). Interpersonal sources of information on HIV/AIDS included school (39%), parents (38%), friends (32%), and doctors (26%).

In this study, in terms of race, Indian learners ranked their sources of information, in descending order of importance, as school (n=210), television (n=190), newspapers

(*n*=167), parents (*n*=164) and magazines (*n*=121), while Black learners listed their sources in descending order of importance as television (*n*=372), school (*n*=364), newspapers (*n*=333), radio (*n*=315) and parents (*n*=304), respectively. In terms of gender, the sources of information for females in descending order were school (*n*=333), television (*n*=319), newspapers (*n*=286), parents (*n*=275) and radio (*n*=243), respectively. The sources of information for males in descending order were television (*n*=243), school (*n*=241), newspapers (*n*=214), parents (*n*=193) and radio (*n*=29), respectively.

The 'school' (*n*=210) as Indian learners' *first choice* in this study seems rather contradictory when considering the study by Caballero et al., (1997) above, where learners identified the 'school' as their fifth most important source of information. On the other hand, there was no contradiction if one had to compare Indian learners' choice of 'school' with the findings of Turner et al. (1993) referred to above. In another study conducted by Rogers (1974), schools were not even mentioned by any of the learners as their main source of information.

However, we should bear in mind that with the current proliferation of AIDS education programmes in the school system, the role of the facilitator and the school has no doubt increased in importance since the time the earlier studies were conducted. The fact that the majority of learners in this study identified "facilitators and schools" as the primary sources of AIDS information could be indicative of the fact that facilitators and schools are currently more responsive, or that messages provided in these settings have become more visible or perceived as more credible For example, according to McDermott, Hawkins, Moore and Cittadino (1987) reading newspapers, books and magazines can also be related to educational attainment in terms of exposure to facts about AIDS in schools.

The *second* highest source of information for Indian learners and female learners in this study was television. This seems to be in line with findings of other studies worldwide (Campbell & Mbizvo, 1994; Gillbert, 1994; Tuchinda, Chotpityasunondh and Teeratkul,

1998; Turner et al., 1993; Westrupp et al., 1996), which suggest that television is one of the foremost sources of information (outside the education setting) about AIDS for adolescents. The fact that a lot of information comes from television perhaps highlights the lack of parental guidance in matters of HIV/AIDS education. This assumption seems to be borne out by the findings of other studies (e.g. Caballero et al., 1997; NAIEP, 1996; Turner et al., 1993) as well as the statistics obtained in this study, which indicate that parents were not cited as frequently as television, as a source of information about HIV/AIDS.

In addition, the findings of this study seem to correspond with the findings of the study by Caballero et al. (1997) mentioned earlier, which indicate that doctors appeared to have been the least consulted source. The reason that Brown and Fritz (1988) gave for this trend is that health-care professionals are no longer assuming an educational role and other sources such as the media seem to have taken over.

Sixty-three percent of learners in the Turner et al. (1993) study mentioned other sources of information, such as pamphlets, posters, leaflets and/or flyers while only five percent of the sample in this study said they got their information from other sources besides the ones that were listed for them in the questionnaire. Some of the alternatives that learners mentioned in this study were libraries, psychologists, computers, the Internet, churches, HIV-positive people, billboards, taxi posters and advertising on buses.

According to Warwick, Aggleton, and Homans (1988), the tremendous expansion of newspapers, magazines, books, and radio and television advertising and "infomercials" produces an overwhelming amount of health information that is difficult for people to understand and interpret. Thus, it is important that adolescents are taught how to analyse the media to be able to determine the accuracy of information provided by the media (Brown & Fritz, 1988 b). There is a continual flow of information regarding AIDS, but learners do not always have the ability to translate and interpret that information accurately. When this happens, facts become distorted and myths begin to form and crystallize (Nelson & Clarke, cited in DiClemente, 1992). On the other hand, a study

conducted by DiClemente (1992) found that a combination of sources of information, especially the media (i.e. television, newspapers and radio), AIDS education programmes etc. has significantly increased adolescents' knowledge about AIDS and has reduced the prevalence of commonly-held myths. Indeed, based on the comparison of different studies above, it is evident that adolescents' sources of information about HIV/AIDS vary in different contexts.

4.4 Perceived severity of the illness

The perceived severity of the illness was examined by means of two questions. The purpose of the first question was to assess learners' perceptions of the severity of the illness, based on a list of activities that were given, to indicate whether or not PWAs could take part in those activities. Learners had to put a tick if they said 'yes' or a cross if they said 'no' as to whether PWAs could take part in the list of activities that were given. The answers provided by learners in this study indicate that the awareness of the severity of the disease is higher amongst Black learners than Indian learners. Just over half (n=381) of the Black learners believed that PWAs could attend school and play with friends (n=377) and 299 Black learners felt that it was alright for PWAs to date, i.e. have a girlfriend or boyfriend or get married (n=306). On the other hand, only 219 Indian learners in this study said that there is nothing wrong with PWAs attending school and only about a quarter (n=158) of Indian learners felt that it was alright for PWAs to date or get married (150).

Approximately half of the female learners in the study (n=341) believed that PWAs should be allowed to attend school and only 274 female learners believed that PWAs should get married (n=274). Two–hundred-and-fifty-nine males in the sample thought that it was alright for PWAs to attend school, while only 183 male learners believed that it was acceptable for PWAs to date or get married (n=182).

It is apparent from the above results that learners were not entirely comfortable with the fact that PWAs could in fact date or be married. It is obvious that learners were not aware

that PWAs could date healthy HIV-negative partners or be happily married, provided they are practicing safe sex.

4.5 Knowledge of HIV/AIDS

A recent study (Bhattacharya, Cleland & Holland, 2005) investigating HIV prevention efforts for Asian-Indian adolescents who were born in the United States found that of a total of 165 learners who responded to the 49-item survey, more than 25 percent and 14 percent of the learners believed that donating blood and taking blood tests, respectively, could transmit HIV. According to the authors, while most of the adolescents in this study were aware that high-risk behaviours, such as unprotected sex, could transmit HIV, a large number were also ignorant of other transmission modes and held misconceptions that may produce anxiety and bias.

Understanding of sex (i.e. sex with or without a condom) as a method of transmission on the Symptomatic Scale was significantly higher amongst Indian learners than Black learners. Black learners generally seem to have displayed more accurate knowledge on the Blood Transmission Scale than Indian learners did. Fifteen Black learners managed to get all eight items on the Blood Transmission Scale correct, compared to only one Indian learner. Indian learners displayed a better understanding of the myths and misconceptions surrounding HIV/AIDS. In terms of gender, it appears that females' responses on the Symptomatic Scale and the Blood Transmission Scale were much more accurate than males' responses. Table 4 in the results section indicate that most of the male and females in this study displayed a very good understanding of the myths and misconceptions surrounding HIV/AIDS as well as a very good knowledge of HIV/AIDS. However, female learners appeared to be slightly more knowledgeable of HIV/AIDS and the myths and misconceptions surrounding the disease than male learners. The findings in this study concur with the findings in a cross-sectional survey about understandings of barriers to condom use in rural Benin conducted by Hounton, Carabin and Henderson (2005) which presented a summary of the knowledge of the participants on HIV/AIDS and crude odds ratio estimates comparing males to females. There was high awareness of AIDS (99.9%)

among participants. However, females were more aware than males of the modes of transmission of HIV infection (Hounton, Carabin & Henderson, 2005) as well.

A possible reason for the high scores that male and female learners achieved on the Total Knowledge Scale in this study may be related to the fact that knowledge of AIDS has been influenced positively by a number of variables over the years viz., growing awareness of AIDS today by the general public; AIDS education programmes; professional and lay literature on the topic; the large variety of reports furnished by the media; and the recent exposure of safe-sex commercials on television, radio, billboards, etc. According to Roscoe and Skomski (1989), it is probably these factors that have increased young people's AIDS knowledge to some extent.

Although the adolescents in the sample had a good general knowledge about HIV/AIDS, they nevertheless also entertained many myths about the disease. Most of the questions asked by children in Grades 5 and 6 in Montauk and Scoggin's (1989) study, for example, suggested the existence of myths. They asked questions about the transmission of HIV through contact with 'contaminated' toilet seats, swimming pools, and food, and through exposure to infected animals, people and insects.

In this study, scores related to myths and misconceptions are indicative of the fact that learners appear to be less knowledgeable about what does not cause AIDS, for example, that HIV is not spread through everyday activities or that it is not spread through casual contact. Nearly a third of learners in this study (27%) did not know that a person cannot become infected from the bites of mosquitoes or other insects, from eating food that was prepared or which is served by someone else [for e.g. sharing food (8%), sharing cups and glasses (8%) and cups and sharing cutlery (9%)], or from being around an infected person [for e.g. living in a house with a person who has AIDS (9%)], standing next to someone who is sneezing or coughing (27%) or hugging a person who has AIDS (9%). Learners were also particularly ignorant about and suspicious of contamination through bodily fluids and excretions. A small percentage of learners did not know that contact with saliva (kissing - 26%), tears (crying - 6%), urine (using toilets - 10%) (unless these contain visible blood) does not spread infection.

Brown et al. (1990) state that the misconceptions held by adolescents may be due to a variable combination of poorly developed abstraction abilities, heightened anxiety, and the use of defense mechanisms that limit data seeking at this point in their development. In addition, these myths are exchanged among friends, apparently perpetuating and reinforcing themselves in the absence of appropriate strategies to address HIV/AIDS. In such an environment, it is easy to imagine how misperceptions of beneficial practices such as condom use, for example, could become yet one more myth.

4.6 Fear of HIV/AIDS

Firstly, those learners who said 'no' or 'not sure' to Question 1 ("Are you worried that you will get AIDS?") may not have perceived the severity of AIDS. It is assumed that learners at the Grades 6 and 7 levels generally receive selective information about AIDS rather than comprehensive knowledge. Thus, such responses may have been due to the fact that they may not have received enough information about AIDS as yet to be worried. Secondly, it is possible that learners simply did not mark that they were personally worried about contracting AIDS on the questionnaire because they were concerned that the researcher might judge them.

The results of the two-way ANOVA reported in Table 6 and Figure 4 in the results section clearly indicates that there appears to be a significant gender difference, as more female learners were worried of getting AIDS than male learners. According to DiClemente et al., (1986) the reason for this is perhaps because females are easily and more heavily affected by the epidemic and they are at a greater risk of infection due to biological, social and economic factors than males are.

The study conducted by Broekmann (1997) indicated that Grade 7 learners who had more knowledge on HIV/AIDS, displayed greater fear of the disease than Grade 6 learners. It thus seemed that the more children knew about the nature and severity of the disease, the more fearful they became of it. According to van Dyk (2001), what in fact happens is that as adolescents' social contacts broaden and as they are increasingly exposed to mass media, they hear more and more about AIDS, but because of their limited cognitive

abilities, they do not always understand what they see and hear and they are therefore prone to being fearful of the disease or PWAs.

Further, the results in this study found that females were much more knowledgeable of the disease than males were (see Figure 4 and Table 16). However, even though female learners appeared to be more knowledgeable, they were more fearful of the disease. This might be due to the well established difficulty facing women in negotiating the terms of sexual intercourse. In addition, it is assumed that males, being less knowledgeable about HIV/AIDS would then be less aware of the dangers of the disease and thus more likely to take risks or experiment with sex than females would be.

Gender was significant for the second item regarding fear, namely, 'Attendance at school' (see Table 6). The majority of the sample, particularly the Black learners (380) and female learners (330), reported that they would not attend school if they knew that someone at school had AIDS (see Figure 5). In addition, Table 5 in the results section indicates that gender appeared to be significant for the Myths and Misconception Scale. This means that more female learners than male learners who held myths and misconceptions about HIV/AIDS were worried about attending school if they knew that the person at school had HIV/AIDS.

The results reflected in Figure 3 indicated that Indian learners perceived the disease to be less serious than Black learners did, thus they were probably more willing to attend school. In addition, 103 Grade 7 Black learners reported that they knew someone who had AIDS (see Figure 1), compared to only 15 Grade 7 Indian learners. It appears from the last statement that the prevalence of AIDS deaths may be higher in Black communities than in Indian communities. Based on the above statement, it is assumed that fear would also be high in Black communities. Another possible reason for explaining the results in Figure 3 could be that more Black learners have been exposed to the disease than Indian learners were, therefore Black learners were more fearful of the disease, and hence fewer Black learners were willing to attend school if they knew that the person at school had AIDS.

Sixty percent of Black learners said that they *would not* go to school if they knew that someone at school had AIDS. This finding concurred with the study conducted by Mathews, Kuhn, Metcalf, Joubert, and Cameron (1990) who surveyed 377 learners from four Cape Town township high schools. Learners expressed intolerance, fear and rejection of PWAs, and only 6.4% of learners said that they would accept an affected person into their classroom. Yet, almost half (47%) of them said that they would *not be scared* to sit next to someone at school who had AIDS. According to the author, this appeared to be a contradictory response. There also appeared to be contradictory responses from female respondents, with 52% saying that they will not attend school if they knew that someone at school had AIDS, yet 41% of them reported that they will *not be* scared to sit next to someone at school who has AIDS.

Decision-making in terms of simple behaviours, such as seeking or avoiding proximity to PWAs, or attending school, is evidently accompanied by anxiety in learners. Another example, in this study showed that 94% of learners thought that PWAs could attend school and 93% of learners thought that PWAs could play with friends, yet only 18% of the learners reported that they would sit next to someone who has AIDS. According to Brown, Nassau and Barone (1990), possible reasons for the contradiction in learners' responses could be because of learners' poor abstraction and deductive abilities which is still immature at this stage in their development and they are apparently often overwhelmed by the personal anxieties that AIDS creates.

According to Mathews et al. (1990, cited in Kaplan & Van den Worm, 1993), fear of AIDS or PWAs also appears to stem from a lack of knowledge, especially with respect to how the disease is spread. The above finding was substantiated by Cillier's (1989) South African cross-cultural research findings, which indicated that children have limited knowledge about AIDS transmission, and that parents are either not prepared or not equipped to give their children the necessary information and guidance (Price, Desmond & Kukulka, 1985, cited in Cilliers, 1989). The fact that a lot of information comes from television further emphasizes the lack of parental guidance in matters of HIV/AIDS education. Communication between adolescents and their parents about reproductive

health issues is uncommon. A study of three large cities in Burkina Faso, for example, found that nearly 40% of adolescents did not feel comfortable talking to their parents about sex and sexuality, and almost 60% of parents were uncomfortable talking to their children about these issues (Research in Brief, 2004).

The discussion of a study of this nature will not be complete without describing its limitations. This study had a few limitations which will now be discussed. First, the use of a specific community in South Africa for the sample, limited the study in terms of population and ecological validity, making it difficult to generalise the results to all other school population groups in South Africa. Second, the presence of the researcher during the administration of the questionnaire could have affected the subjective responses provided by the participants. Third, the researcher allowed the learners to ask questions if they did not understand what was required of them. Although the intention was to ensure that the explanations provided did not influence the manner in which the learners responded to the questionnaire items, it is possible that some responses may have been affected. Fourth, the questionnaire was distributed in a classroom or school hall, whichever was available. This was done for administrative effectiveness, and so that the researcher had as many learners as possible completing the questionnaires and handing them back to her at the same time. The intimate nature of the questions could have deterred some learners from answering honestly in the presence of their classmates, who, in some cases, would have been able to look over their shoulders to see their responses. Thus, it is possible that participants answered certain questions according to social desirability. The assessment environment was therefore, not conducive to learners answering as honestly as possible. Fifth, one needs to interpret the results with extreme caution, since the measures used did not prove to be very reliable. Specifically, certain scales had comprised too few items. Sixth, the language and terms used in the questionnaire may not have been familiar to the participants. The manner in which questions were worded and ordered could have facilitated or limited the information obtained (cf. Charlton, 2000). Lastly, questions were open-ended and close-ended. The former allowed the respondents to respond in their own words, while the latter limited the responses to the alternatives that were selected, based upon previous work or the

expectations of the researcher. Both types of questions have their limitations, i.e. the alternatives in close-ended questions may suggest that only normative responses are included (Charlton, 2000). Open-ended questions may provide the best index of an individual's concerns, but coding responses limits the data analyses, in that it is difficult to order categorical responses.

However, these limitations should not detract from the value of the research. As was mentioned, the results must be viewed with caution. Nevertheless, the data yielded interesting results and possibilities for future research. Also, the survey did yield a high response rate and this allowed for drawing useful information from the data.

CONCLUSION

The findings of this study have important implications as a picture was gradually being built of a group of young people that have a fairly sound understanding of HIV and AIDS. It can be safely concluded that at least in this sample the basic message of transmission knowledge was understood. However, due to the misconceptions that learners held, it is clear that knowledge in risk reduction, whether gained in schools or elsewhere must increase. It is apparent from the study, however, that the socialisation of adolescents does not occur exclusively in school. It may well be that a far greater influence comes from other cultural institutions and forces. Although this observation is so obvious as to sound trite, one would have difficulty finding recognition of it in the accumulated studies of adolescent thinking. We lack a research base on how thinking is affected by a wide range of powerful social forces, including the mass media, the organisation of daily life (for example, the shopping mall culture), changes in family and community structures, and so on. Exploring such questions will require new methods of inquiry and analysis; but the importance of understanding how intentional and unintentional social policies shape the way adolescents come to think about their world warrants a significant investment (Feldman & Elliot, 1990).

Adolescents who harbour misconceptions have, according to DiClemente (1989), unnecessarily high, and at times, debilitating levels of fear and anxiety regarding their

personal susceptibility to HIV infection. Dispelling such misconceptions may therefore reduce unnecessary fear and anxiety and the potential for stigmatisation of segments of the population most adversely affected by the AIDS epidemic (DiClemente, 1989). Learners' fears of the epidemic and their anxiety about their own susceptibility to the disease must be addressed. One of the ways of addressing this issue is by helping the young child to modify his or her absolute thinking about HIV/AIDS.

The discussions that took place after the questionnaire was completed involved extensive questions regarding HIV/AIDS and sexuality in which the learners eagerly solicited information from the researcher.

In order to properly interpret the results in this study, and their possible implications for intervention, the researcher felt that it was important to place the results obtained in this study into the context of studies of young people's knowledge of transmission in other parts of the world. A comparison between knowledge and fears of HIV/AIDS held by South African primary school learners and other groups of comparable young people was made throughout the discussion. It is hoped that the comparison has made it clear as to whether South African primary school learners have similar, higher or lower levels of misinformation about AIDS transmission than equivalent youth groups in other countries. While early research indicated low levels of HIV knowledge among adolescents (Price, Desmond & Kukulka, 1985), recent research has shown that adolescents have become more informed (as this study too has indicated), perhaps in part due to the profusion of knowledge-based risk-reduction interventions in the past decade. Some studies now demonstrate relatively high levels of knowledge regarding specific modes of HIV transmission (Brown et al., 1989). Nevertheless, this study like many of the other studies which were discussed, indicates that significant deficits remain in adolescents' knowledge in some domains important for prevention (Hingson, Strunin & Berlin, 1990). Based on the above statement, young children or 'novices' need to be taught the facts about HIV/AIDS in order to reduce the confusion of fear they may feel as a result of partial understanding or incomplete information gained from various sources (NAIEP, 1996).

Past research, however, indicates that HIV education programmes, in combination with other sources of information, especially the media, have significantly increased adolescents' knowledge about HIV and reduced the prevalence of commonly held myths and misconceptions about the disease's transmission. This important role of educational programmes should not be minimized as there is evidence indicating that reducing misconceptions about casual contact among adolescents results in increased tolerance toward those individuals infected with HIV or who have AIDS (DiClemente & Peterson, 1994).

The researcher's honours research results (Hoosain, 2004) revealed considerable ambiguity and confusion among learners and an inability to distinguish between the 'virus' and 'AIDS'. This is of course paralleled by the tendency in media reporting of HIV infection and AIDS to conflate the two phenomena through the casual use of phrases such as the AIDS virus', and 'the AIDS carriers'. Given widespread and consistent failure to establish these crucial distinctions, it is hardly surprising that some young people appear to be so confused (Warwick et al., 1988). Learners demonstrated some concern (fear) about the transmission of AIDS and there also appeared to be some contradiction in learners' responses with regard to their acceptance of PWAs (Hoosain, 2004). Those learners who were more knowledgeable about AIDS were not necessarily less fearful of contracting AIDS (Hoosain, 2004). For example, findings from the study conducted by Broekmann (1997) suggest that Grade 7 learners who had more knowledge of HIV/AIDS displayed greater fear of the disease than Grade 6 learners. The findings in Hoosain's (2004) honours research study concur with the findings in the Broekmann study, which indicate that more Grade 7 learners, who according to the theory, are suppose to be more knowledgeable, were in fact more worried about contracting AIDS than Grade 6 learners (47%). A possible explanation for this could be that older children remember more facts, or perhaps they comprehend more of what they "know."

According to Nelson and Clarke, cited in DiClemente (1992), an understanding of the transmission of AIDS is one of the most critical achievements of adolescence.

Adolescents are beginning to experience puberty and they are curious about sexuality and drugs and other things that are new to them. Adolescents need to know how AIDS is and is not transmitted. This information must be clear and straightforward. (For example, one definitely cannot get AIDS through hugging and dry kissing, and nobody knows for sure if one can get AIDS through wet kissing, although there have been no known cases to date.) This lesson should separate information into what is fact and what is myth (Nelson & Clarke, cited in DiClemente (1992).

The objective of this report was not simply to assess learners' knowledge and fears of HIV/AIDS. Numerous studies have already been conducted for this purpose in virtually every conceivable population in virtually every country, however, the implications of the current study for future research are immense as this is the first piece of research, in South Africa, which examined the knowledge and perceptions of Indian and Black primary school learners. Such an endeavour plays an important role in furthering our understanding of the AIDS problem and in assessing Indian and Black learners' knowledge and fears of the disease, however, in order to corroborate or reject the results of the current research, similar studies are warranted. There should be an attempt to extend this research to other members of the South African population, as the current study was carried out amongst a select group of people. Further research in this area would surely add to the generalisability of the results. Thus the researcher hopes that this study will stir other researchers' interests in the issues that were discussed and prompt them to undertake the kinds of investigation necessary to establish whether, or to what extent, the statements presented here are accurate. The knowledge to be gained from such efforts has significant consequences.

Although all humans are potentially at risk of becoming infected with the HI virus, teenagers, with their experience and lack of knowledge, are a particular vulnerable group (Unks, 1996). Much has been written and broadcast about AIDS; thousands of pamphlets have been distributed, and AIDS hotlines have been established. It is not a disease about which little is known; nor is it a disease against which humans have no apparent defense. In any case, it is unlikely that there is any one easy solution to this problem. But we hope those who are looking for answers will be able to take into account the *significant* results

that this study has been able to unearth (cf. Schofield, 1965). If the theoretical insights pursued in this study, validated in some way by the empirical data presented, have served to further the understanding of the HIV/AIDS problem, then this study's purpose will have been served.

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APPENDICES

Appendix A: Tables of results

See 3.12

Cross tabulations for the variable, 'Do you know anyone who has AIDS?' vs. the three items for fear.

Cross tabulation for the variable, 'Do you know anyone who has AIDS?' vs. 'fear of contracting AIDS' (1st items for fear).

Indian learners

		Fear of contracting AIDS			
Do you know anyone who has AIDS?		Yes	Not Sure	No	**Total**
	Yes	19	8	11	**38**
	Not sure	14	3	4	**21**
	No	85	32	50	**167**
	Total	**118**	**43**	**65**	**226**

Cross tabulation for the variable, 'Do you know anyone who has AIDS?' vs. 'fear of contracting AIDS' (1st items for fear).

Black learners

		Fear of contracting AIDS			
Do you know anyone who has AIDS?		Yes	Not Sure	No	**Total**
	Yes	99	44	54	**197**
	Not sure	12	13	15	**40**
	No	80	35	55	**170**
	Total	**191**	**92**	**124**	**407**

Cross tabulation for the variable, 'Do you know anyone who has AIDS?' vs. 'fear of contracting AIDS' (1st items for fear).

Female learners

		Fear of contracting AIDS			
Do you know anyone who has AIDS?		Yes	Not Sure	No	**Total**
	Yes	79	34	34	**147**
	Not sure	19	7	8	**34**
	No	93	38	47	**178**
	Total	**191**	**79**	**89**	**359**

Cross tabulation for the variable, 'Do you know anyone who has AIDS?' vs. 'fear of contracting AIDS' (1st items for fear).

Male learners

		Fear of contracting AIDS			
Do you knowanyone who has AIDS?		Yes	Not Sure	No	**Total**
	Yes	39	18	31	**88**
	Not sure	7	9	11	**27**
	No	72	29	58	**159**
	Total	**118**	**56**	**100**	**274**

See Table 11. Cross tabulation for the variable, 'Do you know anyone who has AIDS?' vs. 'fear of attending school'(2nd item)

Indian learners

		Attendance at school			
Do you know anyone who has AIDS?		Yes	Not Sure	No	**Total**
	Yes	0	2	36	**38**
	Not sure	0	5	16	**21**
	No	7	12	148	**167**
	Total	**7**	**19**	**200**	**226**

See Table 12. Cross tabulation for the variable, 'Do you know anyone who has AIDS?' vs. 'fear of attending school'(2nd item)

Male learners

		Attendance at school			
		Yes	Not Sure	No	**Total**
Do you knowanyone who has AIDS?	Yes	2	6	80	**88**
	Not sure	0	3	24	**27**
	No	5	8	146	**159**
	Total	**7**	**17**	**250**	**274**

Cross tabulation for the variable, 'Do you know anyone who has AIDS?' vs. 'Feelings of proximity to someone with AIDS (3rd item for fear).'

Indian learners

		Feelings of proximity to someone with AIDS			
		Yes	Not Sure	No	**Total**
Do you know anyone who has AIDS?	Yes	8	2	28	**38**
	Not sure	2	7	12	**21**
	No	29	19	119	**167**
	Total	**39**	**28**	**159**	**226**

Cross tabulation for the variable, 'Do you know anyone who has AIDS?' vs. 'Feelings of proximity to someone with AIDS (3rd item for fear).'

Black Learners

	Feelings of proximity to someone with AIDS			
Do you know anyone who has AIDS?	Yes	Not Sure	No	**Total**
Yes	35	12	150	**197**
Not sure	10	8	22	**40**
No	21	26	123	**170**
Total	**66**	**46**	**295**	**407**

Cross tabulation for the variable, 'Do you know anyone who has AIDS?' vs. 'Feelings of proximity to someone with AIDS (3rd item for fear).'

Female learners

	Feelings of proximity to someone with AIDS			
Do you know anyone who has AIDS?	Yes	Not Sure	No	**Total**
Yes	25	11	111	**147**
Not sure	5	8	21	**34**
No	25	23	130	**178**
Total	**55**	**42**	**262**	**359**

Cross tabulation for the variable, 'Do you know anyone who has AIDS?' vs. 'Feelings of proximity to someone with AIDS (3rd item for fear).'

Male learners

	Feelings of proximity to someone with AIDS				
Do you know anyone who has AIDS?		Yes	Not Sure	No	**Total**
	Yes	18	3	67	**88**
	Not sure	7	7	13	**27**
	No	25	22	112	**159**
	Total	**50**	**32**	**192**	**274**

<u>See 3.13</u>

Cross tabulations for the variable 'Is there cure for AIDS?' vs. the three items for fear.

Cross tabulation for the variable, 'Is there a cure for AIDS?' vs. 'fear of contracting AIDS (1st item for fear).'

Indian learners

	Fear of contracting AIDS				
Is there a cure for AIDS?		Yes	Not Sure	No	**Total**
	Yes	11	5	3	**19**
	Not sure	17	15	9	**41**
	No	90	23	53	**166**
	Total	**118**	**43**	**65**	**226**

Cross tabulation for the variable, 'Is there a cure for AIDS?' vs. 'fear of contracting AIDS (1st item for fear).'

Black learners

		Fear of contracting AIDS			
Is there a cure for AIDS?		Yes	Not Sure	No	**Total**
	Yes	21	8	16	**45**
	Not sure	40	29	22	**91**
	No	130	55	86	**271**
	Total	**191**	**92**	**124**	**407**

Cross tabulation for the variable, 'Is there a cure for AIDS?' vs. 'fear of contracting AIDS (1st item for fear).'

Female learners

		Fear of contracting AIDS			
Is there a cure for AIDS?		Yes	Not Sure	No	**Total**
	Yes	14	7	8	**29**
	Not sure	38	23	14	**75**
	No	139	49	67	**225**
	Total	**191**	**79**	**89**	**359**

Cross tabulation for the variable, 'Is there a cure for AIDS?' vs. 'fear of contracting AIDS (1st item for fear).'

Male learners

		Fear of contracting AIDS			
Is there a cure for AIDS?		Yes	Not Sure	No	**Total**
	Yes	18	6	11	**35**
	Not sure	19	21	17	**57**
	No	81	29	72	**182**
	Total	**118**	**56**	**100**	**274**

See Table 13. Cross tabulation for the variable, 'Is there a cure for AIDS?' vs. 'fear of attending school'(2nd item)

Indian learners

		Attendance at school			
Is there a cure for AIDS?		Yes	Not Sure	No	**Total**
	Yes	1	2	16	**19**
	Not sure	1	6	34	**41**
	No	5	11	150	**166**
	Total	**7**	**19**	**200**	**226**

See Table 14. Cross tabulation for the variable, 'Is there a cure for AIDS?' vs. 'fear of attending school'(2nd item)

Male learners

		Attendance at school			
		Yes	Not Sure	No	**Total**
Is there a cure for AIDS?	Yes	2	3	30	**35**
	Not sure	1	5	51	**57**
	No	4	9	169	**182**
	Total	**7**	**17**	**250**	**274**

See Table 15. Cross tabulation for the variable, 'Is there a cure for AIDS?' vs. 'fear of being in proximity to someone with AIDS'(3rd item).

Indian learners

		Feelings of proximity to someone with AIDS			
		Yes	Not Sure	No	**Total**
Is there a cure for AIDS?	Yes	8	2	9	**19**
	Not sure	6	9	26	**41**
	No	25	17	124	**166**
	Total	**39**	**28**	**159**	**226**

Cross tabulation for the variable, 'Is there a cure for AIDS?' vs. 'fear of being in proximity to someone with AIDS'(3rd item).

Female learners

	Feelings of proximity to someone with AIDS			
Is there a cure for AIDS?		Yes	Not Sure	No	**Total**
	Yes	8	3	18	**29**
	Not sure	11	14	50	**75**
	No	36	25	194	**255**
	Total	**55**	**42**	**262**	**359**

Cross tabulation for the variable, 'Is there a cure for AIDS?' vs. 'fear of being in proximity to someone with AIDS'(3rd item).

Male learners

	Feelings of proximity to someone with AIDS			
Is there a cure for AIDS?		Yes	Not Sure	No	**Total**
	Yes	12	5	18	**35**
	Not sure	15	8	34	**57**
	No	23	19	140	**182**
	Total	**50**	**32**	**192**	**274**