INVESTIGATING PERCEPTIONS OF AIDS AMONG INTERMEDIARY PHASE LEARNERS USING THE DRAW-AND-WRITE TECHNIQUE

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ABSTRACT

In view of the high incidence of HIV infection amongst South African teenagers in the 15-19 age group and the limited information available about the knowledge pre-adolescents have about AIDS, this study aimed to investigate intermediary phase learners' perceptions of AIDS. In order to ascertain their views, the Draw-and-Write technique, which involves using learners' drawings together with writing, was used together with a follow-up discussion in order for learners to interpret their own drawings. A further motivation for this study was to evaluate the suitability of the Draw-and-Write technique for assessing and understanding primary school learners' knowledge about AIDS in a South African context.

Data was gathered mainly through two Draw-and-Write sessions with a total of 18 learners, which were followed by group discussions. A thematic analysis was carried out on the transcriptions of the data. Five significant themes emerged, suggesting that learners already had a considerable amount of knowledge about AIDS and its causes. The themes centred around the transmission of HIV, the prevention of HIV, treatment, care of people with HIV/AIDS and consequences of AIDS.

The results showed that although many learners had considerable knowledge about how HIV is transmitted, a number of them still had misconceptions about transmission. The drawings also showed that many learners had knowledge of sex beyond what one would normally

expect for their age. The Draw-and-Write technique proved to be a very useful tool for establishing what learners know about HIV/AIDS and it merits further use in a classroom situation. It is hoped that this study will provide educators with information that can assist in the development of comprehensive AIDS education programmes for primary schools.

DECLARATION

I hereby declare that this dissertation, unless specifically indicated to the contrary in the text, is my own original work and that I have not submitted it, nor any parts of it, for a degree at any other university.

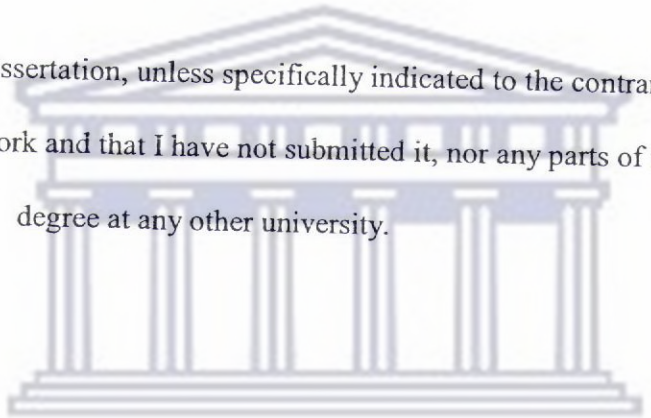

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TABLE OF CONTENTS

PAGE

Title page.....i

Abstract.....ii-iii

Declaration.....iv

Acknowledgements.....v

Table of contents.....vi-ix

List of tables.....x

CHAPTER 1: INRODUCTION

1.1 Background.....1-5

1.2 Aims.....5

1.3 Methodology.....5

1.4 Chapter overview.....6

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction.....7

2.2 Research on primary school learners' knowledge and perceptions of AIDS 7-19

2.3 Draw-and-Write Technique.....24-28

2.4 Summary.....28-29

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction.....30

3.2 Analytic framework.....30-32

3.3 Instruments..... 33

3.4 Advantages and disadvantages of the Draw-and-Write technique.....33

3.4.1. Advantages.....33-34

3.4.2. Disadvantages.....34-36

3.5 Pilot Study.....36-38

3.6 Main Study.....38-40

3.7 Group discussions.....40-41

3.8 Data Analysis.....41-43

3.9 The researcher: Reflexive issues.....43-45

3.10 Ethical Considerations.....45-46

CHAPTER 4: RESULTS

4.1 Introduction.....46-47

4.2 Results from the Draw-and-Write nvestigation.....47

4.2.1 Results from group discussions 48-54

4.3 Definition of AIDS..... 54

4.3.1 Physical symptoms of AIDS.....54

4.3.2 Emotional symptoms of AIDS.....55

4.4 Transmission of AIDS.....56

4.4.1. Unprotected sexual intercourse.....56

4.4.2. Unprotected sexual intercourse, pregnancy and AIDS.....57

4.4.3. Sex with many people.....57

4.4.4. Commercial sex workers.....58

4.4.5. Kissing.....58

4.4.6 Sharing needles.....59

4.4.7 Touching blood.....60

4.4.8 Blood transfusions.....60

4.4.9 Smoking and drinking.....61

4.4.10 Homosexuals.....61

4.4.11 Violence: Kidnapping and rape.....62-63

4. 5 Prevention of HIV infection.....64

4.5.1 Abstain from Sex.....64

4.5.2 Use a condom.....64

4.5.3 Place a used condom in a bin.....65

4.6 Treatment of HIV/AIDS.....66

4.7 Attitudes towards people with AIDS: Caring.....66

4.8 Consequences of AIDS.....67

4.9 Summary.....67-69

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

5.1 Introduction.....67

5.2 Summary of results from the Draw-and-Write investigation.....67-81

5.3 Limitations of study.....81-84

5.4 Draw-and-Write technique.....84-86

5.5 Recommendations for classroom practice and future research.....86-89

5.6 Conclusion.....89-90

References.....91-98

Appendix 1.....99-105

Appendix2 106-110

Appendix 3.....111

Appendix 4 116

LIST OF TABLES **PAGE**

Tables 1. *Summary of studies on perceptions of AIDS amongst primary school learners*..... 20-23

Table 2. *Summary of drawings and written responses to the questions about AIDS*.....50-51

Table 3. *Learners statements and words during the Draw-and-Write investigation according to age and gender*.....106-110

CHAPTER 1

INTRODUCTION

1.1 Background

The Human Immunodeficiency Virus (HIV), which leads to AIDS (Acquired Immune Deficiency Syndrome), is spreading at an alarming rate. Already 18.8 million people around the world have died of AIDS, 3.8 million of them children (UNAIDS, 2000). Recent UNAIDS/WHO antenatal surveillance estimates show that in 1999 alone 5.4 million people were newly infected with HIV. While global statistics indicate that 34.3 million people are living with HIV, the rate of infection world-wide is uneven (UNAIDS, 2000).

In Africa AIDS is spreading faster than anywhere else in the world. The disease, now the leading killer in Sub-Saharan Africa, has claimed the lives of 16.3 million people in this area since the epidemic began (Akpata-Ohohe, 2000). Altogether there are now 16 countries in which more than one-tenth of the adult population aged 15-49 is infected with HIV (UNAIDS, 2000). In seven countries, all of the southern cone of the continent, at least one adult in five is living with the virus. In Botswana, a shocking 35.8% of adults are now infected with HIV (UNAIDS, 2000).

South Africa has the largest number of people living with HIV/AIDS in the world (UNAIDS, 2000). Currently 19.95% are infected, up from 12.9% just two years ago

(UNAIDS, 2000). With a current total of 4.2 million infected, it is estimated that by the year 2005, there will be more than 6 million South Africans infected with HIV (Department of Health, 2000). Projections show that this number is expected to exceed 10 million in the next 8 to 10 years (Department of Health, 2000 cited in UNAIDS, 2000). Statistics gained from antenatal surveys indicate that current prevalence levels for the Western Cape are estimated at 8,7%, reflecting a 22,5% increase from the 1999 figure of 7,1% (Department of Health, 2000). Even more alarming are the increasingly high infection rates amongst South African teenagers aged 15-19 years old, with the estimated infection rate amongst girls in this age group having increased from 12,7% in 1997 to 21,0% in 1998 (Department of Health, 1999). Current projections are that more than 50% of South Africans under 15 today will die of AIDS-related causes over the next decade (Sunday Times, 2000).

The primary reason for such high HIV infection rates is attributed to unprotected sexual intercourse, with the average age of onset of sexual activity among South African teenagers being around 15 years (Sunday Times, 2000). The results of a South African study undertaken in six provinces showed that 10% of the respondents stated that they had started having sex at age 11 years or younger (UNAIDS, 2000), which points to the need of HIV prevention programmes to be targeted at primary school level. Reductions in the rate of HIV infection among teenagers would lead to a substantial slowing of the epidemic over the next 5 to 10 years (Sunday Times, 2000). Conversely, failure to affect the rate of infection among this age group would sustain an epidemic of catastrophic proportions for decades (Sunday Times, 2000).

of culturally appropriate interventions (Joffe, 1996; Campbell, 1997). Young learners' openness to learning provides an opportunity to instil norms and values, which would affect more responsible future sexual behaviour. This baseline assessment could assist educators plan appropriate intervention programmes for intermediary phase learners.

1.2 Aims

This research aims to investigate primary school children's understanding of AIDS in order to provide educators with information with which to develop comprehensive and effective AIDS education programmes for this age group. An additional aim is to explore the suitability of the Draw-and-Write technique as a research instrument in a South African context.

1.3 Methodology

In order to ascertain learners' views the Draw-and -Write technique, which involves using children's drawings, together with writing, will be employed in this research. This technique was pioneered by Noreen Wetton at the University of Southampton and has proved to be a powerful, technique for discovering children's own perceptions of health and health related issues (Williams, Wetton & Moon, 1989b cited in McWhirter and Wetton, 1994). The initial sample comprised of 18 learners aged between 8-11 years from a selected primary school in Bellville. In qualitative research of this nature a smaller number of participants can be used, rooted in their context, providing the in-depth focus required for this study. Access to the participants was gained through collaboration with Bellville Education Support services.

1.4 Chapter Overview

Chapter 2 presents a review of the literature that is relevant to the aims of the present study. It examines studies that have been done on primary school learners' perceptions of AIDS and studies using the Draw-and-Write technique.

Chapter 3 describes the methodology and considers the methodological issues relevant to this study. A detailed argument for the usage of the Draw-and-Write technique is offered. This discussion consists of a critique of the Draw-and-Write technique in social science research. In addition, the aims, participants, use of interviews, data gathering procedures and method of analysis for the current study are detailed.

In chapter 4, the research findings are presented and in chapter 5 the findings of the present inquiry are summarized and their significance explored and their significance explored. The limitations of the study are discussed and recommendations for future research in this area are made.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The first section of this chapter reviews both international and South African literature on primary school learners' perceptions of AIDS. Only main findings will be explored for key themes relevant to the present study. A table providing a more detailed synopsis of research findings can be found in this chapter. The second section reviews studies which were undertaken using the Draw-and-Write technique. Although both the international and South African Draw-and-Write literature investigates health-related issues rather than directly exploring children's perceptions of AIDS, it has been included in this chapter in order to substantiate its usefulness as a research instrument.

2.2 Research on Primary School Learners' Knowledge and Perceptions on AIDS

In the United States a number of studies have investigated knowledge and beliefs about HIV and AIDS among primary school learners. In these studies both interviews and focus groups were utilized. Thus for instance, Quadagno, Eberstein, Foster, Sittig, Sly and Kistner (1997) undertook a study to assess the long-term effects of Magic Johnson's announcement on learner's HIV and AIDS knowledge. Baseline data was collected eight to nine months before Johnson's announcement, and included 609 learners enrolled in grades one, three and five. Follow-up data was collected 10 to 11 months after Johnson's announcement.

The results of this study showed that 605 (81%) of the first, third and fifth grade learners interviewed the first time were aware that AIDS is a disease, whilst figures increased to 95,4% among the 563 children who were re-interviewed the second time. Quadagno et al. (1997) found, however, that knowledge of how Johnson was exposed to HIV varied widely among the learners. Thus 42,8% did not know how Magic Johnson's was exposed. The same percentage mentioned either sex (unspecified) or heterosexual sex whilst the remainder (12,8%) mentioned erroneous or impossible modes of transmission (Quadagno et al., 1997). The authors conclude that though publicity concerning Johnson was widely received even by young learners, their knowledge with regard to the details of AIDS transmission was less complete than might have been expected.

The extent to which Johnson's announcement increased learner's awareness of HIV and AIDS and affected their knowledge and attitudes concerning the disease were also compared by grade. The results indicated that awareness increased by grade stabilizing by grade three (from 54% of first graders the first time, to 68,7% of first graders the second time, with comparable figures of 89,7% and 91,8% for third graders and 99% and for fifth graders respectively) (Quadagno et al., 1997).

The authors undertook another study relating to Magic Johnson's announcement of his HIV status was undertaken using structured interviews with thirty-three mostly white (some Hispanic) learners aged 10-18 years old (Quadagno et al., 1997). This study found that all the learners had heard about AIDS. However reactions varied due to the large difference in their ages. One third of the learners announced that they did not learn

anything new. Prior to Johnson's announcement another sample matched by age, sex and ethnicity was interviewed to assess aggregate before and after differences. When comparisons were made with the matched sample no significant differences in risk factor, prevention, or viral knowledge, and no effect on worry about AIDS or on willingness to interact with persons with AIDS were found (Quadagno et al., 1997).

Another US study examining AIDS related beliefs by grade, race and socio-economic status was undertaken using interviews to examine knowledge and attitudes about HIV transmission and willingness to interact with persons with AIDS across grades one to five (Kistner, Eberstein, Quadagno, Sly, Sittig, Foster, Balthazor, Castro & Osborne, 1997). This study found that knowledge about AIDS and the willingness to interact with an HIV infected person increased with age in primary school. However, even among fifth grade students there were still misconceptions about AIDS. Thus, for example, the belief that HIV and AIDS can be transmitted through low-risk bodily fluids such as coughing, sneezing and by sharing eating utensils was a popular view (Kistner et al., 1997). Willingness to interact with an HIV infected person seemed to be determined by accuracy of AIDS knowledge. It was reported in this study that younger learners reported hearing fewer media messages about AIDS and that parents are more likely to discuss AIDS with older siblings (Kistner et al., 1997). This study therefore concludes that since younger learners have less access to information about AIDS than older learners, they are less knowledgeable.

In addition to age differences in exposure to AIDS information, the authors also feel that learners may vary in their ability to comprehend information to which they have been exposed due to biologically-based cognitive differences in how they reason. They found similarities in the types of misconceptions about AIDS among learners of different developmental levels and that these misconceptions were consistent with reasoning about illness in general (Kistner et al., 1997). Despite these findings, Kistner et al. (1997) suggest that even first graders, who are according to the Piagetian view thinking at the pre-operational or early concrete operational levels, are capable of understanding and retaining basic information about the mechanisms by which HIV and AIDS are transmitted. These research findings suggest that whilst the developmental level of children needs to be taken into account when developing appropriate information about AIDS, it is important not to underestimate what primary school children are able to learn about AIDS.

These findings were substantiated by another American study that used clinical interviews to examine causal reasoning about AIDS in learners representing three major phases of cognitive development, namely, the prelogical (5-7 years), concrete logical (8-10 years) and formal logical (11-13 years) stages (Walsh & Bibace, 1991). The results of this study suggest that similar to their understanding of other illnesses, learners' understanding of AIDS reflect their level of cognitive development.

Another study in the United States examining learners knowledge of AIDS from a developmental viewpoint was undertaken by Schvaneveldt, Lindauer and Young (1990).

Learners in preschool, first, third and fifth grades were interviewed. The findings of this study also suggests that learners' knowledge of AIDS is associated with general perceptions they have regarding illness, and that accurate knowledge of AIDS is directly related to age. Osborne, Kistner and Helgemo (1993) examined the developmental progression of children's understanding of illness transmission in general and AIDS in particular, as well as explored the relation between a child's knowledge of AIDS and his/her attitudes toward persons with AIDS using questionnaires. The results of this study support a developmental progression in knowledge about AIDS that is consistent with progression in knowledge related to illness in general.

Six hundred primary school learners participated in another US study examining knowledge and understanding of AIDS (Obeidallah, Turner, Iannotti, O'Brein, Haynie & Galper, 1993). Interviews were used to assess the accuracy of learners' knowledge of AIDS and their level of understanding of the disease process associated with AIDS. The results of this study suggest that AIDS education will be ineffective unless it corresponds to the conceptual level of the learner and builds on learners current knowledge and understanding of the meaning of commonly used terms (Obeidallah, et al.,1993). The authors further state that methods of teaching need to be adapted to the conceptual level of the learner.

Another US study was undertaken in Rhode Island with 441 primary school learners with the aim of assessing learners' attitudes, grade related similarities and differences in AIDS knowledge (Brown, Nassau & Barone, 1990). The results of this study indicated

that all learners were most knowledgeable on items reflecting whether one could contract AIDS through sharing needles, touching and sexual intercourse (Brown et al., 1990). Learners were least knowledgeable on items reflecting whether one could contract AIDS through kissing or mosquito bites (Brown et al., 1990).

In a further United States study undertaken by Chin, Schonfeld, O'Hare, Mayne, Salovey, Showalter and Cicchetti (1998), primary school children's conceptual understanding of the causes of cancer, colds and AIDS were investigated using semi-structured interviews. When comparisons were made among illnesses, learners' levels of conceptual understanding of the causes of cancer was significantly lower than for the causes of colds, but not significantly different from those of AIDS (Chin et al., 1998). The results of this study imply that AIDS knowledge is on par with that of the common cold, as opposed to knowledge about the causes of cancer.

An elicitation study by Hoppe, Wells, Morrison, Gillmore and Wilsdon (1995) used focus groups to develop measures for a survey of learner's knowledge, understanding, beliefs and attitudes about HIV and AIDS. The results of this study suggest that reticence about dealing with sexual topics tended to dampen group discussion among boys and girls in the sixth grade as well as with third grade boys, who found discussing sexuality emotionally arousing. This finding is very significant in that it highlights sexuality and AIDS as being a sensitive topic that pre-teens are often not comfortable discussing with adults. It is also evident that in such discussions valuable data could be lost due to the nature of the investigation and the research instrument used.

Fassler, McQueen, Duncan and Copeland (1990) explored the general AIDS knowledge and attitudes held by primary school learners in Vermont, United States. One hundred and forty seven primary school children between the ages of six and twelve were surveyed. In addition to questionnaires and interviews, each learner was asked to draw a picture of a virus and a person with AIDS. Information on sources of knowledge as well as their questions, concerns and attitudes was collected. Significant misconceptions about AIDS were identified in all age groups. Although 62% of first graders surveyed indicated that they had heard of AIDS, only 15 % could provide even minimally accurate information about the disease. From third grade on, over 90% of learners had heard of AIDS, with the majority capable of providing accurate information on the disease. Significant misconceptions about AIDS were, however, identified in all age groups with inaccurate information mainly in the area of modes of transmission of the virus (Fassler et al., 1990). Thus, learners thought AIDS could be spread in a variety of ways, including, mosquito bites, drinking fountains, toilets, touching any needles, touching a person with AIDS, or by donating blood (Fassler et al., 1990). Results indicated that awareness of and accurate information about AIDS increased steadily through the early school years. It was also evident that learners obtained much of their information about AIDS from the media, and predominantly from television (Fassler et al., 1990).

Sly, Eberstein, Quadagno and Kistner (1992) using interviews and questionnaires collected data about AIDS from first and fifth grade learners attending a public school in a mid-sized metropolitan area in the USA. The study focused on learners' knowledge,

attitudes and beliefs about AIDS. The results suggest that although many learners are aware of AIDS in the first grade, it is not until the fifth grade that nearly all of them are aware of the existence of the disease. Learners in the fifth grade had a higher level of knowledge about AIDS than first grade learners, but they still had a number of misconceptions about the disease and persons with it. Respondents had relatively higher levels of knowledge about specific clinical characteristics than they did about modes of transmission, which also seemed to reflect differences between race and gender groups and between grade levels (Sly et al., 1990). It was inferred that learners might be obtaining much of their AIDS information from sources targeted at older populations (e.g. radio, television, posters, billboards and public service announcements). While they are able to understand some pieces of it, they cannot integrate the pieces into a minimally general understanding of the disease (Sly et al., 1992). The researchers conclude that instead of protecting learners from AIDS information, it would be more beneficial to develop appropriate AIDS education programmes which take into account race, gender, age and other influencing factors.

Another study assessed intuitive theories of AIDS transmission through clinical interviews with a sample of 205 first, 195 third and 208 fifth grade students in the United States, balanced by sex and race (Kistner, Eberstein, Balthazor, Castro, Foster, Osborne, Sly & Quadagno, 1996). Grade differences were noted for knowledge of high-risk transmission routes, rejection of misconceptions, and cohesiveness and complexity of learner's theories of AIDS transmission. Learners' theories of AIDS transmission also differed by race and verbal abilities. The results of this study show that misconceptions

about AIDS among learners could be a result of over-generalization of media messages. The accuracy and content of learner's beliefs about AIDS transmission are a function of their exposure to information about AIDS as well as their capacity to understand this information.

The literature search yielded one European study, undertaken with primary school children in France by Chiva and Rigal (1989). This study was conducted with fifty 6-12 year olds and aimed to examine perceptions, knowledge and methods to avoid contracting AIDS, using semi-structured interviews. Results from this study also showed that accurate AIDS knowledge increased with age.

The available African literature on primary school learners' AIDS knowledge reveals studies done in Uganda, Zambia and Tanzania. These studies examined learners' AIDS related knowledge, attitudes, beliefs, sexual practices, and attitudes towards sex and perceived risk of HIV infection using anonymous questionnaires and open-ended essays to collect the data.

The study undertaken in Zambia revealed that of the sample of 200 learners aged between 12-16 years, 62% of the boys and 26% of the girls had already had sexual intercourse (Peltzer & Likwa, 1991). Despite this high incidence of sexual contact in the sample, the learners knew very little about contraception and family planning. It also suggests that Zambia reflects characteristic features of other African countries, namely, limited knowledge among learners about AIDS, despite the widespread prevalence of the disease.

However, the subject clearly has strong relevance in Zambia. Therefore, Peltzer and Likwa (1991) conclude that almost all the learners wanted to know more about how to prevent pregnancy and AIDS. This implies that Zambian primary school learners, in general, know little about contraceptives such as condoms or the pill and about the more adult notion of family planning, but are possibly keenly aware of the effects of pregnancy and of AIDS. In concluding the authors recommended that sex education be introduced into the science curriculum of primary schools at grades six or seven.

A Tanzanian study examining AIDS knowledge among primary school learners' aged 11-18 years also showed that knowledge of AIDS increased with increasing age (Ndeki, Klepp & Mliga, 1994). This study suggests that there is a link between cognitive development and levels of knowledge about AIDS. In this study 86% of the sample of learners reported that they perceived AIDS as a serious threat to primary school learners and 96% reported that they themselves were very afraid of getting AIDS (Ndeki et al., 1994). Thus, although there was an awareness of the dangers of AIDS, there was also a high level of ignorance regarding how the disease is spread. Another finding of the Tanzanian study showed that girls reported more restrictive attitudes toward sex than did boys and boys reported having had sexual intercourse more often than did girls (38 % vs 15%) (Ndeki et al., 1994). The different attitudes of boys and girls towards sex could reflect cultural norms that allow for boys to be more open about sex as opposed to girls. As a result it is possible that girls could under-report their sexual attitudes and activities because it is not socially acceptable for them to engage in this behavior. It was also found that learners in high HIV/AIDS prevalence areas seem to have more knowledge

about AIDS and also report lower levels of risk behavior than primary school learners in low prevalence areas (Ndeki et al., 1994). This finding thus suggests that actual experience and daily exposure to the consequences of AIDS influences levels of knowledge and behaviour.

In Uganda a study was undertaken by Kipp, Kwered and Mpuga (1992) to investigate learners' and teachers' knowledge about AIDS. Sixty learners in primary schools completed anonymous true-false questionnaires. Learners under the age of 15 years correctly answered 64% of the questionnaire. There was no significant difference in knowledge between the rural and urban schools as well as no significant knowledge differences between males and females. The results of this study were used to modify and improve the on-going AIDS information programme particularly for younger learners.

In South Africa two rural primary schools in southern Kwazulu Natal was surveyed to establish the predisposing, enabling and reinforcing factors regarding HIV/AIDS that affect young learners (Taylor, Jinabhai & Dladla, 1999). Six hundred and ninety one learners in grades 3-7 completed a questionnaire in Zulu on their knowledge of AIDS. The average age of the learners was 11 years old. The results of this study indicated that 15% did not know that AIDS was a disease and 21% did not know how it is transmitted. Fifty five percent of pupils believed that playing with an infected person could transmit it, 43% thought that sitting next to an infected person might be dangerous, 59% did not want to use the same cup, 48% did not want to use the same toilet as an infected person and

35% thought that even touching could result in infection (Taylor et al., 1999). A majority of learners (73%) did not think they were at risk of getting AIDS. Fifty three percent agreed that HIV/AIDS could be prevented by behaviors such as using a condom, avoiding sex and having a single partner, but only 34% of learners intended to use a condom themselves. Many learners (78%) requested AIDS education at school and 81% said their families would support this. The majority of pupils (58%) said that a nurse should teach about AIDS (Taylor et al., 1999).

The literature surveyed reveals that studies in this area have been predominantly done in the USA. There is however no extensive literature in this area in Europe, Africa and particularly in South Africa. In the AIDS literature reviewed the research instruments used were mainly surveys in Africa, semi-structured interviews in Europe and only in the US were both focus group interviews and semi-structured interviews utilized.

It is difficult to compare the various studies done according to the age of learners because in African countries there appears to be a larger age range in primary schools as opposed to the American and European studies. Nevertheless broad similarities emerge in that most primary school learners studied have heard about AIDS and have some idea about how the disease is transmitted. These studies also reveal that many of the beliefs that pre-adolescents have about AIDS transmission are inaccurate. Learners are exposed to media messages aimed at adolescent and adult populations such as billboards, radio and television and the results of various studies show that learners tend to over-generalize these media messages. Thus it appears that the media is a main source of information

about AIDS available to children. However the extent to which they can make sense of the information they receive from the media and other sources seemed to vary and increase in objectivity and accuracy according to their age and developmental phase. Where AIDS programmes have been introduced for example, in Uganda, it was found that issues such as appropriate language policies, relevant content of courses and the cooperation of the community are important factors to consider when developing comprehensive AIDS programmes for primary schools.

The literature search revealed that research on perceptions of AIDS in South Africa has been more quantitative in nature, aimed largely at adolescent and adult populations and has produced information around broader trends. In consequence, it seems clear that more extensive qualitative research such as the present study, which aims to gain insight into children's beliefs about AIDS on a small scale level, needs to be undertaken in South Africa.

The next section reviews studies that used the Draw-and-Write technique to explore young learner's perceptions of health related issues, substantiating its usefulness as a research method with this age group.

Table 1: Summary of studies on perceptions and knowledge of AIDS among primary school learners.

Researchers	Sample	Methodology	Aim	Findings
Brown et al. (1990) USA	N=441 49%male 96% white	Self-administered questionnaires	• Assess AIDS knowledge in relation to attitudes, grade related similarities and differences	• Learners were more knowledgeable on items reflecting whether one could contract AIDS through touching, sharing needles and sexual intercourse. • Learners were least knowledgeable on items reflecting whether one could contract AIDS through kissing or mosquito bites
Chin et al. (1998) USA	N=784	Semi-structured interviews	• Examine conceptual understanding of the causes of cancer, colds, AIDS	• Results imply that AIDS knowledge is on par with that on the common cold (influenza) as opposed to knowledge about colds and cancer
Chiva & Rigal (1989) France	N=50 Ages 6-12 years	Semi-structured interviews	• Examine perceptions, knowledge, methods to avoid contracting AIDS	• Accurate AIDS knowledge increased with age • No gender differences
Fassler et al. (1990) USA	N=147 Ages 6-12 years	Self-completion questionnaire, interviews, drawings	• AIDS knowledge and attitudes	• Significant misconceptions about AIDS identified in all age groups • 62% of 1st graders heard of AIDS, however only 15% could provide accurate info about AIDS • Learners seemed to have misconceptions about transmission of the virus e.g., toilets, touching needles, mosquito bites, drinking fountains • Awareness and accuracy of info increases with age • Children obtain much of their info from the media • Television is a major source of information
Hoppe et al. (1995) USA	N=136 6th grade boys 3rd grade girls	Focus groups	• To investigate the suitability of using focus groups with learners exploring sensitive subjects such as beliefs and attitudes about AIDS	• Highlights sexuality as a sensitive topic that pre-teens are not comfortable discussing with adults
Kipp et al. (1992) Uganda	N=60	Self-administered questionnaires	• Investigate learners and teachers' AIDS knowledge	• Learners under 15 years answered 64% of the questionnaires correctly • There was no significant difference in knowledge between the rural and urban schools • No significant differences between male and females

Table 1: Summary of studies on perceptions and knowledge of AIDS among primary school learners.

Kistner et al. (1997) USA	N= 609	Interviews	• Examine AIDS-related beliefs by grade, race, gender, socio-economic status and size of community	• Accuracy of knowledge of AIDS transmission increased with grade • Willingness to interact with an AIDS infected child increased with grade and level of accurate information • Misconceptions about HIV transmission exist among learners even in the fifth grade • Common misconceptions about transmission of HIV were through coughing, sneezing, sharing eating utensils. • Younger learners are exposed to less media information about AIDS than older learners, therefore they are less knowledgeable • Cognitive level of learners could determine how much they can comprehend about AIDS and transmission of HIV
Kistner et al. (1996) USA	205- 1st grade 195- 3rd grade 208- 5th grade balanced by race and sex	Interviews	• Examine knowledge, attitudes about HIV transmission	• Knowledge about HIV transmission & willingness to interact with persons with AIDS increased with age • Even 5th graders had misconceptions about AIDS, sex transmission through low-risk bodily fluids such as coughing, sneezing, sharing eating utensils • Younger children hear fewer media messages about AIDS • Parents are more likely to discuss AIDS with older children • Younger children have less access to info about AIDS than do older children, they are less knowledgeable
Ndeki et al. (1994) Zambia, Tanzania	11-18 year olds N= 1119	Self-administered questionnaires	• Investigate AIDS knowledge	• Link between cognitive development & levels of knowledge • 865 of sample reported AIDS to be a serious threat to primary school children • 96% reported that they were afraid of getting AIDS • High level of unawareness of how disease gets spread among learners • Girls report more restrictive attitudes towards sex and boys • Boys report having had sexual intercourse more often than did girls (38%vs15%)
Osborne et al. (1993) USA	N=120 50% boys, 50% girls Kindergarten, Gr4/5 Gr7/8 80% white 20% black	Self-administered questionnaires	• Investigate AIDS knowledge and attitudes	• Similar misconceptions about AIDS were identified across grade levels • Youngest group generally lacked an accurate understanding of AIDS transmission • 45% did not know how AIDS is transmitted • 13% inaccurately believed that alcohol or drug ingestion is the cause of HIV infection • 15% believed that being near a person with AIDS could lead to HIV infection

Table 1: Summary of studies on perceptions and knowledge of AIDS among primary school learners.

				• 35% of responses about transmission of HIV were idiosyncratic such as, kissing a dog's tongue, smoking, taking candy from strangers • 5% accurately identified contaminated needles as a means of contracting HIV • 28% did not know how AIDS is transmitted • 12,5% identified sharing needle and blood mixing as a means of contracting HIV
Peltzer & Likwa (1991) Zambia, Tanzania	N=200 12-16 years old	Self–completion quest & open ended essays	• AIDS knowledge, attitudes beliefs, sexual practices	• Learners know little about family planning i.e. condoms, pills • Wanted to know about AIDS/pregnancy prevention
Quadagno et al. (1997) USA	N=609 Grades1,3 &5 Follow-up interview N=563	Interviews	• Impact of Magic Johnson's HIV status on AIDS knowledge, attitudes of primary school children	• 81% of 1,3,5 graders were unaware that AIDS is a disease • Increase to 95,4% (second time) • 42,8% did not know he was exposed to HIV • 42,8% mentioned sex as the cause of AIDS • 12,8% mentioned impossible modes of transmission • Despite widely publicized info about AIDS, knowledge in regard with details was less complete than might have been expected • Awareness increases over time
Quadagno et al. (1997) USA	N=33 Ages 10-18 years (white)	Structured interviews	• AIDS knowledge	• All learners had heard of AIDS • Age difference-reactions varied • 1/3 announced that they had not learnt anything new • Comparison made with matched sample. No difference in: Risk factor knowledge, prevention knowledge, viral knowledge • No effect on worry about AIDS or willingness to interact with infected people
Taylor et al. (1999) Kwazulu Natal, South Africa	N=691 Grade 3-7 Average age 11	Self-completion questionnaires	• Examine perceptions, knowledge, methods to avoid contacting AIDS	• 15% of learners did not know that AIDS is a disease • 21% did not know how its transmitted • 55% believed it could be transmitted by playing with an infected person • 43% thought that sitting next to an infected person might be dangerous • 59% did not want to use the same cup • 48% did not want to use the same toilet as an infected person • 35% thought that even touching could result in infection • 73% did not think that they were at risk of getting AIDS • 53% agreed that HIV/AIDS could be prevented by behaviours such as using a condom, avoiding sex, and having a single partner

Table 1: Summary of studies on perceptions and knowledge of AIDS among primary school learners.

				• Only 34% of pupils would use a condom themselves • 78% requested AIDS education at school • 81% said that this could be confirmed by their families • The majority 58% said that a nurse should teach about AIDS
Walsh & Bibace (1991) USA	N=60 Ages 5-7, 8-10, 11-13	Individual interviews	• Causal reasoning about AIDS	• Results indicate that in ways similar to their understanding of other illnesses, children's understanding of AIDS reflect their level of cognitive development.

2.3 The Draw-and-Write Technique

The Draw-and-Write technique was the research instrument selected for use in this study. In this section the available literature using the Draw-and-Write technique with primary school learners will be reviewed. Unique to this method of research is the use of learners' drawings in exploring their views on health-related issues. The literature revealed a variety of studies in which learners' drawings have been used for health-related research. A more detailed discussion about the history, advantages and disadvantages of this method is presented in chapter 3.

The Draw-and-Write investigation technique was used in primary schools in three cities in Yugoslavia as a potential evaluation instrument in preparation for the Healthy Schools Project (Zivkovic, Marinkovic, Legetic, Paunovic & Vidanovic, 1994). The aim of the study was to monitor learners' knowledge about their health education programme during the first four grades of elementary school. This study revealed that the Draw-and-Write technique is sensitive enough to reveal the learners' range of knowledge acquired in school and was found to be attractive and interesting by teachers, health workers and learners. With a few modifications this technique was introduced as 'a knowledge change' evaluation instrument in the Healthy Schools Project in Yugoslavia (Zivkovic et al., 1994).

Charlton (1979) used the Draw-and-Write technique to explore learners' beliefs about cancer and the results of this study were used to inform the development of a subsequent survey. Barnett, Francis, de Koning and Shaver (1994) report on the use of learners'

drawings to explore their health concerns and priorities in a sugar plantation in Zimbabwe, an urban school in the UK and in urban primary and secondary schools in Pakistan, Uganda and India. They also report on a large scale research effort aimed at establishing the current `state of the art' concerning health education related to HIV/AIDS in Africa and Asia (Pridmore & Bendelow, 1995). In this study learners were asked to draw pictures about HIV/AIDS related topics and their pictures were used to encourage individual and group discussions.

A Draw-and-Write scenario was devised by MacGregor, Currie and Wetton (1998) in order to elicit the views of primary school learners (ages 8 - 12) in a sample of six primary schools in Lothian, Scotland. They sought to investigate learners' views on the qualities they would expect to see in a school which promotes health, and the qualities their own schools needed to develop to become more health promoting. Categorisation of the data revealed inter- as well as intra-school similarities and differences in responses (MacGregor et al., 1998). The authors conclude that the Draw-and-Write investigation could be utilised to ascertain learners' opinions on the qualities schools need to possess and develop to promote health, which in turn could help to inform the development of the Health Promoting Schools concept.

Pridmore and Bendelow (1995) used the Draw-and-Write technique to elicit views about health with 11 Bushmen and 100 Botswana learners aged 9 - 10 years in Botswana. Both the learners and teachers reported benefits from their involvement in the research and some of the teachers said that they had gained new insight into the learners' perceptions

of health; they were excited and surprised by the richness of the responses and considered the Draw-and-Write to be a valuable method for their own classroom practice (Pridmore & Bendelow, 1995).

McWhirter and Wetton (1994) conducted a pilot study in the United Kingdom using the Draw-and-Write technique to investigate approximately 400 four to thirteen year old learners' perceptions of risky situations. This study demonstrated that it is appropriate to ask young people up to the age of 13 what they understand by 'risky' using a Draw-and-Write approach. The responses obtained from this study revealed that young people's concepts of 'risk ' and 'risky' are still developing at an age when they enjoy considerable independence of action (McWhirter et al.,1994). Their concept of risk in relation to health is poorly developed in comparison with their health knowledge, which further implied that their understanding of cumulative risk is almost nil (McWhirter et al., 1994).

Oakley, Bendelow, Barnes, Buchanan and Husain (1995) conducted a study in the United Kingdom investigating young people's knowledge and attitudes towards cancer using drawing and writing. One of the groups sampled for this study was 100 children aged 9-10 years. This study proved that the use of drawings to collect data from children is a valuable research tool. From a methodological point of view the authors conclude that this research method makes a contribution to developing techniques for research on and with children within the developing discipline of "children's studies" (Oakley et al., 1995).

In South Africa the Draw-and-Write investigation has been used to examine children's conceptions of water hygiene, sanitation practices and health behaviours in five urban and one rural farm primary school in the Western Cape (Bility & Onya,1999). This study revealed information that proved to be a valuable resource for selecting hygiene education themes (Bility & Onya,1999). A Draw-and-Write study exploring children's perceptions on the causes of worm infestations was also undertaken in Khayelitsha, Cape Town during 1999 by the School of Public Health, University of the Western Cape. Although the results of this study have not yet been published, preliminary analysis of the drawings indicate that the technique proved to be a powerful and informative method of investigating children's views around health-related issues (Personal communication with Vergnani, 2000).

Although the Draw-and-Write technique has been used to tap into children's perceptions and attitudes towards health-related issues, there is currently no available literature internationally and particularly in South Africa investigating primary school children's perceptions and attitudes towards AIDS using this technique.

The Draw-and-Write technique has proved to be a simple way of exploring children's beliefs about health related issues and to describe the society in which they live (Pridmore & Bendelow, 1995). This instrument allows for the study of difference and range, rather than seeing children as homogenous groups. However, the technique is still in the process of being developed and needs to be carefully and sensitively adapted for use in different contexts (Pridmore & Bendelow, 1995). More research in this area needs

to be undertaken in order to develop this research instrument, which already shows enormous potential as a method of exploring children's ideas about health without being limited by language differences.

2.4 Summary

As can be seen from the 16 studies reviewed in this chapter investigating primary school learners' perceptions of AIDS, 11 were in the USA, 3 in Africa and only 1 in Europe and in South Africa respectively. Various methods were used to collect data, such as semi-structured interviews, focus groups and questionnaires. This review indicated that although there is some data on primary school learners' perceptions of AIDS, it is limited. It is also apparent that traditional research instruments, namely, questionnaires and interviews have been predominantly used with children, pointing to a need for new, innovative methods in order to elicit information more effectively from primary school learners.

The US studies provide the most information about primary school learners' knowledge and perceptions about AIDS. These show that most learners appear to have an awareness of AIDS. Thus, overall at least 80% of learners in primary schools have heard about AIDS. However, it is also evident that learners in all grades have many misconceptions about AIDS, particularly about the disease process. The studies also show that accurate AIDS knowledge improves with age. A number of studies point out the importance of considering learners' developmental level and cognitive ability when developing appropriate life skills programmes.

It is difficult to compare studies done in African countries with studies done in the United States because of the wider age range of learners in African primary schools. However, these studies indicate broad similarities in that learners in primary school are aware of AIDS and have ideas about how the disease is transmitted as is the case for their American counterparts. In South Africa there is little evidence on primary school learners' perceptions of AIDS except for one study done in Kwazulu Natal. The results of this study show broad similarities with the other studies. The literature survey points to the fact that more extensive research needs to be undertaken investigating South African learners' knowledge and perceptions about AIDS.

The review of the Draw-and-Write literature reveals this technique's potential as a useful qualitative tool to find out more about learner's views and knowledge on health-related issues. Usually described as a bottom up approach to research, this method gives learners the opportunity to express their own views and ideas. This innovative research method, however, is still in the process of being developed and requires adaptation for use in different settings. Given the limited amount of data available on primary school learners' perceptions of AIDS and the need for more research in this area, this research method shows enormous potential as a research instrument for children of this age.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The aim of the present study was to gain a better understanding of what intermediary phase learners know about AIDS in general and, more specifically, about the causes of AIDS, using the Draw-and-Write technique. This research method involves using children's drawings together with writing, to gain insight into their beliefs about AIDS. This was combined with a follow-up discussion in order to give learners the opportunity to interpret their own drawings. A further motivation for this study is to evaluate the suitability of the Draw-and-Write technique for assessing and understanding primary school learners' knowledge about AIDS in a South African context.

3.2 Analytic Framework

In the last decade there has been a notable growth in sociological, psychological and health education with and for children (Backett-Milburn & McKie, 1999). However, there is still a discrepancy between research and health promotion practice, which is often based upon stereotypes around different sections of the population (Backett-Milburn & McKie, 1999). Traditionally there has been relatively little space for hearing children's voices in the design and process of health education and promotion strategies even though there is an ever-increasing need for evidence-based research with children (Backett-Milburn & McKie, 1999).

Within health promotion research and practice, little attention has been paid to how children perceive health and particularly AIDS, to what they see as major health problems and to what they would like to learn about health (Kalnins, McQueen, Backett & Currie, 1992). According to Natapoff (1978), preventative health programs and health education, whether for individuals or groups should use learners' own ideas as a framework.

Primary school learners by virtue of their stage of cognitive, social and emotional development have needs and concerns about their health that are different from those of adults (Kalnins et al., 1992). It is, therefore necessary to understand health as learners themselves see it within their own relevant social contexts. This research approach differs fundamentally from most other research done with learners in this age group. Conventionally AIDS research has focused on adults. Following on this a top down approach has been adopted in eliciting information from learners on AIDS. This has typically involved the administration of surveys aimed at collecting quantitative data from learners about AIDS. Instead the approach followed in this study is primarily concerned with the collection of qualitative data from learners themselves and this offers a learner-centered approach, which incorporates their own ideas, beliefs and metaphors. As indicated above, this involves a follow-up discussion with the learners about the analysis of their drawings. In this sense the research does not simply use learners as subjects. Instead they are also participants and analysts.

However, while this research method is innovative in its use of learners as analysts, the primary analysis involves an examination of their drawings and their interpretation by the principal researcher. One criticism of the research paradigm described above concerns whether learners are sufficiently developed intellectually to interpret their own data and the context within which the data is produced (Backett-Milburn & McKie, 1999). This research attempts to understand contextual issues that may play a role in the subjects interpretation of their drawings and tries to add to our knowledge on learners' beliefs about AIDS in South Africa.

3.3 Instruments

In order to ascertain learners' views, the Draw-and-Write technique, which involves using learner's drawings, together with writing, was employed in this research. The Draw-and-Write technique was pioneered by Noreen Wetton at the University of Southampton and has proved to be a useful technique for discovering children's own perceptions of health and health-related issues (Williams, Wetton & Moon, 1989b; cited in McWhirter & Wetton, 1994). It is based on drawing and writing activities and can be adapted for use with learners' aged 4 and over. The learners themselves help in the analysis of the responses. The Draw-and-Write technique addresses the difficulties conventional research instruments have with the need to be adapted to reflect local social and cultural norms.

3.4 Advantages and disadvantages of the Draw-and-Write technique

The Draw-and Write technique is still in the process of being developed as a research instrument. It needs to be carefully and sensitively adapted for use in different contexts. The advantages as well as the disadvantages of this technique are described below.

3.4.1 Advantages

The Draw-and-Write technique offers an opportunity to learners to express their own ideas and feelings in a creative and non-verbal way. This research method utilizes drawings which encourages spontaneity and can be an enjoyable activity for learners of all ages. This technique inverts the more traditional 'top-down' methodology to a bottom-up approach and has the potential to enable all learners to participate and to improve the quality and relevance of the curriculum (Pridmore & Bendelow, 1995). Unlike other research which has been done on rather than for learners using adult categories into which children are expected to fit, the Draw-and-Write technique offers an innovative and participatory approach which increase our understanding of learners and how they see the world (Pridmore & Bendelow, 1995).

This method is concerned with how learners interpret their own social reality, how they understand important issues such as AIDS and how this influences their experience. Unlike questionnaires and interviews, the Draw-and-Write technique is informal and learner orientated, thus able to bridge the power dynamics which exist between adults and learners.

The way in which the data is collected is flexible and sensitive. In the analysis of the data the emphasis is placed on understanding complex details of the learners and their context. The Draw-and-Write technique is an easy exercise to administer and does not require the use of too many materials. Although it requires some planning in advance, the actual administration itself is not very time-consuming. It can also be used in a variety of contexts such as schools, communities and in rural settings. The exercise can be easily translated into other languages and the exercise itself can be easily adapted to investigate a range of topics.

3.4.2 Disadvantages

The are various methodological and analytical limitations associated with the Draw-and-Write technique that were addressed in this research. One of the criticisms of this technique is that many researchers using this method have simply quantified the overt pictorial content (Backett-Milburn & McKie, 1999). In the present study learners drawings and statements were not merely quantified. Instead a descriptive analysis was employed.

The classroom setting too presents difficulties that could easily influence the quality of the data produced. In school learners are expected to be obedient. Some learners would want to please by providing the kind of answers that they think is expected of them rather than their truthful opinion. In order to address this issue teachers were not invited to assist, observe or participate during the investigation. I took time to establish a rapport

with the learners, reassuring them that the session was not going to be like a usual lesson. They were encouraged to share their own opinions about AIDS. Thus the emphasis was not only on providing facts, but also allowing learners the freedom to express themselves.

Although the Draw-and-Write investigation provides all learners with the opportunity to express their views in a creative and non-verbal manner, it is important to have knowledge about the different social and cultural contexts the learner comes from. Deciding on the task for learners required careful planning as it had to be at the level that would make sense for them. A pilot study was undertaken in order to test the research questions to ensure that learners could identify with the concepts they were going to be questioned about. Therefore, in the construction of the research question and in the analysis process, the impact of learners' social and cultural reality was considered for this study.

Drawing too might not be a skill that all learners have equal expertise in. This particular skill is influenced by various factors such as developmental level, drawing ability and the role and importance drawing has in their social and cultural context. In this study the quality of learners drawings will not be assessed but rather their own explanations of what they have produced.

Another possible limitation concerns the learners' actual willingness to participate in the study. Once parents have given consent it is difficult for a learner to refuse to participate

out of fear of being disobedient or exposed. Learners are also under more pressure to consent when all the participants are selected from one class. In this study learners were randomly selected from a variety of classes and each learner was given the opportunity to withdraw from the study.

3.5 Pilot study

A pilot study was undertaken in order to test the Draw-and-Write technique. The aim of the pilot study was to explore various aspects of the research process, including the validity of the research design, language issues, the willingness of learners to participate and their responses to the Draw-and-Write exercise. The Phillipi East Education Support Services with whom the researcher has a working relationship, was approached for access to the schools. The pilot study was conducted at a Xhosa medium school located in Phillipi, and selected according to availability and easy access. Arrangements to meet with the school principal were made by the school psychologist at the clinic. The letter issued by the Department of Education granting permission for the study was given to the principal and the aims of the study were explained. Since HIV/AIDS education will become part of the official school curriculum in the near future, the principal felt that it was acceptable for us to undertake the pilot study without further consultation with parents. After permission was granted by the principal, learners were selected to participate in the study. The initial sample of 10 boys and girls was randomly selected from the grade 3 and 4 class lists by the principal. The study was undertaken in the school staff-room, as there were no other rooms available at the school.

The interpreter introduced the session and explained the aims of the study. She then conducted the session in Xhosa while the researcher assisted and made observations. Learners were given two sheets of paper and were asked to do each task on a separate page. AIDS awareness was measured by two tasks. Task one required learners to Draw-and-Write about someone who has AIDS. Task two required learners to Draw-and-Write all the different ways in which someone could get AIDS. They were given 10-15 minutes to complete each question. Another forty-five minutes was devoted to the follow-up discussion, during which time learners got the opportunity to explain their drawings to the group and ask questions.

At first the learners were seated together at one table. Due to the fact that they were placed close together, they whispered to each other and giggled about how to draw sexual contact as a cause of AIDS. To curb this, they were then placed at different tables and encouraged not to share ideas. It seemed obvious that learners were uncomfortable and unsure about whether expressing their knowledge about sexual intercourse would be criticized. Only after the researcher explained that all responses are acceptable did learners settle down to draw. In analyzing the responses to the questions, it was found that although learners were able to respond to both tasks quite effectively, task one did not generate enough information whereas the question about the causes of AIDS generated quite extensive responses.

Against this background, in preparation for the main study, it was decided to rephrase task one in order to allow learners to associate freely by asking them to draw anything that came to mind when they think about AIDS. In consultation with my supervisor and other researchers, I decided that it would be easier to conduct the main study at a school in which the medium of instruction is English or Afrikaans as I felt that the language differences had significantly influenced the pilot study. Therefore an English/Afrikaans medium school was targeted for the main study, which would enable me to conduct the sessions without the need for interpretation. I also decided not to include the results of the pilot study in this study because of the amount of data loss during translation and difference in the phrasing of the research tasks between the pilot and main studies.

3.6 Main Study

The main study was undertaken at a selected primary school in Bellville. Access to the participants was gained through collaboration with Bellville Education Support Services with whom I have a working relationship. The participating school was again selected according to availability and easy access. This primary school is located in the Bellville area. The learners attending this school are mainly English and Afrikaans speaking with some learners who speak Xhosa. This majority of learners at this school are from a working class background. Arrangements to meet with the school principal were made. The letter granting permission for the study by the Department of Education was given to the principal and the aims of the study were explained.

After permission was gained to undertake this study, teachers were informed of the study and letters were sent to the parents requesting permission for the selected learners to participate in the study. Eighteen learners aged between 8-11 years were drawn randomly from the grade 3 and 4 class lists by the researcher with the assistance of the principal. Selection was made according to age and an equal number of boys and girls were targeted. The learners who eventually participated comprised of two groups of six and twelve learners respectively. The first group consisted of three girls and three boys. The girls were eight, nine and eleven years old. Two of the boys were nine years old and one was twelve years old.

After initial analysis of the results I decided to hold a second group session, as I felt that I needed more data for this study. The second group consisted of five boys and seven girls, because one of the selected boys was absent on the day of the study and was replaced by a girl. There were 3 ten year old and 2 eleven year old boys who participated in this group. The girls consisted of 5 ten year old and 2 nine year old girls. After analyzing the data, it appeared that no new data was emerging and in consultation with my supervisor, we decided that we did not need to hold a third group session.

I conducted both sessions without the assistance or presence of any teachers. I explained the aims of the study to the learners and assured them that their identities would not be disclosed and that they could withdraw from study at will. All the learners selected for this study were eager to participate so there was no need for any substitutions.

The first session took place in the school staff room and the subsequent session in the library. Ten to fifteen minutes was spent explaining the study, distributing paper and pencils and giving instructions to learners. During the introduction I explained to learners that the session was going to be about AIDS. I told that them they were going to be asked two questions about their knowledge on AIDS. They were instructed to Draw-and-Write their responses on the paper provided rather than give verbal responses.

The duration of the first group session was one hour long and the second session approximately one and a half-hours. Respondents were seated away from each other in order to prevent learners from sharing ideas with each other. Participants were given fifteen minutes each to Draw-and-Write in response to the two questions about AIDS.

For task one, learners were asked to Draw-and-Write anything that came to mind when they thought about AIDS. The second task required them to Draw-and-Write what they thought the causes of AIDS are. Afterwards a forty-five minute discussion was held during which learners were given the opportunity to interpret their drawings and expand on their ideas and feelings about the topic.

3.7 Group Discussions

After both groups had completed their Draw-and-Write exercise learners were called together for a discussion about their drawings. It was also an opportunity for me to

observe both their intellectual and emotional responses to the exercise. Ideally learners could have been given the privacy to discuss the drawings with the researcher on an individual basis. However there was limited space available at the school to conduct the study as well as time constraints. During the Draw-and-Write exercise I had the opportunity to observe learners level of comfort towards the exercise and felt that it was acceptable to conduct a group discussion. The group discussion was guided by a few questions related to where they had learned about AIDS, whether they felt that information about AIDS was easily available and whether AIDS education should be taught at school. My own training as a psychologist equipped me to manage the group dynamics, respond to learners with sensitivity and provide a containing environment for them to express themselves. A code of conduct was introduced before the discussion began. The group agreed to give every participant an opportunity to share, to listen when someone is speaking, respect each other's viewpoints and they agreed not to disclose the content of the discussion with outside parties. In my opinion learners were comfortable and eager to share their own information about AIDS and experiences in a group context. At the same time learners were not probed for personal information which might have exposed them and left them feeling vulnerable in the group context.

3.8 Data Analysis

The data was analyzed using a thematic analysis. First, the data was examined repeatedly in order to become familiar with it. Riley (1990) refers to this as the ' hear what your data has to say' stage. This process involved generating themes, categories and looking

for patterns. A detailed analysis of the drawings was not done, but general features were noted to give a broad categorization of issues learners focused upon. This categorization is only one of many ways in which to express the Draw-and-Write investigation results.

The written statements were then coded and the broad categories were generated. Six categories were developed, namely, definition of AIDS, transmission of AIDS, prevention of AIDS, treatment of AIDS, care of AIDS sufferers and the consequences of AIDS. Since qualitative research observes all social interaction as unique, these interpretations can be seen as the subjective reflection of the researcher. This is founded on the assumption that there is no universal truth or 'scientifically objective' reality, so that all interpretations are valid within their specific context (Mouton & Marais, 1990).

The next stage of analysis involved examining whether the aims of the study were achieved. This was done by examining the available literature on primary school learners perceptions of AIDS, and testing them through the data. I was satisfied that the data gathered was useful in providing insight on the issues under investigation and was therefore informative and credible. This was achieved by viewing this data from the qualitative paradigm that is concerned with the learners' subjective understanding of their own social reality.

It was also necessary to test the validity of the data. Validity, with its concern for what is being measured, is directly relevant to the research interview (Brenner, Brown & Carter,

1985). Therefore, the researcher must demonstrate the extent to which the questions measure what is intended. Learners interpreted their own drawings and took the opportunity during the discussion to clarify their contributions. During this process I shared in the group some of the responses with the participants and requested them to comment on the accuracy of interpretation of their initial responses, which were elicited during the Draw-and-Write investigation. This attempt at respondent validation confirmed my findings about the meanings that emerged from the data.

According to Marshall and Rossman (1995) categories and patterns that emerge in the data must be analytically challenged by the researcher no matter how obvious the pattern might be. I therefore searched for alternative explanations for the data, and was satisfied with the themes that were generated in my final analysis.

The final phase of the analysis involves the writing of the research results, which is presented in the next chapter. In this section the research context is described, the data that was collected is presented together with the participants experiences from their own social reality.

3.9 The researcher: self -reflexive issues

Given the importance of reflexivity in qualitative research, this section reflects my own experiences, feelings and thoughts about the process. This discussion draws on the notes I took during sessions, after each session and at different times during this project.

After the initial pilot study I became aware of how much age, culture, language, colour, class and gender can influence open discussion. During the pilot study learners observed me with great curiosity and were very polite because I did not come from their school or community. I also got the feeling that they seemed to be wary of authority and compelled to do their best. They were very cooperative, somewhat quiet and compliant during the whole process. Relying on the assistance of the interpreter also greatly influenced the dynamics of the group and the whole data gathering process. The interpreter was from the same community as the learners and very familiar with the school and learners. She did most of the talking, trying to make the group comfortable while introducing the study. Being an ex-teacher, she was very comfortable in the classroom setting and managed the learners efficiently. In trying to get learners to give the information we needed, the interpreter tended to prompt learners by giving examples which I feel influenced the validity of the data. When reflecting on the process I realised that not communicating fluently in Xhosa really influenced the level of comfort and trust amongst the learners. At that point I felt that it would be better to undertake the main study in an English or Afrikaans medium school, thus creating more opportunity to establish rapport with learners.

The main study was undertaken in an English and Afrikaans medium school in another area altogether. Although once again there was a difference of colour, class, culture and gender that might have influenced the process, it felt easier than the pilot study. It was

easier to establish a rapport with learners because there was no language barrier. The respondents appeared much more relaxed in my presence. Some of the learners were quiet, polite and others were eager to please, whilst there were some boys who were restless and tried to draw attention to themselves. It was interesting to note that the attention seeking behaviour of boys had not changed since my own schooling. In this group learners were more comfortable with the process of drawing and viewed the Draw-and-Write as fun and a great way to get out of the usual classroom lesson.

I think that the power dynamics between adult and learner affected how compliant the participants were during the process. This points to the danger of the 'halo effect' (Lebow, 1982) which is a general orientation of goodwill towards the researcher/teacher rather than a more truthful account of their thoughts, feelings and experiences. I was also aware of my own need to collect the data which learners might have sensed and thus set out to comply with.

3.10 Ethical Considerations

AIDS is a sensitive topic and especially so when considering young children. The aims and objectives of this research were clearly outlined to the principals of the participating schools. Copies of a letter from the Western Cape Department of Education granting permission to undertake this study was given to each principal. In addition, letters to parents requesting permission for learners to participate in the study were made available to the schools and sent to each parent.

Another problem is the classroom context which makes it difficult for a child to refuse consent to participate in the study and this should be taken into account (Pridmore & Bendelow, 1995). In this study this problem was overcome by randomly selecting learners from more than one class and every learner was given the choice to participate in this study. Selection of learners was done randomly from the class lists according to gender and age. After the aims of the study were explained to the potential participants they were given the choice to withdraw from the study. Learners were reassured that their identities would not be disclosed in the study and the content of the sessions would remain confidential.

A follow-up discussion after the investigation gave learners the opportunity to ask questions and express their feelings about the process. Given that sex and AIDS are both very sensitive topics to discuss with young learners the group discussions were guided by a code of conduct that was contracted with the learners. The groups were conducted a respectful, positive and containing manner. Some of the data emerging from this study indicated that learners are either aware of sexual abuse of have experienced it themselves. A follow-up session with the participants of this study will be undertaken after the study is completed.

I tried to as far as possible not to disrupt the normal functioning of the participating schools. The sessions were thus conducted in the staff rooms and library of the respective schools so as not to interfere with class activities.

CHAPTER 4

RESULTS

4.1 Introduction

In this chapter the results from the Draw-and-Write investigation are reported with a detailed presentation of the way in which learners expressed their understanding of AIDS and its causes. I describe their drawings and written statements, the verbal responses, their level of comfort with the task and the experiences they shared. I observed how learners behaved during the sessions with regards to the amount of attention they paid to the task, their level of concentration, their need for encouragement, their resistance, either active or passive, their interest or lack of interest and their response to instructions and the drawings. I also observed their attitude towards the task as well as any anxiety associated with the topic and task. The majority of learners gave multiple responses, and often one respondent would have comments placed in several categories. Given this overlap a purely descriptive analysis was considered to be appropriate and meaningful.

It was not possible to draw any conclusions about age-related differences in knowledge because merely one age group ranging from 8-12 years was used in this study. The participants of this study are not a representative sample of all primary school learners in the Western Cape and the results of this study therefore cannot be generalised. The aim of this study was to gain more in-depth information about AIDS from a small number of learners. Although there were no distinct difference in the level of knowledge about AIDS between the boys and girls, there appeared to be differences in attitudes and power

relations between them. A more detailed discussion about how boys and girls differed in their behaviour and attitudes can be found in the discussion chapter.

It is not possible to include all the responses learners made during the Draw-and-Write investigation in this discussion. Thus, an appendix of a detailed table of all learners' responses according to age and gender is attached at the end of this study. Copies of all the drawings that learners produced can also found attached at the end of the study as an appendix.

4.2 Results from the Draw-and Write investigation

The results reported here are from both the Draw-and-Write sessions that were undertaken. During these sessions learners responded quickly to the invitation to Draw-and-Write. Many of them took the opportunity to fill their pages with drawings and written statements. Learners did not need much encouragement to draw, but some needed assistance with the spelling and writing of words. Learners showed a keen interest and a positive attitude towards the task. Each respondent made verbal contributions in the discussions afterwards, but there were some learners who were not as outspoken as others. Although learners did not verbally express any feelings of fear or signs of obvious anxiety in their behaviour, some of them drew pictures about illness and death which might indicate an expression of fear about AIDS.

4.2.1 Results from group discussion

The five major themes which emerged in the learners drawings were explored during the follow-up discussion. The themes included HIV transmission, HIV prevention, treatment, care and consequences of AIDS. Given the sensitive nature of the topic and the evidence of possible sexual experience and sexual abuse in some of the learners drawings, it was important to create ground rules for the learners before entering into the discussion. Learners were encouraged to listen while others spoke, give everyone an opportunity to contribute to the discussion, show respect for others opinions about the topic and refrain from sharing the content of the discussions outside of the group. My own training and experience as a counsellor enabled me to facilitate these discussions with sensitivity and respect. Learners had the opportunity to share freely but were not encouraged to expose information and experiences could have left them feeling vulnerable.

During the discussion learners had questions relating to the themes which emerged in the study. As the issues emerged I clarified certain myths and emphasised the relevant facts about HIV for the group. Their own curiosity and interest during the discussions revolved mostly around preventing infection and transmission of HIV. One of their main concerns was about whether HIV can be spread through sharing saliva. Others were not clear about whether touching a used condom could lead to HIV infection.

In some of the themes that emerged in the group discussions there is evidence that learners are influenced by media messages. Some of their responses include popular

media slogans like *AIDS kills*, *beware of AIDS* and the symbol for the AIDS ribbon. It is possible that the learners who chose to express the consequences of AIDS in their drawings might have experienced some anxiety about the subject. However, during the discussion none of the learners reported feeling fearful or expressed visible signs of discomfort of anxiety. I emphasised that despite the fact that there are many people who are affected by HIV, there are many things we can do in order to prevent infection and ways in which we can treat and care for people who are affected by HIV/AIDS. The importance of caring for those affected was also raised with some discussion about eating healthy food and taking medicine. The discussion ended with positive discussion on how we can all contribute by taking care of ourselves in order to prevent infection and be more accepting of those who are affected through showing support and providing proper care. None of the learners appeared to be visibly distraught by the exercise, instead they appeared very invigorated by the discussion. It is possible that their lightheartedness was their way of dealing with the morbidity of AIDS.

The discussion was also guided by a few questions which were related to where they had learned about AIDS, whether they felt that information about AIDS was easily available and whether AIDS education should be taught at school. A number learners said they had learned about AIDS from watching television, particularly a programme called Soul Buddies. Others had learned about AIDS from friends, relatives, library, clinic, hospitals, radio and the Internet. One of the girls in the group related her experience of going to an AIDS awareness party arranged by a chain store where her mother works. These results confirm findings of other studies that suggest that the media can influence what learners

know about AIDS. Thus the results of a study by Fassler et al., (1990) indicated that much of learners information about AIDS was obtained from the media and particularly television. Sly et al. (1990) did a study which showed that learners knowledge was obtained from media messages aimed at older populations on the radio, television, posters, billboards and public service announcements. These results also show that learners are able to understand some of the information but not able to integrate it at an in-depth level. Therefore the authors recommend that more appropriate AIDS education programmes be developed specifically for this age group.

Some learners said that they wanted their parents and teachers to be more open about sex and AIDS. They felt that discovering these issues was inevitable, therefore it should not be kept from them. Others said they had no problems accessing information about AIDS. All the respondents felt that it is important to learn more about AIDS at school. Some learners wanted the researcher to teach about AIDS. Others felt that their teachers should teach AIDS education. They seemed to share the same keenness to learn about AIDS at school as learners who took part in another South African study by Taylor et al. (1999), in which 58% of the participants felt that a nurse should teach about HIV and AIDS. In a Zambian study undertaken by Peltzer & Likwa (1991) learners wanted to learn about AIDS and the authors of that study recommended that such a programme be introduced in the science curriculum. It seems that there are many primary school learners who believe that learning about AIDS at school is important.

Below are the questions that were posed to learners during the Draw-and-Write investigation. This is followed by the table in which the results of the Draw-and-Write investigation are categorised according to the main themes which learners focused on. In the section that follows the results of the Draw-and-Write are expressed by tabulating learners' responses and including some of their drawings together with a brief discussion about each theme they focused on.

Instructions for Draw-and-Write exercise:

1. What comes to mind when you think about AIDS? Draw-and-Write whatever comes to mind for you.

2. What are the different ways in which someone can get AIDS? Draw-and-Write all the different ways you can think of.

Table 2. Summary of drawings and written responses to what learners think about AIDS and their understanding of its causes.

MAIN CATEGORY	SUB-CATEGORY
DEFINITION	AIDS is a penis sickness AIDS is a kind of disease AIDS is a sickness AIDS is a virus
SYMPTOMS	
Physical symptoms	Person in bed has AIDS, and sorry she ever did it Person in bed has AIDS Thin person with AIDS has a fever ill lady She is sick
Emotional symptoms	Women is crying because she has AIDS She is angry with the man who gave her AIDS
TRANSMISSION OF HIV	
Unprotected sexual intercourse	Unprotected sex Men and women having sex without a condom Condom can also give you AIDS if you don't listen to the rules
Sex with too many people	Sex with many people
Kissing	Kissing someone with AIDS
Needles/blood	Syringes Injection needles Touching an infected person's blood Do not touch blood
Smoking and drinking	Drinking wine causes AIDS Smoking cigarettes causes AIDS
Homosexuality	Gay men cause AIDS
Other illnesses	TB causes AIDS
VIOLENCE	
Rape	Doing sex and raping without a condom If you rape someone they can get AIDS Women raped by men People have AIDS will rape you

Kidnapping and raping	Men who have AIDS drive around in a van stealing and raping children
PREVENTION OF HIV	
Abstaining from sex	Safe sex is no sex Having sex with your boyfriend is bad
Using condoms	Can't get AIDS by using a condom Safe sex
Do not touch used condoms	Throw away a used condom Picking up a used condom
TREATMENT Medication	Take medicine for AIDS If you have AIDS you must take an injection
CARE	
Attitudes towards someone with AIDS	Caring for people with AIDS Helping people with AIDS
Fear	I don't care Beware of AIDS
CONSEQUENCES OF AIDS	
Death	AIDS kills You can't see AIDS, you just know when death comes AIDS causes death
Spreads widely	Many people have AIDS

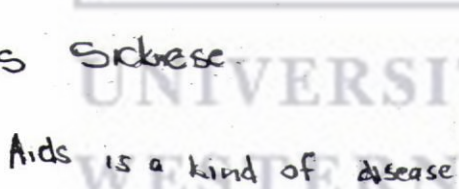
In the following pages, examples of learners drawings are included, depicting the main themes and including some of their statements and comments. In response to the first task some learners chose to provide a definition of AIDS, thus sharing their understanding of what they think AIDS is. Others concentrated on drawing what they thought the symptoms of AIDS would be. The most frequent responses were related to the causes of AIDS. Learners cited unprotected sexual intercourse as the most common cause of AIDS. Respondents also appeared to be familiar with methods of preventing HIV infection with the most frequent suggestion being the use of condoms. Other themes

that emerged were the treatment of AIDS patients, care for them and the consequences of AIDS.

4.3. Definition of AIDS

Some learners decided to share their understanding of what AIDS is. One learner called it a 'penis sickness'. By using the penis as an example this learner might be suggesting that sexual intercourse is the main cause of AIDS. Another depicted AIDS as a virus. This learner appears to know that the AIDS process starts when one contracts the HIV virus. Others referred to it as being a disease or a sickness. We can assume that some learners know that AIDS can affect our physical well-being which is related to contracting a virus possibly through sexual intercourse. Below are some of the pictures that learners drew showing the penis sickness and virus.

(10 year old girl)



(8 year old girl)

(11 year old boy)

4.3.1 Physical symptoms of AIDS

All the learners in this sample knew that AIDS is something which affects the body. Some learners described the physical appearance of an AIDS sufferer. Some drew thin, sickly looking people while others drew people so ill that they have to remain in bed. Below are some examples of learners drawings showing the physical symptoms of AIDS.

(9 year old girl)

(9 year old girl)

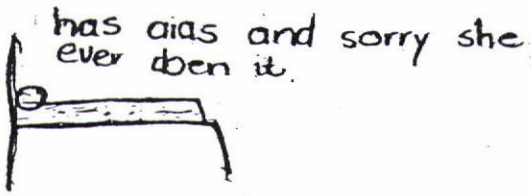
(8 year old girl)

4.3.2 Emotional symptoms of AIDS

Although there are not as many examples depicting the emotional symptoms of AIDS as there are of the causes, all the learners in this group knew that AIDS is something which brings sadness and many other painful emotions. One learner drew a women in tears because she has AIDS, knowing that she could eventually die. Another learner drew someone who is angry because she has AIDS and angry with the person who gave it to her. An awareness of the different emotions that someone who has AIDS can go through was evident from these drawings. Below are some examples of learners drawings about the emotional symptoms of AIDS.

(9 year old girl)

(10 year old girl)



(10 year old girl)

4.4 Transmission of HIV

There were a variety of responses about the transmission of HIV. Learners drawings ranged from unprotected sexual intercourse, having sex with too many people, paid sex without a condom, kissing, sharing needles, sharing blood, blood transfusions, smoking cigarettes, drinking wine, homosexuality and violent acts such as rape and kidnapping. However, even though learners quoted mostly accurate causes of AIDS, some had misconceptions and were confused about the transmission process. Below are some examples of the drawings learners did depicting their understanding of how HIV is transmitted.

(10 year old girl)

(10 year old boy)

4.4.1 Unprotected sexual intercourse

Unprotected sexual intercourse was often cited as being a cause of AIDS. When examining some of the drawings, it appeared that some learners had explicit knowledge of sex. One could speculate that some learners have had the opportunity to watch pornographic videos, have seen people have sex or have actually participated themselves. Below are some examples of learners' drawings and comments about unprotected sexual intercourse.

Someone who have aids and you make sex with that person you can also get it

(9 year old girl)

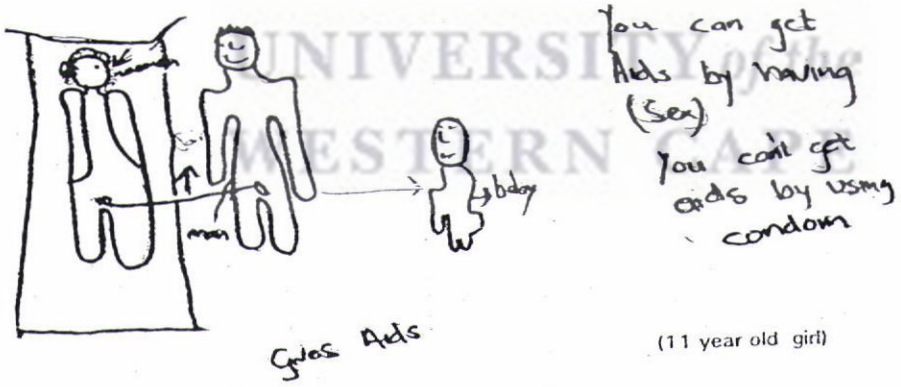
(9 year old girl)

(11 year old boy)

(10 year old boy)

4.4.2 Unprotected sexual intercourse, pregnancy and AIDS

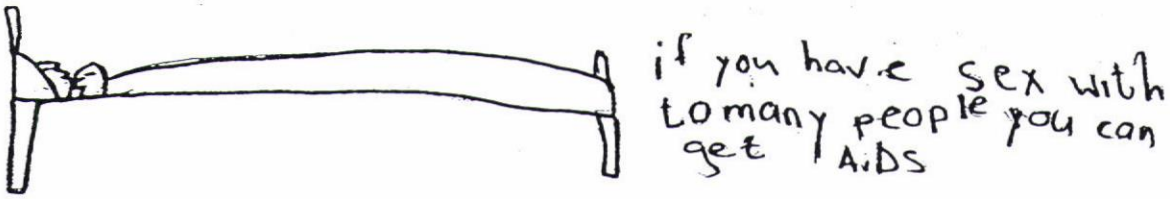
One of the participants drew the picture below showing a couple and a baby. This 11year old girl raised the issue of pregnancy as well as HIV infection as a result of unprotected sexual intercourse. She reported that using a condom would prevent both HIV infection and pregnancy. Below is an example of the drawings she made.



(11 year old girl)

4.4.3 Sex with too many people

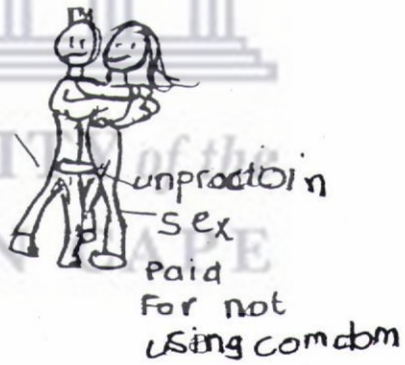
Although not frequently cited, sex with too many people was also given as a reason for HIV infection. The artist of the drawing below felt that if one has unprotected sex with too many people, HIV could spread fast among people.



(9 year old girl)

4.4.4 Commercial sex workers

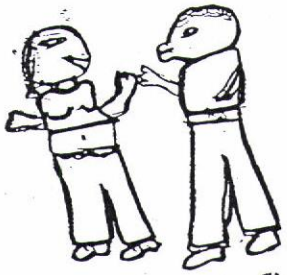
A 10 year old boy drew the picture below. He reported that some women get paid to have unprotected sex with men. He believes that commercial sex workers (prostitutes) are responsible for the spread of HIV. In the discussion, this boy reported accompanying his cousin when he goes looking for a sex worker to have sex with. We could speculate that this boy might have observed two people having sex.



(10 year old boy)

4.4.5 Kissing

Although learners mostly depicted quite accurate causes of AIDS, they also had some misconceptions about AIDS. Two learners drew pictures that reported kissing as a cause of AIDS. Some learners were not certain whether sharing saliva would result in HIV infection, and wanted clarity about this matter. During the discussion these facts were clarified for learners.



kissing and liking someone how have Aids

(10 year old girl)

I think kissing can also give you aids

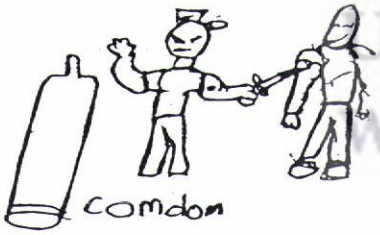
(11 year old girl)

French Kissing!!

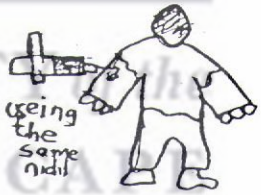
(10 year old girl)

4.4.6 Sharing needles

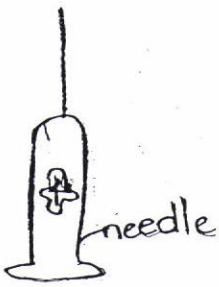
Many learners drew syringes and needles depicting them as a means of contracting HIV. Learners felt that by sharing needles HIV can be transmitted. Even though this information is accurate, learners do not appear to associate sharing needles with the drug culture which is mainly the aim of media messages. Below are some drawings showing needles.



(10 year old boy)

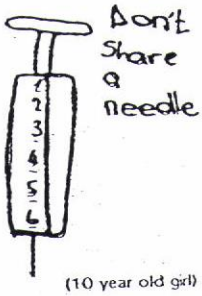


(10 year old boy)

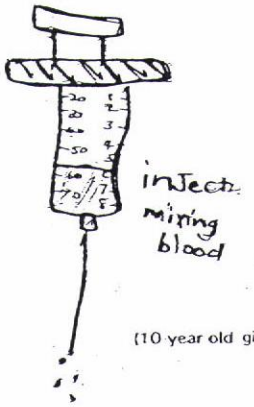


(10 year old girl)

(10 year old boy)



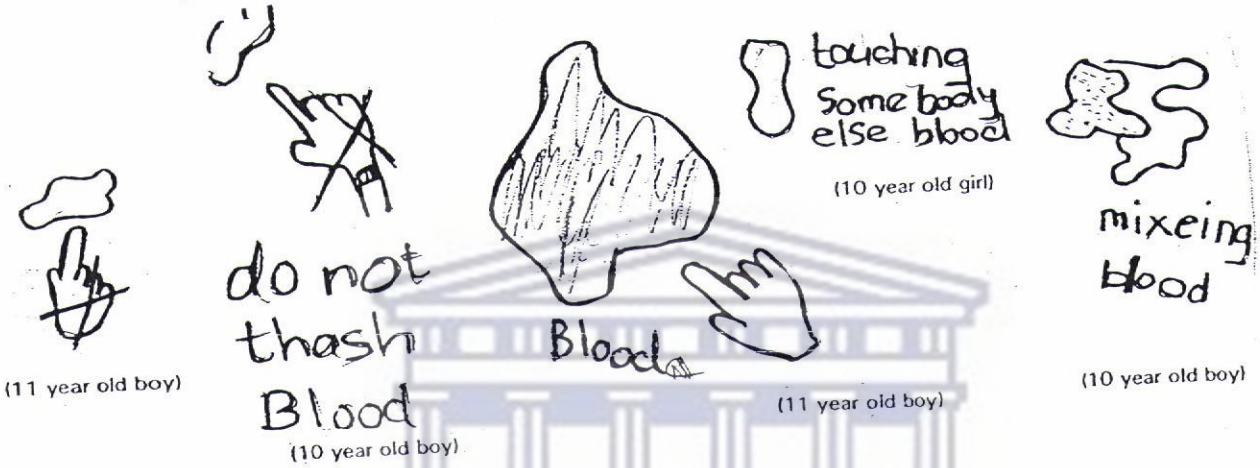
(10 year old girl)



(10 year old girl)

4.4.7 Touching blood

Most learners appeared to be aware that touching blood could be dangerous. Below are some examples of learners' drawings expressing their views on sharing blood.



(11 year old boy)

(10 year old boy)

(10 year old girl)

(11 year old boy)

(10 year old boy)

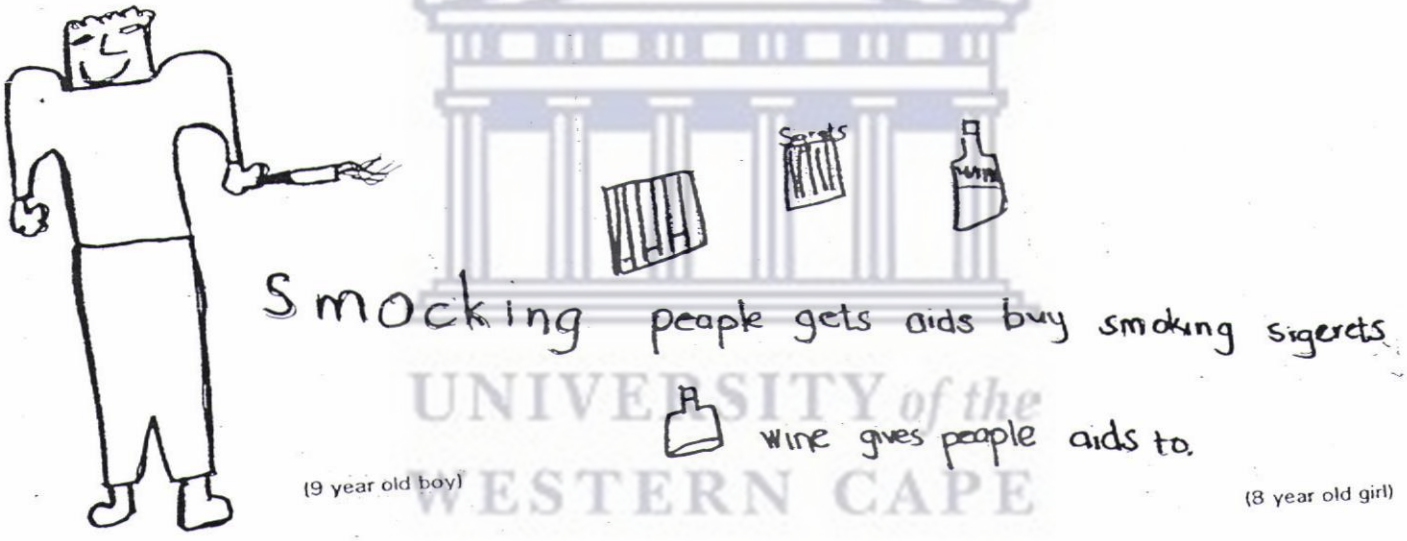
4.4.8 Blood transfusions

There were learners who reported that blood transfusions cause HIV infection. Below is a story about a women who has sex with someone she needed a blood transfusion from. She becomes HIV infected because she had unprotected sexual intercourse with this man. This is an example of how learners confuse HIV infection with blood transfusions.

(10 year old girl)

4.4.9 Smoking and Drinking

Some of the younger learners made reference to drinking wine and smoking cigarettes as being a cause of AIDS. Thus, an 8-year-old girl felt that drinking wine and smoking cigarettes caused AIDS. Another 9-year old boy reported smoking cigarettes as being a cause of AIDS. This is another example of the misconceptions that learners have about HIV infection. It appears that some learners associate AIDS with other behaviour that can be harmful.

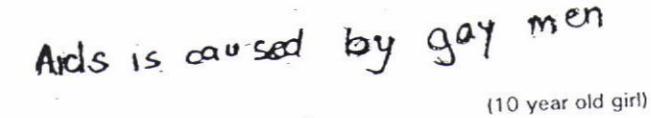


(9 year old boy)

(8 year old girl)

4.4.10 Homosexuality

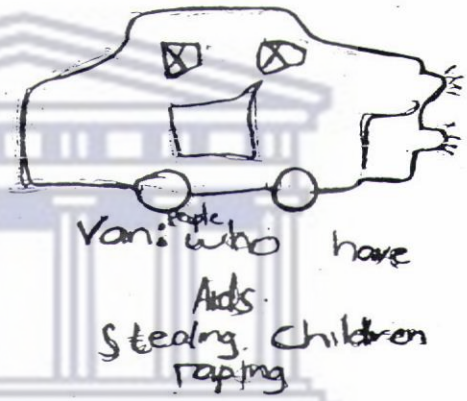
Only one learner made reference to gay men being the cause of AIDS. Although only one learner wrote homosexuals cause AIDS, during the follow-up discussion other learners (both boys and girls) seemed to agree that gay men are responsible for causing AIDS. One of the girls wanted to know whether HIV would be transmitted if two girls have sex. This is another example of a common misconception that learners have about AIDS.



(10 year old girl)

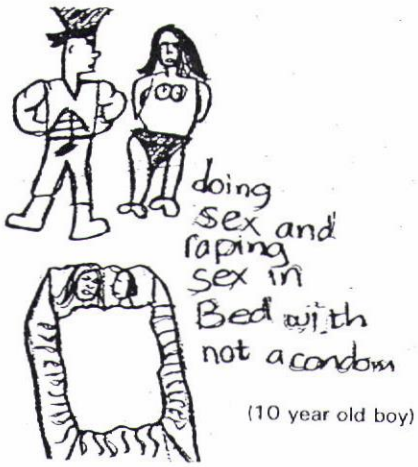
4.4.11 Violence: Kidnapping and Rape

A number of learners made reference to rape as a way of becoming infected with HIV. Below are some examples of learners drawing and written statements about rape. A 9-year-old girl did the drawing below. She drew a combi, which she said, *"drives around stealing children to rape and give them AIDS"*.

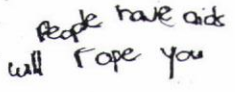


(9 year old girl)

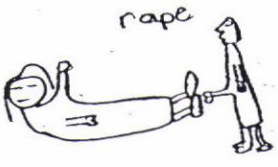
A 10-year-old boy drew the picture below. He said, *" Doing sex and raping sex in bed without a condom causes AIDS"*. This boy explained that if you get raped by someone who has AIDS then you can become HIV positive if you do not use a condom. In the follow-up discussion he clarified the difference between sex and rape and explained that in both instance if a condom is not used one can get AIDS.



(10 year old boy)

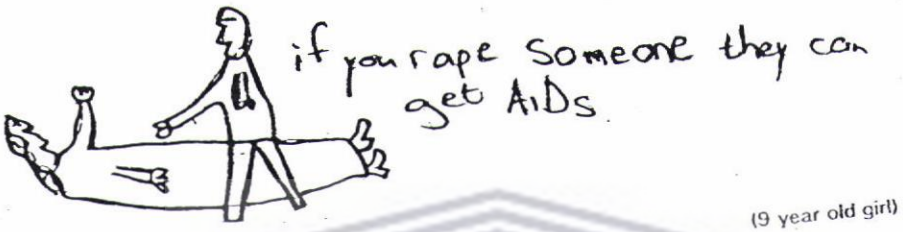


(9 year old girl)



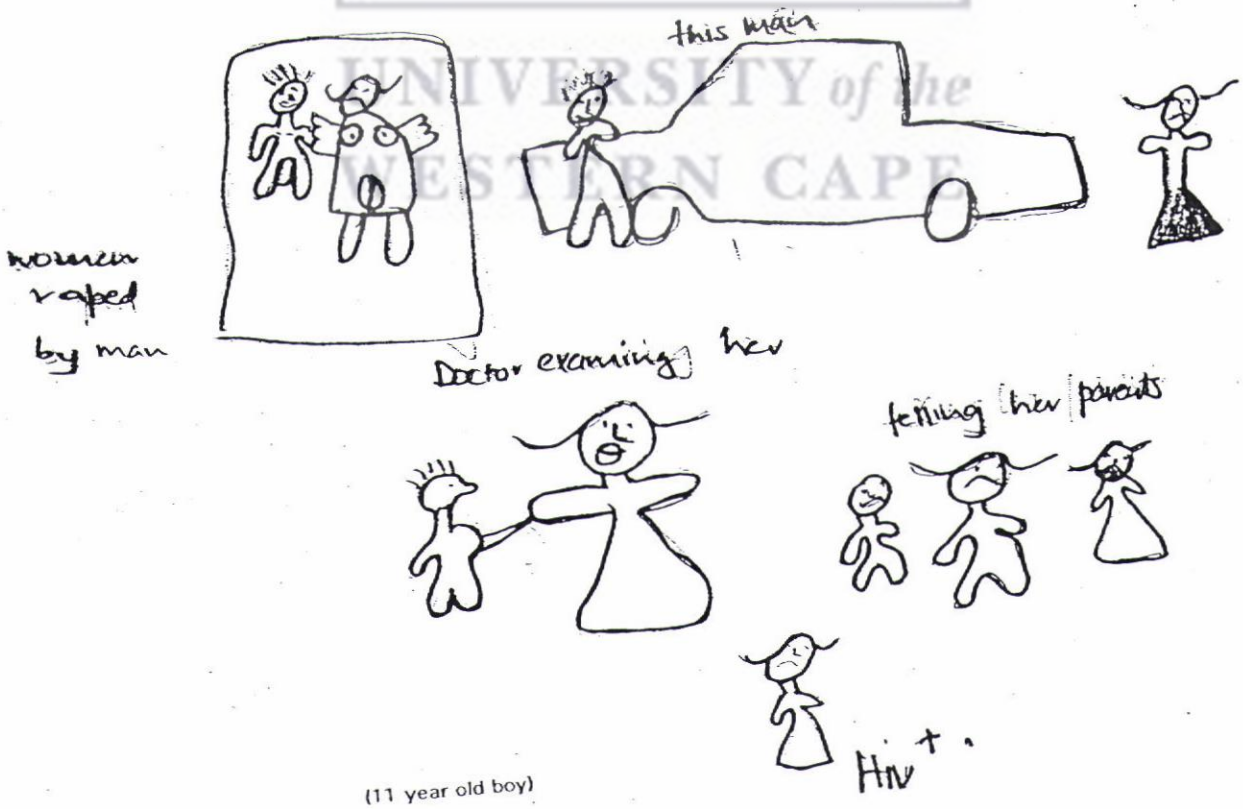
(9 year old girl)

A 9-year-old girl drew the pictures below. She drew a picture of a man about to rape women. She said, "*If you are raped by someone who has AIDS then you will get AIDS*".



(9 year old girl)

Below is a story of a woman who was raped by a man. She went to the doctor for a medical examination and discovered that she is HIV positive. Afterwards she went to tell her parents about her HIV status. The drawings were done by an 11 year old boy.



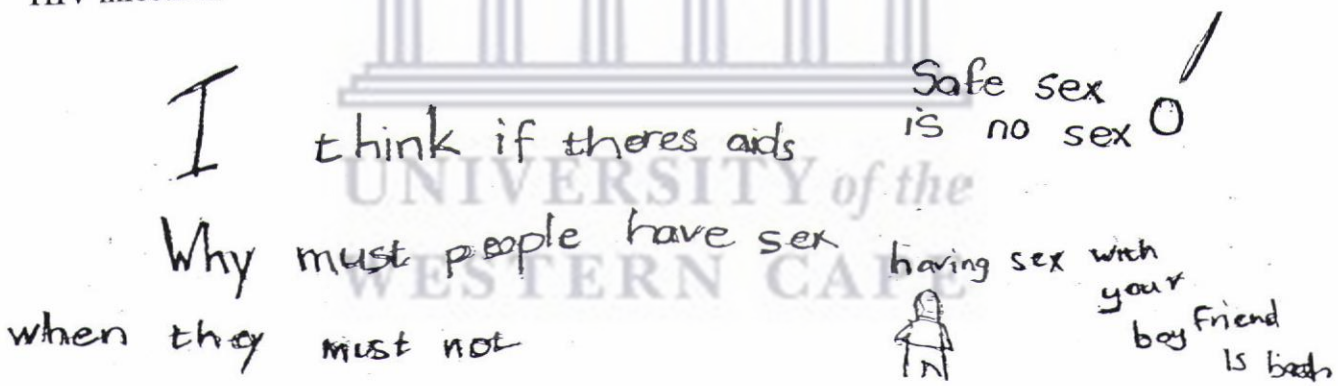
(11 year old boy)

4.5 Prevention of HIV infection

Several learners drew pictures and made statements about the different ways in which we can prevent contracting HIV. Others drew pictures demonstrating the correct use of a condom. Below are some examples of learners' drawings about the usefulness of condoms and their ideas about different ways in which to prevent HIV infection.

4.5.1 Abstain from sex

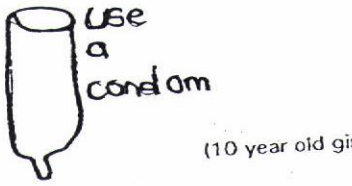
Some learners reported that abstaining from sexual intercourse is a good way to prevent HIV infection.



(10 year old girl)

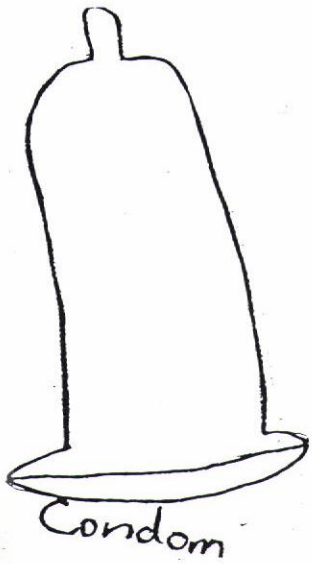
4.5.2 Use a condom

The most popular response was "*use a condom*". All learners agreed that by using a condom during sexual intercourse we could prevent HIV infection. Below are some pictures of demonstrating the correct use of the condom.



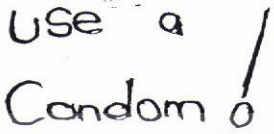
(10 year old girl)

(10 year old girl)

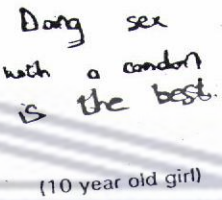


(11 year old boy)

(10 year old boy)



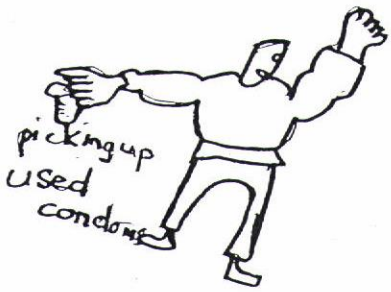
(10 year old girl)



(10 year old girl)

4.5.3 Place a used condom in the bin

Some learners indicated that you can get AIDS if you pick up a used condom therefore they should be thrown in the bin.



(10 year old boy)

(10 year old boy)

(10 year old boy)

(10 year old boy)

4.6 Treatment of HIV/AIDS

Although learners were asked about the causes of AIDS some provided ideas about treatment for people who are HIV positive. Some learners mentioned that taking medicine and leading a healthy lifestyle could help those who are infected with HIV. Another suggested that someone with AIDS needs an injection.

(10 year old girl) (10 year old girl)

4.7 Attitudes towards people with AIDS: Caring

During the follow-up discussion the matter of caring for people living with AIDS was raised. One learner drew a person who is HIV + who is disclosing his status to a friend. His friend responds by saying that he does not care. In the follow-up discussion this learner felt that often we do not care about people who have AIDS because we are afraid of them. She said that people are worried that they will get the virus. However this learner felt that we should care about people who are infected with HIV. All the learners felt that friends, family and the community should support people who have AIDS.

(9 year old girl)

(10 year old girl)

4.8 Consequences of AIDS: Death and Dying

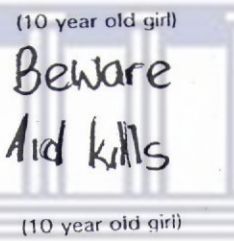
All the participants knew that AIDS leads to eventual death. Below are some drawings of learners depicting the consequences of AIDS. One learner reported that if you are raped by an AIDS infected person you could eventually die.

(10 year old boy)

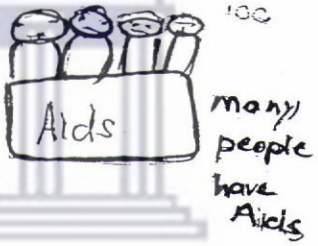
(10 year old girl)

(9 year old girl)

(10 year old boy)



(10 year old girl)



(10 year old girl)

4.9 Summary

The results of this study indicate that the children in this study are aware of AIDS, from a young age. All 18 learners participating in this study had some knowledge of AIDS. The Draw-and-Write investigation was successful in eliciting learners understanding of the main causes of AIDS. All the learners were able to draw, write and describe quite accurately their understanding of the causes of AIDS. One of the main themes emerging was around the transmission of AIDS. The most frequently cited examples were about unprotected sexual intercourse. Sex with multiple partners and sex with commercial sex

workers were other examples that learners expressed in their drawings. In addition some learners appeared to have exposure to sexual intercourse. It is possible that some might have either watched or participated in sex as they drew quite explicit pictures. Others displayed familiarity with sexual abuse, which was quoted by both girls and boys as a cause of AIDS. Some even reported that being raped by an HIV infected person could lead to infection.

Sharing needles and mixing blood were other popular examples reported by learners. Although learners knew correct means of transmission they also had some misconceptions about HIV transmission. Thus some learners reported kissing, smoking cigarettes and drinking wine as ways of contracting HIV. These misconceptions indicate that some learners' knowledge about how the disease is spread are incorrect.

Another important theme that emerged in this study was the different ways in which HIV infection can be prevented. Most learners' felt that using a condom could prevent HIV infection. A few believed that abstaining from sex was the best protection against HIV infection. Some felt strongly that used condoms should be thrown in a bin in order to prevent HIV infection. Most learners appeared to be aware of the importance of taking steps towards preventing HIV infection.

The treatment and care of HIV infected people was another theme which emerged in this study. Some learners' felt that taking medication and leading a healthy lifestyle might help an HIV infected person. They also believed that families and the broader

community should be supportive and provide care for infected persons. All the learners were aware of the fact that there is no cure for AIDS and that it would lead to eventual death. Although learners did not express their fears verbally some of the slogans and drawings indicate their concern about AIDS. The final theme that emerged from this study was about the consequences of AIDS. The participants were very positive in their attitudes towards people who are affected.

CHAPTER 5

DISCUSSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a discussion of the main findings of the Draw-and-Write investigation reflected in the previous chapter. The main themes that emerged are summarised and a few recommendations for AIDS curriculum for primary schools are included. There is also a summary of the usefulness of the Draw-and-Write technique as a research instrument for qualitative research with children. Some of the limitations of this study as well as suggestions for future research are discussed.

5.2 Summary of results from the Draw-and-Write investigation

This study aimed to explore the perceptions of AIDS amongst a small sample of intermediary phase learners from a selected primary school in Bellville. The overall result of this study showed that the all 18 participants from as young as 8 years have knowledge of HIV and AIDS. The results of learners knowledge of AIDS in this study was reflected in 5 major themes that emerged, namely, the transmission of HIV, prevention of HIV, treatment, care of HIV infected people and consequences of HIV infection.

One of the main themes that emerged was the varied knowledge learners' had of the different ways in which HIV can be transmitted. Participants mostly made reference to

unprotected sexual intercourse as a main cause of HIV infection. Reports of unprotected sexual intercourse as one of the main routes of HIV infection has been reported in various other studies undertaken with primary schools. Thus, in a study by Quadagno et al. (1997), 42,8% of learners knew that unprotected sex could lead to HIV infection. The results of a study undertaken by Brown et al. (1990) indicated that one of the modes of transmission learners were most knowledgeable about was contracting HIV through unprotected sexual intercourse. The results of this study indicate that learners' knowledge of unprotected sexual intercourse as a main cause of HIV infection appears to be at a similar level to that of learners in other countries. Some learners also knew that having unprotected sex with multiple partners could increase the risk of HIV infection. Avoiding multiple sex partners was reported in the results of another South African study by Taylor et al. (1999) in which 53% of learners agreed that HIV infection can be avoided by having one sex partner. It is evident that some learners are aware of the dangers of having unprotected sex with many people.

There was also mention of unwanted pregnancy as a result of unprotected sex in addition to HIV infection. The concern about pregnancy and the desire to learn more about family planning emerged in a study by Peltzer and Likwa (1991) in which learners views of AIDS and sexuality were investigated. The results of this study undertaken in Zambia used a wider age range of primary school learners than in this study. Nonetheless it appears that primary school learners in other African countries share the same concerns. It was interesting to learn that some learners knew about commercial sex workers whom

they also related to unprotected sex and HIV infection. One of the boys in this study had a story that he proudly told about male relatives who went to women who sell sex for money. The same boys also shared the incorrect belief that commercial sex workers are mainly responsible for causing AIDS. It is important for teachers to challenge these attitudes and to help learners see sex as part of a mutual, caring and respectful relationship (Vergnani & Frank, 1998). Commercial sex workers were not referred to in the other studies reviewed in chapter 2. We can speculate that this issue might be unique to the context of the lives of these learners. While teaching life skills in schools teachers need to address issues which are particular to the context of the learners. The stereotypical notion that sex workers cause AIDS is another issue which can be addressed by an effective and comprehensive AIDS education programme.

One learner suggested that gay men cause AIDS. This is a common stereotype that emerged in the 1980's when the AIDS epidemic appeared amongst gay men in the United States. Learners' opinions are also shaped by the misinformation and stereotypes about homosexuality in their communities. In the other studies reviewed there was no emphasis placed on homosexuality being a cause of AIDS. Teaching learners to respect differences in people is another important aspect of life-skills education that must be included in the curriculum. A girl in one of the groups asked *'can you get AIDS if two women have sex?.'* Once again there is evidence to support learners eagerness to learn the correct facts about AIDS. This topic also provides an opportunity for teachers to challenge gender stereotypes which learners might hold (Vergnani & Frank, 1998).

Many learners perceived rape as another means of HIV infection, that was not a significant theme in the international and other African literature. This example is evidence of the nature of the social issues which learners are possibly confronted with in their communities and reflects the challenges facing South African children. Current statistics indicate that in South Africa one in four girls and one in seven boys are sexually abused before the age of eighteen in this country (Vergnani & Frank, 1998).

One learner made reference to kidnapping and raping of children by people with AIDS. This example appears to reflect learners' fears about abuse and AIDS. This example indicates fears that could be related to the recent spate of child abduction in the Kuilsriver* area. Although learners did not say that they are afraid of getting AIDS, these examples reflect their fears and concerns for their own safety and wellbeing. South Africa is known to have very high incidence of rape, child abuse and domestic violence. A girl in one of the groups said, *"AIDS is caused by fathers who sexually abuse their daughters"*. This theme highlights the importance and relevance of addressing the issues of child sexual abuse and incest in the life skills curriculum for primary schools. The HIV/AIDS progamme which the Western Cape education department has proposed for inclusion into the curriculum for primary schools includes topics such as pregnancy, sexual abuse, violence and gender equality (Department of Education, 2000).

* The learners who participated in this study live near Kuilsriver.

Given the horrifying incidence of rape in South Africa, it is important that teachers address gender and power issues related to sexuality, also including that boys learn that sex and sexuality are not about asserting power and getting women to do what the man wants (Vergnani & Frank, 1998). This study also indicates that many learners are obviously worried about rape. This issue needs to be dealt with at school level in the life-skills classes.

Sharing needles and blood infected with HIV was another popular example that learners quoted as a way in which HIV could be transmitted. Learners did not talk about sharing needles in terms of taking medication or intravenous drugs, therefore suggesting that they know the facts about needles but not necessarily the activities it is associated with. Once again it must be emphasized that these are the kinds of issues which learners need clarity on. Another study with primary school learners in which sharing needles appeared to be a common example was a study by Brown et al. (1990). In this study learners were reported to be most knowledgeable about sharing needles and sexual intercourse. In some instances learners made reference to 'touching blood' as a way of contracting HIV. These examples indicate that learners know that there is an association between blood and HIV, but they are not sure about how exactly HIV is transmitted. One learner said, " *my granny knows someone who has AIDS. She said that she knows a women who touched the AIDS person's blood now she also has AIDS* ". These kinds of misconceptions tend to create anxiety in young learners who do not understand the disease process. In another South African study undertaken by Taylor et al. (1999) 35%

of respondents reported that touching blood can lead to HIV infection. These findings suggest that '*contracting HIV by touching an infected person*' might be a common misconception amongst learners in this age group. This issue can be addressed in the life skills programme by demonstrating to learners using visual aids how transmission takes place.

In this study a few learners reported French kissing as a possible cause of HIV transmission. One learner's accompanying statement said '*I think kissing causes AIDS*'. Her statement reflects that she is not quite sure about it. Some learners in this group wanted clarity about whether HIV could be transmitted through sharing saliva. This appeared to be an important issue for these learners. This example was also evident in a study by Brown et al. (1990) in which kissing was reported by respondents as a means of HIV infection. The importance of AIDS education is highlighted as learners show an eagerness to learn the facts about HIV transmission, particularly with regard to issues that affect their lives.

Other incorrect examples they quoted were smoking cigarettes and drinking wine, other common substances known to be harmful to our wellbeing. Another common misunderstanding amongst learners was the belief that blood transfusions cause AIDS. This appears to be a common misunderstanding amongst primary school learners found in another study undertaken by Fassler et al. (1990) in which learners quoted donating blood as a cause of AIDS.

Learners appear to have high levels of knowledge about AIDS and its causes, but where gaps do exist it is mainly around their understanding of how the disease is transmitted. This is consistent with other research findings in which misconceptions were noted among learners. Kistner et al. (1997) found that even 5th grade learners had certain misconceptions. Learners in that study reported low-risk bodily fluids that are transmitted from coughing, sneezing and sharing eating utensils cause HIV infection. Various authors explain these misconceptions in terms of learners' cognitive ability and developmental phase.

Osborne et al. (1993) states that young learners might have a limited ability to comprehend illness transmission. These authors recommend that learners could benefit more from curricula that decrease their fears without presenting overly complex information. Kistner et al. (1997) report that children's knowledge about AIDS increases with age. This is substantiated by Walsh and Bibace (1991) who report that learners' understanding of AIDS reflect their cognitive development. In this study it was difficult to investigate the age-related differences in knowledge because of the small number of learners and the unequal distribution of age. However the results of the study indicate broad similarities to other surveys done with primary schools learners in terms of their knowledge and understanding of AIDS.

The results of this study showed that although the developmental level of the learner influences a learners ability to learn, the social and cultural context too plays a significant

role in how knowledge is constructed. There are themes arising from this investigation that reflect that learners have knowledge that might extend beyond what one would normally expect of this age group. Some learners appeared to have explicit knowledge of sexual intercourse. This could mean that the media messages (usually aimed at an older population) are reaching this group but also that they are being exposed to sexual activities at an early age. Their reference to rape implies that this could be an important issue. These findings could be useful for teachers in informing their classroom practices. The Draw-and-Write technique is a simple method that can be used by teachers in order to explore what learners already know about AIDS. This exercise also creates the opportunity for teachers to clarify the misconceptions that learners might have about AIDS. The follow-up discussion used in combination with the Draw-and-Write technique offers learners the opportunity to ask their own questions about AIDS. Teachers could use learners' questions to plan their lessons around AIDS and sexuality education for individual groups of learners. Given that learners' knowledge is also influenced by cultural, economic and social factors, by doing the Draw-and-Write exercise the specific needs of learners can be assessed and met by individual schools. Feedback from teachers could assist programme developers construct a relevant AIDS programme that can clarify important issues for this age group. Providing correct information to learners in primary school with regard to HIV/AIDS has been confirmed by the Department of Education and would be included in the guidelines for educators for 2001-2005 (Department of Education, 2000).

The *'usefulness of the condom'* in the prevention of HIV was a significant theme that emerged in the study. There were numerous drawings of condoms. Some learners drew pictures demonstrating the correct use of a condom. Given this high level of awareness about condoms, one might speculate that media messages that are usually aimed at adults and adolescents are reaching this age group too. Another themes arising under the theme of HIV prevention was abstaining from sexual intercourse which some learners felt very strongly about. In a study by Taylor et al. (1999) 53% of learners felt that AIDS could be prevented by avoiding sex. Given that one of the main aims of introducing sexuality and AIDS education at primary school level is to delay the onset of sex for pre-adolescents, it is encouraging to note that some learners are aware of the advantages of delaying sex.

Some learners knew that used condoms must be thrown in the bin in order to prevent others from becoming infected. Although it is not entirely true that one can become infected with HIV by just touching infected semen, these young learners' awareness of hygiene, creating a cleaner and safer environment for everyone is remarkable. Learners appear to know that HIV can be transmitted through infected semen, but they do not fully understand how this process takes place. Their knowledge about the transmission of HIV through blood and semen appears to be incomplete. These learners can definitely benefit from learning about AIDS education in their school in order to help them understand how AIDS is transmitted and address their fears about AIDS.

The treatment of HIV and AIDS was a theme highlighted by a smaller number of learners. Some learners suggested that taking injections and medication could help treat a patient. They appeared to be aware that there is no known cure for AIDS and that treatment could help to prolong somebody's life. Leading a healthy life style was also regarded as being good for an AIDS sufferer. Learners did not elaborate much on this area as the discussion focused more on causes and prevention of AIDS. Once again this was an indication that the respondents were aware of the consequences of this illness.

Caring for HIV or AIDS sufferers emerged as another very important theme in this study. Although learners were concerned about whether one could contract HIV through kissing and touching, they felt that people affected by this illness should be cared for. They were aware of the prejudices that AIDS infected people have to contend with. Some learners shared the view that communities need to be supportive of HIV infected people because some said *'those people did not ask to get ill'*. By realizing that we should not blame those who are affected by AIDS some learners displayed a mature understanding. One of the tasks facing teachers in South Africa is to promote tolerance and empathy for those affected by HIV. In this sample learners most displayed empathic understanding of the situation that AIDS sufferer face despite their own fears. Given the escalation of HIV infection in South Africa, it is imperative that learners are equipped with information and skills in order to learn how to cope with the different ways in which HIV/AIDS affects them. The development of attitudes of non-discrimination is included in the new draft learning programme for primary schools life skills and HIV/AIDS education (Department

of Health and Education, 1997, 1998). Encouraging learners to welcome in their classroom a fellow learner who is affected or whose parents have died, or are living with AIDS will be included in the curriculum. Learning how to care for a family member affected by AIDS or a neighbour living with AIDS are other issues that will be addressed by the new curriculum (Department of Health and Education, 1997, 1998). Working together with the parents might also facilitate the change of attitudes and combat discrimination and prejudice especially since many communities in South Africa discriminate against, isolate and avoid people with AIDS (Vergnani & Frank, 1998).

Other studies investigating the attitudes of learners towards AIDS infected people suggest that learners willingness to interact with other infected by HIV increases with age and increased accurate knowledge about AIDS (Osborne et al., 1992). The results might suggest that the learners in this sample have enough accurate knowledge about AIDS to not fear interaction and this is encouraging. Contracting HIV was perceived as a serious threat for 96% of learners in a study undertaken in Tanzania (Ndeki et al., 1994). These results were different from the findings in a South African study undertaken by Taylor et al. (1999) in which 73% of learners did not think they were at risk of getting AIDS. The respondents of Tanzanian study were exposed to HIV and AIDS in their community. These research findings might suggest that exposure daily to the consequences of AIDS might influence their level of knowledge and behaviour.

A final theme that emerged in the study was the consequences of AIDS. There was no doubt amongst learners that the result of having AIDS would be death. All the respondents in this study were aware that someone with AIDS would suffer a great deal before dying. Some had heard stories about people in the community who have died of AIDS. *'Beware of AIDS' and 'AIDS kills'* are some of the slogans which accompanied learners drawings of the AIDS ribbon. With the growing HIV infection rate in South Africa by the year 2005 there are expected to be around 800 000 orphans under the age of 15 (Abt production, 2000). Absenteeism among children who are care-givers or heads of households, those who help to supplement family income, and those who are ill, is bound to rise (Coombe, 2000). In planning appropriate education programmes for schools educators need to teach skills which will equip learners to cope with the imminent increase in the HIV infection and AIDS death rate in communities. In the new life skills and HIV/AIDS Education programme planned by the Education department for intermediary phase learners topics such as coping with grief, dying and death, caring at home for someone who is ill, how to do the shopping and how to cope with death in the family have been included in order to prepare learners to cope with the AIDS crisis we currently face (Swart, K, 1997, 1998).

The influence of media messages on learners' knowledge was evident in some of the themes which emerged in this study. Learners reported having access to various sources of media information such as television, radio and the Internet. A study undertaken in the United States found that learners gain information about AIDS from media messages

aimed at older people (Sly et al., 1990). The authors state that although learners are able to understand some of it they often cannot integrate some of the information. Some of the misconceptions that learners showed with in this study could possibly be as a result of a lack of a complete understanding about the transmission of AIDS due to their age, developmental level and access to information. However they also had significant correct information about AIDS. Learners also appear to be gaining information from sources other than the media like friends, family and in the community. These findings suggest the need for more age appropriate information about AIDS to be made available by the education system, the media and families.

Knowledge about AIDS in another South African study indicated that only 15% of primary school learners were aware that AIDS is a disease (Taylor et al.,1999). These findings were unlike a study done in the United States in which 81% of learners knew that AIDS is a disease (Quadagno et al., 1997). Learners' knowledge about AIDS in primary schools globally appears to be uneven. Although they appear to already know some facts about AIDS, this study as well as others suggest that learners' knowledge about AIDS is not complete in all areas. In this study learners also expressed a need to learn more about AIDS. In the detailed analysis of the various themes which learners focused on in this study, their level of understanding about AIDS emerged, together with the gaps in their knowledge and their questions about AIDS. These findings highlight the importance of introducing AIDS education in South African primary schools.

From the data collected in this study there was no significant evidence of difference in the level of knowledge between boys and girls. There was however, evidence of differing attitudes towards the causes of AIDS by boys and girls. Although both boys and girls agreed that one of the main ways in which HIV is transmitted is when men do not wear condoms, only boys mentioned that commercial sex workers are responsible for the spread of AIDS. Some of the boys were more outspoken than the girls and at times wanted to dominate the discussion. It appeared as if the girls were not as comfortable and confident as the boys about sharing their views on AIDS. In a study undertaken by Hoppe et al. (1995) there was evidence that dealing with sexual topics in a focus group tended to dampen discussion with boys and girls together. A Tanzanian study also showed that girls had different attitudes towards sex than boys. Ndeki et al. (1994) reported that girls possibly underreport their sexual attitudes and activities because it is not socially acceptable for them to engage in this behaviour. This could possibly also have been the case in this study. Therefore in future it might be better to have separate discussions with boys and girls, in addition to joint group discussions. At the same time boys and girls should learn about each other's development and opinions, therefore, it is advisable to also have mixed classes in which the teachers can address other relevant issues (Vergnani & Frank, 1998). Issues such as values and gender roles should be addressed in mixed gender classes where both boys and girls should be encouraged to share ideas and to challenge each other's views (Vergnani & Frank, 1998).

In addition to teaching the facts about AIDS, teachers are also faced with the responsibility of teaching skills for life. Learners in the intermediary phase in particular are going through physical, emotional and social adjustment as they approach puberty. It is important for them to learn about and understand the changes that accompany puberty (Vergnani & Frank, 1998). Lessons which explore their feelings and attitudes, and that start to develop the skills needed to build lasting relationships, resist peer pressure and make wise decisions could be included in their learning programme (Vergnani & Frank, 1998). Sexual abuse for instance is a theme that occurred frequently in this study. Thus, by teaching learners about abuse in the context of values, that is, of what is right and wrong in order for learners to understand that sexual abuse is always wrong and it is a misuse of power (Vergnani & Frank, 1998). Thus, an integrated AIDS education programme which encourages positive values, a healthy sexuality, respect for self and others need to be included in classroom practice

5.3 Limitations of study

The main aim of this study was to gain a better understanding of intermediary phase learners knowledge about AIDS and its causes. Although the investigation was not exhaustive the aims were achieved to some extent. The main limitation of the study was the small sample drawn from only one primary school thus not giving more learners the opportunity to share their views on AIDS. In terms of reliability it might not be possible to repeat the study at another school and produce the same results. Therefore the results of this study cannot be generalised with learners from other schools. The validity of the

results of this study could have been influenced by my limited experience in undertaking research, such as my ability to facilitate a group, to encourage discussion and record the data, interpret the data and select the relevant themes.

Both the Draw-and-Write sessions were not recorded on tape. I took notes during the session and wrote extensive notes after both the sessions. It is possible that some of the dialogue was not recorded. This could have resulted in some of the subtleties of the session being lost. However the main themes from these sessions were documented afterwards. Given my limited experience in the area of research, it is possible that I might have missed certain nuances that a more experienced researcher might have picked up on. However, using a tape recorder could on the other hand have inhibited honest discussion and compromised learners feelings that confidentiality was maintained.

Learners might also not have trusted me completely because of my status as an adult, my race and gender. Learners perceive adults as having more power and authority over them. The power relations between minors and adults might have been influenced the extent to which learners opened up, especially since the discussion about AIDS inevitably touched on sexual intercourse which is a sensitive topic. How learners perceived the task would have had a significant influence on what and how much they chose to share. Some might have been compliant, and wanted to please me by giving correct answers whilst other might be cautious and afraid of being exposed. It was noted that boys and girls had different status in the group resulting in some girls not being as outspoken as the boys

who wanted to dominate the discussion. Possibly separate groups for boys and girls in addition to the mixed group discussions could lead to both genders being more comfortable to share their thoughts and feelings.

The researcher being of eastern descent might have influenced the level of comfort learners felt and their willingness to trust. Being female too might have been comforting for some, but an inhibiting factor for others who might have felt embarrassed by the topic.

The initial pilot study was undertaken in a Xhosa-medium school with the assistance of an interpreter. During the session it was difficult to record all the data because of the language difference. During the session my inability to understand everything said in Xhosa as well as my difficulty to communicate fluently with the participants affected the quality of the data. Although the learners in this sample participated in the Draw-and-Write exercise they were not completely comfortable with the use of drawings to express their ideas about AIDS. The exercise felt unfamiliar (almost abstract) for them. The interpreter reported that learners in the township schools were not exposed to drawing as much as learners from the suburban schools. Given this problem I decided to do the main study at an English or Afrikaans medium school.

The time allocated for both the groups of the main study may have been another factor that limited the range and nature of the data collected. Learners from both groups relaxed

more as the session progressed and tended to talk more at the end. A longer discussion time would be useful in order to give the participants the opportunity to share more information.

A final factor influencing the results of this study is the difficulty with making any assumptions about age related differences because of the uneven age distribution in the sample. Learners were randomly selected from the class lists according to gender and grade. I ensured that learners older than 12 years were not included in this sample. However I did not ensure that there were equal age distributions amongst the selected respondents. In the analysis of the data broader trends emerging as well as gender differences were explored.

The data that the learners produced in the main study cannot simply be interpreted as a reflection of their own inner worlds. Knowledge is produced within the social and cultural context that also needs to be understood. In this study some of the themes that emerge indicate certain social realities particular to this context.

5.4 The Draw-and-Write technique

This method of research has become increasingly popular in health education research with children (Backett-Milburn & McKie, 1999). For this study the Draw-and-Write technique was adapted to explore learners perceptions of AIDS. This technique proved to be a very useful instrument that encouraged learners to get talking about a sensitive issue

in a very informal way. The Draw-and-Write technique was a good ice-breaker to use for introducing discussions about learners perceptions about the causes of AIDS. It is an easy technique to administer to a group of learners provided the instructions are simple and clear.

Learners appeared pleased that the exercise involved drawing rather that writing or doing a questions and answers session like the usual classroom lesson. The informality of the session appealed to them and in the second session learners sat on the floor scattered across the room.

This research instrument was successful in eliciting both learners understanding of AIDS and its causes. It was also possible to tap into the gaps in their understanding about AIDS. The data generated from this study has been informative and can be used to gain better insight into learners experiences, and what they are thinking and feeling about AIDS. Given the power relations that exist between adults and minors, the informality of the Draw-and-Write technique was able to bridge a gap that just talking and writing might not have.

The Draw-and-Write technique is an instrument which teachers can easily adapt for use in the classroom. Teachers could use the Draw-and Write in order to establish learners' baseline knowledge about AIDS and other relevant issues. Any misconceptions which learners might have can easily be elicited using the technique. The follow-up discussion

can also be used to give learners the opportunity to share their opinions and ask questions. By knowing what learners want to learn can help teachers plan their lessons. Given the diverse backgrounds and needs of South African learners using the Draw-and-Write would enable individual schools and teachers the opportunity to establish learners baseline knowledge about a variety of subjects. In this way teachers can adapt their teaching according to learners needs which together with the curriculum guidelines by the department of education could provide a comprehensive life skills and AIDS education for intermediary phase learners.

5.5 Recommendations for classroom practice and future research

There are limited studies available both internationally and locally which explore the perceptions of AIDS amongst primary school learners. Further investigation in this area in South Africa would contribute to our understanding of pre-adolescents and inform our education practices. The Draw-and-Write technique has proved to be an appropriate method for eliciting learner's views on AIDS in this study. It has demonstrated that very useful data can be gained from learners using this technique. Implications for classroom practice and further research are described below.

The Draw-and-Write technique offers an opportunity for learners to express their ideas about a variety of health related topics. In the classroom teachers can use this method to learn more about learners knowledge about AIDS and other relevant issues. Thus, individual schools can adapt their teaching according to the needs of learners using the

Draw-and-Write technique to assess perceptions, knowledge and even misconceptions about AIDS and other issues.

In the development of appropriate educational programmes for primary schools educators need to recognise the challenges learners face and address their needs. From the data it appears that learners understand a considerable amount about AIDS transmission, AIDS prevention, treatment, care and the consequences thereof. In this study the results suggest that some learners have extensive sexual knowledge possibly gained through inappropriate watching of sexual activities. There were also drawings of rape and child abuse. Topics such as rape and sexual harassment are included in the proposed life skills curriculum for grades 6 and 7 (AM Educational Consultants, 2000). Given the high level of knowledge learners appear to have in this area, it might be necessary for schools to be more flexible in their teaching approach, therefore including certain areas of life skills education in earlier grades according to the existing level of knowledge of the learners.

In this way learners' actual day to day concerns would more likely be addressed. The findings of this research suggests that learners from the age of 8 years already have quite extensive knowledge of AIDS, its causes and consequences.

The serious nature of some of the issues that emerged in this study encourages the review of traditional approaches to school-based interventions. In order to address the issues that affect learners, intervention needs to extend beyond the classroom. Change should occur

at multiple levels with interventions being directed not only on the individual, but interventions should also be directed at the classroom, school, family and community (Johnson, 1997). The fact that some learners possibly have access to pornographic materials and others are visiting commercial sex workers with relatives suggests that there might be a lack of parental protection and guidance. This points to the fact that parents need to become more involved in their children's education and safety particularly since AIDS affects everyone in the community. Parents should be regarded as important role players in our fight against AIDS. Therefore schools should collaborate with parents in order to establish what challenges individual learners, families and communities face with regard to AIDS. Hosting AIDS programmes at schools for entire families could result in improved communication between learners, parents and teachers. Thus, community networks could also be strengthened in the fight against AIDS.

Further research is also needed across different social and cultural groups as there are variables other than the developmental level of the learner that affect knowledge. Some of the factors known to influence the construction of knowledge are language, culture, race, gender and socio-economic status. In this study the differences between the researcher and the respondent influenced the research process and this is a matter which researchers need to be sensitive to. In reviewing some of the themes that emerged from this study, it was also apparent that learners face particular challenges such as violence and abuse.

From the data generated in this study it was apparent that the media is an important source of information for young learners. Some of the emerging themes revealed that some of the information known to learners might have been gained through the mass media. Given that most media messages are mainly been aimed at adults and teenagers, it is possible that some of their confusion and misunderstandings learners have about AIDS could be related to them not being able to fully understand the messages aimed at adults. Educators should consider working with journalists in developing messages that are appropriate and aimed specifically at pre-adolescents. At the same time we must not assume that all learners have equal access to media information once again highlighting the need for AIDS education to become part of the curriculum for all primary schools.

5.6 Conclusion

The present study investigated the perceptions of AIDS amongst a selected sample of intermediary phase learners from a school in Bellville. This study identified themes which elicited learners understanding of AIDS, the gaps in their knowledge and the challenges they face within their own social context. It is hoped that this study highlighted the importance of AIDS education in providing learners with correct information, addressing their misconceptions, and influencing healthy sexuality and a respect for others. Given the rising incidence of HIV infection amongst teenagers in South Africa, introducing AIDS education at primary school level, encouraging healthy sexual behaviour and instilling positive values might be successful in curbing this epidemic.

The Draw-and-Write technique has proved to be appropriate for eliciting learner's views on AIDS. It has also demonstrated that quality data can be collected from learners using this technique. Many of the learners reported enjoying the drawing and writing. This method enabled learners an opportunity to express ideas, which they might not have reported in words. It has illustrated that intermediary phase learners perceive AIDS to be a serious illness, which leads to eventual death. Learners have quite accurate knowledge about the causes and consequences and also how to prevent AIDS. Learners' misconceptions about how AIDS is transmitted was also highlighted quite effectively. The Draw-and-Write technique can be utilised by teachers in the classroom for establishing what learners know about AIDS and other relevant issues. Thus, schools can adapt the life skills curriculum to suit the individual needs of schools and communities.

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APPENDIX 1

The Draw-and-Write investigation technique

Appendix 1

The Draw-and-Write investigation technique

How to organise the Draw-and Write activity.

Introduction

- ***Q1.*** Ask learners to think about all the things that come to mind when they think about AIDS.
- ***Q2.*** Ask learners to think of all the ways in which someone can get AIDS.
- Ask the learners to draw pictures of all the things that come to mind when they think of AIDS. They are to draw as many of these pictures as they can on one side of a page.
- Ask then to write (or dictate to you) a caption to accompany each picture.
- Only if there is time after they have finished drawing and writing can they colour their pictures.

Timing

- The activity should be completed in one session. This can vary from 20-30 minutes depending on the age of the class.

Secrecy

- To ensure the accuracy of the results, it is important that what the learners produce is, as far as possible, their own unaided work. This is why you should prevent them from sharing ideas. One way of explaining this is to tell them that what they are doing is a

secret activity, and if they need to ask for help, they should whisper to you so no one else hears. You can tell older learners they are taking part in a survey.

Spelling

- If undue emphasis is placed on spelling this may distract from, or prolong the activity in hand. It is recommended that:
    - The learners do not use word books to check the words they cannot spell;
    - They spell as they think words should be spelled, or
    - You write for them the words or phrases they need, and
    - You only write on the blackboard the phrases 'thoughts about AIDS' and 'causes of AIDS'.

Labeling

- Ask each learner to write their age, gender and grade to make analysis easier. In addition learners can choose pseudonyms like fruit names or colours as labels.

Materials

- Two A4 sheets of plain paper per learner. Pencils. Crayons (optional)

❖ ***How to explain the activity to the learners***

Spoken instructions	**Permitted prompts and reminders**	**Beware**
Introduction 'Good morning/Hello. How are you all today? Good.		Do not use words to preempt or lead learners
Activity 1: explanation 'Now I want you to think about all the things that come to mind when you think about AIDS. No- Don't tell me or anyone else. Keep it as a secret inside your head the things that come to mind when you think about AIDS.	Repeat the key phrases ' all the different things that come to mind', 'when you think of AIDS'. Keep reminding them to 'Keep it a secret'.	Do not give any clues or hints. Do not let learners divulge their ideas to others.
Activity 2 : drawing 'Now I want you to draw all the things that you thought of when AIDS came to mind.	Keep reminding them to 'Keep thinking of lots of pictures to draw'. Repeat the key phrases again. Praise the learners who have started, for example, 'Yes that's a good one'.	Discourage learners from looking at each other's work and discussing their drawing. Don't suggest what to draw Beware of learners copying each other.
Activity 3 : writing 'Now write what you have drawn in you picture'. You can whisper to me any spellings you need help with. It you can't write I'll come round and write for you. You can tell me in a whisper what you want written and I'll write it for you'.	When the spoken or written word seem to have no clear reference to AIDS, for example 'bin' or ' chair' ask the learner ' How does this relate to AIDS?'. Write down the learners answer, ad if it is unrelated to AIDS please write down unrelated.	Don't' suggest to the learner how his/her picture might be linked to AIDS Ask only the permitted questions.
Conclusion We have to stop in five minutes. I'm coming around for a last look.	Remind them' Make sure that you have drawn all the things that you have thought of'.	Check that there is something written for each picture each learner has drawn.

❖ *How to analyse the results*

You can use the following categories to code and analyse each learner's work. On each learners paper make a note of, or code, the categories you think are illustrated and written about. At the end of this exercise you should have a better insight into the awareness learners have about HIV/AIDS, its causes, and consequences.

Main coding categories

- Definition of AIDS
- Symptoms
- Transmission of HIV
- Prevention of HIV
- Treatment
- Care
- Consequences of AIDS

Sub-categories

Main category	Sub category
Definition of AIDS	Penis sickness, virus, disease.
Symptoms	
Physical symptoms	Thin, sick, Ill in bed, fever
Emotional symptoms	Sorry, crying, angry
Transmission of HIV	
Sexual intercourse	Unprotected sex, having sex with your boyfriend is bad, sex with many people, men and women are having sex without a condom. Condom can also give you AIDS if you don't listen to the rules.
Kissing	Kissing someone with AIDS

Main category	Sub category continued……
Rape	Doing sex and raping without a condom. If you rape someone they can get AIDS. Women raped by men. Men who have AIDS drive around in a van stealing and raping children. People have AIDS will rape you. Syringes. Injection needles. Touching an infected person's blood. Do not touch blood. Drinking wine causes AIDS. Smoking cigarettes causes AIDS.
Needles/blood	Syringes, injection needles, touching an infected person's blood, do not touch blood
Smoking and drinking	Drinking wine causes AIDS, smoking cigarettes causes AIDS
Other	Gay men cause AIDS TB causes AIDS
Prevention of HIV	
Abstinence	Safe sex is no sex
Using condoms	can't get AIDS by using a condom
Do not touch used condoms	Throw away used condoms
AIDS awareness	Beware of AIDS
Treatment	Take medicine for AIDS, If you have AIDS you must take an injection.
Care	Person 1: I have AIDS Person 2: I don't care.
Consequences of AIDS	
Death and dying	AIDS causes death, AIDS kills, Many people have AIDS, you can't see AIDS, you just know that it is there.

❖ *Follow–up discussion*

- Together with the Draw-and –Write investigation a follow-up discussion can be included to probe for more in-depth information.
- In this exercise, which can be undertaken immediately after the Draw-and-Write investigation learners are each given the opportunity to interpret their own drawings, ask questions and share their ideas about the topic.
- Given the sensitive nature of the topic it is important to make ground rules about conduct during discussions.
- An additional 30-45 minutes can be allocated for this discussion depending on the age of the learners and the size of the group.
- In addition to the research questions other related open-ended questions can be weaved into the discussion.

APPENDIX 2

Statements and words used by learners according to age and gender during the Draw-and-Write investigation

Table 3. Statements and words used by learners according to age and gender. (Main Study 1.)

GIRL/ AGE	DEFINITION/SYMPTOMS OF AIDS	TRANSMISSION OF HIV	PREVENTION OF HIV	TREATMENT/CARE CONSEQUENCES OF AIDS
8	• Sick lady • AIDS is a kind of disease.	• People get AIDS by smoking cigarettes. • Wine gives people AIDS.		
11		• You can get AIDS by having sex. • You can also get pregnant. • The women and man is having sex but the man is not wearing a condom. • I think kissing can also give you AIDS.	• You can't get AIDS by using a condom.	
9	• Ill lady	• Rape causes AIDS. • If you have sex with too many people you can get AIDS. • If you rape someone they can get AIDS. • HIV		
BOYS/ AGE 9		• A person with AIDS pricks another with a needle, this causes AIDS. • Smoking causes AIDS.		
9	• This lady has HIV. She is sick. • Drew symbol for AIDS.		• Condom can protect you from getting AIDS	
12	• AIDS is a sickness. • Drew symbol for AIDS	• Two people having sex without a condom, penis • Injection needle • HIV.		• If you have AIDS you must get an injection.

Table 3. Statements and words used by learners according to age and gender. (Main Study 2.)

GIRLS/ AGE	DEFINITION/ SYMPTOMS OF AIDS	TRANSMISSION OF HIV	PREVENTION OF HIV	TREATMENT/CARE CONSEQUENCES OF AIDS
9	• TB causes AIDS	• Sex without a condom causes AIDS. • Not using a condom. • Leaving a used condom outside can cause AIDS. • Using the same needles using filthy needles.		• Two people talking: Person 1: I have AIDS person 2 : I don't care
9	• Sick person in bed has AIDS. • Thin person with AIDS, has a fever.	• People in a van stealing children, raping them and giving them AIDS. • People with AIDS will rape you. • Someone who has AIDS and you make sex with that person you can also get it. • Needles can cause AIDS	• Condom can protect you against AIDS.	• AIDS can kill you. • Symbol for AIDS. • AIDS causes death.
10			• Use condoms to do sex, use condoms, doing sex with a condom is the best, use a condom. • Sex is important Please safe sex • Beware of AIDS x2 • HIV	• AIDS killsx5. • Care for people with AIDS • South African Flagx2, •

Table 3. Statements and words used by learners according to age and gender. (Main study 2.)

GIRLS/ AGE	DEFINITION/ SYMPTOMS OF AIDS	TRANSMISSION OF HIV	PREVENTION OF HIV	TREATMENT/ CARE CONSEQUENCES OF AIDS
10		• French kissing causes AIDS. • Needle. • Touching somebody else's blood. • Blood transplanting be careful	• Use a condomx5. • Safe sex is no sex. • Don't share a needle.	• Care for people with AIDS. • Beware AIDS killsx4. • South African flagx2. • HIV. • Symbol for AIDSx2
10 10	• Penis sickness. • TB causes AIDS. • Women is crying because she has AIDS • She is angry with the man who gave her AIDS	• Two people having sex. Without a condom you can get AIDS. • STORY: Women needed blood so she had to have sex with a man who gave her AIDS . • They had sex without a condom. • The man who gave her AIDS is regretful " I should not have slept with you. • Needle	• Condom	• AIDS symbol
10	• I have AIDS, person is crying	• Kissing and licking someone can give you AIDS. • Condom can also give you AIDS if you don't listen to the rules. • Having sex with your boyfriend is bad. • Injection mixing blood can give you AIDS	• Safe sex. • Use a condom.	• AIDS symbol. • Many people have AIDS. • Don't get AIDS please. • Take medicine for AIDS. • You can't see AIDS you just know when death comes.

Table 3. Statements and words used by learners according to age and gender. (Main study 2.)

BOYS/AGE	DEFINITION/ SYMPTOMS OF AIDS	TRANSMISSION OF HIV	PREVENTION OF HIV	TREATMENT/CARE CONSEQUENCES OF AIDS
10		• Unprotected sex x 3. • Needles, mixing blood x2	• Safe sex.condom. • Throw condom in bin after using it.	• AIDS kills
10		• Sex without a condom causes AIDS. • Needles	• Man is putting on a condom. • Condom. • Wear a condom when you have sex.	• AIDS symbol x2
10		• Two people having sex without a condom. • Two people in bed together "not safe sex". • Picking up a used condom causes AIDS. • Not using a condom • Injection needle, sharing blood causes AIDS. Mixing blood	• Use a condom. • Throw a used condom in the bin.	• Symbol for AIDS. • AIDS kills AIDS causes death
11	• AIDS is a virus	• Two people in bed doing sex, man has no condom. • Doing sex and raping sex in bed with no condom causes AIDS. • Sharing needle and touching the blood of other people who have AIDS.	• Do not pick up a condom. • Do not share needles, do not share blood	
11		• Women raped by this man, doctor is examining her, she is telling her parents	• Condom	• AIDS kills

APPENDIX 3

Letters to principal and parents requesting permission to undertake study.

University of the Western Cape

Private Bag X17 Bellville 7535 South Africa Telephone: (021) 959-2430
Fax: (021) 959-2647 Enquiries: (021) 959-2276/3887

FACULTY OF EDUCATION

9 October 2000

Dear Principal

RE: Request permission to undertake research

I am a student at the University of the Western Cape currently working on a mini-thesis towards completing the M.Psych degree. At present I am working in collaboration with Dr. Mark Bunding at Bellville Education Support Services. I would like to undertake research investigating the perceptions of AIDS among intermediary phase learners with the aim of assessing pupils' level of knowledge about AIDS. The objectives of the study relates to developing appropriate AIDS educational programmes for schools.

I kindly request permission to undertake the fieldwork for this study at your school. I would require 24 randomly selected pupils each from grades three and four for approximately one hours each in order to complete the study. I am happy to conduct the fieldwork with pupils after school hours to prevent disruption of their classes.

Permission to conduct this study has been granted by the Western Cape Education Department. Please find enclosed a copy of this letter granting permission together with a letter to parents explaining the study and requesting permission for their children to participate.

I hope that my request will receive your favourable attention.

Yours sincerely

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FACULTY OF EDUCATION

10 October 2000

Dear Parent

RE: Participation of your son/daughter in a study to help control the spread of AIDS amongst youth.

AIDS is spreading quite fast in South Africa with infection rates amongst teenagers being very high. The Department of Health report that the infection rates for teenagers between ages 15-19 have increased from 12.7% in 1997 to 21.0% in 1998 with teenage girls being most at risk.

In order to address this problem we are conducting a study amongst a few primary schools in the Cape Town Metropolitan Area in order to find out how pre-adolescents perceive AIDS. In this way we can learn how to develop appropriate AIDS education programs for primary schools. In order to do this study we have randomly selected 3 schools and the school that your son/daughter attends is one of them. We will be asking a randomly selected number of students to draw and write their understanding of what AIDS and its causes are. Participation in this study will be voluntary. If you therefore have any objections about your son/daughter taking part in this study you are free to tell the school that you do not want him/her to participate. The learners themselves will be given the option not to participate if they do not want to.

Permission to conduct this study has been granted by the Western Cape Education Department. A copy of the letter granting permission is with the school principal.

Should you have any questions or concerns, please do not hesitate to contact us and/or the school principal. All such communication will be kept strictly confidential.

Yours sincerely

Ms Deena Naidoo
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FACULTY OF EDUCATION

10 October 2000

Geagte Ouer

Insake: Deelname van u seun/dogter aan 'n studie om die verspreiding van VIGS te bekamp

VIGS infeksie in Suid-Afrika neem vinnig toe, en veral onder tieners.Gegewens van die Departement van Gesondheid dui daarop dat die graad van infeksie van 12.7% in 1997 toegeneem het tot 21.0% in 1998, met tienermeisies die grootste risikogroep.

Ten einde hierdie probleem aan te spreek, onderneem ons 'n studie in 'n paar primêre skole in die Kaapse metropolitaanse gebied om pre-adolessente se houding jeens VIGS te bepaal. Die doel is om geskikte VIGS voorligtingsprogramme vir skole te ontwikkel. Ons het willekeurig drie skole vir hierdie navorsing uitgesonder, en u kind se skool is een daarvan. Ons beoog om 'n aantal leerders te vra om hulle siening van VIGS met sketse en woorde uit te beeld. Deelname sal vrywillig wees. Sou u enige besware teen u kind se deelname voorhou, staan dit u vry om die skool dienooreenkomstig in te lig. Leerders sal self ook die keuse gestel word om deel te neem al dan nie.

Die Wes-Kaapse Onderwysdepartement het reeds toestemming tot hierdie ondersoek verleen, die brief is ter insae by die skoolhoof.

Indien u enige navrae, besware, of behoefte aan verdere inligting sou hê, voel vry om ons of die skoolhoof te nader. Dergelike kommunikasie sal streng vertroulik hanteer word.

Die uwe

Me Deena Naidoo
Departement van Opvoedkunde
Universiteit van Weskaapland
Tel no: 959 2282 (w) 685 6851 (h)

Me Tania Vergnani
Departement van Opvoedkunde
Universiteit van Weskaapland
Tel no: 959 2282 (w)

APPENDIX 4

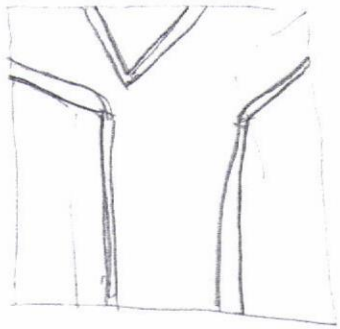
The drawings that learners produced during the Draw-and-Write investigation.

boy age 10 Grade 4b

Girl 10 years old Gr. 4B

Sex is important

Kills



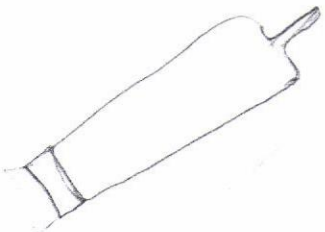
Safe Sex

Safe Sex

Bewear AIDS. kills

AIDS

Kills



AIDS

Please Safe Sex

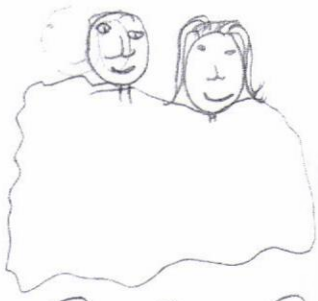
Bewear of AIDS

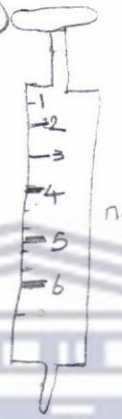
Sex Kills

Girl 10 years old GR 4.B.

Aids kills

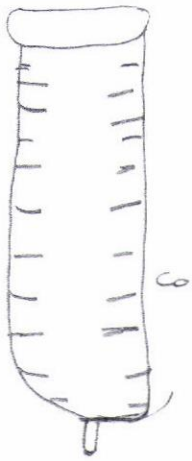
beware of Aids

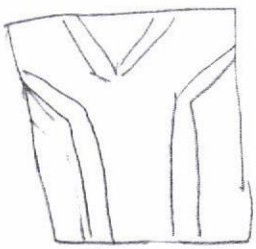




Safe Sex

Doing sex with a condon is the best.

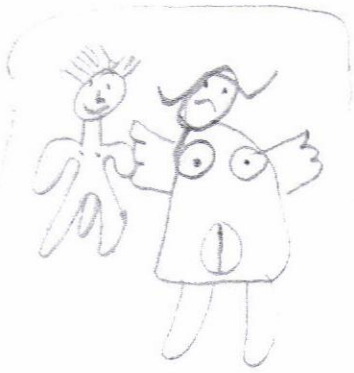


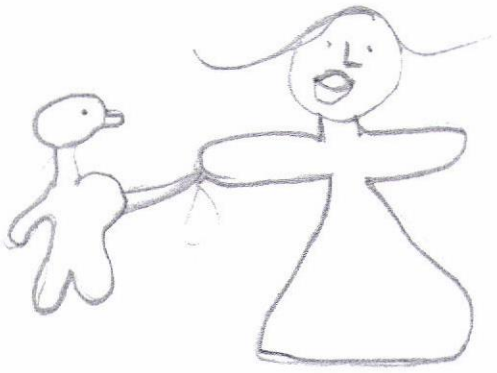


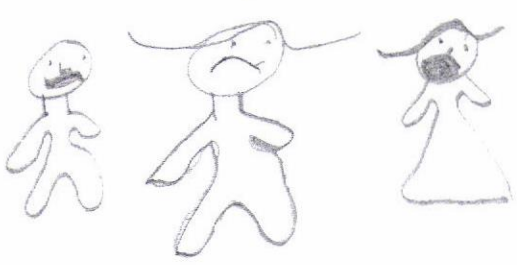
use a condon

AIDS

KIDS







boy 11 years old 4B

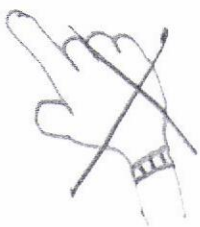
boy

age 10 Grade 4 =

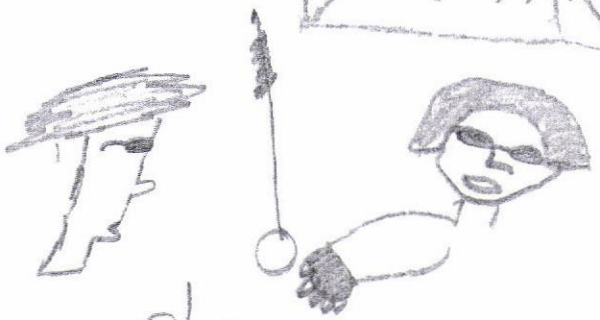
Boy 10 years old LD

do not pick up condom

doing sex raping and sex in Bed with not a condom



o not hash 3lood



do not Share needles

Boy 10 years old Grade 4B

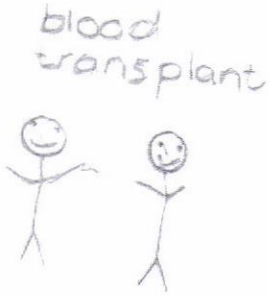
boy 10 years old Grade 4 or 5

Boy 10 Gr 4B

not useing a condom

not safe sex

Maxing blood



condom

sorry sre

I think if theres ads
Why must people have sex
when they must not

Aids is caused by gay men

2) I am a girl ... years old Grade 4

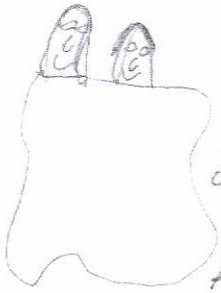
I am a girl 10 years old Grade 4b

Girl 10 years old Gr 4 E

care for people with Aid

HIV

Beware Aid kills



use a condon, Aids kills!

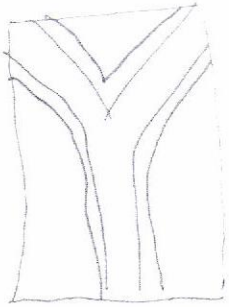
use a condom

Hiv

needle

safe sex

no sex

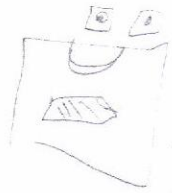


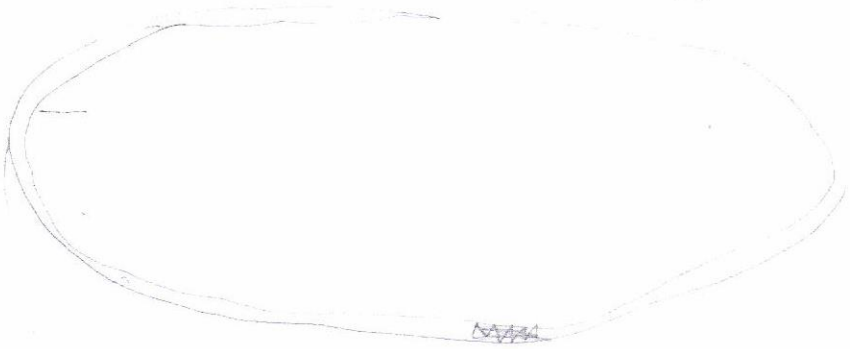
Aids kills

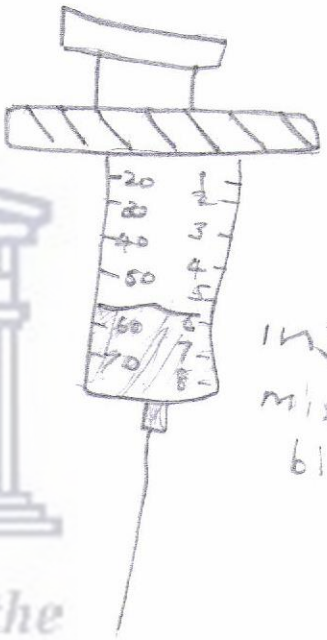
use a Condom

Girl 10 years old Gr 4 B

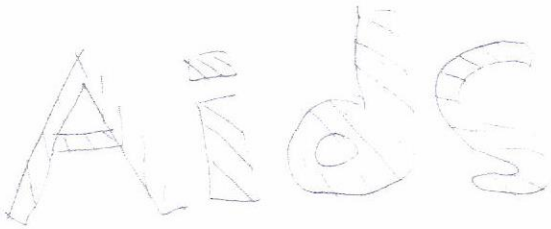
) Girl Age: 10 - 12

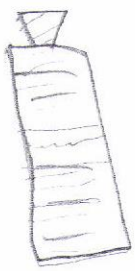






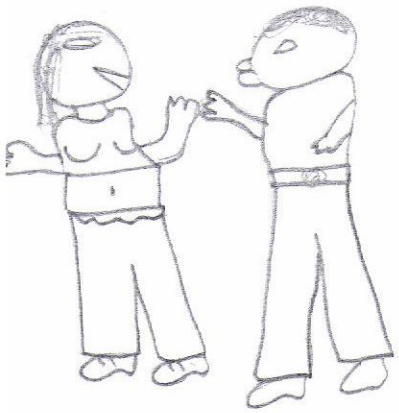
Injection mixing blood



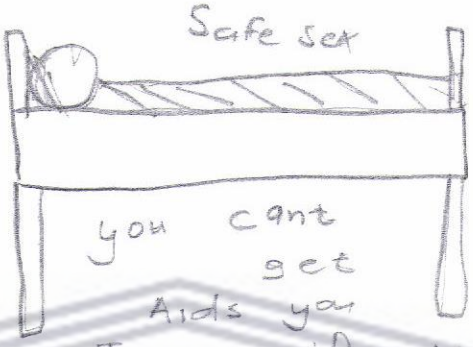


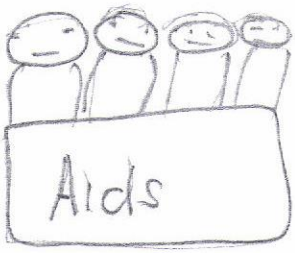
Medicine

dont Get Aids please



Kissing and liking some one hou have Aids





many people have Aids

Aids

Were do Aids come from

Aids condon Can also give you Aids if you dont listen to The rools

I have Aids

people Just Get Aids

having sex with your boy Friend is bad

Girl 9 Years old Grade 4B

Acondam

T.B.

SEX

HIV

Girl 4 years old Grade RB

Not useing a condom

useing the same needles

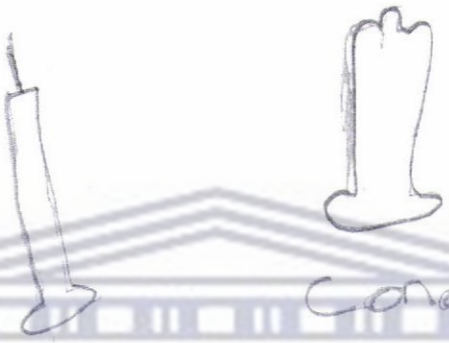
Sex

Sick

Fear

Find out by
Soul buddyyz

thin



Condom

Aloe

Glove

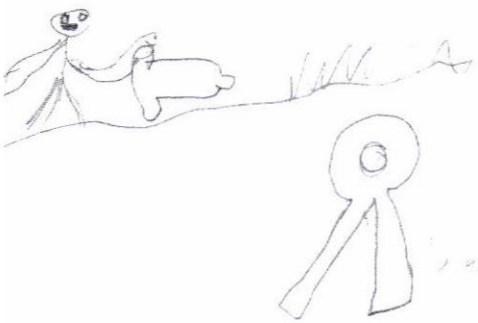
Van: fear who have

Aids
Stealing children
raping

Girl Age: 9 Yr: 4D

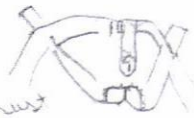
Aids Can Kill you!!

People have aid will Rape you



Someone who have aids and you have sex with that person you can also get it

Mr. Banana 12 year.



th out a condom.

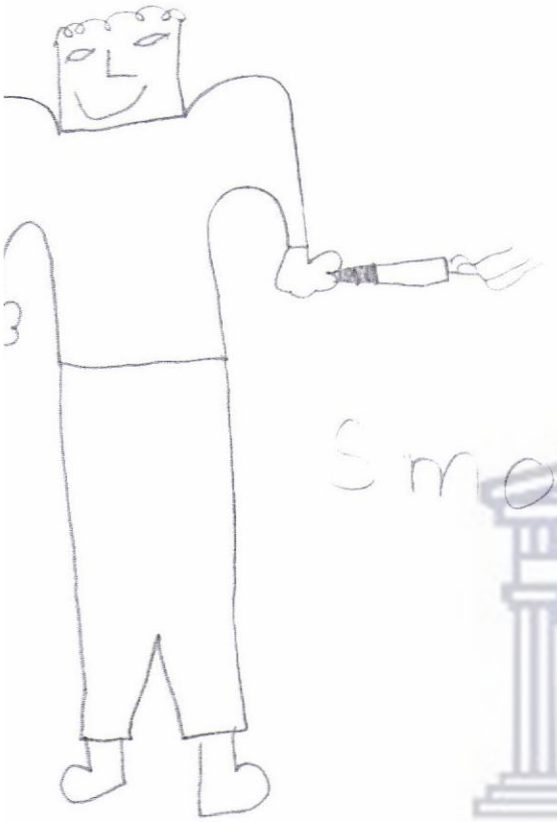
you have said, then you must
a injection.

Apple Grade 4a ②

9 Years old

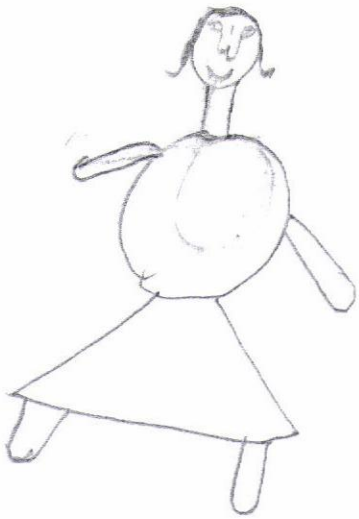
Apple Grade 4a ①

9 Years old (boy



Smoking

9yrs Mum Grade 3

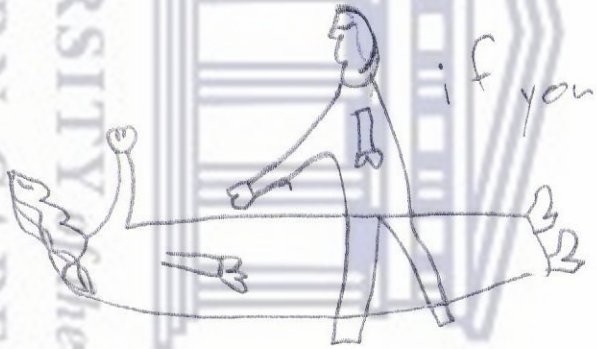


HIV - sick

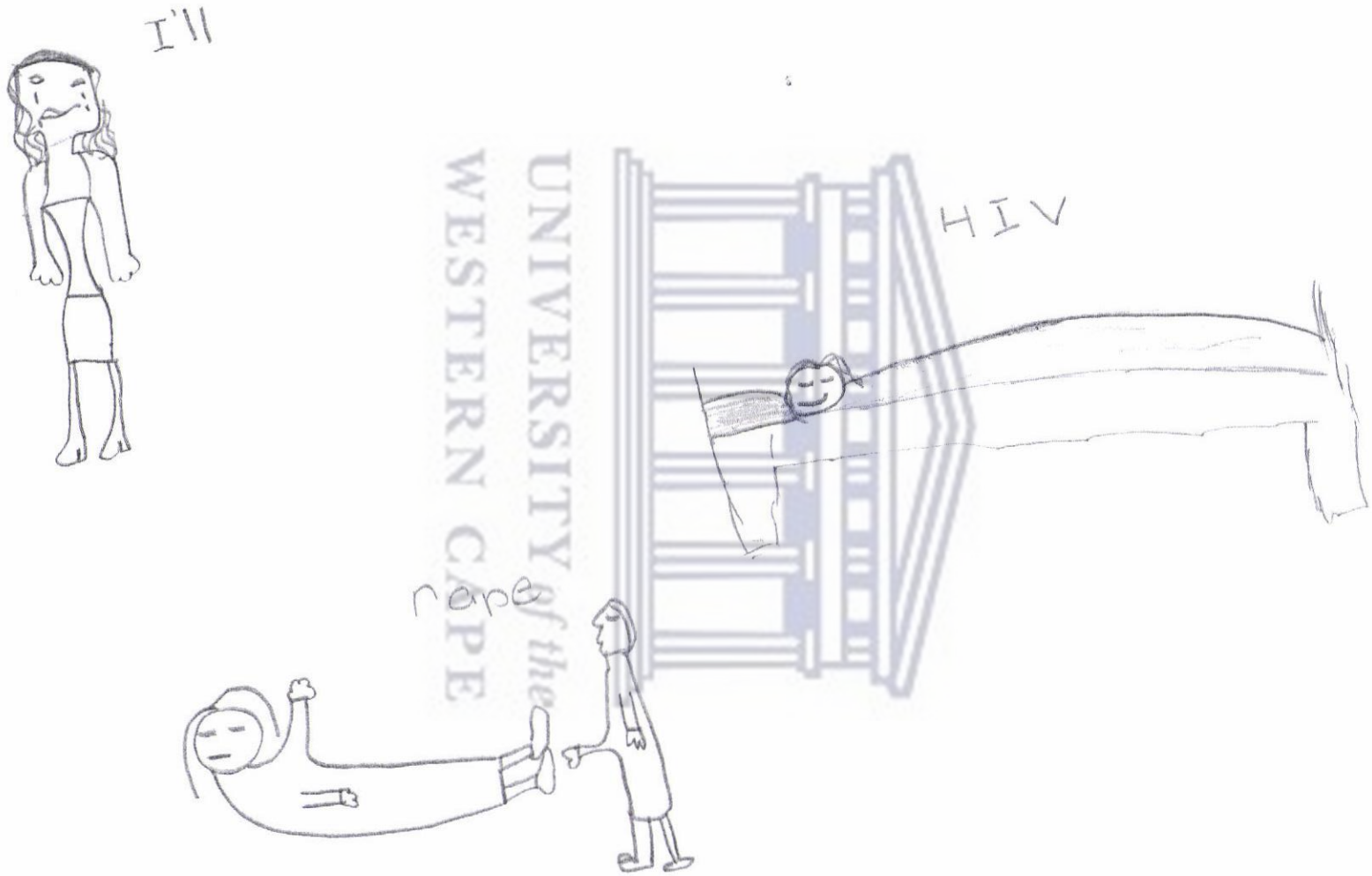
Plum 9yrs Grade 3 Boy

1.  Condom

if you have sex with to many people you can get AIDS

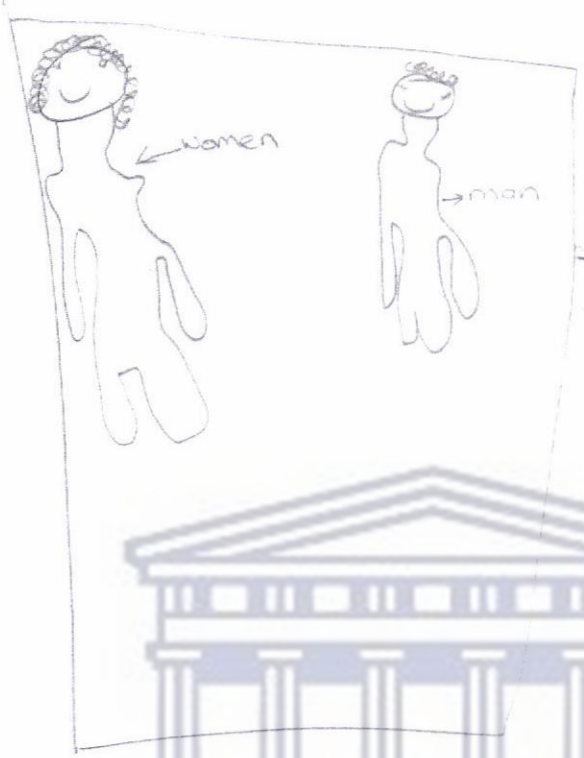


if you rape someone they can get AIDS



Grade. 5b

age 1



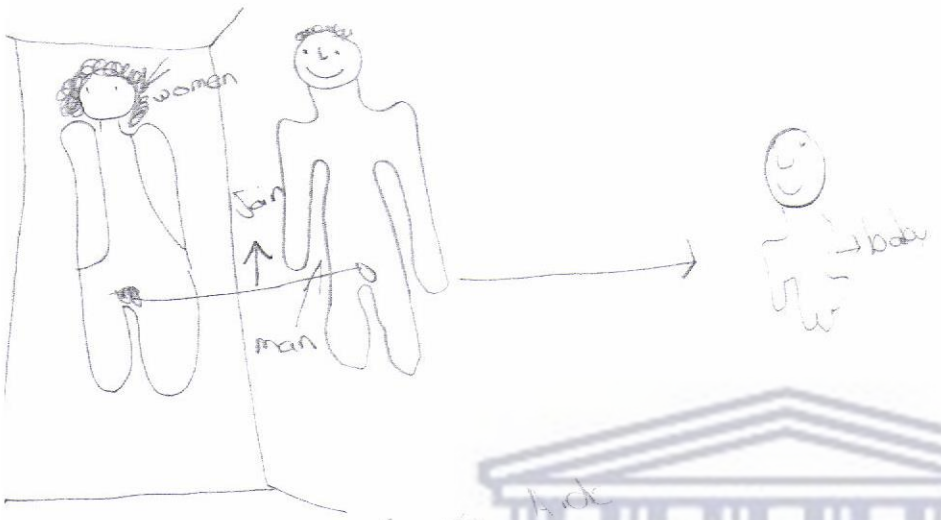
the women and the man is having Sex out they are not the man is not ~~wen~~ wereing a condor

I think kissing can also give you aids

(girl)

grade 5b

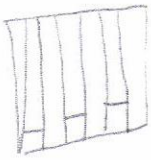
age: 11



You can get
HIV by having
(sex)

You can't get
aids by using
a condom.

Year Grade 3 B 8

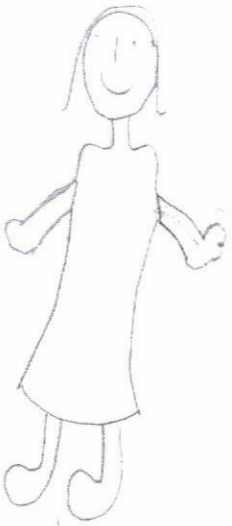


people gets aids by smoking sigerets

wine gives people aids to.

ear 8 Gr 3B

(Girl)



Aids is a kind of disease

Like lady