

**AN EVALUATION OF THE HIV/AIDS PROGRAMME IN
PRIMARY SCHOOLS IN BROWNS FARM, CAPE TOWN**

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UWC

Key words: HIV, AIDS, STDS, prevention, programme, sex, condom,
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ABSTRACT

Aim: To compare knowledge and reported behaviour related to HIV/AIDS between primary school students who attended schools where a Health Care Trust HIV/AIDS programme was run and those who attended schools without such a programme.

Objectives: To compare amongst youth in primary schools with an HIV/AIDS programme and schools without:

- Knowledge about the HIV/AIDS Programme of Health Care Trust
- Knowledge of HIV/AIDS and STDs,
- Perceived risk and perceived role of individuals,
- Attitudes towards condom use
- Attitudes towards people living with AIDS,
- Sexual behaviour,
- Access to condoms and condom use.

Setting: The study takes place in primary schools in two informal settlements, (Browns Farm and Samora Machel) in Cape Town.

Methodology

Study Design: This was a cross-sectional descriptive study comparing the students who attended schools where a Health Care Trust HIV/AIDS programme was run and those who attended schools without such a programme.

Study Population: All youth (697) in standard five in primary schools in Browns Farm and primary schools in Samora Machel.

Sample Size: Sample size was calculated using EPI INFO. The sample size was 176 students.

Sampling Procedure: From the four schools that have received AIDS education from the programme, two were randomly selected as the programme group. The comparison group consists of students from the new school in Browns Farm and a randomly selected school in Samora Machel with similar socio-economic conditions as Browns Farm.

Data Collection: An interviewer-administered questionnaire was designed for data collection based on the objectives

Results: A total of 176 students, 51% females and 49% males participated in the study.

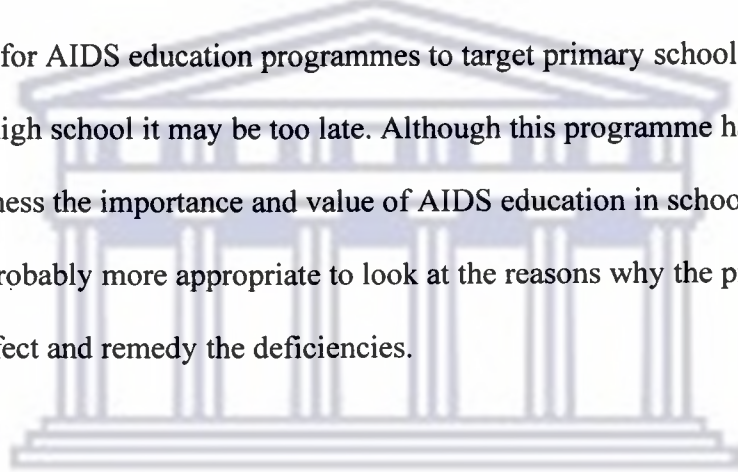
The mean age of the students was 14.5 with a range of 11- 20 years. Amongst the programme group knowledge about the programme was 84%. Knowledge of HIV/AIDS was high, 98% in the programme group and 97% in the comparison group with a prevalence ratio of 1 and (0.96-1.0) 95% confidence interval. STD knowledge was 22% for the programme group and 78% for the comparison group. One third of the students, 38%, (31% programme group and 45% comparison group prevalence ratio 0.68 and (0.46-0.9) 95% confidence interval were sexually active.

Of these students 12% have used a condom (19% programme group and 8% comparison group) with the programme group influenced by the programme. They all had no

problems with condom use. Students in both groups have a negative attitude towards people living with AIDS.

Conclusion

Students at the school where the HIV/AIDS programme was run, did not have greater knowledge nor did they have more appropriate behaviour than the students in the comparison group. Youth in primary schools are sexually active and therefore at risk of contracting HIV and other STDs. They know about condoms but are not using them. This stresses the need for AIDS education programmes to target primary schools as by the time they reach high school it may be too late. Although this programme has been of limited effectiveness the importance and value of AIDS education in schools, cannot be dismissed. It is probably more appropriate to look at the reasons why the programme had only a limited effect and remedy the deficiencies.



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CHAPTER 1

INTRODUCTION

The HIV/AIDS epidemic has become a serious public health problem worldwide. In 1995 it was estimated that 20-30 million people worldwide were infected with HIV virus and 4 million with AIDS. This figure is expected to rise to 40-50 million HIV infections by year 2000 (Miller and Steinberg: 1995).

In South Africa in 1995 about 1.2 million people were estimated with HIV infection and 2000 with AIDS. Up to 500 people get infected each day and 3-5 million HIV infections are expected by year 2000 (Miller and Steinberg: 1995). In a national HIV survey on women attending anti-natal care, the point prevalence of HIV infection was 10.44% and was highest between ages 20-24, (13.12%), followed by ages 25-29, (11.03%) (sixth national survey: 1995). The seventh national survey in 1996 revealed that 2.4 million South Africans were infected with the greatest increase among women aged 20-24, (17.5%), followed by ages 25-29, (15%). Latest national results on pregnant women revealed that 14.17% women are infected (eighth national survey: 1997).

Despite the effort by health care workers, the HIV epidemic is escalating. McIntyre (1996) predicts that between 18-27% of the South African population will be HIV positive by year 2010. This has serious implications for the already overburdened health department. The expenditure on HIV/AIDS could reach 34-75% of total health expenditure by year 2005.

Most studies and interventions done to reduce the HIV epidemic, internationally and nationally, focus on high school youth. According to national surveys on HIV incidence the infection rate is highest in the age group 20-24. In South Africa it is highly likely to find an 18-year old still in primary school, which means that by the time he/she reaches high school, it may be too late.

School provides a point of access to most adolescents. Nearly 95% of all children and adolescents attend elementary and secondary school. Because its primary mission is to impart knowledge and teach skills, school is the ideal place for promoting health among adolescents. Programmes such as AIDS prevention are designed to change risky behaviour, by targeting all students in the classroom. By establishing school-wide norms for unprotected sex, for example, these programmes can also address students in the larger school environment. HIV infection and other STDs are serious problems for adolescents. Approximately 20% of the people diagnosed with AIDS are 20-29 years old. Because of the long latency period between infection with HIV and diagnosis of AIDS, many adults in this age group are likely to have been infected with HIV during adolescence (Basen-Engquist *et al*: 1997).

It is important for researchers to realise that prevention of HIV depends on the complex interaction of individual behaviour and a broader social, economic, political and cultural context. Without expansion of the research base in social and behavioural sciences and without inclusion of social behavioural science and evaluation research as an integral component of interventions, the campaigns against HIV/AIDS will be ineffective.

A serious disjunction has existed between research on prevention programmes themselves. The science needed to arrest the epidemic cannot occur in the abstract, therefore directly linking research to program intervention is a critical component of effective interventions (Parker: 1998).

Behaviour change and social change are long-term processes that take place over years of diverse strategies and interventions, and change cannot take place over short periods. The goal is to lower the rates of infection as quickly as possible but this take time. There is a need for an integrated approach to HIV/AIDS management. HIV/AIDS is not just about prevention. It is about creating and applying a series of interventions that are coordinated and that bring together prevention, care and support activities. Managing the epidemic is a process that involves amongst other things research which includes finding out information about the situations. Like what is the extent of HIV infections, what are the trends for various social groups, or what activities are linked to HIV infection.

Freudenberg (1990) suggests that AIDS prevention needs to link to a vision of a better world. He further states education has provided accurate information on AIDS to a wide-cross section of the population, but has been less successful in helping people to change their risky behaviour. AIDS prevention programmes need to be integrated into other programmes serving community needs, especially into those grass roots organisation that can raise questions of gender behaviour and drug use (Freudenberg: 1990).

This study will assess whether the HIVAIDS programme of Health Care Trust in Browns Farm has resulted in a greater understanding and more appropriate behaviour of youth in primary schools.

BACKGROUND OF THE PROGRAMME

The HIV/AIDS programme is a programme of health Care Trust known as Makukanye. It focuses mainly on youth in schools through young volunteers. Its primary behavioural objective is to reduce unprotected sexual intercourse by increasing the number of students who postpone sexual intercourse until they are older and by increasing condom use among those who are sexually active.

It focuses on grades 5, 6 and 7 in each school in Browns Farm. Because of the huge number of students per grade each grade is done separately. This means that each school is visited three times a year but going to different students. By the time a student reaches grade 7, which is the focus of this study, he/she must have received education from the programme three times, if he/she has been in this school from 1996.

Methods used by the programme to impart knowledge to these schools include drama, talks, music and demonstrations. The content for education includes HIV transmission, prevention of HIV/STDs, signs and symptoms of STDs, attitude towards people living with AIDS.

This programme was initiated in 1996 as a response to an increasing number of people living with AIDS picked up by community health workers (CHWs) during their home visits. The programme has the following aims:

- To increase community awareness of HIV/AIDS, through education by running training programmes for youth volunteers and CHWs, who in turn run community education workshops
- To develop appropriate support structure/system for people living with AIDS (PWAs) and their families

This study focuses on the first aim of increasing community HIV/AIDS awareness by educating youth in schools.

BACKGROUND OF BROWNS FARMS

Browns Farm is an informal urban settlement with serviced (toilet facilities and running water) and unserviced areas divided into villages and sections. It is situated about 22 km from the city of Cape Town and 9 km from Mitchell's Plain. The population is composed mainly of young adults who migrated from rural areas of the former Transkei in search of jobs. Approximately 60 000 people live in this area. There is one day hospital and one preventive and promotive health clinic. Community health workers who are rendering a 24-hour service, as these formal structures are closed after hours, service the whole area. There are five primary schools evenly distributed in the area and one

high school. The primary schools are all the same low socio-economic status. They are from grade 1 – 7 consisting only of black children between 7 and 20 years of age.

CHAPTER 2

LITERATURE REVIEW

Prevalence of HIV

Wilkinson (1996) reported that South Africa is in the midst of a catastrophic HIV epidemic. In the next decade it will increasingly have to cope with the consequences of the HIV epidemic. Those infected will soon start to fall sick and require care, and almost all will die prematurely.

The most affected age group is 20-49 (national surveys: 1995-1997), this was further confirmed by a study done in Khayelitsha where it was discovered that the age mostly affected was 15-24 (Shaikh: 1995).

Western Cape has the lowest rate of HIV infection from results of national surveys on pregnant women but there has been an increase over the years and Western Cape will soon catch up with the rest of the country (Cape Argus: 1998). In 1995 the HIV infection was 1.66%, in 1996 3.09% and in 1997 6.29%. These figures are almost doubled each year, which is the highest increase in the country (Cape Times: 1998).

Sexually transmitted diseases

Many studies done in South Africa show that sexually transmitted diseases (STDs) also constitute a major health problem as they sometimes precede HIV infection (dept of national health and population development: 1991). Basen-Engquist point out that STDs are more of a problem of the age group 20-29 that also has a high HIV prevalence (Basen-Engquist *et al*: 1997). Approximately 25% of sexually experienced adolescents contract a STD each year.

Sexual behaviour

In a study done in Britain, it was shown that youth become sexually active early with a median age of 17 for both girls and boys (Mellanby *et al*: 1995). In a study done in Browns Farm it was shown that the age at which youth start to become sexually active ranged between 9-15 with the mean of 12.4 (Slatsha: 1997, unpublished).

Youth information

Richter (1995) pointed out that youth lack information on sexual issues despite the use of media for education. She further suggested that youth have a low perceived risk of STDs including HIV/AIDS. In particular they do not know that HIV/AIDS is sexually transmitted and can be prevented by use of condoms (Richter: 1995).

Matthews *et al* (1996) reported in a study which investigated knowledge about HIV/AIDS, that in a Mpumalanga rural school only 48% of students knew that AIDS could be prevented. A similar study was conducted in Browns Farm where it was

reported that only 44% of students knew that AIDS could be prevented (Slatsha: 1997, unpublished).

Condom use

In another study done in Natal on condom use it was shown that high school students were not using condoms. Reasons for not using condoms as stated by them were: it limits sexual pleasure; it indicates lack of trust, it challenges male ego, it is related to STDs and it interferes with pregnancy (Abdool-Karim: 1992).

Richter (1995) discovered in a study done nationally on youth that despite the widespread acquaintance young people have with condoms, only 93% have seen a condom, 72% have been instructed on how to use a condom and 29% of the sexually active had used a condom.

AIDS Prevention programmes

Choi *et al* (1994) point out that AIDS prevention programmes have produced long-term behaviour change. Feigenbaum *et al* (1995) discovered conservative challenges to sexuality education in schools. Dean *et al* (1994) reported in a study done in the UK, that moralists, who are obsessed with the belief that sex education only increases sex, captured the education department. Mellanby *et al* (1995) have shown that sex education programmes can increase the use of condoms and other forms of contraception when young people do have sex, assuming that sexual activity remains the same as it is not indicated in this article. Schools sex education can produce behaviour changes such as

condom use (Kirby, 1995), and has been shown to delay sexual activity (Wellings *et al*: 1995).

Studies done internationally to evaluate AIDS prevention programmes showed that these programmes are successful in increasing AIDS-related knowledge and improving attitudes towards people with AIDS (Aplasca *et al*: 1995). Peer educators have been found to be more effective than even highly trained adult educators (Siegel *et al*: 1998). Programmes that address HIV/STD control measures have been shown to slow the HIV/AIDS epidemic (Figuroa *et al*: 1998). In a study in Tanzania Klepp *et al* (1997) showed that it was feasible and effective to train local teachers and health workers to provide HIV/AIDS education, to Tanzanian primary school children.

In South Africa, Miller and Steinberg (1995) suggest that children and teenagers must be educated about sex and be empowered with skills such as how to negotiate with partners about safer sex. The department of health identified the introduction of life skills and AIDS education in school going youth as the key programmes to prevent HIV/AIDS. NACOSA identified youth as a crucial group for education, to transform their lives as they negotiate their way to adulthood and remain free from HIV infection (MRC AIDS Bulletin: Sept. 1996). Missed opportunities should be avoided; youth should get counseling and information at any health centre (Flisher *et al*: 1992).

Recent studies show that comprehensive sexual health education, when implemented before adolescents become sexually active, is effective in encouraging young people to

delay sexual activity and to practise safer sex when they are sexually active (d'Cruz *et al*: 1996).

d'Cruz *et al* (1996) suggested that well designed sexual health information programmes, are also necessary to counter underlying prejudices that lead to stigmatisation and discrimination of people living with HIV/AIDS and for advocacy to convince decision makers to make HIV/AIDS a priority issue. Information about HIV, availability of condoms and provision of STD services cannot by themselves lead to improvements in sexual health and HIV prevention, if social and economic and cultural constraints prevail. The global epidemic is constantly changing and new 'lessons' and trends are regularly identified.

Social level

Parker *et al* (1998) reported that research has shown that the disease tends to attack disadvantaged communities sooner and more severely than in other communities. This trend is linked to a number of social factors that contribute to HIV infection including lack of access to health and social services, poverty, labour migration, rapid urbanisation, unemployment, poor education, illiteracy, an inferior social position of women, diversities in language and culture, crime, political instability and war. These are more of a problem in a squatter area where people are unemployed and live in shacks hardly big enough to accommodate a bed. One social problem leads to the other; e.g. because of illiteracy there is unemployment, because of unemployment there is high crime rate. There is a big role played by culture in the spread of HIV; e.g. where women are inferior

and their culture does not permit them to initiate condom use. This is more pronounced among black communities. Illiteracy makes women more inferior to men as the more educated the woman is, the more assertive she becomes. In South Africa there is growing concern around the high prevalence of rape and sexual harassment, where women are subjected to violent sexual assaults that expose them to HIV, other STDs and pregnancy.

Behaviour level

Parker *et al* (1998) further reported that one of the main goals of HIV prevention has been to promote behaviour change from high risk to low risk sexual activities, such as having fewer sexual partners, or using condoms during every act of sexual intercourse. Early approaches assumed that all people needed was to know about HIV, how it was spread and what the results of infection were, and they would take concrete steps to change their behaviour. Unfortunately these approaches helped alert people but were not sufficient to promote or sustain behaviour change.

(Parker *et al*: 1998) suggest that the prevention of HIV infection be about developing a range of strategies and interventions that support behaviour change. The goal can never be absolute eradication of HIV infection because the factors that lead to HIV infection are beyond an individual's control. These are poverty, illiteracy, urbanisation, culture, gender relations and other factors, which cannot be changed overnight. Because of illiteracy most women are unemployed leading to poverty, that makes them to engage in unprotected sex early so that they can get money for food and clothing. In some cultures, women are inferior to men and are expected to give in to whatever sexual demand a man

makes, this makes it difficult for them to engage in safer sex, as their culture does not allow them to talk about sex with their partners. Children grow up under these circumstances and adopt them without questioning them, hence the high HIV rate in the age group 20-24. ✦

DEFINITION OF TERMS

- Health care Trust is an NGO rendering primary health care services through community health workers in disadvantaged communities of Browns Farm, Samora Machel and Wallacedene.
- Community Health Workers are men and women chosen by the community, and trained to deal with the health problems of individuals and the community, and to work in close relationship with the health services (WHO, 1987).
- Serviced in this study means availability of flushed toilets and running water.
- Programme group in this study means the students who attended the schools where the HIV/AIDS programme of Health Care Trust was operative.
- Comparison group in this study means the students who attended the schools without such a programme

RATIONALE FOR DOING THE STUDY

This study has been done to help the management of Health Care Trust to evaluate their HIV/AIDS programme with the aim of improving the impact it may have in increasing HIV/AIDS information. The study will be used by peer educators (youth running the

programme), to evaluate their performance and plan their activities according to need. It is going to benefit youth in schools by giving them a better more focused, need-based student oriented AIDS education. This study will investigate the theory that youth in primary schools are sexually active and therefore there is a need for AIDS education programmes to target this group of youth, so that they can take informed decisions and delay sexual intercourse. The results will be used as a baseline for intervention and further research, as the evaluation of a programme is ongoing. One never knows if he is on the right track unless he keeps on looking back. The results will identify the strengths and weaknesses of the programme and plans will be made based on the results.

AIM

To compare knowledge and reported behaviour related to HIV/AIDS, between primary school students who attended schools where a Health Care Trust HIV/AIDS programme was run and those who attended schools without such a programme.

OBJECTIVES

To assess amongst youth in primary schools in Browns Farm and compare between the programme group and the comparison group, knowledge, attitudes and practise related to HIV/AIDS. Knowledge, attitudes and practise will be assessed by measuring each in the following manner:

Knowledge:

Notes

- about the programme, (Makukanye)
- of HIV/AIDS
- of STDs
- of their perceived risk of being infected with HIV/AIDS
- the perceived role of individuals in protecting themselves from HIV infection

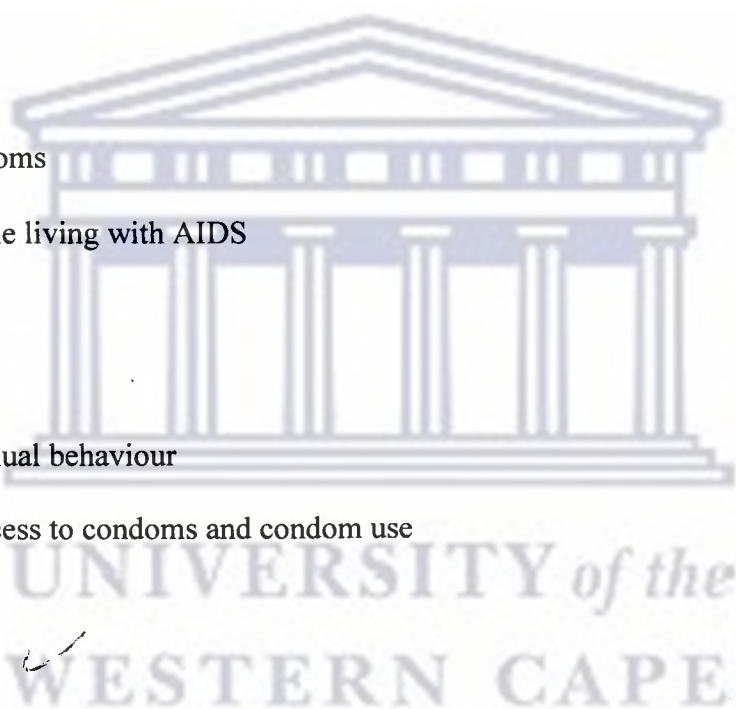
Attitude

- towards condoms
- towards people living with AIDS

Practice

- determine sexual behaviour
- determine access to condoms and condom use

CHAPTER 3



METHODOLOGY

Study Design

This was a cross-sectional descriptive study, using quantitative methods, comparing two groups of youth, those that have attended schools where a HIV/AIDS programme of

Health Care Trust was operative (programme group) and those that have attended schools where there was no such programme (comparison group).

Study Population

All youth (697) doing standard five in a primary school in Browns Farm and Samora Machel. There are five primary schools in Browns Farm, four of these schools have been receiving AIDS education from the programme and the fifth one is a new school. There are two primary schools in Samora Machel, which are new and never had the programme.

Programme group

All youth doing standard five in a primary school in Browns Farm which received the HIV/AIDS programme and who have been in these schools for at least the past two years (from 1997). This amounted to four schools.

Comparison group

All youth doing standard five in a new primary school in Browns Farm and schools in Samora Machel, who never had the programme. This amounted to three schools.

Sample size

The sample size was calculated using EPI INFO as follows:

Population of students in programme schools = 494

Population in comparison schools = 203



To detect a reasonably presumed difference of 20% in the knowledge level between schools where the programme was run and the other schools without the programme, at a significance level of 95% and with a power of 80%, a sample size of 88 in each group was required

Sampling Procedure

Two groups of students were selected as the programme group and comparison group.

Programme group

From the four schools that had the programme, two schools were randomly selected. From these two schools 88 students were randomly selected by drawing names from a hat. Only students who have been in these schools for the past two years were included in the sample.

Comparison group

From the two primary schools in Samora Machel, one was randomly selected. Together with the new school in Browns Farm they formed the comparison group. The 88 students were randomly selected from these schools, 44 students per school, drawing names from a hat.

Data Collection

A questionnaire was designed for data collection and covered the broad areas of the HIV/AIDS Programme (Makukanye), HIV/AIDS/STD, sexual behaviour, condom use, attitude towards condoms and attitude towards people living with AIDS. The Questionnaire was in Xhosa, which is the language spoken by participants. It was

interviewer administered. No prompting was done and no choices were given. Answers were coded in categories. The questionnaire is appended to this report.

Pilot Study

The questionnaire was tested in a primary school in Sweet Home, a neighbouring squatter area that is similar to Browns Farm. The results of this pilot were that students in primary schools are sexually active, have knowledge of HIV/AIDS and very little knowledge of STDs, know that condoms can prevent HIV but are not using them. The questionnaire could not be self-administered due to literacy skills and the occasional technical language used e.g. STD. Some of the questions were not understood by the students and had to be rephrased. The students seemed comfortable with the questionnaire. There were no completely unexpected answers to questions posed.

Data analysis

Data was analysed using EPI INFO. 2x2 tables and frequency distribution tables were created. Prevalence ratios and 95% confidence intervals were calculated. The programme group was compared to the comparison group.

Validity and Reliability

The questionnaire was based on the national study done on HIV/AIDS amongst youth by Richter (1996). The questionnaire was discussed with researchers in the field and was found to be adequate. It was also tested in a pilot programme where some questions had to be changed to be understandable. It was translated into Xhosa and then interviewer-administered. Reliability of the questionnaire was not tested due to a lack of resources available to conduct repeat interviews amongst a proportion of the participants.

Ethical considerations

General permission for the study was obtained from school principals and parents, who were requested that they agree that their children could participate, if selected in the sample. Pupils were informed of their right to refuse to participate in the study, to withdraw their participation any time they so wish and to refuse to answer any questions they are uncomfortable with. Only the researcher had access to the individual results so confidentiality was ensured.



CHAPTER 4

RESULTS

RESPONSE RATE

The response rate was 100% due to the co-operation from the teachers and the fact that the researcher went back repeatedly.

CHARACTERISTICS OF THE SAMPLE

A sample of 176 students, (51%) females and (49%) males were randomly selected from the primary schools consisting of students attending schools where the programme was run as the programme group and those from schools without the programme as the comparison group.

These students came from four different schools who had the programme (88) and two without the programme (88). The mean age of the sample was 14.5 (15 for boys and 14 for girls), ranging between ages 11-20 (boys 11-20 and girls 12-17). The median age was 14.0 (15 for boys and 14 for girls). Age range was 11-20 in the programme group with 17% students less than 13 years, and in the comparison group 12-19 with 5% less than 13 years. All the students in the programme group were in the school for at least two years. In the programme schools 34% of them started schooling in these schools and 66% commenced schooling outside Browns Farm.

KNOWLEDGE OF PROGRAMME

All the students in the sample were asked if they get AIDS education at school and only 45% were getting it. These were all from the schools who had the programme, and comprised 91% of the 88 students in this group. Sources of this information (of those receiving AIDS education in programme group only) were Makukanye 89%, health professional 11% and teacher 3% (these categories are not mutually exclusive hence it does not add up to 100%). Methods used were talks 81%, drama 86% and condom demonstration 1% (methods not mutually exclusive hence do not add up to 100%). Asked if they ever heard of the programme (Makukanye) in the programme group, 84 % of the students reported to have heard of the programme (both school and community). They heard about it at school 96% and some in the community 4%. Times that the programme has been to schools in the past three years reported were 80% less than 2 times and 20% more than 2 times.

The remaining 55% who never received AIDS education in school wanted education in the form of talks 60%, drama 73% and condom demonstration 40%.

KNOWLEDGE OF HIV/AIDS

Adequate knowledge that HIV/AIDS is incurable or infectious or a STD was 97% for the whole group, 98% in the programme group, and 97% in the comparison group prevalence ratio 1 with a (0.96-1,04) 95 % confidence interval. This constituted adequate knowledge about the general nature of HIV/AIDS as it characterises it as a “dangerous” disease due

to its transmissible nature and its severity. They categorise HIV/AIDS as to whether it is an infectious disease, an incurable disease and a STD, see their responses in table 1 below. It is important to notice in this table that, the prevalence ratio for AIDS as an infectious disease and an STD is very low which means that the programme group had much less knowledge than the comparison group. This is unexpected and indicates that the programme was relatively ineffective in generating high knowledge levels.

Table 1. AIDS Information. Responses of the students who knew what AIDS is, N=171.

Knowledge	Programme group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence Interval
Infectious	86	16	19	85	56	66	0.2	0.18-0.45
Incurable	86	69	80	85	60	71	1	0.96-1.35
STD	86	1	1	85	13	15	0.08	0.01-0.57

These are the responses of students who knew one or more of the above 3 categories.

Knowledge of HIV/AIDS transmission was 95% for the whole group, 93% in the programme group and 98% in the comparison group, prevalence ratio 0.95 with 95% confidence interval of (0.89-1.01).

Table 2. Mode of AIDS Transmission. Responses from students who knew how AIDS is transmitted, N=168

Mode	Program group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence interval
Unprotected Sex	82	72	88	86	77	90	0.98	0.88-1.09
Infected blood	82	10	12	86	40	47	0.26	0.14-0.49
Mother to child	82	0	0	86	15	17	N/A	N/A
Multiple Partners	82	0	0	86	2	2	N/A	N/A

N/A= Not Applicable as the comparison group is infinitely more likely to be aware of this mode of transmission.

With regard to signs of AIDS 74% (58% programme group and 90% comparison group), knew signs of AIDS, prevalence ratio 0.65, 95% confidence interval (0.53-0.77). About 15% of the sample (13% programme group and 18% comparison group). have seen a person with AIDS, prevalence ratio 0.69, 95% confidence interval (0.34-1.04).

About one-third of the sample, 36% (16% programme group and 56% comparison group) prevalence ratio 0.29 confidence interval (0.12-0.46), knew what a STD is. In describing it they mentioned painful urine, penile or vaginal discharge and sores in the genitalia (see Table 3). The prevalence ratio for painful urine is low (0.21), which means that the comparison group had more knowledge than the programme group. For genital sores the prevalence ratio was quite high (2.5), which indicate that the programme was effective.

Table 3. Knowledge of symptoms amongst those who knew what a STD is. N=63

STD knowledge	Program group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence interval
Painful urine	14	2	14	49	34	69	0.21	0.06-0.75
Discharge	14	4	29	49	20	40	0.70	0.29-1.71
Genital sores	14	8	57	49	11	22	2.5	1.28-5.08

Perceived risk and role of individuals

Everybody in the sample reported a need to protect themselves from HIV/AIDS and STDs when sexually active, although 5% did not know how. Ways of protection mentioned were abstinence, condom use and by having one faithful partner. The responses for each are listed in table 4.

Table 4. Knowledge of different methods of preventing HIV/AIDS/STDs by those students who knew how to protect themselves. N=167

Protection	Programme group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence interval
Abstinence	81	9	9	86	15	17	0.64	0.30-1.37
Condom	81	67	83	86	73	85	0.97	0.86-1.11
One partner	81	6	7	86	27	31	0.2	0.10-0.54

ACCESS TO CONDOMS

Close to all (96%) of the students (95% programme group and 97% comparison group), have heard of a condom and 89% (84% programme group and 93% comparison group), have seen a condom and 83% (67% programme group and 86% comparison group), reported their availability at clinics.

Of those who have seen a condom only 40% have had somebody explain to them how to use a condom (programme group 55% and comparison group 45%).

In the programme group only 73% of students heard about condoms from Makukanye and 42% saw it from Makukanye.

SEXUAL BEHAVIOUR AND CONDOM USE

About one-third (38%) of the students have had sex, (31% programme group and 45% comparison group), prevalence ratio 0.68 with 95% confidence intervals (0.46-1). See Figure. 2. The age range for all students in the sample was 11-20, for the sexually active it was 13-20 (14-20 programme group and 13-19 comparison group) and for virgins 11-20 (11-20 programme group and 12-17 comparison group).

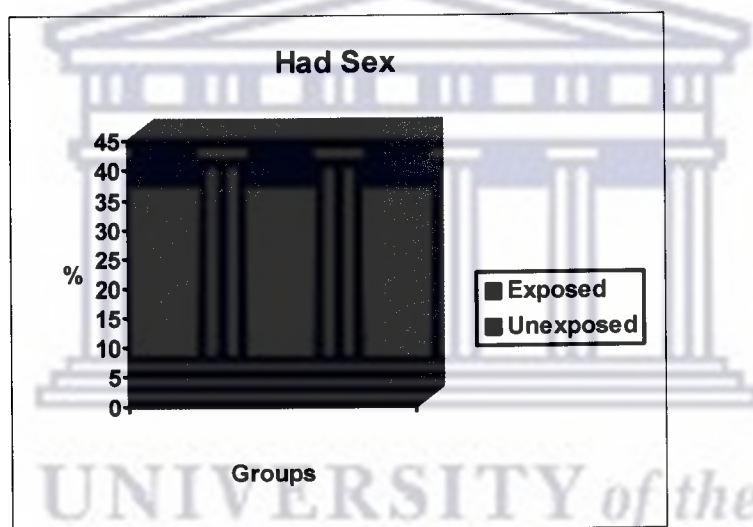


Figure 2. Sexual behaviour for the programme group (31%) and the comparison group (45%)

CONDOM USE

About 12% of the sexually active students have used a condom (62.5% males and 32.5% females), (19% programme group and 8% comparison group), prevalence ratio 2.47 with

95% confidence interval of (0.64-4.3). Half of the students who used a condom used it every time when having sex and they were all from the programme group. The students who used a condom reported no problems associated with condom use. All those who used a condom in the programme group, reported it to be due to the influence of the programme.

ATTITUDES TOWARDS CONDOMS

The reasons given by the 88% of students who have never used condoms when having sex were, lack of information on how to use a condom and that it limits sexual pleasure.

See table 6.

Table 6. Reasons for not using condoms given by the sexually active students who have never used a condom. N=59

Reason	Program group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence interval
Don't know how to use	22	15	68	37	24	65	1.05	0.73-1.52
Limit sexual pleasure	22	7	32	37	14	38	0.84	0.40-1.76

A need was identified by 169 students (96%) of the whole group for condoms to be used to prevent STDs, HIV/AIDS and pregnancy, the results for the different groups are shown in the table 7 below.

Table 7. Need for condoms to be used as perceived by the students who heard about condoms. N=169

Need	Programme group	Response	%	Comparison group	Response	%	Prevalence ratio	Confidence interval
STD	84	0	0	85	37	44	N/A	
HIV	84	84	100	85	63	74	1.35	1.19-1.53
Pregnancy	84	0	0	85	8	9	N/A	

Attitudes towards People living with AIDS (PWA)

Students were asked if they could attend classes, play sport or eat with people with AIDS. They were also asked if they would allow PWAs to stay with their families. Thirdly, they were asked if they would like them to disclose their HIV status. Their responses are tabulated in table 8.

Table 8. Attitudes of the whole group towards People Living With AIDS N=176

Category	Programme group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence interval
Class	88	45	51	88	38	43	1.18	0.86-1.62
Sport	88	53	60	88	40	45	1.32	1-1.76
Eat	88	35	40	88	28	32	1.25	0.84-1.86
Stay with family	88	60	68	88	58	66	1.03	0.84-1.27
Tell about HIV	88	77	88	88	71	81	1.08	0.95-1.23

Asked how they feel about PWAs they mentioned sympathy, hatred, fear, love and sometimes love and hate at the same time. The feelings for different groups are shown in Table 9.

Table 9. Feelings of the whole group towards People Living With AIDS. N=176

Feelings	Programme group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence interval
Sympathy	88	59	67	88	73	83	0.81	0.68-0.96
Fear	88	23	26	88	6	7	3.83	1.64-8.96
Hatred	88	4	5	88	7	8	0.57	0.17-1.88
Love	88	6	7	88	9	10	0.67	0.25-1.79
Love and hate	88	1	1	88	1	1	1	0.06-15.74

Students were asked if there is any change in the way they feel about PWAs now compared to two years ago. 21% of the whole group, (23% programme group and 19% comparison group) reported a change, prevalence ratio 1.18 95% confidence interval (0.66-1.64). This change was attributed to the following:

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Table 10. Sources of change from only those students who reported a change in their feelings towards People Living With AIDS. N=37

Source of change	Program group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence interval
Makukanye	20	12	60	17	0	0	N/A	
Information	20	7	35	17	16	94	0.37	0.20
Neighbour	20	1	5	17	0	0	N/A	
Media	20	0	0	17	1	6	N/A	

The three schools from Browns Farm were compared to the one school from Samora Machel. This was done to see if the results in the programme group were pushed up by this one school. Results are presented in Appendix 2. HIV knowledge and transmission was high in both groups (96% knowledge and 94% transmission in Browns Farm, 100% for both knowledge and transmission in Samora Machel). Although knowledge of STDs was low in both groups Browns Farm was lowest (20%) compared to Samora Machel (82%). More students in Samora Machel (20%) have seen a person with AIDS than Browns Farm (14%).

The need for protection from HIV was high for both groups (93% Browns Farm and 100% Samora Machel). The number of students who had sex was the same for both groups (39% Samora Machel and 38% Browns Farm). Although condom use was 12%

for both groups respectively, only students from Browns Farm (67%) used a condom every time when having sex. Students from Samora Machel have a negative attitude towards condoms than those coming from Browns Farm (condoms limit sexual pleasure 25% Browns Farm and 67% Samora Machel). Knowledge that condoms can prevent STDs was very low for Browns Farm (10%) and 58% for Samora Machel, as well as prevention of pregnancy, which was 2% for Browns Farm and 12% for Samora Machel. Attitudes towards PWAs and feelings were similar for both groups.

Schools were also compared against each other to see if one differs from the other especially for the programme group to see if one school is given more attention than the other, see results in Appendix 3. School 1 and 2 are programme group from Browns Farm. Schools 3 and 4 are the comparison group 3 from Browns Farm and 4 from Samora Machel. The comparison showed that schools, 2, 3 & 4 have high HIV knowledge than school 1.

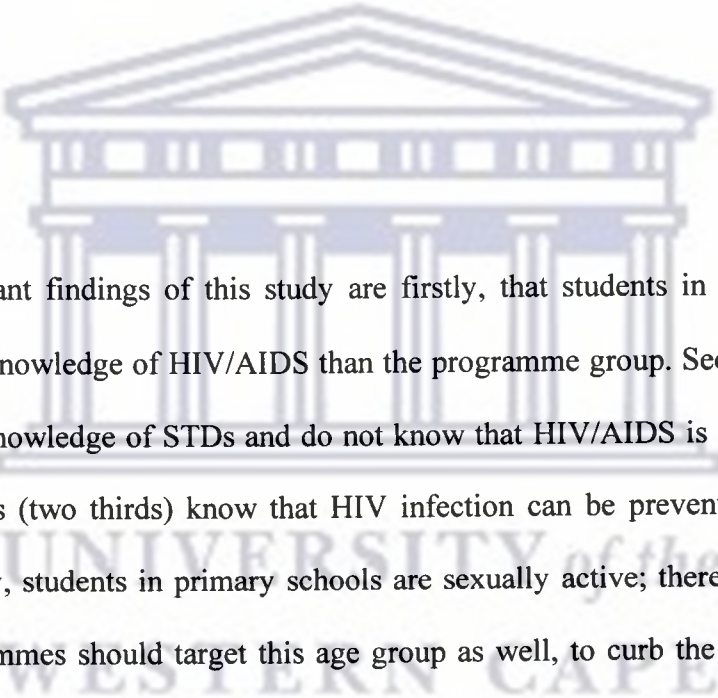
School 4 had the highest STD knowledge whilst school 1 had the lowest. HIV transmission knowledge was high across the schools. STD knowledge was low in all schools except for 4 (82%). Protection from HIV/STD knowledge was high in all schools. Students in school 3 were more sexually active (52%) than the three schools. More students in school 1 (27%) have used a condom than the three schools although not everytime when having sex. All the sexually active students in school 2 have used a condom every time when having sex. Only students in school 3 and 4 knew that condoms could prevent a STD (29% and 58%) and pregnancy (7% and 20%). Students in

all schools showed a negative attitude towards PWAs although they reported sympathy towards them.

A further comparison was done comparing the programme group and the comparison group sexually active students against selected objectives. The results of this comparison confirmed all the findings mentioned above and are presented in appendix 4.

CHAPTER 5

DISCUSSION



The most important findings of this study are firstly, that students in the comparison group had more knowledge of HIV/AIDS than the programme group. Secondly, students have very little knowledge of STDs and do not know that HIV/AIDS is a STD. Thirdly, very few students (two thirds) know that HIV infection can be prevented by use of a condom. Fourthly, students in primary schools are sexually active; therefore HIV/AIDS education programmes should target this age group as well, to curb the spread of HIV. Lastly, although students have high knowledge of HIV/AIDS and know that it is transmitted by unprotected sex, they do not use condoms.

There was no anecdotally known or suspected contamination or co-intervention between students in the programme group and the comparison group. Even though none of the students in the comparison group had heard of the Makukanye project, it is still possible that some contamination could have occurred via informal contacts between students of

the different schools. Only students at the programme school reported that they had received specific AIDS education, suggesting that co-intervention was unlikely to have occurred. However the comparison group was in the school for only one year they could have had co-intervention at other school

The results are now further discussed under headings linked to the objectives.

KNOWLEDGE ABOUT THE PROGRAMME

Almost all students in the programme group remembered the HIV/AIDS programme, indicating that it had at the very least made an impression on them. The programme has given AIDS education to 89% of students doing standard five in primary schools in Browns Farm. Most students in the schools wanted to be involved in the programme, which is an opportunity for the programme to attract more youth.

Although the programme activities are talks, drama and condom demonstration, the study showed that more attention is given to drama than other activities. This could be due to the fact that, as it is a programme for young people by young people, the drama becomes some sort of an entertainment and they retain the memory of the drama longer than the other activities. However drama alone is unlikely to lead to appropriate behaviour and a change of attitudes.

KNOWLEDGE OF HIV/AIDS

Youth information on HIV/AIDS transmission was found to be high. The most common mode of transmission they knew about was unprotected sex, which was high in both groups. Infected blood, multiple partners and mother to child were not shown to be that important as a mode of transmission, probably due to lack of information. It was interesting that multiple partners were not seen as an important mode of transmission of HIV in this study, because it is anecdotally known in the community that people who are HIV positive are labeled as having it because of promiscuity. Some of these misconceptions are clearing with time due to an increase in HIV/AIDS knowledge and the prevalence of the disease (national surveys: 1995-1997). It is also strange that the results are low for multi-partners as a mode of transmission, whereas unprotected sex is high, this could be because they don't see the sense in limiting partners if they can use condoms.

It is even worse discovering low knowledge level of transmission of HIV by infected blood, as this is the most dangerous transmission mode although it is relatively uncommon. It is also strange that the transmission of HIV by infected blood is low while one third of students are afraid of PWAs because of fear of infection.

In a study done in some of these schools in 1997, although the sample size was very small, HIV/AIDS knowledge was 83% and was not due to the programme as it was still in its infancy then. HIV/AIDS knowledge is now 95% indicating an increase of 12%, although this increase cannot be attributed to the programme.

Although the knowledge level of HIV/AIDS was found to be high in this study, knowledge of some important issues of HIV/AIDS is not so high. For example, most students did not know that HIV is transmitted from mother to child and very few mentioned multiple partners as an important risk factor. This is important information for youth to plan their future, to know that by saving themselves from contracting HIV it means saving their children as well, because they could give it to their babies.

The difference in knowledge between the two groups could be due not necessarily to lack of information in the programme group, but probably to other factors. These include differences in the age distribution and sexual activity in the two groups and the limiting nature of questionnaires, which are difficult for younger youth to answer adequately. This could be because most students in the programme group started schooling from Grade 1-7 with no break by the time they reach Grade 7, so they are relatively young. Students in the new schools come from different backgrounds and different schools mostly from the Eastern Cape and may have had education in previous schools. This is not reflected in this study, because the questionnaire was asking about AIDS education in this school not in previous schools.

The fact that this programme had limited effectiveness does not undermine the role played by all AIDS education programmes in this regard. It has been confirmed in studies done internationally and nationally, to evaluate AIDS prevention programmes, that these programmes can produce behaviour changes if planned properly.

KNOWLEDGE OF STDS

Despite the high level of knowledge of AIDS shown by students in this study, knowledge of STDs and their relationship to HIV was poor. STDs are a problem for the age group 20-29, which also has a high HIV prevalence. Twenty five % of sexually active adolescents contract a STD each year (Basen-Engquist *et al*: 1997). This is dangerous considering the fact that STDs predispose to HIV infection and some students in primary school may have sexual relationships with this age group. Students had little information that HIV/AIDS is a STD, which was lacking more in the schools from the programme group than the comparison group. It may however be that they know it is sexually transmitted but do not understand the term STD. A focus on STDs that helps students identify the symptoms of STDs and their consequences, and that encourages early attendance at health services when infected, needs to be included in all school HIV/AIDS programmes, which was lacking in this programme.

SEXUAL BEHAVIOUR

The results in this study show that primary school children are sexually active, but most research on AIDS and sexuality education targets high school children, with very little done in primary school. This is one of the weaknesses of AIDS education programmes. It may be due to the assumption that they are still young but the range at which they start having sex has been found to be 9-15 with boys starting earlier than girls (Slatsha: 1997), unpublished).

The programme is operating in a squatter area with poor socio-economic conditions. Here there is poor housing and lack of privacy. This together with poverty could lead to early sexual intercourse in young people. Early intercourse could be due to children witnessing it at home or selling themselves for money, food and school fees, and being sexually abused as children, which is not uncommon in these settings.

The need for sex education in primary schools is high, as it may be too late by the time they get to high school, as they may then already have developed risky behaviour that may be difficult to change (Choi et al: 1994).

Comprehensive sexual education when implemented before adolescents become sexually active, is effective in encouraging young people to delay sexual activity and practise safer sex when sexually active.

PERCEIVED RISK OF BEING INFECTED WITH HIV

All the students in the sample saw themselves at risk of being infected with HIV when they become sexually active. This is promising considering that two thirds of the sample are not sexually active yet.

It was interesting to discover the low information level about having one faithful partner as a prevention measure as this is important for AIDS prevention. This is however much higher compared to the response given to multiple partners as a mode of transmission for

HIV, which is strange. This may be due to lack of information on the concept of transmission versus prevention. It is anecdotally known that there are still people in this community who do not believe that AIDS is real and will only believe and practise safer sex when they see a person with AIDS. In this study the number of students who have seen a person with AIDS was high and could be much higher as it is highly likely that most have seen them, but didn't know they had AIDS.

PERCEIVED PROTECTION AGAINST HIV/AIDS

All the students in the sample knew that it is their responsibility to protect themselves from HIV infection when they become sexually active. It can only be hoped that with the knowledge they have about HIV transmission they will remain HIV negative as they negotiate their way to adulthood.

ATTITUDES TOWARDS CONDOMS

Few students showed a negative attitude towards condoms, although they did not use them. Youth who are not sexually active also chose condoms as the best way to prevent HIV infection, which is a good sign. It was interesting to discover that of the students who used condoms, most were from the programme group and they reported they were influenced by the programme. Behaviour change is very difficult, as it is not solely an individual's responsibility, but is influenced by other factors like culture and socio-economic status. Few students are sexually active in the programme group, and there is a possibility of that being due to the programme. This could possibly be listed as one of its successes, as it is what it is striving for.

ACCESS TO CONDOMS AND CONDOM USE

Most students knew where to get condoms even though they did not know how to use them. More needs to be done in educating this youth on how to use them. Almost half of sexually active students used condoms in this study. More males used condoms than females. This could be due to among other things to the fact that talking about sex is taboo in black communities, so women cannot initiate condom use with their partners and this is passed from generation to generation. This could be the reason for more condom use in males than females, shown in this study.

In a study done in Brown's Farm knowledge of HIV prevention by condom use was 44% (Slatsha: 1997, unpublished) and 48% in Mpumalanga (Matthews: 1997). Inconsistent use of condoms, in a study done nationally in South Africa by Richter (1995), on youth revealed that only 29% of sexually active youth used condoms. The findings in this study indicate that although most students have access to condoms, there is low use (12%) of condoms by youth and that they are at risk of acquiring HIV infection. This is a challenge for all AIDS education programmes as there is a general lack of information on how to actually use a condom, and most students in the sample reported not knowing how to use a condom, as the reason for not using them.

ATTITUDES TOWARDS PWAs

Some students showed a negative attitude towards PWAs. They wanted them to be "kept in a place away from other people" and this was irrespective of having had the

programme, as more students in the programme group were afraid of PWAs than the comparison group. Nevertheless, most students had a positive attitude towards PWAs, their reason being that “one cannot get AIDS by mere contact”. Although some had a negative attitude towards PWAs, two thirds showed sympathy to them and a third attributed their change to the programme.

STUDY LIMITATIONS

- There was no baseline information to compare the results to, hence it becomes difficult to assess what proportion of the knowledge is reasonably attributable to the programme or not.
- Also because there was no baseline information to compare the results to, it is possible that the differences in the knowledge and reported behaviour between the programme and comparison schools is due to differences in baseline knowledge before the programme began.
- The methodology used is limiting for the age group, as structured questionnaires do not give space for explaining further and young people tend to pick up one response and move on to another question, even though they could answer more comprehensively.
- A qualitative approach would be better to get attitudes around sexual behaviour in this age group. However since the study concentrated on the outcome and not the reasons for the outcome, a quantitative approach was more appropriate.

- In theory there is a chance of contamination, as pupils live in the same areas and play together after school, but this was not evident in the study given that no student in the comparison group knew about the programme.
- Theoretically, students in the comparison group may be getting information from another source, but according to the researcher's thorough knowledge of the area; this is not the case, except for mass media to which both groups are exposed.
- The comparison group was slightly older and more of them were sexually active, both of which factors could have influenced their knowledge and behaviour.
- The questionnaire was not tested for reliability
- Validity was not properly tested for, but face validity was reasonably assumed.
- The comparison schools were only a year old, therefore it is possible that the students in the comparison group had education from previous schools, as the questionnaire was only asking about the current school.

CONCLUSION

KNOWLEDGE ABOUT THE PROGRAMME

The programme Makukanye HIV/AIDS education was well known to most of students in the programme group schools in Browns Farm. It has given AIDS education to 89% of students doing standard five in these primary schools. This programme has been of limited effectiveness. Nevertheless the importance and value of AIDS education in

schools cannot be dismissed. It is probably more appropriate to look at the reasons why the programme had only a limited effect and remedy the deficiencies.

KNOWLEDGE OF HIV/AIDS

Students in primary school have a high knowledge of HIV/AIDS. They know that HIV/AIDS can be prevented by use of a condom, but their use of condoms was low.

KNOWLEDGE OF STDS

Students in primary school have very low knowledge of STDs. They do not know that HIV/AIDS is a STD, although they know that it is sexually transmitted.

SEXUAL BEHAVIOUR

Students in primary school are sexually active and therefore are at high risk of contracting HIV if not using condoms. This shows the need for AIDS education programmes to target primary schools, as by the time they reach high school it may be too late.

PERCEIVED RISK BY STUDENTS

These students know that everybody is at risk of contracting HIV when sexually active, this provides an opportunity for condom education.

PERCEIVED PROTECTION AGAINST HIV

Students in primary school know that it is their responsibility to protect themselves from HIV infection. This provides a good opportunity for AIDS education programmes.

ATTITUDES TOWARDS CONDOMS

Most students showed a positive attitude towards condoms and willingness to use them if and when they become sexually active. However very few currently sexually active students used condoms.

ACCESS TO CONDOMS AND CONDOM USE

The students had adequate access to condoms but did not use them. Nevertheless the attitudes towards condoms were positive even with the non-sexually active students.

ATTITUDES TOWARDS PWAS

Most students in this study had positive attitudes towards PWAs. This provides hope to positively change attitudes for the next generation

GENERAL COMMENTS

The programme will now know where to improve, as this is what the study was all about, to bring the best programme to the community. Also the results from this study are not conclusive, as there was no baseline information to compare these results to. An important lesson learnt is that one should do a pilot project and/or situational analysis before engaging in a project as important as this one.

CHAPTER 6

REPORTING THE DATA

Results will be presented to schools and management of Health Care Trust in the following manner:

In Schools:

- A meeting will be arranged with teachers where a presentation will be made in each school using transparencies and flipcharts with diagrams (pie charts and bar graphs), recommendations will be made as to how teachers can help to improve the programme.
- Second presentation meeting will be with students that will be narrative with simple pictures to show.

At Health Care Trust:

Results will be presented in the form of three meetings.

- First presentation will be made to the management using graphs, charts and transparencies.
- Second presentation will be done to community health workers and will be narrative and using simple pictures.
- Third meeting will be with the youth volunteers who do most of the AIDS education and will also take the same format as community health workers.

RECOMMENDATIONS

This is the first phase of the evaluation of the HIV/AIDS programme and it looked at the outcome of the programme. The following recommendations are made:

- More or better presented information needs to be given on how to use a condom and condoms must be shown in all AIDS education sessions
- More or better presented information on STDs, signs and symptoms, their relationship to HIV and their prevention.
- Programme should include other aspects of sexuality and general life skills education.
- More education is needed to change negative attitudes towards PWAs. Will need to do research on strategies to employ to achieve this.
- Another study looking at the training programme for the AIDS educators, its content and strategies employed, and its evaluation as well as looking deeper into sexual behaviour and attitudes using qualitative methods, should follow.



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APPENDIX 1

QUESTIONNAIRE

Date:

ID No.:.....

Age Sex M/F

School 1 2 3 4

Programme 1/2
group

Browns Farm school

No.	Questions	Categories	Coding	Skip To
1	How long have you been in this school?	> 1 year 1-2 years < 3 years	Yrs in school 2 or less = 1 more than 2 = 2	
2	Where were you before?	Browns Farm Outside Browns Farm	Where before Where before B = 1 Where before 0 = 2	
3	Do you get any AIDS education in this school?	Yes 1 No 2	AIDSeduc 1 = yes 2 = no	-> Q6
4	Who does/did it for you?	Makukanye Health Professionals Other	By who Maku ½ By who HP ½ By who teach ½ 1 = yes 2 = no	
5	What method do/did they use?	Talks Drama Condom demonstration Other	Methustalk ½ Methusdram ½ Methlikcod ½	-> Q8
6	If no, would you like to have an AIDS education?	Yes 1 No 2	Like AIDSeduc ½	->Q8

7	What method would you like it to be?	Talks Drama Condom demonstration Othr	Methliktal ½ Methlikdra ½ Methlikcod ½	
8	Have you heard of a group of youth known as Makykanye Youth AIDS Group?	Yes No	Heardmaku ½	-> Q17
9	Where did you hear about them?	School Community	Where heard School = 1 Comm = 2	
10	What were they doing?	Drama Talks Condom demonstration	Doing drama ½ Doing talks ½ Doing codem 12	
11	How many times have they been to your school?	1-2 2-3 <3	Times in school 2 or less = 1 more than 2 = 2	
12	Would you like them to come again?	Yes 1 No 2	Come again ½	-> Q14
13	What would you like them to repeat?	Talks Drama Condom demonstration	Like talks ½ Repeat drama ½ Like condom ½	
14	What did you like the most?	Talks Drama Condom demonstration	Like talk ½ Like drama ½ Like codemo ½	
15	What did you like the least?	Talks Drama Condom demonstration	No like talk ½ No like drama ½ No like condom ½	
16	How do you think the programme can be improved?	Teacher involvement Student involvement Parent involvement	Prgimtech ½ Prgimstud ½ Prgimpare ½	
17	What do you understand about HIV/AIDS?	Infection Incurable STD Don't know	HIV Infect ½ HIV Incur ½ HIVSTD ½ HIVknow ½	->Q22
18	How is HIV/AIDS transmitted?	Unprotected sex Infected blood Mother to child Multiple partners	Unprotsex ½ Infectblood ½ Motochild ½ Multipartn ½	
19	Have you ever seen a person with AIDS?	Yes 1 No 2	Seen PWA ½	
20	From what you have seen or heard what does the person with AIDS look like?	Diarrhoea Loss of weight Skin rashes Loss of hair	Signdiarho ½ Signloswegt ½ Signskinras ½ Signloshair ½	
21	What do you understand about STDs?	Pain during urination Penile/vaginal discharge Genital sores Warts Don't know	STDurine ½ STDdisc ½ STDsores ½ STDwarts ½ Signknow ½	

22	Do you think one needs to protect her/himself from an STD/HIV/AIDS when one is sexually active?	Yes No	HIVSTDrisk ½	->Q25
23	What do you think the best way to protect ones self?	Abstinence Condoms One faithful partner	HIVabstain ½ HIV condom ½ HIV onepart ½	
24	Have you ever heard of a condom?	Yes 1 No 2	Heardcondo ½	->Q40
25	Where/who did you heard it from?	Makykanye Health professional Friend Sibling CHW Teacher	Hrdconmaku ½ Hrdconurse ½ Hrdconfrnd ½ Hrdconsibl ½ HrdCHW ½ Hrdteacher ½	
26	Have you ever seen a condom?	Yes 1 No 2	Seecondo ½	->Q31
27	Who showed it to you?	Makukanye Health professional Friends Sibling CHW Teacher	Seeconmaku ½ Seeconurse ½ Seeconfrnd ½ Seeconsibl ½ SeenCHW ½ Seenteacher ½	
28	Where can you get condoms?	Makukanye Health professional CHW Teacher	Getcomaku ½ GetcoHP ½ GetcoCHW ½ Getcoteach ½	
29	Has anyone explained to you how to use a condom?	Yes No	Had sex ½	
30	Have you ever had sex?	Yes No	Hadsex ½	->Q37
31	Have you ever used a condom?	Yes No	Usedcondom ½	->Q36
32	Have you experienced any problems using condoms?	Yes 1 No 2	Hadproblem ½	
33	If yes, what were the problems?	Breakage Dryness Too tight	Probbreakag ½ Probdrynes ½ Probtight ½	
34	When do you use a condom?	Everytime I have sex Sometimes	Whenuseco Everytime = 1 Sometimes = 2	
35	What made you to use a condom? Was it the influence of the programme?	Yes No	Makuinflue ½	
36	Why are you not using a condom?	Don't know how to use it Limit sexual leasure No access	Howuseco ½ Sexpleasur ½ No access	
37	Why should condoms be used?	STDs HIV/AIDS	CoprotSTD ½ CoprofHIV ½	



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		Contraception	Coprotrgrn ½	
38	Should students with AIDS do the following: a) Attend classes? b) Play day sport with other kids c) Eat with other kids d) Stay with their families e) Tell about their HIV status	1 Agree 2 Strongly agree 3 Disagree 4 Strongly disagree 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5	Agree = 1 Disagree = 2 PWA class ½ PWA asport ½ PWAeat ½ PWAstayfam ½ PWAHIVtell ½	
39	Is there any hange in the way you feel about people with AIDS now than before education?	Yes 1 No 2	Pwchange ½	
40	Explain how you feel?	Sympathy Fear Hatred Love Mixed	PWAsympath ½ Pwfear ½ PWAhatred ½ PWAlove ½ Lovehat ½	
41	What made you to change?	Makukanye Information	Changemaku ½ Changeinfo ½ Changeneigh ½ Changemedia ½	



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APPENDIX 2

BROWNS FARM SCHOOL *versus* SAMORA MACHEL

NB: BF = Browns Farm

SM = Samora Machel

Categories	BF	Response	%	SM	Response	%	Prevalence ratio	95% confidence intervals
Knowledge	132	127	96	44	44	100	0.96	0.93-0.99
Infectious	127	42	33	44	30	68	0.49	0.35-0.63
Incurable	127	96	76	44	33	75	1.01	0.83-1.20
STD	127	5	4	44	9	20	0.19	0.11-0.27

HIV/IDS TRANSMISSION

Categories	BF	Response	%	SM	Response	%	Prevalence ratio	95% confidence intervals
Transmission	132	124	94	44	44	100	0.94	0.90-0.98
Unprotected sex	124	106	85	44	43	98	0.87	0.80-0.94
Infected blood	124	28	23	44	22	50	0.45	0.20-0.70
Mother to child	124	0	0	44	15	34	N/A	
Seen PWA	132	18	14	44	9	20	0.67	0.32-1.02

STD KNOWLEDGE

Categories	BF	Response	%	SM	Response	%	Prevalence ratio	95% confidence intervals
STD knowledge	132	27	20	44	36	82	0.25	0.17-0.33
Painful urine	132	13	10	44	23	52	0.75	0.47-0.98
Discharge	132	6	5	44	18	41	0.44	0.20-0.68
Sores	132	12	9	44	7	16	2.29	1.04-3.54

PROTECTION FROM HIV/AIDS/STD

Categories	BF	Response	%	SM	Response	%	Prevalence ratio	95% confidence intervals
Knowledge	132	123	93	44	44	100	0.93	0.89-0.97
Abstinence	123	13	11	44	11	25	0.42	0.20-0.62
Condom	123	107	87	44	33	75	1.16	0.97-1.35
One partner	123	20	16	44	13	30	0.55	0.30-0.80

SEXUAL BEHAVIOUR

Categories	BF	Response	%	SM	Response	%	Prevalence ratio	95% confidence intervals
Had sex	132	50	38	44	17	39	0.98	0.64-1.32
Used condom	50	6	12	17	2	12	1.02	0.23-1.81
Everytime	6	4	67	2	0	0	N/A	

ATTITUDE TOWARDS CONDOMS

Categories	BF	Response	%	SM	Response	%	Prevalence ratio	95% confidence intervals
Don't know how to use	44	33	75	15	6	40	1.88	0.99-2.76
Limits sexual pleasure	44	11	25	15	10	67	0.38	0.20-0.56

NEED FOR CONDOMS TO BE USED

Categories	BF	Response	%	SM	Response	%	Prevalence ratio	95% Confidence intervals
STD	126	12	10	43	25	58	0.16	0.09
HIV	126	123	98	43	24	56	1.75	1.34
Pregnancy	126	3	2	43	5	12	N/A	



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APPENDIX 3

COMPARISON OF INDIVIDUAL SCHOOLS

HIV KNOWLEDGE

NB! School 1 and 2 = programme group, 2 and 3 = comparison group

Categories	Sch 1	Resp	%	Sch 2	Resp	%	Sch 3	Resp	%	Sch 4	Resp	%
knowledge	42	40	95	46	46	100	41	41	100	44	44	100
infectious	40	9	23	46	7	15	41	26	63	44	30	68
incurable	40	31	78	46	38	83	41	27	66	44	33	75
STD	40	0	0	46	1	2	41	4	10	44	9	20

HIV/AIDS TRANSMISSION

Categories	Sch 1	Resp	%	Sch 2	Resp	%	Sch 3	Resp	%	Sch 4	Resp	%
transmission	42	88	46	45	45	98	44	42	95	44	44	100
Unprotected sex	37	86	45	40	40	89	42	34	81	44	44	100
Infected blood	37	14	45	5	5	11	42	18	43	44	22	50
Motochild	37	0	45	0	0	0	42	0	0	44	15	34
Seen PWA	42	19	46	3	3	7	44	7	16	44	9	20

STD KNOWLEDGE

Categories	Sch 1	Resp	%	Sch 2	Resp	%	Sch 3	Resp	%	Sch 4	Resp	%
knowledge	42	8	19	46	6	13	42	13	31	44	36	82
urine	8	1	13	6	1	17	13	11	85	36	23	64
discharge	8	3	38	6	1	17	13	2	15	36	18	50
sores	8	4	50	6	4	67	13	4	31	36	7	19

PROTECTION FROM HIV/AIDS/STD

Categories	Sch 1	Resp	%	Sch 2	Resp	%	Sch 3	Resp	%	Sch 4	Resp	%
Knowledge	42	38	90	46	43	93	44	42	95	44	44	100
abstinence	38	1	3	43	8	19	42	4	10	44	11	25
condom	38	35	92	43	32	74	42	40	95	44	33	75
One partner	38	3	8	43	3	7	42	14	33	44	13	30

CONDOMS

Categories	Sch 1	Resp	%	Sch 2	Resp	%	Sch 3	Resp	%	Sch 4	Resp	%
heard	42	38	90	46	46	100	44	42	95	44	43	98
Seen	42	30	71	46	44	96	44	40	91	44	42	95
Explain use	42	5	12	46	29	63	44	11	25	44	17	39

SEXUAL BEHAVIOUR

Categories	Sch 1	Resp	%	Sch 2	Resp	%	Sch 3	Resp	%	Sch 4	Resp	%
Had sex	42	15	36	46	12	26	44	23	52	44	17	39
Use condom	15	4	27	12	1	8	23	1	4	17	2	12
Every time	4	3	75	1	1	100	1	0	0	2	0	0

ATTITUDES TOWARDS CONDOMS

Categories	Sch 1	Resp	%	Sch 2	Resp	%	Sch 3	Resp	%	Sch 4	Resp	%
don't know how	11	8	73	11	7	64	22	18	82	15	16	40
Sexual pleasure	11	3	27	11	4	36	22	4	18	15	10	67

CONDOMS PREVENT

Categories	Sch 1	Resp	%	Sch 2	Resp	%	Sch 3	Resp	%	Sch 4	Resp	%
STD	38	0	0	46	0	0	42	12	29	43	25	58
HIV	38	38	100	46	46	100	42	39	93	25	24	96
Pregnancy	38	0	0	46	0	0	42	3	7	25	5	20

ATTITUDES TOWARDS PWAs

Categories	Sch 1	Resp	%	Sch 2	Resp	%	Sch 3	Resp	%	Sch 4	Resp	%
Class	42	19	45	46	26	57	44	16	36	44	22	59
Sport	42	21	50	46	32	70	44	14	32	44	26	59
Eat	42	10	24	46	25	54	44	9	20	44	19	43
Stay with family	42	26	62	46	34	74	44	24	55	44	34	77
Tell about AIDS	42	37	88	46	40	87	44	37	84	44	34	77

FEELINGS FOR PWAs

Categories	Sch 1	Resp	%	Sch 2	Resp	%	Sch 3	Resp	%	Sch 4	Resp	%
Sympathy	42	23	55	46	36	78	44	34	77	44	39	89
Fear	42	16	38	46	7	15	44	2	5	44	4	9
Hatred	42	3	7	46	1	2	44	4	9	44	3	7
Love	42	2	5	46	4	9	44	4	9	44	5	11
Love hate	42	0	0	46	1	2	44	1	2	44	0	0

APPENDIX 4

FURTHER COMPARISON OF THE PROGRAMME GROUP AND THE COMPARISON GROUP SEXUALLY ACTIVE STUDENTS N=67

AIDS INFORMATION

Objective	Programme group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence interval
Infectious	27	4	15	40	25	63	0.24	0.09-0.60
Incurable	27	22	81	40	27	68	1.21	0.91-1.60
STD	27	1	4	40	11	28	0.13	0.02-0.98

AIDS TRANSMISSION

Objective	Programme group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence interval
Unprotect ed sex	27	23	85	40	36	90	0.95	0.78-1.14
Infected blood	27	4	15	40	19	48	1.31	0.12-0.82
Mother to chide	27	0		40	5	13	0.00	
Multiple partners	27	0		40	2	5	0.00	

STD KNOWLEDGE

Objective	Programme group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence Interval
Painful urine	27	1	4	40	18	45	0.08	0.01-0.58
Discharge	27	4	15	40	12	30	0.49	0.18-1.37
Genital sores	27	4	15	40	7	18	0.85	0.27-2.61

PREVENTION OF HIV/AIDS/STD

Objective	Programme group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence interval
Condom	27	21	78	40	37	93	0.85	0.67-1.05
One partner	27	3	11	40	14	35	0.32	0.10-1.00

REASONS FOR LACK OF CONDOM USE

Objective	Programme group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence interval
Lack of knowldge	27	13	48	40	3	75	2.47	0.64-9.48
Sexual pleasure	27	7	26	40	25	63	0.77	0.49-1.22

NEED FOR CONDOM USE

Objective	Programme group	Response	%	Comparison group	Response	%	Prevalence ratio	95% Confidence interval
STD	27	0	0	40	21	53	0.00	
Pregnacy	27	0	0	40	5	13	0.00	