

THE AIDS EDUCATION NEEDS OF BLACK, GRADE 10 PUPILS IN GRAHAMSTOWN

Author: MARIUS GOUWS

Student Number: 9917801

Public Health Programme : University of the Western Cape

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Supervisor: Dr Mickey Chopra

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The AIDS Education Needs of Black, Grade 10 Pupils in Grahamstown



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Dr Mickey Chopra

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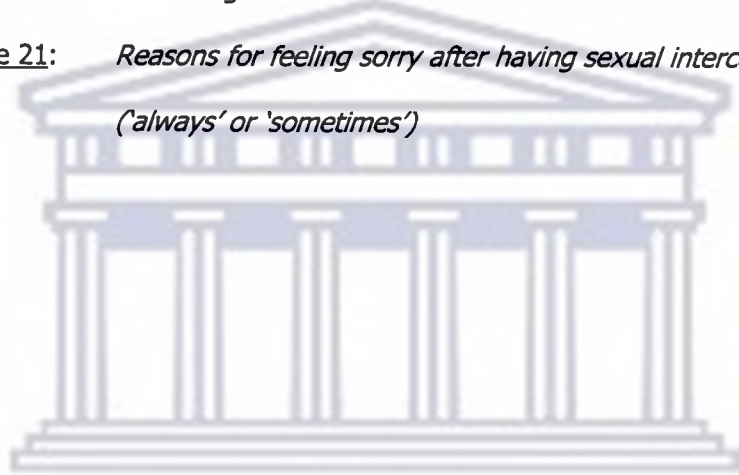


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The logo of the University of the Western Cape, featuring a stylized classical building with columns and a pediment.

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**ABSTRACT: THE AIDS EDUCATION NEEDS OF BLACK, GRADE 10
ADOLESCENTS IN GRAHAMSTOWN**

In the absence of a cure for HIV/AIDS, it is necessary to concentrate efforts at prevention of HIV infection. A cross-sectional, descriptive study was performed to inform a future educational intervention for black adolescents in the Rini and Joza areas (peri-urban) of Grahamstown. A systematic sample of three hundred ($n = 300$) grade ten pupils from five senior, secondary schools in the area was selected for inclusion into the study. The adolescents were requested to complete a structured, anonymous questionnaire exploring their perceptions regarding HIV/AIDS according to the constructs of the Health Belief Model (HBM). A response rate of 98% was achieved.

The aim of the study was to investigate the perceived threats and benefits around HIV and sexuality in adolescents, by exploring knowledge, beliefs, current sexual practices, perceived barriers to practicing safe sexual behaviour, and opportunities for future intervention presentation. This will inform the future development of a health promotion intervention.

The results revealed that the HIV/AIDS education needs of adolescents in the Rini and Joza areas of Grahamstown are unique. It was found that the knowledge of the adolescents with regard to HIV/AIDS was superficial, which led to the illustration of widespread confusion and frustration. Regardless of the poor levels of knowledge and misconceptions harboured by the respondents, and the fact that many (83.1%) were sexually active, a high proportion of the adolescents did not regard themselves as being

at risk to HIV infection. Moreover, the study has identified numerous risk-taking practices of the adolescents for acquiring HIV. These include low levels of condom use, living with sexual partners, early ages at becoming sexually active, and high levels of Sexually Transmissible Infection rates.

The study has also identified possible opportunities for future intervention development and reported barriers to practicing of safe sexual intercourse. Appropriate recommendations for intervention design and implementation are made in this regard.



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1. INTRODUCTION

The Human Immunodeficiency Virus (HIV)/Acquired Immunodeficiency Syndrome (AIDS) pandemic is reaching devastating proportions. It is common knowledge that the age groups at greatest risk to the disease comprise of adolescents. It has been shown that South Africa faces an economic catastrophe once these age groups present with full-blown AIDS in their economically productive years. Areas that have already high unemployment rates will be the most affected. The predominantly black residential areas of Grahamstown (i.e. Rini and Joza), which occurs in the second poorest province of South Africa: the Eastern Cape, has been the geographical focal point of the study.

In order to meaningfully curb the rampant spread of HIV/AIDS, it is felt that preventive strategies should be devised and implemented at district level through adolescent education programmes. Structuring and developing effective education programmes are highly dependent on the accurate and holistic understanding of the needs of the adolescents. This study has attempted to use the Health Belief Model (HBM) for Health Promotion, as a conceptual framework for gaining an understanding into the adolescent health education needs which are unique to Grahamstown's black youths.

2. KEY PROBLEM STATEMENT

What are the focus areas that must be addressed by an HIV/AIDS education programme based on the constructs of the HBM for Health Promotion in the township areas of Grahamstown, in the Province of the Eastern Cape?

3. PURPOSE

To obtain information from a cross-sectional study that will enable the formulation of a HIV/AIDS education programme for township adolescents residing in Grahamstown, in the Province of the Eastern Cape.

4. LITERATURE REVIEW

A literature review was conducted in relation to both selective HIV/AIDS aspects in adolescents, and the HBM in Health Promotion. Sources of information included abstract articles and journal articles found with the aid of Medline and Cochrane Library searches. Although a large amount has been written on the subject matter, it was evident that very little research has been performed in South Africa, and more specifically in the Eastern Cape Province.

To initiate the discussion, a brief overview of the main elements and origin of the HBM in Health Promotion, will be provided. In order to justify the decision for choosing the HBM as the conceptual framework for performing HIV/AIDS

education to adolescents, a summative section will focus on the specific reasons for selecting the HBM as the conceptual framework for the study. Following this, a discussion will be provided on the research that has been performed, internationally and nationally, which relates directly to the research question. The discussion will be structured according to the main elements of the HBM; i.e., perceived susceptibility, perceived severity, perceived benefits, perceived barriers, potential *cues to action*, and sense of self-efficacy in order to ensure avoidance of disease contraction.

4.1. THE HEALTH BELIEF MODEL IN HEALTH PROMOTION

This section will provide a brief overview of the HBM. A succinct explanation on what the model entails, and where it originates, will be provided¹⁻⁹.

4.1.1. Origin of the Health Belief Model

The HBM was one of the first models that adapted theory from the behavioural sciences to health problems, and it remains one of the most widely recognized conceptual frameworks of health behaviour. It was originally introduced in the 1950's by psychologists working in the United States Public Health Service (Hochbaum, Rosenstock, and Kegeles). Their focus was on increasing the use of then available preventive services, such as chest x-rays for Tuberculosis screening, and immunizations such as flu vaccines¹. The HBM focused on the relationship of health behaviours, health practices, and utilization of preventive

health services. They assumed that people feared diseases, and that health actions were motivated in relation to the degree of fear (i.e. perceived threat) and expected fear-reduction potential of actions, as long as that potential outweighed practical and psychological obstacles to taking action (i.e. net benefits)².

The three originators were trained in social psychology with phenomenological orientation. They were also substantially influenced by the theories of Kurt Lewin.

4.1.2. Factors Leading Towards the Development of the Health Belief Model

The factors that led to the development of the HBM are:

- The health setting of the 1950's, and
- The professional training and background of the originators.

The health setting during the early 1950's for the United States Public Health Service was primarily oriented toward prevention of disease and not treatment of disease. Medical care, which was largely considered appropriate public health work, was not the focus during that time. Thus, the public health concern for problems connected with patients' symptoms and their compliance with medical regimens was slight. The originators of the HBM were rather concerned with the widespread failure of individuals to engage in preventive health measures.

The model was influenced by the theories of Kurt Lewin, which state that it is the world of the perceiver that determines what an individual will and will not do.

The originators of the HBM conducted major studies in the 1950's and 1960's that were aimed at systematically explaining preventive health behaviour.

Godfrey Hochbaum initiated the first research on the HBM in 1952 by an attempt to identify factors underlying the decision to obtain a chest x-ray for the early detection of Tuberculosis.

Thus, like Lewin, the early researchers also included, in the model, a strong component of the behaving individual's perceptual world. Later, researchers included motivation as a major component, and also a strong concentration on the individual's current dynamics, believing that prior experience exercises influence only insofar as it is still represented in the individual's present state of affairs.

4.1.3. Elements of the Health Belief Model

The structural elements of the HBM can simply be illustrated by way of a diagram. This is as follows:

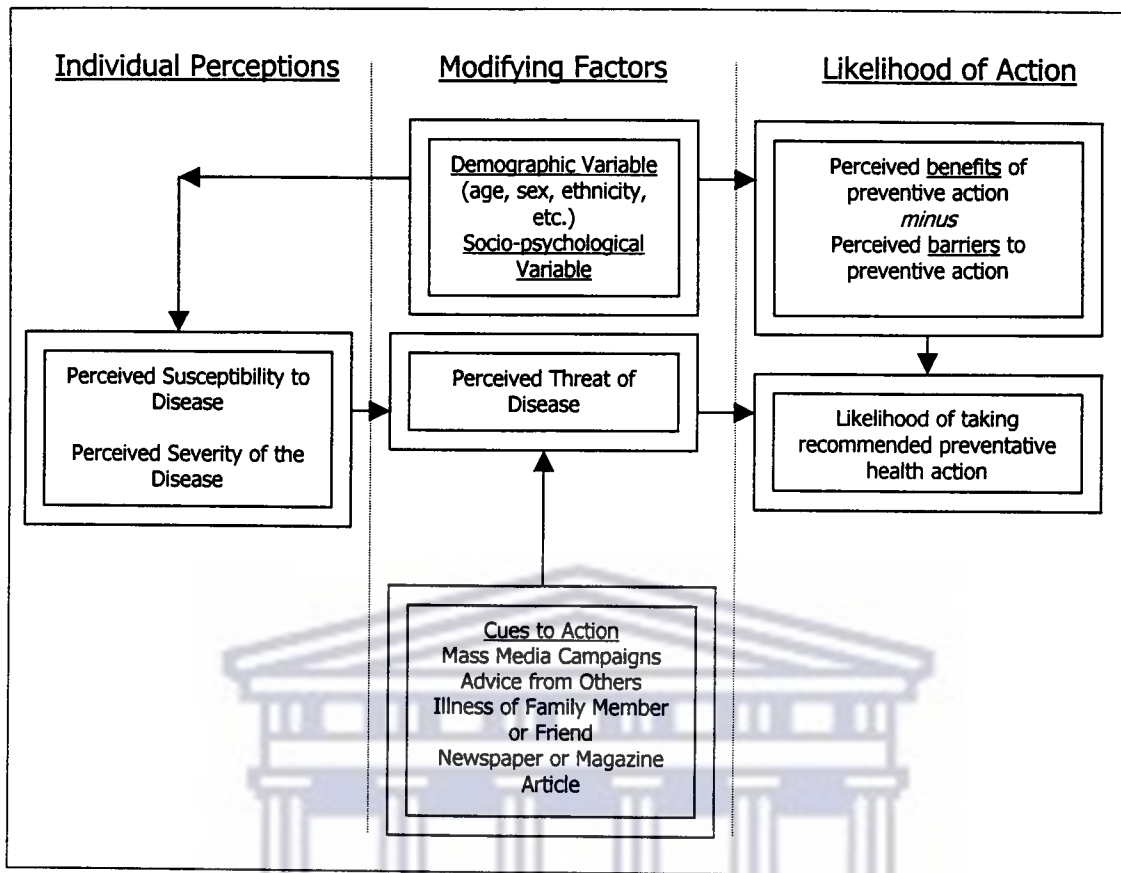


Figure 1: Diagrammatic representation of the structural composition of the HBM

HIV/AIDS education campaigns often identify people who are at high risk of contracting the disease, but do not sufficiently illustrate to these people that they should perceive themselves as being at risk, and that it is not a disease that will only affect others. Thus, they may not think it is necessary to use condoms during coital encounters. The HBM can be useful in analyzing such people's inaction for purposes of developing effective intervention programmes.

The HBM was spelled out in terms of four constructs representing the perceived threat and net benefits: perceived *susceptibility*, perceived *severity*, perceived *benefits*, and perceived *barriers*. These concepts were proposed as accounting

for people's *'readiness to act'*. An added concept, *cues to action*, would activate that readiness and stimulate overt behaviour. A recent addition to the HBM is the concept of *self-efficacy*, or one's confidence in his or her own ability to successfully perform an action. The concept was added by Rosenstock and others in 1988 to help the HBM better fit the challenges of changing habitual unhealthy behaviours such as being sedentary, smoking, or overeating. Table 1 elaborates on these concepts and illustrates its application¹.

CONCEPT	DEFINITION	APPLICATION
Perceived Susceptibility	One's opinion of chances of getting a condition.	Define population(s) at risk, risk levels. Personalize risk based on a person's behaviour. Heighten perceived susceptibility if too low.
Perceived Severity	One's opinion of how serious a condition and its sequelae are.	Specify consequences of the risk and the condition.
Perceived Benefits	One's opinion on the efficacy of the advised action to reduce risk or seriousness of impact.	Define action to take: How, where, when, clarify the positive effects to be expected.
Perceived Barriers	One's opinion of the tangible and psychological costs of the advised action.	Identify and reduce barriers through reassurance, incentives, and assistance.
Cues to Action	Strategies to activate 'readiness'.	Provide how-to information, promote awareness, reminders.
Self-Efficacy	Confidence in one's ability to take action.	Provide training, guidance in performing action.

Table 1: Definitions and applications of concepts of the HBM

Originally the HBM was developed to help explain health-related behaviours. It could guide the search for *'why?'* and helps identify leverage points for change. In addition, it can be a useful framework for designing *change strategies*. The most promising application of the HBM is for helping to develop messages that are likely to persuade individuals to make healthy decisions, such as using condoms during sexual intercourse. The messages can be delivered in printed

educational materials, through electronic mass media, in one-to-one counseling, or in well-executed group sessions.

Messages that are suited to health education for HIV/AIDS- and STD control in adolescents illustrate the components of the HBM³. Before one will accept a perceived risk of personally contracting the disease, and exercise safe sexual practices, one must believe that one can have sexual intercourse with an asymptomatic carrier (*is susceptible*). Also, that HIV infection can lead to AIDS (*the severity is great*), and that using condoms will substantially reduce the risk of contracting the disease (*benefits*), without negative side-effects such as reduced sexual gratification for both oneself and one's partner (*barriers*)⁴. Educational campaigns, radio-talk shows, eroticized usage of condoms, etc., might promote consistent adherence to safe sexual practices (*cues to action*)⁵. If the individual has a negative perception of condom use, a *behavioural contracting strategy* might be used to establish acceptance in the general study population to ensure that his or her confidence in using condoms successfully can increase (*self-efficacy*)⁶. Once again, reference is made to table 1 to illustrate the application of these concepts.

The HBM has a '*good fit*' when the problem behaviour or condition evokes health motivation, since that is its central focus⁷⁻⁹. Since, HIV/AIDS is one of the most preventable diseases, it is felt that adolescents will gain tremendously from an educational intervention based on the HBM to ensure condom usage or premarital sexual abstinence.

4.2. REASONS FOR CHOOSING THE HEALTH BELIEF MODEL

The most important reason for choosing the HBM, relates to its simplicity and consequent time saving characteristics. It needs to be borne in mind that the Albany District office of the Department of Health is severely understaffed and financially stricken, and can, therefore, not engage in complex health promotion activities for which they lack the necessary skilled supervision. Models such as the Health Action Model, Consumer Information Processing Model, Planned Behaviour Model¹⁰, Ajzen-Fishbein Attitude-Behaviour Model, Leventhal *et al*'s Self-Regulatory Model¹¹, Self-Efficacy Theory¹², Expanded HBM's¹³ are all, admittedly, more comprehensive but will require more intensive programme development, training of implementers, resource allocation, etc. Unfortunately, these requirements are not accessible to the staff that will be implementing the developed intervention programme in the Albany Health District. Hence, the HBM will eventually serve as a frame of reference to implement the much-needed intervention. After all, various studies have experienced proven successes by using the traditional HBM in the fight against HIV-spread^{14,15}.

Although it has been stated that the HBM focuses on manipulating choice rather than empowering decision-makers¹⁶, as required by the Ottawa Charter for Health Promotion of 1986, it is felt that the immense HIV/AIDS problem necessitates an immediate onslaught by health practitioners to stem its wave of destruction. It is felt that manipulation of choice in this sense is justified by urgency and its practicable nature, given the severe financial and staffing

shortages experienced by eventual implementing authorities. It is further felt that the HBM will serve as a suitable departure point in addressing HIV/AIDS education due to its amenability to expansion into more complex models of health promotion, such as the Health Action Model¹, at a later stage. At least one study urges that a variety of models must be tested to find appropriate and effective methods of reducing HIV-risk¹⁷ behaviours in adolescents. It has been proven sufficiently that theory-based interventions that are developed in a sound manner are effective^{18,19}.

A further strength of the HBM in assessing educational needs is the direct implications it holds for intervention design²⁰. Each construct of the HBM is theoretically modifiable using traditional health education strategies²¹. For example, critically examining the modes of transmission and rates of HIV infections in target populations can help pupils realistically estimate susceptibility. Using the HBM to assess HIV education needs could provide a profile of pupil beliefs that would be helpful in designing relevant and efficient interventions. In this way, it may be possible to design empowering interventions grounded in demographic youth-specific culture²²⁻²⁸.

In contrast to the above, some studies question the effectiveness of the HBM^{22,29,30}. It bears mentioning that the HBM has been noted to have two distinct shortcomings. One of the problems that has been said to plague the HBM is that different questions are used in different studies to determine the same beliefs; consequently, it is difficult both to design appropriate tests of the HBM

and to compare results across studies. A further reason why research does not always support the HBM is that factors other than health beliefs also heavily influence health behaviour practices. These factors may include such things as special influences, cultural factors, socio-economic status, and previous experiences. It is anticipated that this study has allowed for these factors in that a relatively small and homogenous group of individuals has been selected for the study. This has possibly ensured that the same beliefs, practices, and influences contributed towards the behaviours of the sample.

Other proponents disregard all contemporary behaviour-theories in the search for HIV prevention programmes in that it is stated that they do not fully incorporate the less rational, more emotional elements of adolescent health and risk behaviour³¹. Additionally, it has been proposed that risk-taking behaviour is ill reported due to problems with selected study designs. It is said that one of these factors include inattention to situational norms and other contextual factors³².

Nevertheless, the fact remains that adolescence is a critical time for the prevention of HIV infection and both the treatment and prevention of high-risk behaviour³³⁻³⁵. Moreover, using the HBM as a theoretical framework, health care providers can guide the adolescent to make realistic risk assessments and identify positive ways of incorporating condoms into their sexual lives³⁶.

4.3. PREVIOUSLY PERFORMED STUDIES

A rich source of literature is available on the different aspects that the key research problem has attempted to address. Unfortunately, no published research has been performed in the township areas of the Grahamstown area. Therefore, information sources were consulted to gain knowledge on the main elements of the HBM (i.e. perceived threat and its severity, perceived benefits, perceived barriers and potential opportunities for intervention¹). To enable the proposed research to gather information relevant to the Grahamstown area, this section has been particularly useful in compiling a data-capturing tool (i.e. the questionnaire) for the proposed study.

It needs to be stated that most of the references are from international studies, since information on only four South African studies were found. Moreover, these studies proved to have serious problems and either considered pupils living in highly urbanized areas (Johannesburg³⁷ and Cape Town³⁸) or extremely rural settings³⁹ (former Transkei homeland).

4.3.1. Perceived Susceptibility to HIV/AIDS and its Severity in Adolescents

Numerous studies have shown that adolescents in both international⁴¹⁻⁵² and national³⁷⁻⁴⁰ settings had a high level of knowledge with regard to HIV/AIDS. However, these studies have shown that despite the awareness of the disease, adolescents do not perceive themselves as engaging in risky sexual behaviour,

although it appears to be the case. Moreover, certain studies report that the high levels of knowledge in adolescents are superficial⁵³⁻⁵⁵.

Considering the high levels recorded for adolescent HIV/AIDS knowledge attained in previous studies, it is questionable whether the questions asked to the subjects elicited accurate responses. In addition, the questions may also have been leading, which may have resulted in the finding of flatteringly impressive scores. In this regard it is noted that at least three studies⁵⁶⁻⁵⁸ provided multiple-choice questions that could have led to the recording of high levels of HIV/AIDS related knowledge, falsely. To gain a more accurate reflection on the knowledge of adolescents with regard to contracting the disease, it was considered advisable to provide students with open-ended questions when testing their knowledge on contracting the disease.

Although patterns, consistency and frequency of condom use are important elements to study⁵⁹⁻⁶⁷, the findings of the current research demonstrate many weaknesses. One obvious difficulty involves the inability to measure condom use directly, and thus, the need to rely on interviews or questionnaires to obtain data. These data sources are subject to recall bias as well as the Hawthorne effect, i.e. a subject's behaviour is greatly influenced by the awareness that he or she is being studied. This is of particular concern when studying adolescents, who seek approval by conforming to the anticipated responses of their peers⁶²⁻⁶⁵. Therefore, trends rather than absolute numbers should be interpreted and

considered; and research subjects were cautioned as to this largely subliminal phenomenon prior to questionnaire administration.

Furthermore, there appears to be poor validity and reliability of the measures of consistent condom use. Many studies base this measurement on use at 'last intercourse', whereas others use vague terms such as 'sometimes,' 'occasionally,' and 'rarely.' One international study included 'almost always' and 'most of the time,' as two separate categories⁶⁷. Although there are obvious inherent difficulties in studying private behaviour, more valid measurements are needed. Subjects should possibly only be asked if they always use condoms during penetrative intercourse, since one such encounter will suffice to contract the infection. Inconsistent condom use should be regarded as high-risk behaviour in contracting HIV/AIDS due to the ease of spread of the disease.

Full-blown AIDS is not seen very often by adolescents in the Grahamstown surroundings due to the extended incubation period of the disease, and it may be possible that people in the final stages of the disease may not be living in the community anymore. This probably results in a situation whereby adolescents do not perceive themselves as being susceptible to the disease. The national adolescent sexuality survey conducted by the National Progressive Primary Health Care Network (NPPHCN) shows that some adolescents doubt the existence of AIDS⁴⁰. It also needs to be mentioned that several international studies have found no significant relationship between perceived susceptibility to Sexually Transmissible Infections (STI's) and self-reported use of condoms⁶⁸⁻⁷⁰.

However, the NPPHCN study showed that some adolescents abstain from sexual intercourse due to fear of HIV/AIDS and other STD's⁴⁰. These contradictory results supported the need to ascertain an accurate reflection of the perception of black adolescents regarding susceptibility to HIV/AIDS in the Grahamstown area.

In addition, knowledge and perceived susceptibility must be compared between males and females in an attempt to explain the noted differences in sexual risk behaviours. This has been proven to be the case in numerous studies conducted throughout the world, not only in developing countries with more pronounced gender-defined behaviour and roles⁷¹⁻⁷³. Therefore, reasons must be sought to utilize underlying factors in less risk-taking behavioural genders, and extend/impart it to the other. For instance, one study has shown in poor African communities that adolescent females engage in very risky sexual behaviour, e.g. unprotected anal intercourse and *anilingus*, with adult men⁵³.

Since the measured knowledge of adolescents is reportedly high with regard to HIV/AIDS, it would indicate that they possess knowledge on the severity of the disease. However, it may be necessary to measure cultural beliefs in this regard. It is possible that subjects were led to believe that the previous research programmes only focused on Western medicine, and that it did not encompass cultural practices or beliefs, such as an effective cure provided by traditional healers. Therefore, this additional aspect was incorporated into the questionnaire developed for this study. Additionally, it has been shown in a certain study that

adolescents reported high levels of fear, yet misunderstood the seriousness of HIV infection⁵⁵. Unexpectedly, a further study showed that perceived severity and barriers are significant predictors of the adoption of HIV-preventive behaviours⁷⁴. These ambiguous results clearly necessitated investigation on a local level.

4.3.2. Perceived Benefits

The HBM proposes that thinking that safe sexual behaviour is effective at preventing HIV/AIDS infection should correlate positively with its consistent practice. Local studies show that this is not the case³⁷⁻⁴⁰. Possible reasons relate to the fact that social environments are so unsupportive, that it is almost impossible for adolescents to make the cognitive and behavioural correlation. This also appears to be the case in international settings; since problems have been reported to arise as a result of the fact that behaviour is distally removed from its consequences and negative reinforcement is not contiguous with it⁷⁵. An obvious example is that of efforts to prevent smoking habits in all age categories.

It is obvious that merely providing information to adolescents is an inadequate intervention. They are receiving and retaining information on HIV/AIDS. It does need to be established, however, if it was misinformation that they have received, as alluded to by the NPPHCN study⁴⁰. This can lead to confusion and obscure the true benefits of low risk behaviour regarding HIV/AIDS infection.

Despite the high levels of knowledge and fear for HIV infection, some proponents suggest that factors such as cognitive immaturity, peer influences, and sexual behaviour being perceived as a normal facet of physical development in adolescents, all override normal motivational aspects to abstain from HIV/AIDS risk-taking behaviour⁷⁶. It was therefore obvious that these factors should be incorporated into the questionnaire developed for this study, to enable further investigation that may provide the required clarity.

If perceived susceptibility, seriousness, and benefits do not motivate safe sexual practices alone, health care providers will also have to consider attitudes and beliefs, barriers, etc., to develop effective prevention programmes⁶¹. The perceived barriers identified by other studies will briefly be mentioned.

4.3.3. Perceived Barriers

Previous studies note numerous perceived barriers to sexual abstinence in adolescents^{40,61}, condom use^{68-70,77,78}, and non-penetrative sex⁴⁰. The multitude of perceived barriers mentioned made it imperative to identify what the perceived barriers were specifically in adolescents^{79,80} of the Grahamstown area. In order to illustrate an awareness of the potentially perceived barriers, a limited number will be listed that were identified by other, similar studies:

4.3.3.1. Barriers to Sexual Abstinence

Studies have shown that the portrayal of sexual intercourse by the mass media has had an influence on the premature sexual maturation of adolescents. These sources include television programmes, movies, etc.

Probably the most significant reason for adolescents to engage in sexual activity is as a result of peer group pressure⁸¹⁻⁸³. Adolescents are extremely impressionable, and have to conform to peer expectations to ensure acceptance in this time of social uncertainty. This is possibly why studies have shown that family therapy³³, and peer-led interventions, have an important role to play in shaping sexual behaviour in adolescents.

A further consideration is the fact that many first sexual encounters occur under duress and are not strictly voluntary. This is particularly true on the part of female adolescents⁴⁰. A study in the United States of America has shown that HIV-positive adolescents were more likely to have been abused. It needed to be established what the main causes for engaging in involuntary sex is in the Rini and Joza areas.

Recreational opportunities for adolescents in poor areas are limited. Therefore, many adolescents commence habits of alcohol consumption at an early age. The resultant disinhibitory effects upon sexual behaviour leads to inevitable engagement in unsafe sexual practices^{4,71}. It needs to be borne in mind that

certain behaviours, such as church- or social-group attendance, have been shown to be associated with low-risk HIV behaviour⁸⁴. Therefore, opportunities for affiliation with constructive, social associations and organizations may play a large role in delaying sexual activity.

4.3.3.2. Barriers to Condom Use

The following general barriers to condom use have been uncovered by previous studies. This list will however have to be prioritized in this research study to establish effective and possibly unique focus areas for the education programme that must be devised for the Grahamstown area.

- Inconvenience: It has been mentioned that the use of condoms takes away from the usual degree of spontaneity of sexual acts, when the condom needs to be fitted⁴⁰.
- Embarrassment: Adolescents have noted that they are too embarrassed to use condoms for various reasons⁴⁰. This observation provides evidence that the use of condoms by adolescents is not the norm.
- Decrease sexual pleasure: It has been noted that condoms take away from the naturalness of sexual intercourse. It has also been known to inflict pain⁴⁰. Moreover, gifts or money offered for sexual favours prevent adolescents from prescribing, or insisting on, condom use⁵³.

- Size: Some younger boys stated that available condoms are too big for them, and that it slips off during the sexual act⁴⁰.
- Uncertainty of responsibility: Genders tend to shift the responsibility of having condoms available away from themselves. Boys regard condom availability to be the responsibility of girls, whilst girls are of the opinion that the responsibility belongs to the boys⁴⁰.
- Accessibility: Some adolescents cannot reach distribution points due to various factors⁸⁵. It has also been stated that clinic staff frown upon young people who ask for condoms⁴⁰.
- Seen as evidence of sexual promiscuity: Girls are especially aware that their parents and partners may interpret the insistence of condom use as evidence of sexual promiscuity⁴⁰.
- Regarded as distrust of partner: Adolescents may think that the partner distrusts them and thinks that they may contract a disease if engaging in unprotected sexual intercourse⁴⁰. This is obviously an insult to the partner.
- Sexual activity might be unplanned and condoms are not available: Adolescents do not want to have condoms with them all the time, since parents may discover it⁴⁰.

- Lack of assertiveness: The importance of assertiveness in adolescents to avert engagement in risky sexual behaviour must be recognised⁸⁶.

It bears mentioning that at least one study showed that the approval of condom use by peers does not influence individual choice to use condoms during sexual intercourse⁸⁷. This finding needed investigation on a local level.

4.3.3.3. Barriers to Performance of Non-Penetrative Sex

Innovative strategies need to be put in place to promote non-penetrative sex, and should be target-group specific. For example, the fairly low percentage of acceptability of masturbation amongst African youths reported by the NPPHCN survey is relevant to the manner in which masturbation should be promoted as a safer sex option within this community. This should not be intended to encourage differences, but the differences in the experience and expression of sexuality in South Africa needs to be acknowledged, as they should inform different and culturally sensitive approaches to education programmes.

The barriers that are identified in this study have been analyzed to establish which present opportunities for intervention. From this analysis an intervention programme could possibly then be formulated.

Finally, it needs to be mentioned that since a cure or vaccine for HIV is not expected for at least several years, prevention of HIV infection is the only means

of reducing the spread of the disease^{11,88-91}. It also bears mentioning that the long-term consequences of adolescent health-compromising behaviour clearly support the search for effective interventions at secondary school level⁹². Furthermore, interventions must be inclusive enough to provide both preventive-, and corrective actions, where required⁹³.

5. AIM

The aim of this study is to investigate the perceived threats and benefits around HIV and sexuality in adolescents, by exploring knowledge, beliefs, current sexual practices, perceived barriers to practicing safe sexual behaviour, and opportunities for future intervention presentation. This will inform the development of a health promotion intervention.

6. OBJECTIVES

The specific objectives of the study included the following:

- 6.1. To record general biographical information of adolescents included in the study.
- 6.2. To investigate the knowledge of adolescents with regard to HIV/AIDS.
- 6.3. To explore the beliefs of adolescents with regard to HIV/AIDS and general sexual practices.

- 6.4. To establish the sexual practices of adolescents in the Rini- and Joza areas of Grahamstown.
- 6.5. To investigate what barriers prevent adolescents from practicing safe sex and what opportunities exist to overcome these.
- 6.6. To make suitable recommendations that could assist in future educational interventions.

7. METHODOLOGY

This section will consider various aspects on how the study has been conducted.

7.1. Study Design

The study was a cross-sectional, descriptive design. The design had been chosen as it was intended to gain immediate knowledge and information on HIV/AIDS with regard to adolescents. It was further deemed appropriate since:

- 7.1.1. sensitive information had to be obtained from the adolescents,
- 7.1.2. it allowed the study to collect information from a relatively large number of subjects to allow generalizations to be made, and
- 7.1.3. a previous qualitative study⁴⁰ has been performed which informed this study on some key issues that required quantitative exploration.

Also, the selected design was anticipated to provide data that has enabled the complete accomplishment of the aim of the study.

7.2. Definition of Terms

In the context of this study, the following terms will be deemed to have the following meanings:

7.2.1. Adolescent

A person attending high school, i.e. grade eight to twelve. Whereas '*youths*' include this group, but also refers to persons attending primary school, i.e. grades lower than grade eight.

7.2.2. Background to Study Area

Grahamstown is located 60 kilometers (km) inland from the sea, and in the southern portion of the Eastern Cape Province. It is approximately 130km from Port Elizabeth and 180km from East London. The town is still generally divided into two: the West (generally well-serviced old Grahamstown) and the East, commonly known as Rini and Joza (extensive poverty, high unemployment, and poor services). The population of Rini and Joza is approximately 85 000 people comprising approximately 5 000 erven, and can be classified as a peri-urban

area. Therefore, Rini and Joza are neither rural, nor urban. All schools occurring in this area are State-owned and managed.

7.2.3. Sexual Intercourse

It specifically refers to heterosexual copulation involving the penis entering the vagina.

7.2.4. Township

The peri-urban areas occurring adjacent to Grahamstown where the residents are of African ethnic persuasion, commonly known as Rini and Joza.

7.3. Study Population

The study population comprised of all black pupils in grade 10 attending public, senior secondary schools occurring in the township of Grahamstown in the Province of the Eastern Cape. Only grade 10 pupils were selected for purposes of arriving at a manageable sample size that would yield valid results, given the limited resources available for performance of the study. Farm schools were not included in the sample, due to the anticipated unique behaviour of this group. Males and females have however been included in the study.

The schools occurring in Grahamstown, with the respective number of pupils in grade 10 that were included in the study, are illustrated in table 2:

SCHOOL	AREA	Grade 10
Ben Mahlasela	Grahamstown	215
Khutliso Daniels	Grahamstown	113
Nathaniel Nyaluza	Grahamstown	194
Nombulelo	Grahamstown	274
Nomzamo	Grahamstown	170
Ntsika	Grahamstown	167
T.E.M. Mrwetyana	Grahamstown	168
n = 7		1301

Table 2: Schools included in the study with amount of pupils in grade 10.

Since this study is meant to inform an educational intervention, the study population was restricted to schools within a limited geographical range, i.e. the Rini and Joza areas of Grahamstown. Also, it is well documented that black adolescents become sexually active at an earlier age than other ethnic groups and a higher proportion has also been found to be sexually active⁹⁹. Together with the fact that the black population of South Africa has the highest HIV infection rates, these findings make black adolescents a high-risk group.

Belonging to a particular health district places an ethical responsibility on the researcher to extend the positive intervention to be as inclusive as possible. Therefore, the Grahamstown area was anticipated to be appropriate, since it is relatively manageable in terms of size and population. It was expected that the smaller geographical area under study would result in less variability of the

proportionate outcomes between schools; leading to a more realistic reflection by the summary statistics.

7.4. Sample Size

In total, there were 963 pupils in grade 10 in the five selected schools. A sample size of 300 adolescent pupils was drawn from the schools. It was anticipated that the sample size would be sufficient to generalize the findings to the entire study population, since the minimum sample size calculated for an alpha error of 5% with 95% confidence, and reliability of 4%, was 233 pupils, assuming an 85% prevalence of sexual experience^{38,39,100}. Allowance was also made for an instance where 20% (n=47) of the questionnaires would not be usable. The EpiTable computer programme in Epi-Info was used to perform the sample size calculation.

7.5. Sampling Procedure

Sampling was performed in two phases. Firstly, a list of all the senior secondary schools in the Grahamstown area was obtained from the Department of Education. These schools were numbered from one to seven, from which a random sample of five schools was selected. Secondly, all selected schools were requested to prepare class lists of all pupils in grade 10, thereafter a numbered list was prepared that included both boys and girls. The comprehensive list of all names was numbered. In order to perform appropriate comparative

investigations, systematic sampling has been performed. Since a sample size of 300 pupils was required from a study population comprising 963 pupils, every third pupil was selected from the numbered list. The starting point was selected with the aid of a computer-generated list of random numbers. In the event of absenteeism, the next person on the list was selected. This only occurred in two instances. However, should more than two consecutive names have been absent, sample selection would have been held over to a later date to avoid volunteer enrolment. Systematic sampling was undertaken to ensure automatic weighting of sample sizes from individual schools.

7.6. Data Collection

The coordinator for Health Promotion in the district was trained to administer the questionnaire together with the researcher. Conditions approximating those maintained during examinations at schools were used. To facilitate gathering of valid and correct data, all pupils were required to answer the questions at the same time. This was accomplished by requesting pupils to indicate their answer at each question only once the particular question has been read in English by the researcher, and explained in Xhosa by the facilitator. This possibly assisted in creating a uniform understanding of each question, since pupils were encouraged to gain clarity when necessary. It was further anticipated that introverted pupils also gained from this method of questionnaire administration. The researcher and facilitator administered a self-completed and anonymous questionnaire in

the absence of school staff. Upon completion of the questionnaire, the pupils were requested to place it into anonymous envelopes and to enter it into a box.

7.6.1. The Questionnaire

The questionnaire attached as Annexure 1, was piloted at Nomzamo School on 17 March 2000. The results were coded and entered into the EpiInfo questionnaire designed for this purpose. The data was partially analyzed to test its quality. Minor problems were experienced in coding the responses received from open-ended questions. Therefore, appropriate changes were made to these questions and are illustrated in the Annexure referred to above. It is felt that the questionnaire yielded the intended results to fulfill the objectives of the study sufficiently.

7.7. Logistics

Data collection was performed as part of the research team's official duties. The team consisted of the Health Promotion coordinator for the district and Environmental Health Officer. However, permission was first obtained from the District Managers of the Departments of Health and Education. The District Manager of the Department of Education proceeded to draft a letter that was distributed to all the schools included in the study. The letter served to introduce the researcher to the school principals, and to illustrate departmental support for

the study. Individual school principals were also asked for permission and to allow their guidance teachers to provide logistical assistance.

The questionnaires were administered to not more than 20 pupils per session. This made sessions more manageable at each school and ensured that own, individual answers were obtained, since pupils were arranged to sit apart from each other. Administration of the questionnaires took approximately 30 minutes with five minutes provided for questions by the pupils afterwards.

Distribution of the results is intended to include presentations to the District Management Teams of the Departments of Health and Education, and the relevant provincial coordinators. It further intended to attempt to have the research published.

7.8. Workplan

The workplan of the study was as follows:

PERIOD	ACTIVITIES
21 - 25 February 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Obtained permission to perform research from the District Manager of the Dept. of Education. <input type="checkbox"/> Distributed letters to parents of children on who the questionnaire was piloted.
13 March 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Handed out letters to pupils at school where questionnaire was piloted.

	<ul style="list-style-type: none"> <input type="checkbox"/> Obtained permission from principal and made logistical arrangements for piloting exercise.
14 - 16 March 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Conducted training of facilitator. <input type="checkbox"/> Checked for any negative responses to consent letters.
17 March 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Piloted questionnaire
20 March - 27 March 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Entered data on Epi-Info <input type="checkbox"/> Amended questionnaire as necessary.
3 April 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Distributed letters to five schools.
6 April 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Checked for any negative responses to consent letters.
6 & 7 April 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Collected data with translator and checked questionnaires for completeness.
8 - 22 April 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Entered data and validated entries.
24 April 2000 - 31 May 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Analyzed the data.
1 - 8 June 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Wrote-up results.
9 - 14 June 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Wrote-up discussion.
15 June 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Handed in thesis for marking.
After 15 June 2000	<ul style="list-style-type: none"> <input type="checkbox"/> Reported and presented results to interested and affected parties.

Table 3: Workplan

7.9. Data Analysis

The questionnaire was coded and the data entered and analyzed by means of Epi-Info Version 6.04. The data was entered twice to validate the entries.

Frequency tabulations have been produced for categorical data, and means were calculated for continuous data. Comparisons between boys and girls, and levels of household financial status, were made by means of the chi-square test for categorical variables. The means of continuous variables were compared with analysis of variance for normally distributed data, and the Wilcoxon sum rank test for data not normally distributed.

8. RESULTS

The results will be presented as it relates to the objectives of the study.

Therefore, it will be presented under the following headings:

- General biographical information of respondents.
- Knowledge of the respondents with regard to HIV/AIDS.
- Beliefs of the respondents surrounding HIV/AIDS.
- Sexual practices of the respondents.
- Opportunities for future intervention development and reported barriers for practicing of safe sexual intercourse.

The method employed to administer the questionnaires proved to ensure a high level of internal validity. This could be illustrated by the fact that all respondents who indicated that they have not engaged in sexual activity before, did not provide answers to questions that were only intended for respondents who were sexually active. For example, only 246 responses (sexually experienced respondents), or less, were anticipated for the question relating to whether it was an *own decision* to engage in sexual activity for the first time, and this was the amount of responses received. Also, 38.2% of the respondents indicated that they have not used condoms before, and 41.5% indicated that they never use condoms when asked about frequency of condom use. The only shortcoming observed pertained to the fact that respondents would rather mark the '*unsure*'-category, than commit themselves to a decision of '*yes*' or '*no*.' For example, only 22% of the respondents stated that they knew what '*HIV-positive*' denotes, yet 45% of the respondents mentioned a correct method by which HIV infection could be contracted.

Of the three hundred respondents included in the sample, only four did not complete questionnaires. Two of the respondents' parents refused participation of their children in the study, and the remaining two respondents handed in blank questionnaires. This led to the recording of a 98.67% response rate.

Unfortunately tests of reliability could not be performed due to time and resource constraints.

8.1. General Biographical Information of Respondents

The gender distribution of the sample (n=296 adolescents) was relatively even, i.e. 50.7% of the sample was boys and the remaining 49.3% was girls. Although an even overall gender spread was achieved, the proportionate gender spread per individual school was as follows:

Gender Distribution by Individual School	School 1	School 2	School 3	School 4	School 5	Total
Male	46 (74.2)	38 (47.5)	34 (42.5)	14 (35.0)	18 (52.9)	150 (50.7)
Female	16 (25.8)	42 (52.5)	46 (57.5)	26 (65.0)	16 (47.1)	146 (49.3)
Total	62 (100.0)	80 (100.0)	80 (100.0)	40 (100.0)	34 (100.0)	n=296 (100.0)

Table 4: Gender distribution by individual school

Table 4 shows that schools 1 and 4 had disproportionate numbers of girls and boys selected for inclusion into the study, i.e. 74.2% boys and 25.8% girls vs. 35.0% boys and 65.0% girls, respectively. This is however, consistent with the overall gender distribution at the individual schools, as would be expected as a function of the systematic sampling methodology used in the study.

The mean age (in years) of the respondents was as follows:

GENDER	MEAN AGE	STANDARD DEVIATION
MALES	17,800	1,671
FEMALES	17,603	1,556
TOTAL	17,703	1,615

Table 5: Age distribution by gender

No significant difference ($p > 0.2$) existed between the mean ages for boys and girls.

The reported household financial status of the sample population could be illustrated as follows in figure 2:

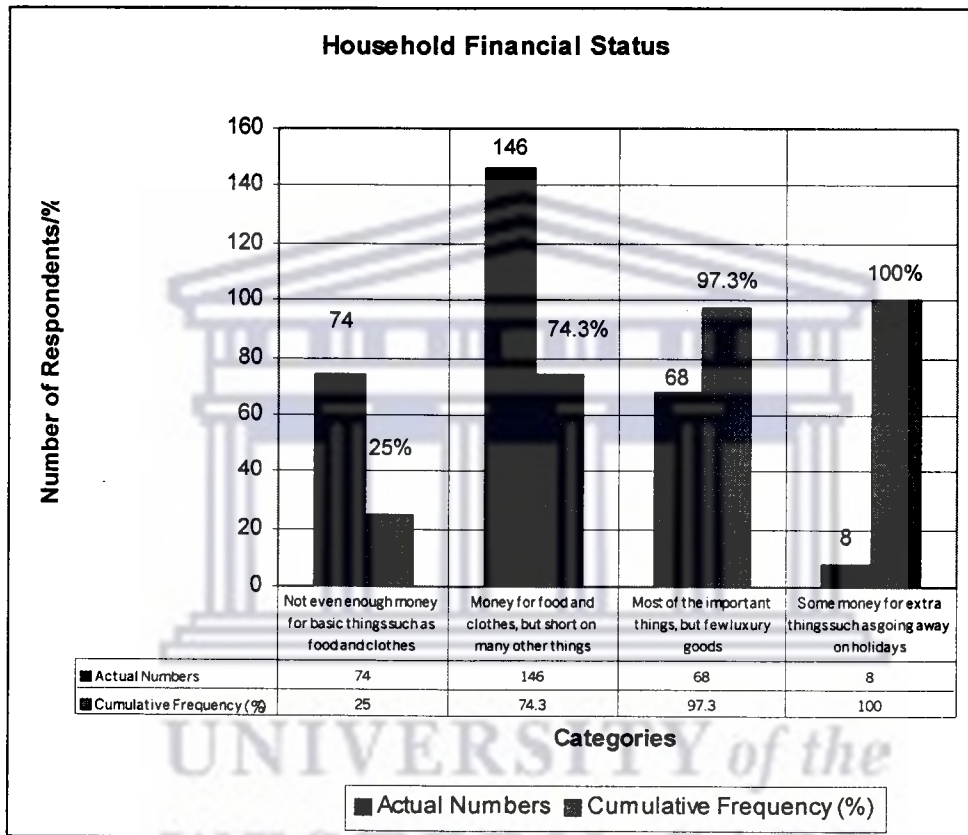


Figure 2: Description of household financial status of sample

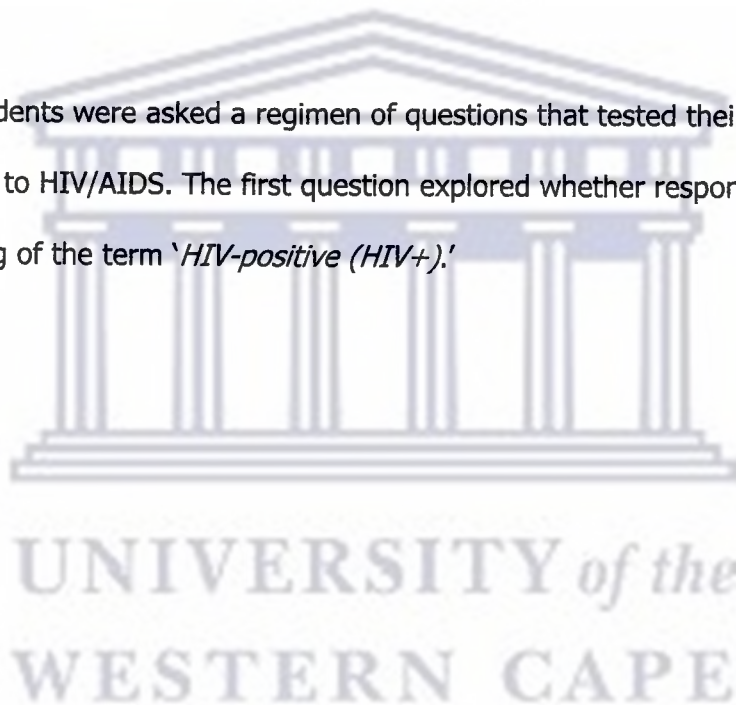
It is noticeable from figure 2 that 74.3% of the respondents have described their household financial status as falling into the first two categories provided, i.e. *not even enough money for basic things such as food and clothes*, and *money for food and clothes, but short on many other things*. Furthermore, only eight

(2.7%) of the 296 respondents reported that their households possess money for extra things, such as going away on holidays[∇].

The distribution of household financial status was not significantly different for boys and girls (Prevalence Odds Ratio {POR}=1.04, 95% Confidence Interval {95% CI}: 0.59<POR<1.82).

8.2. Knowledge of the Respondents with regard to HIV/AIDS

The respondents were asked a regimen of questions that tested their knowledge with regard to HIV/AIDS. The first question explored whether respondents knew the meaning of the term '*HIV-positive (HIV+)*'.



[∇] Due to the low number of respondents categorized into one of the household financial status categories, the four provided categories were collapsed into two categories. These categories are: '*those who can only, or battles to, afford basic amenities*,' and '*those who can easily afford basic amenities*.'

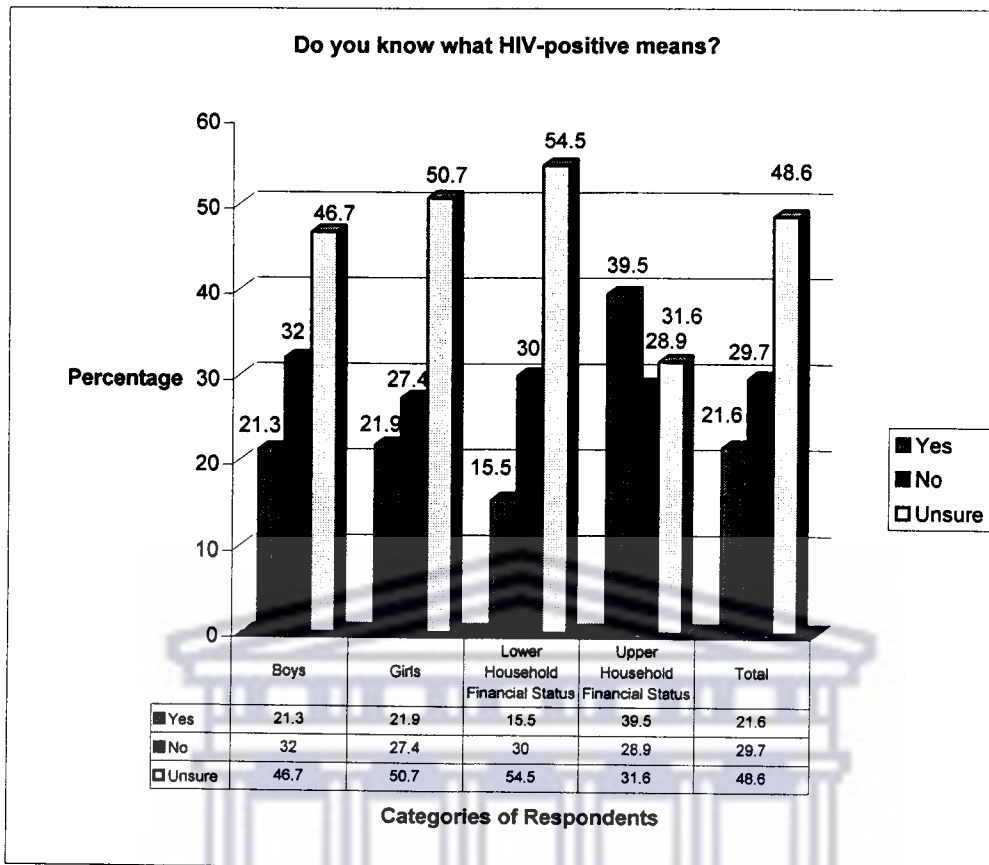


Figure 3: Responses per category of respondents on meaning of HIV-positive

Figure 3 shows that only 21.6% of the respondents were certain that they knew what HIV-positive denotes. 29.7% of the respondents were certain that they did not know what HIV+ denotes, while the majority (48.6%) of the respondents were unsure. There was no significant difference ($p > 0.67$) observed between the responses of the genders. Respondents from households with higher reported income were more likely to state that they knew the meaning of the term (39.5%), than those from the lower income categories (15.5%) (Prevalence Odds Ratio = 3.57, 95% CI: 1.89 < POR < 6.74).

As an open-ended question, respondents were also required to state one way in which HIV infection could be contracted, other than by having unprotected

sexual intercourse. The overall responses received showed that 45.2% of the respondents knew that either blood, sharing of needles, or having multiple partners are risk factors for acquiring HIV infection. 9.3% of the respondents noted that kissing or sharing a toothbrush could lead to HIV infection. 5.7% of the respondents noted some other manner that was incorrect, and 39.8% of the respondents indicated that they did not know. The responses provided by boys and girls differed significantly ($p < 0.001$), as illustrated by figure 4:

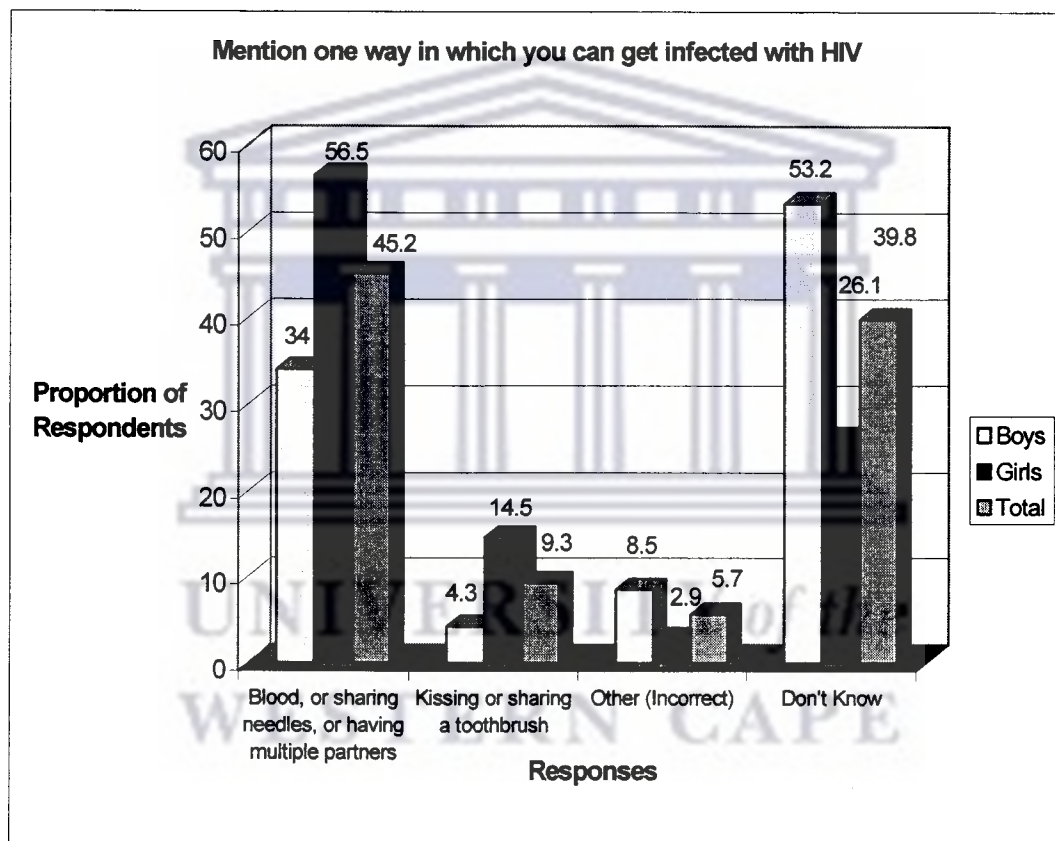


Figure 4: Responses on how HIV infection could be contracted

Many respondents were unsure whether AIDS could be cured:

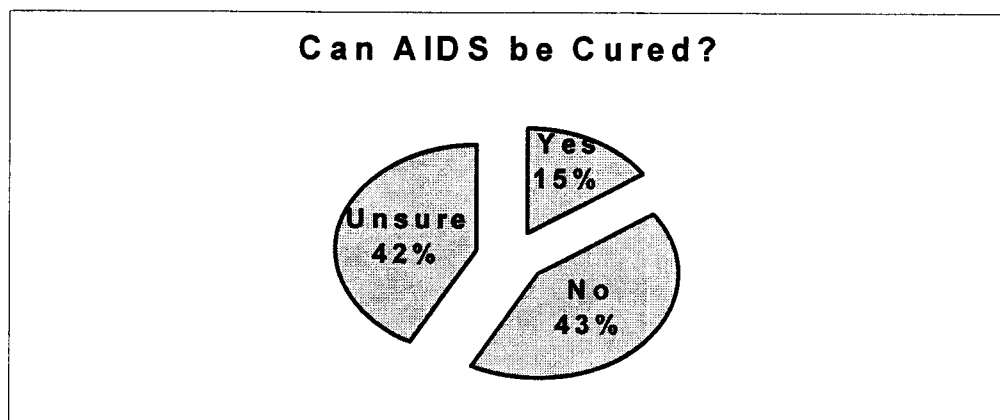


Figure 5: Total responses to the question 'Can AIDS be cured?'

Analysis of the results by category of household financial status showed that 31.6% of the respondents from the upper category stated that AIDS could not be cured, as compared to 46.4% of the respondents from the lower category (Prevalence Odds Ratio = 1.87, 95% CI: 1.04<POR<3.40).

Respondents who indicated that AIDS could be cured (15%), were also asked how they thought AIDS could be cured. 25 of the respondents who answered that they were unsure, also provided a response to the question, which amounted to a total of 70 respondents to the question. 11.4% (n=8) indicated that AIDS could be cured by Western Medicine, 31.4% (n=22) by sleeping with a virgin, 25.7% (n=18) by Traditional Medicine, and 5.7% (n=4) marked the 'other'-category provided.

More than three quarters (77.0%) of the respondents thought that they would die if they had AIDS. 85.3% of the boys knew that they would die if they had AIDS, as compared to 68.5% of the girls (Prevalence Odds Ratio = 2.68, 95% CI: 1.45<POR<4.97). It was further observed that respondents from the

lower financial household category were more aware of the inevitable death outcome of AIDS than the upper household financial status category at 80.0% and 68.4%, respectively (Prevalence Odds Ratio = 1.85, 95% CI: 0.98<POR<3.47).

When asked whether HIV infection could be prevented, 42.6% of the respondents did not know, or were unsure. 57.9% of the respondents in the upper household financial category did not know, or were unsure, whether HIV infection could be prevented, as compared to 37.3% of the respondents in the lower household financial status category (Prevalence Odds Ratio = 2.31, 95% CI: 1.31<POR<4.10). The 57.4% (n=170) of the total sample, who indicated that HIV infection could be prevented, were also asked to indicate how infection could be prevented.

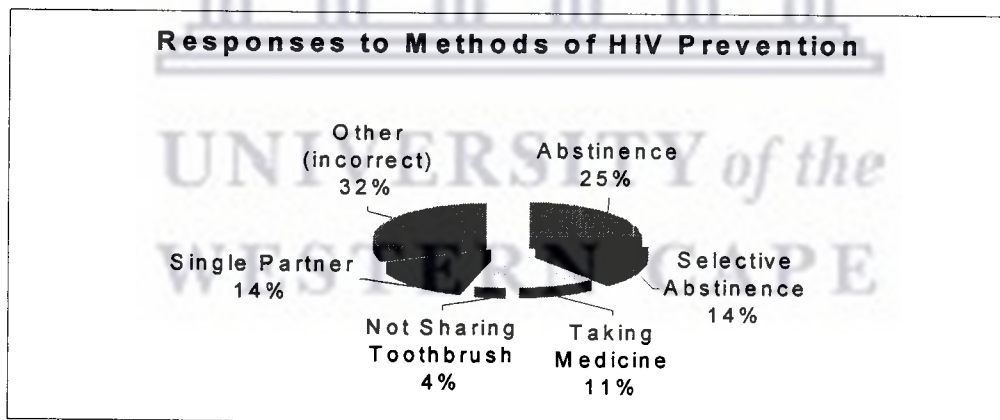


Figure 6: *Reported methods to prevent HIV infection*

The 'other'-category included responses such as using gloves, washing, not ejaculating in partner, don't know, etc. The 'selective abstinence' category refers

to responses based on arbitrary standards for use in deciding whether it would be safe to have sexual intercourse with a person, e.g. appearance.

The mean percentages of correct responses to questions concerning HIV/AIDS knowledge were calculated per gender, household financial status, individual school, and overall categories. The following results were observed:

Respondent Strata (Category of Respondents):	Mean percentages of correct responses to questions relating to HIV/AIDS knowledge:	Average for all questions:
All Boys	21.3 ^a + 34.0 ^b + 41.3 ^c + 85.3 ^d + 24.5 ^e	41.28
All Girls	21.9 ^a + 56.5 ^b + 43.8 ^c + 68.5 ^d + 20.2	42.18
Those whose households can only, or battles to, afford basic amenities.	15.5 ^a + 46.2 ^b + 46.4 ^c + 80.0 ^d + 22.8	42.18
Those whose households can easily afford basic amenities.	39.5 ^a + 42.3 ^b + 31.6 ^c + 68.4 ^d + 19.3	40.22
Respondents from School 1	16.1 ^a + 26.2 ^b + 51.6 ^c + 93.5 ^d + 30.5	43.58
Respondents from School 2	32.5 ^a + 47.5 ^b + 45.0 ^c + 77.5 ^d + 32.5	47.0
Respondents from School 3	10.0 ^a + 40.6 ^b + 40.0 ^c + 67.5 ^d + 10.3	33.68
Respondents from School 4	25.0 ^a + 85.0 ^b + 45.0 ^c + 70.0 ^d + 20.0	49.0
Respondents from School 5	29.4 ^a + 35.3 ^b + 23.5 ^c + 76.5 ^d + 23.6	37.66
Sample	21.6 ^a + 45.2 ^b + 42.6 ^c + 77.0 ^d + 22.3	41.74

Table 6: Mean percentages of correct responses to questions relating to HIV/AIDS knowledge achieved by different categories of respondents

^a Do you know what 'HIV-positive' means?

^b Mention one way in which you can get infected with HIV.

^c Can AIDS be cured?

^d If you have AIDS, will you die?

^e Can HIV infection be prevented? If 'yes,' give one way how it can be prevented.

The average percentage scores achieved by the respondent categories according to gender and household financial status were similar. However, a significant difference is observed among the average percentage scores achieved by individual schools. School 3 only had 33.7% of the questions on knowledge correct, as compared to school 4 with 49.0%.

8.3. Beliefs of the Respondents surrounding HIV/AIDS

Respondents were asked a series of questions to gain an understanding into their, and their larger community's, beliefs concerning HIV/AIDS. The first question posed to explore beliefs were whether the people from their community treats people who are living with HIV/AIDS in the same manner as they do other people who are not living with HIV/AIDS.

The logo of the University of the Western Cape, featuring a classical building facade with columns and a pediment, positioned above the text "UNIVERSITY of the WESTERN CAPE".

UNIVERSITY *of the*
WESTERN CAPE

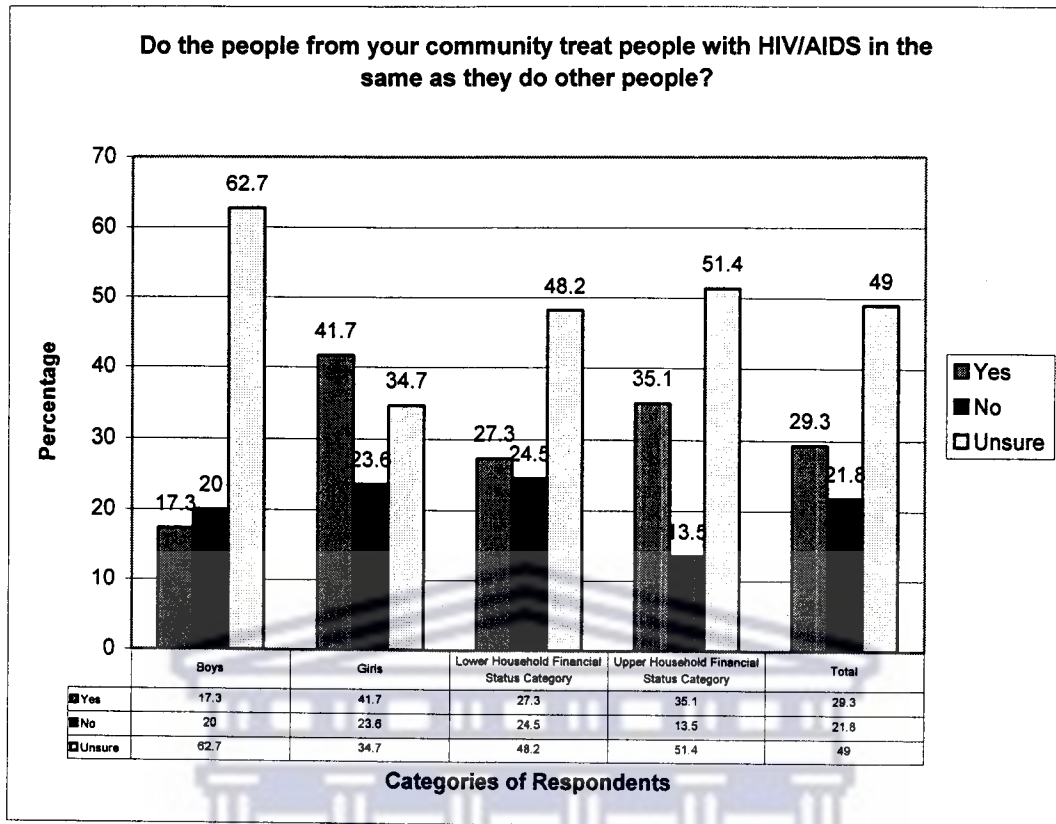


Figure 7: *Responses to whether people from the sample's community treats people living with HIV/AIDS in the same manner as they do other people*

41.7% of the girls stated that people living with HIV/AIDS (PLWA) were treated in the same manner as others, as compared to 17.3% of the boys (Prevalence Odds Ratio = 3.41, 95% CI: 1.92<POR<6.08). The respondents in the upper household financial status category were surer that PLWA were discriminated against by their communities (35.1%), as compared to the upper household financial status category at 27.3% (Prevalence Odds Ratio = 1.44, 95% CI: 0.79<POR<2.64).

The beliefs on whether contraceptive pills or injections could prevent HIV infection was as follows:

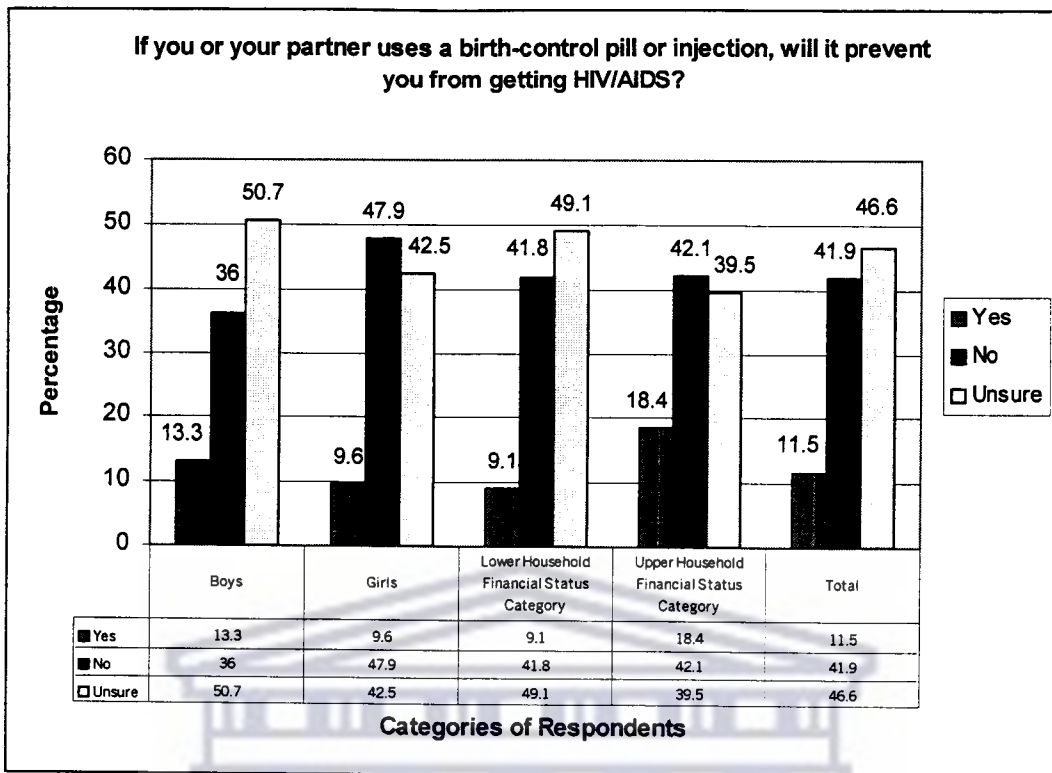


Figure 8: Responses per category of respondents on the ability of contraceptive pills or injections to prevent HIV/AIDS

Almost three quarters (73.6%) of the respondents believed that HIV could be acquired by a single, unprotected sexual encounter. 10.1% of the respondents indicated that one could not, while 16.2% were unsure. Girls were more likely than boys to hold this belief (80.8% vs. 66.7%, Prevalence Odds Ratio = 2.11, 95% CI: 1.19<POR<3.74).

A high proportion of the respondents were unsure whether condoms could prevent HIV infection:

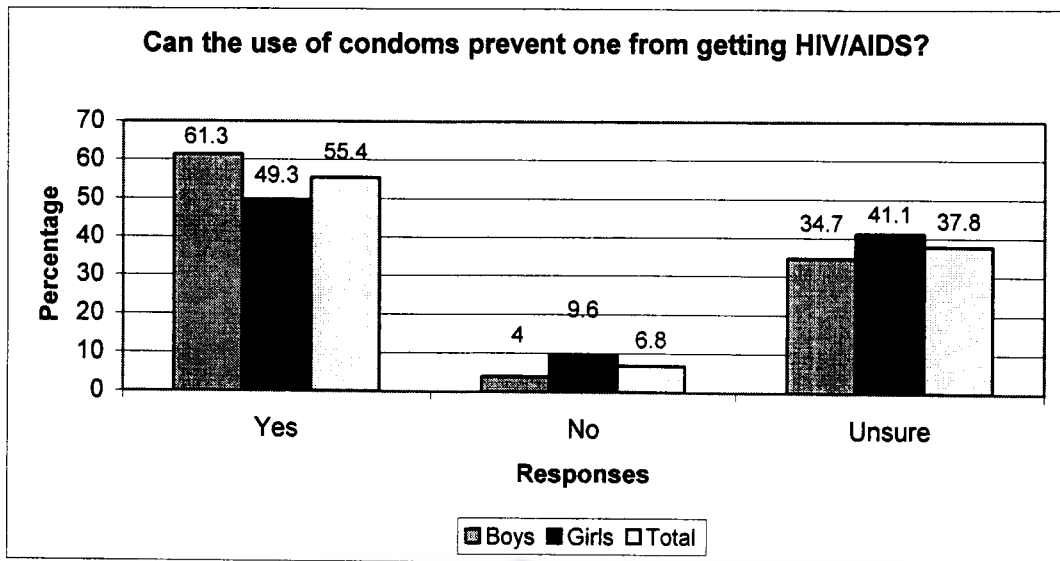


Figure 9: Responses to whether condoms could prevent HIV infection

10.1% of the respondents believed that it is the responsibility of the male to have condoms available for sexual intercourse, whilst 11.5% believed it is the responsibility of the female, and 78.4% believed that it is the responsibility of both the male and female. 6.7% of the boys believed that it is the responsibility of the male partner, as compared to 13.7% of the girls. 81.3% of the boys stated that it is a joint responsibility between the male and female, as compared to 75.3% of the girls.

Respondents were largely unsure whether their partners could be pleased during sexual intercourse if a condom was used:

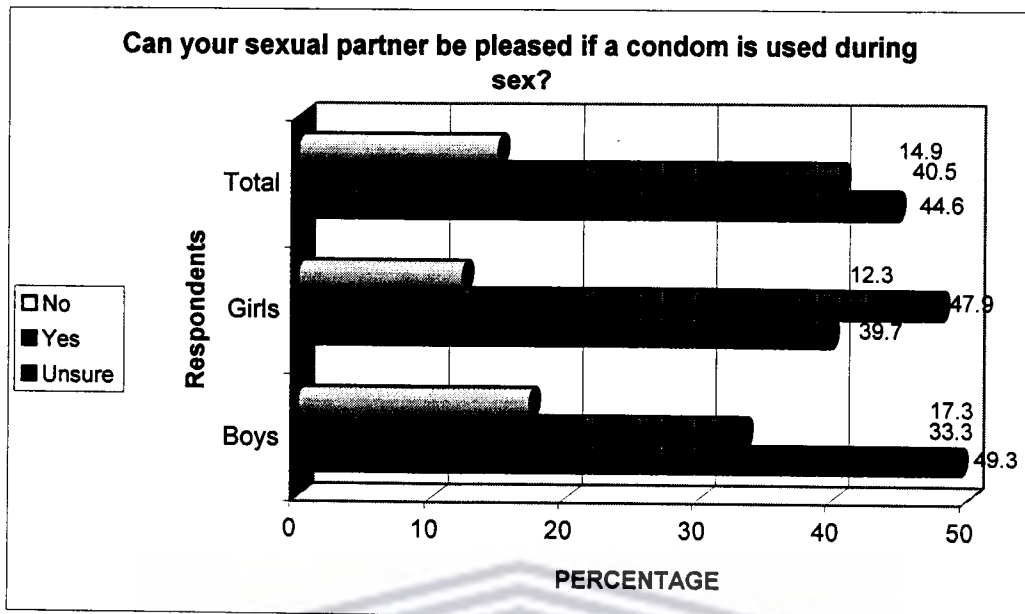


Figure 10: *Belief that partner could be sexually satisfied if a condom is used*

21.1% of the respondents from the upper household financial status category believed that their sexual partners could not be pleased sexually if a condom is used, as compared to 12.7% of the respondents from the lower household financial status category ($p > 0.07$).

In contrast to the findings of figure 10, most girls (71.4%) indicated that they (themselves) could be pleased if a condom was used during sexual intercourse, and 53.8% of the boys ($p < 0.005$). A Prevalence Odds Ratio of 2.14 (95% CI: $1.22 < \text{POR} < 3.78$) shows that the girls were more than twice as likely than the boys to believe that they could be sexually pleased if a condom is used during sexual intercourse.

70.7% of the boys believed that it is necessary to have sexual intercourse in a relationship, as compared to 49.3% of the girls ($p < 0.001$). A Prevalence Odds

Ratio of 2.48 (95% CI: 1.49<POR<4.13) showed that the boys were more than twice as likely than the girls to believe that it is necessary to have sexual intercourse in a relationship. Analysis of the responses by household financial status category showed that 71.1% of the upper household financial status category believed that sexual intercourse is necessary in a relationship, as compared to 56.4% of the responses from the lower category (Prevalence Odds Ratio = 1.90, 1.04<POR<3.49).

More than 40% of the respondents were unsure whether they were at risk to HIV infection:

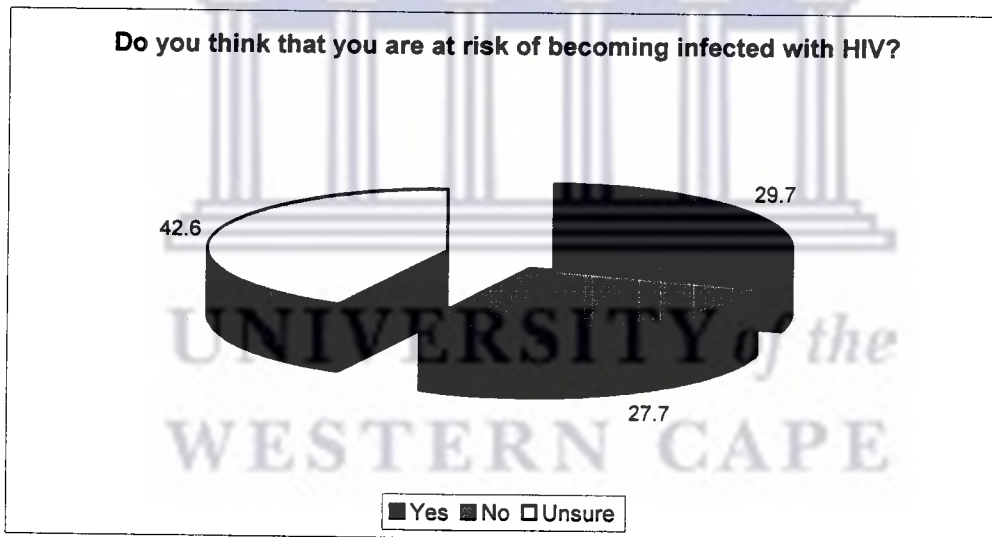


Figure 11: Self-perception of respondents on being at risk of HIV infection

31.5% of the girls did not believe that they are at risk of HIV infection, as compared to 24.0% of the boys (Prevalence Odds Ratio = 1.46, 95% CI: 0.84<POR<2.52):

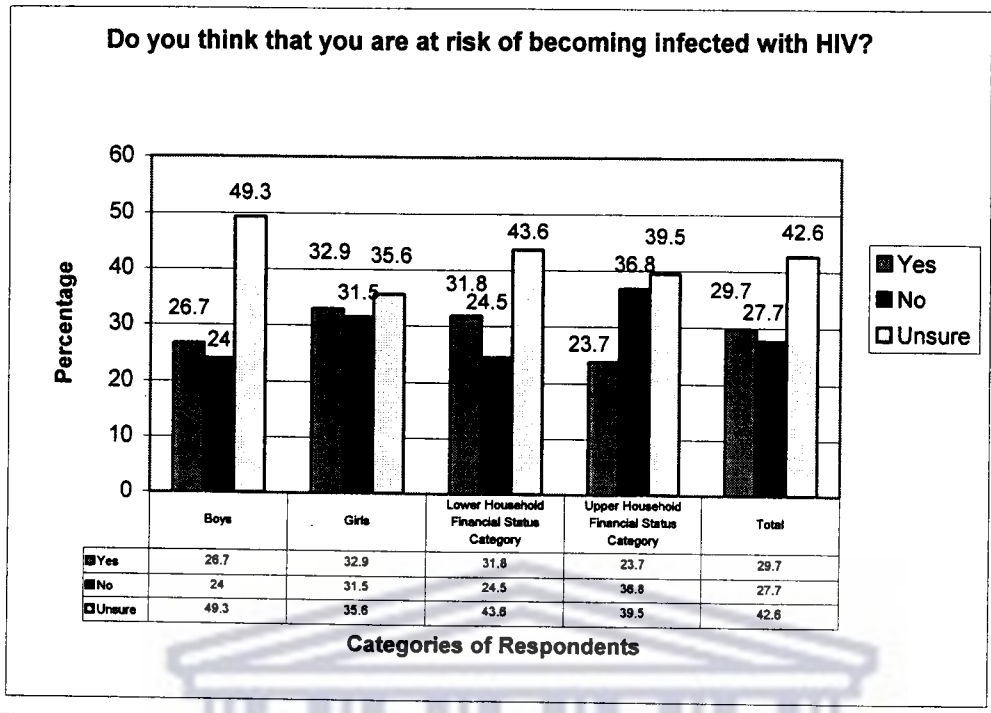


Figure 12: Responses to whether categories of respondents regard themselves as being at risk to HIV infection

The final question posed to gain an understanding into the beliefs of adolescents regarding HIV/AIDS, related to whether adolescents have a reference age at which they believe sexual activity should commence. The responses from the two genders were as follows:

Reference age for commencement of sexual activity	Median Age	Minimum Age Response	Maximum Age Response
Males	18	14	30
Females	21	15	21
Total	18	14	30

Table 7: Reference age at which sexual activity should commence according to genders

The median ages for commencement of sexual activity provided by the two genders were shown to differ significantly by the Wilcoxon Two-Sample Test

($p < 0.001$). No significant difference was observed between the responses from the different household financial status categories.

8.4. Sexual Practices of the Respondents

The next regimen of questions explored the sexual practices of the adolescents in grade 10, who were sexually active ($n=246$). The first question related to whether the adolescents have engaged in sexual intercourse before:

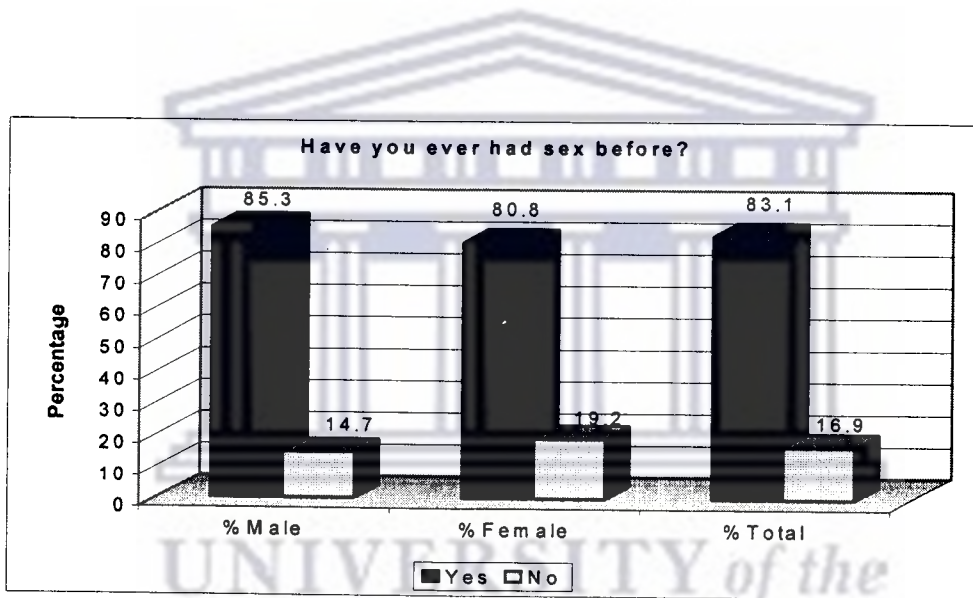


Figure 13: Sexual experience by gender

The 16.9% ($n=50$) of the respondents, who indicated that they have not engaged in sexual activity before, were asked what the main reason was for not doing so. The respondents indicated factors such as: *moral values or forbidden by religion* (18.2%), *not wanting to have sexual intercourse or being afraid* (31.8%), *being too young* (40.9%), and *never had the opportunity* (9.1%).

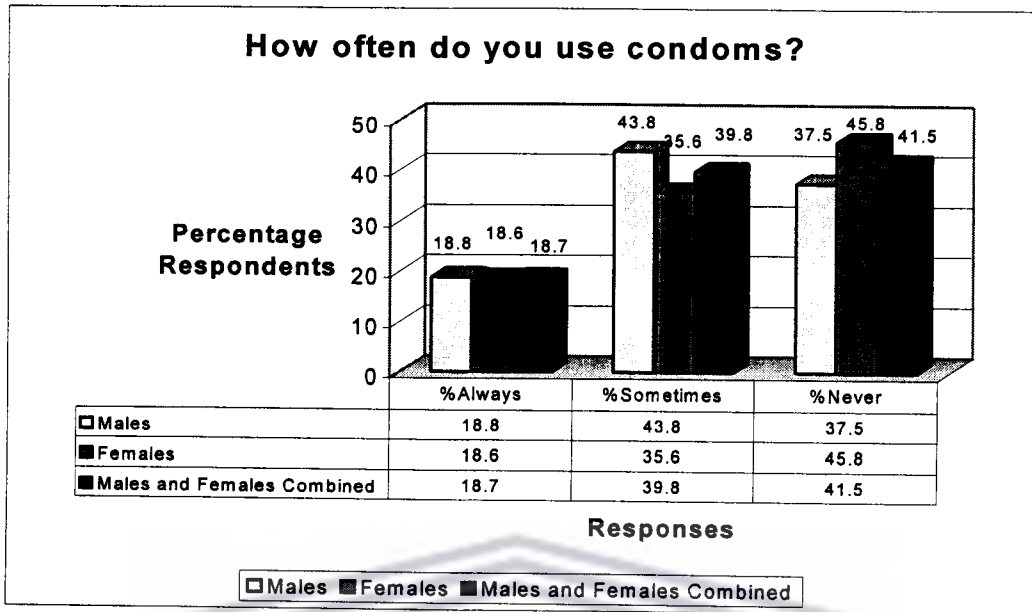


Figure 14: Frequency of condom use by gender

The responses from the household financial status categories showed that the upper category was more likely to *always* use condoms at 39.4%, as compared to the lower category at 11.1% ($p < 0.001$). Further, 50.0% of the respondents from the lower category indicated that they *never* used condoms during sexual intercourse, as compared to 18.2% of the respondents from the upper category.

The respondents were further asked whether they have ever had a sexually transmissible infection (STI):

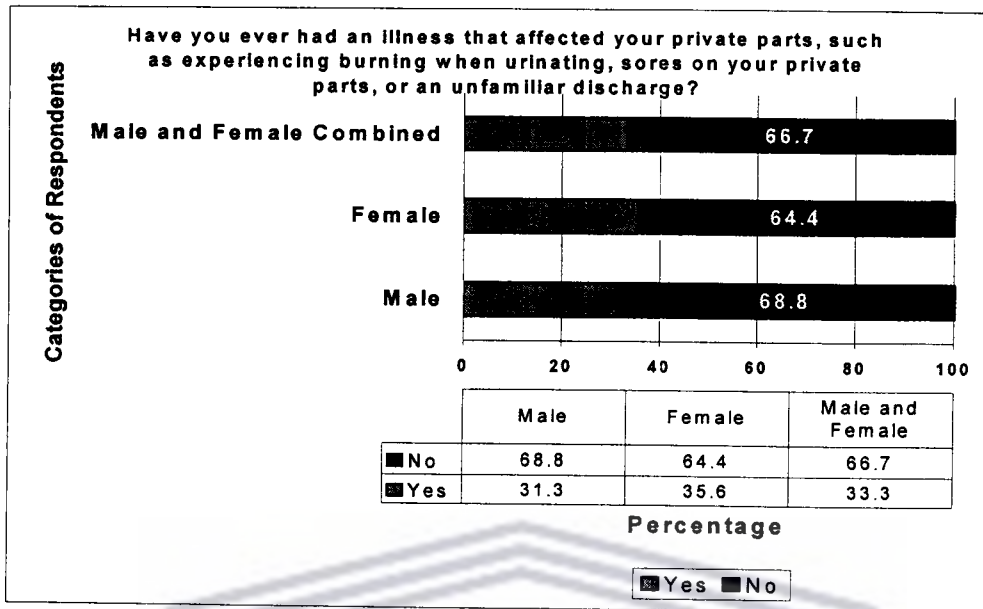


Figure 15: STI history of respondents by gender (n=246)

Testing for an association between frequency of condom use and STI history reveals the following:

Condom Use	History of Sexually Transmissible Infection		
	Yes	No	Total
Always	4 (8.7)	42 (91.3)	46 (18.7)
Sometimes	42 (42.9)	56 (57.1)	98 (39.8)
Never	36 (35.3)	66 (64.7)	102 (41.5)
Total	82 (33.3)	164 (66.7)	246 (100.0)

Table 8: Contingency (3 × 2) table on history of STI against frequency of condom use

A strong association between frequency of condom use and STI history was revealed by the Chi-square Test for Trend (p<0.02).

Respondents were asked to indicate whether they have ever used condoms before, during sexual intercourse:

Used a condom before	Male	Female	Combined Responses	%
Yes	80 (62.5)	72 (61.0)	152	61.8
No	48 (37.5)	46 (39.0)	94	38.2
<i>Total:</i>	128 (52.0)	118 (48.0)	n=246	100.0

Table 9: *Whether respondents have ever used a condom*

No significant difference was observed between the responses provided by the genders (Prevalence Odds Ratio = 1.06, {95% CI: 0.61<POR<1.85}). The responses further showed that 75.8% of the respondents from the upper household financial status category had used a condom before during sexual intercourse, as compared to 56.7% of the respondents from the lower category (Prevalence Odds Ratio = 2.39 {95% CI: 1.21<POR<4.78}).

The use of condoms at last sexual intercourse by the sexually experienced respondents was less than 36%.

Used a condom the last time	Male	%	Female	%	Combined Responses	%
Yes	48	37.5	40	33.9	88	35.8
No	80	62.5	78	66.1	158	64.2
<i>Totals Row:</i>	128	100	118	100	n=246	100

Table 10: *Whether respondents used a condom during their last sexual encounter*

The responses per household financial status category showed that 51.5% of the respondents from the upper category used a condom during their last sexual encounter, as compared to 30.0% of the respondents from the lower category ($p < 0.01$). The Prevalence Odds Ratio of 2.48 (95% CI: 1.33 < POR < 4.64) reveals that the upper category was more than twice as likely than the lower category to have used a condom during their last sexual encounter.

Moreover, the responses obtained for the question relating to whether condoms can prevent infection with HIV, were tested against the responses obtained for the question asking whether a condom was used during the last sexual act. The following representation is provided in this regard:

Did you use a condom the last time you had sexual intercourse?	Can the use of condoms prevent infection with HIV?		
	Yes	No or Unsure	Total
Yes	56 (63.6)	32 (36.4)	88 (35.8)
No	86 (54.4)	72 (45.6)	158 (64.2)
Total	142 (57.7)	104 (42.3)	246 (100.0)

Table 11: Contingency (2×3) table on use of condoms at last sexual encounter as compared to responses on whether condoms could prevent HIV infection

It is noticeable that the respondents who did not use a condom during their last sexual encounter were more likely to have indicated that condoms could not prevent HIV infection, or that they were unsure (45.6%), as compared to those respondents who did use a condom during their last sexual encounter (36.4%). A Prevalence Odds Ratio of 1.47 (95% CI: 0.82 < POR < 2.61) was achieved.

The next question asked at what age respondents had their first sexual experience:

Age at commencement of sexual activity	Median Age	Minimum Age	Maximum Age	IQR
Male	15	7	20	14 to 16
Female	16	13	19	15 to 17
<i>Total.</i>	16	7	20	15 to 17

Table 12: Age at commencement of sexual activity by gender

The Wilcoxon Two-Sample Test showed that the reported ages at which sexual activity commenced for boys and girls were different ($p < 0.002$). The same question also enquired from the respondents to indicate the estimated age of their partners at the first episode of sexual activity. The results are as follows:

Partner's estimated age at first sexual activity	Median Age	Minimum Age	Maximum Age	IQR
Male	14	6	20	13 to 15
Female	18	15	24	17 to 19
<i>Total.</i>	16	6	24	14 to 18

Table 13: Partner's estimated age at first sexual activity

It is observed that the boys prefer to engage in sexual activity with partners who are the same age, or younger, than themselves. The converse holds true for the girls, where they prefer to have sexual partners who are older than them.

When an association is sought between the median age at first sexual intercourse and median age of sexual partner, the following results are achieved:

Age at first sexual experience	Estimated Age of Sexual Partner		
	≤ 15	>15	Total
≤ 15	122 (73.5)	44 (26.5)	166 (56.1)
> 15	30 (23.1)	100 (76.9)	130 (43.9)
Total	152 (51.4)	144 (48.6)	n = 296 (100.0)

Table 14: Contingency table of age at first sexual experience against estimated age of sexual partner at first sexual experience

McNemar's Test reveals that the adolescents who made their sexual debut at 15 years of age or younger, were more likely to have had sexual intercourse with a partner who was 15 years of age or younger ($p < 0.001$).

Few girls made the decision themselves to engage in sexual intercourse for the first time:

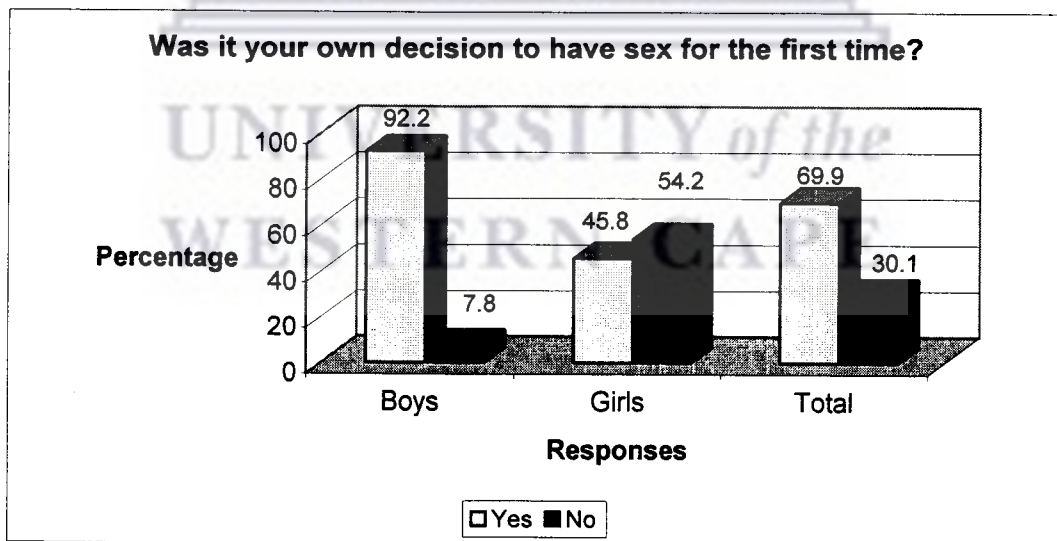


Figure 16: Responses to whether the decision to make their sexual debut was an 'own' decision

The boys were more likely than the girls to have made the decision themselves to engage in sexual intercourse for the first time ($p < 0.001$). Consideration of the responses provided per category of household financial status, revealed that 32.2% of the respondents from the lower category did not make the decision themselves to engage in sexual intercourse for the first time, as compared to 24.2% of the respondents from the upper category (Prevalence Odds Ratio = 1.49, 95% CI: $0.74 < \text{POR} < 3.00$).

Boys also claimed to have had more partners since they started sexual activity, as illustrated in table 15:

Amount of partners since sexual activity commenced	Males	Females	X ² value	P value	Combined Responses	%
<4	82 (64.1)	110 (93.2)	5.312	0.03	192	78.0
>4	46 (35.9)	8 (6.8)	3.657	0.06	54	22.0
<i>Totals Row.</i>	128 (52.0)	118 (48.0)	32.655	0.001	246	100.0

Table 15: Amount of partners since sexual activity commenced

The total number of partners indicated by the different household financial status categories, did not differ significantly from the total, median number of sexual partners indicated by the respondents ($p > 0.8$).

The use of alcohol or drugs immediately preceding the last time that respondents engaged in sexual intercourse was low. 12.2% of the respondents indicated that

they did use drugs or alcohol. 17.2% of the boys indicated that they used drugs or alcohol, as compared to 6.8% of the girls (Prevalence Odds Ratio = 2.85, {95% CI: 1.14<POR<7.39}, $p<0.02$). There was no significant difference in responses between high and low-income households (15.2% vs. 11.1%).

The boys were asked whether they have been to initiation school. 26.7% of the boys indicated that they had been to initiation school. These boys were also asked to indicate at what age they went to initiation school. 58.8% of the respondents indicated that they went to initiation school at 18 years old or younger. 63.2% of the boys who have been to initiation school, indicated that they were provided with sexuality education during the school.

The next question asked whether the respondents live with their sexual partners. 19.8% of the respondents said that they do live with their sexual partners. 22.1% of the boys indicated that they live with their sexual partners, as compared to 17.4% of the girls. Similarly, 21.5% of the respondents from the lower household financial status category stated that they do live with their sexual partners, as compared to 15.2% of the respondents from the upper category.

8.5. Opportunities for Future Intervention Development and Reported Barriers for Practicing of Safe Sexual Intercourse

In order to investigate opportunities for future intervention development and implementation, and barriers against practicing of safe sex options by adolescents, the first question posed to the respondents asked whether they felt that they knew enough about HIV/AIDS. The responses provided showed that only 10.8% of the respondents were sure that they knew enough, 37.8% were sure that they did not know enough, and 51.4% of the respondents were unsure. No significant difference was recorded between the responses provided by boys and girls ($p>0.2$), or the different household financial status categories ($p>0.9$).

When the aforementioned responses are tested against frequency of condom use, the following is achieved:

Frequency of condom use	Do you feel that you know enough about HIV/AIDS?			Total
	Yes	No	Unsure	
Always	4 (8.7)	16 (34.8)	26 (56.5)	46 (18.7)
Sometimes	16 (16.3)	42 (42.9)	40 (40.8)	98 (39.8)
Never	6 (5.9)	36 (35.3)	60 (58.8)	102 (41.5)
Total	46 (10.6)	98 (38.2)	102 (51.2)	n=246 (100.0)

Table 16: Contingency (2×2) table on perception of adequacy of knowledge on HIV/AIDS tested against frequency of condom use

The Chi-square Test for Trend revealed no significant association.

Fewer boys than girls have successfully refused sexual intercourse to a person before:

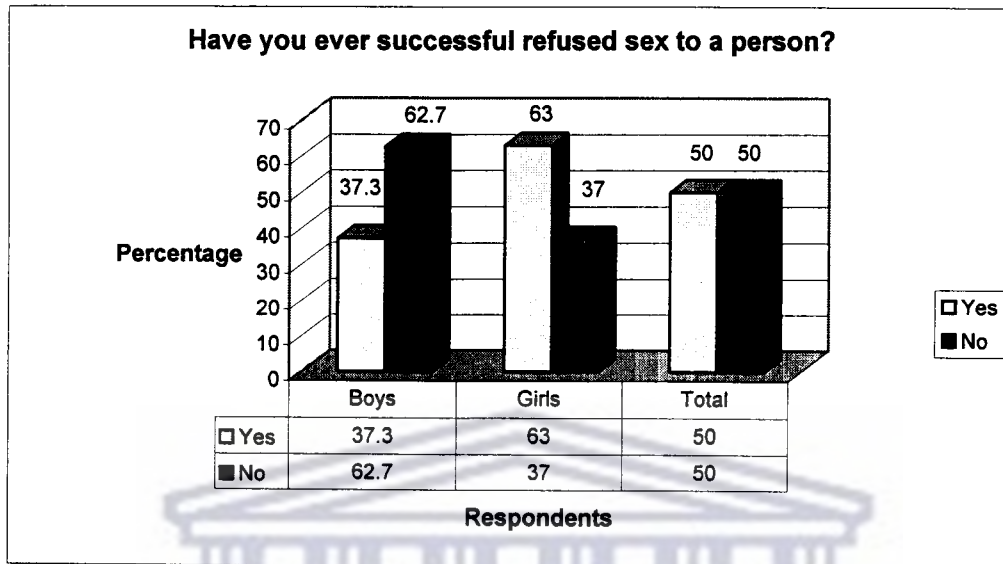


Figure 17: *Successful refusal of sexual intercourse to a person*

Girls were almost three times more likely to have successfully refused sexual intercourse to a person than the boys (Prevalence Odds Ratio = 2.86, 95% CI: 1.73<OR<4.74). No significant difference was observed for the responses provided by the household financial status categories ($p>0.2$).

Three quarters of the respondents stated that it is always possible to have condoms available for sexual intercourse ($n=292$). The responses provided by boys and girls individually were similar ($p>0.34$). 81.6% of the respondents from the upper household financial status category indicated that it is always possible to have condoms available for sexual intercourse, as compared to 72.2% of the respondents from the lower category (Prevalence Odds Ratio = 1.70, 95% CI: 0.85<POR<3.47).

71.9% of the respondents felt that they do, or would, feel comfortable to collect condoms at the clinic (68.9% boys and 75.0% girls). Further, 25.9% of the lower household financial status category stated that they do not, or would not, feel comfortable to collect condoms at the clinic, as compared to 34.2% of the respondents from the upper category.

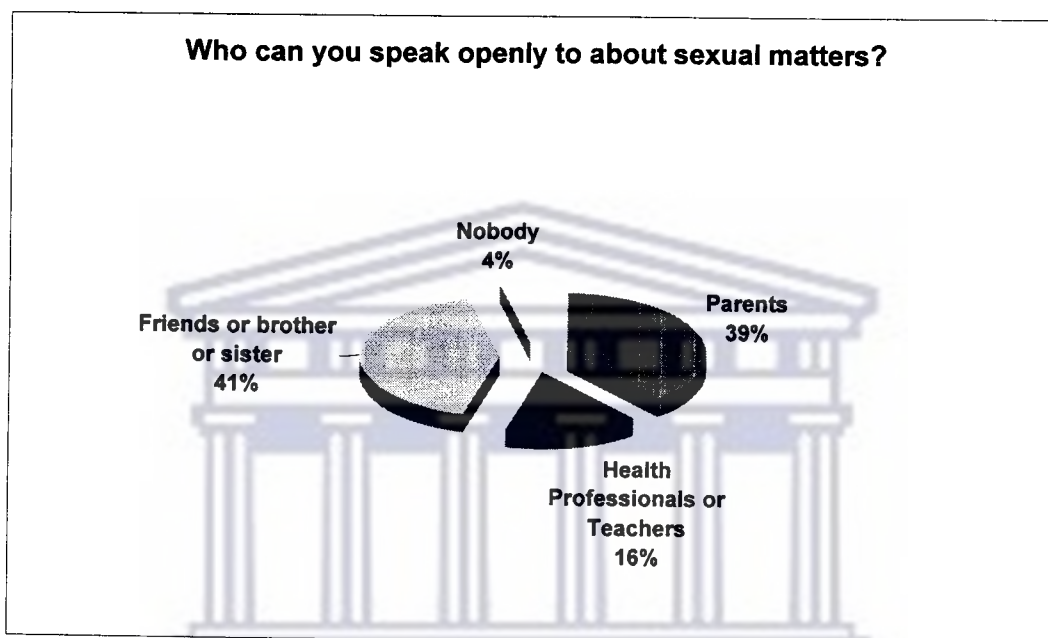


Figure 18: Whom respondents could speak to openly about sexual matters

Friends, siblings and parents were the people that students felt that they could talk openly to. It was further deemed necessary to ask the respondents whether they thought that peers would tease them if they did not engage in sexual activity. The responses by gender are as follows:

Would friends tease you if you do not engage in sexual activity?						
Gender	Yes	%	No	%	Total	%
Males	108	72.0	42	28.0	150	50.7
Females	48	32.9	98	67.1	146	49.3
Total	156	52.7	140	47.3	296	100

Table 17: Whether respondents will be teased by friends if not engaging in sexual activity

Boys were more than five times more likely to believe that peers would tease them if they did not engage in sexual intercourse (Prevalence Odds Ratio = 5.25, 95% CI: 3.09<POR<8.95).

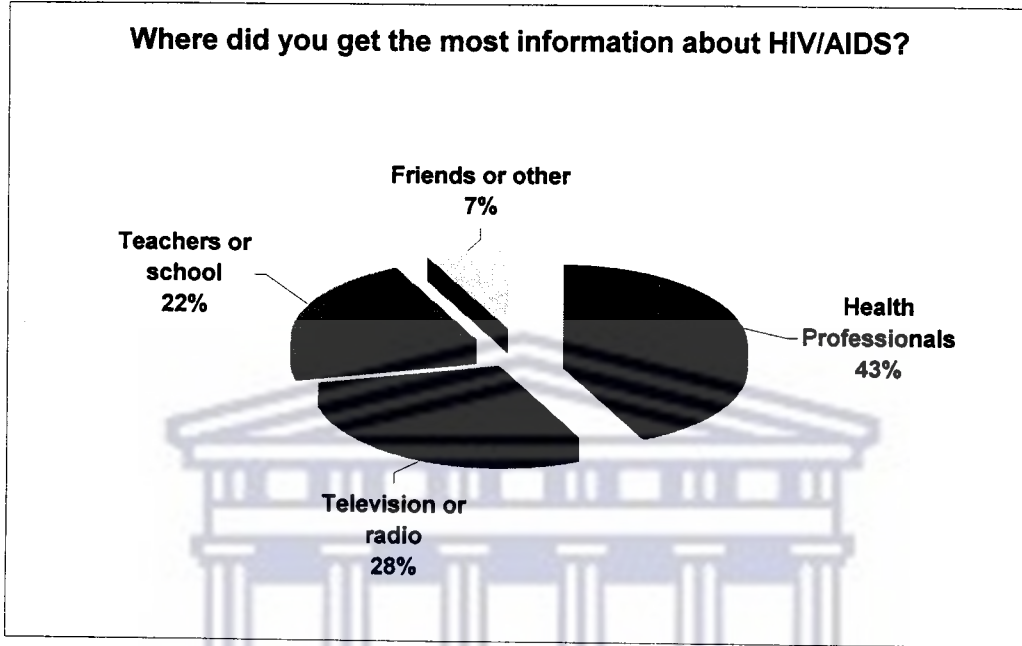


Figure 19: Responses provided on main source of information on HIV/AIDS

Health professionals, television or radio, and teachers or schools rated high as the main source of information on HIV/AIDS. However, parents were generally not mentioned as a source of information on HIV/AIDS.

Both males and females were very keen to discuss and learn about sexuality issues:

Would you like to get more information about HIV/AIDS, and join in discussions around sexuality issues?						
Gender	Yes	%	No	%	Total	%
Males	136	90.7	14	9.3	150	50.7
Females	128	87.7	18	12.3	146	49.3
Total	264	89.2	32	10.8	296	100.0

Table 18: Willingness to obtain more information on HIV/AIDS, and join in discussions around sexuality issues

The next question asked the respondents whether they ever feel sorry, afterwards, for having had sexual intercourse. The responses provided are illustrated as follows:

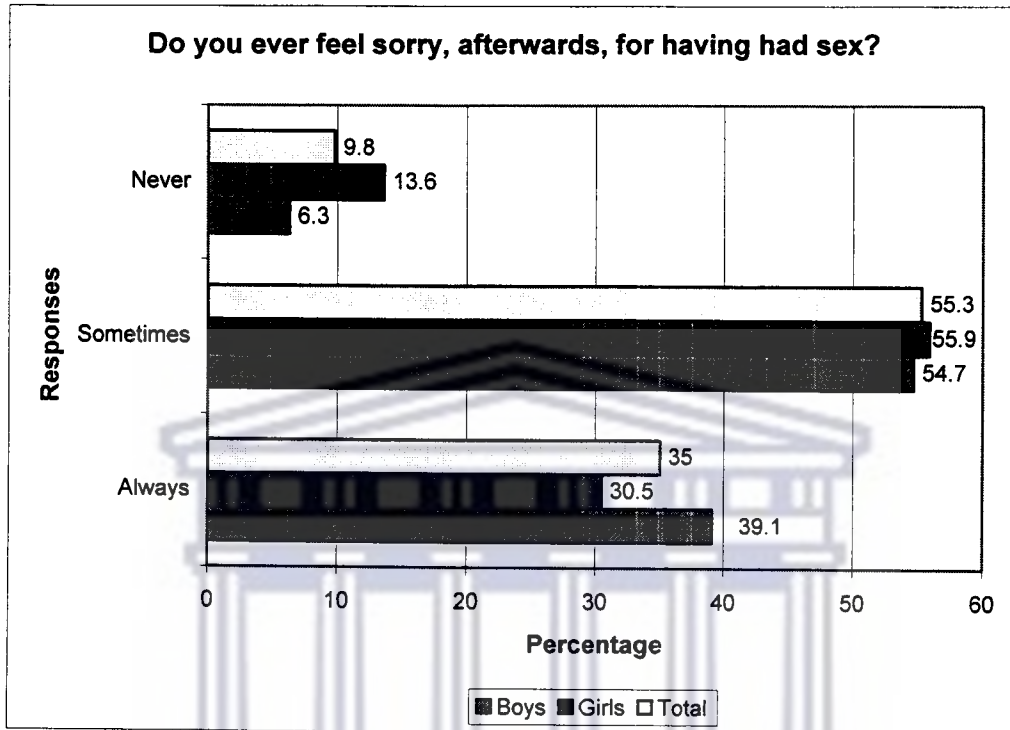


Figure 20: Responses to whether they ever feel sorry, afterwards, for having had sexual intercourse

A higher proportion of the respondents from the lower household financial category (11.1%) indicated that they never feel sorry, afterwards, for having had sexual intercourse, than the upper category (6.1%).

Finally, the respondents who indicated that they feel sorry '*sometimes*' or '*always*' were asked to provide reasons why they provided those answers. The responses were as follows:

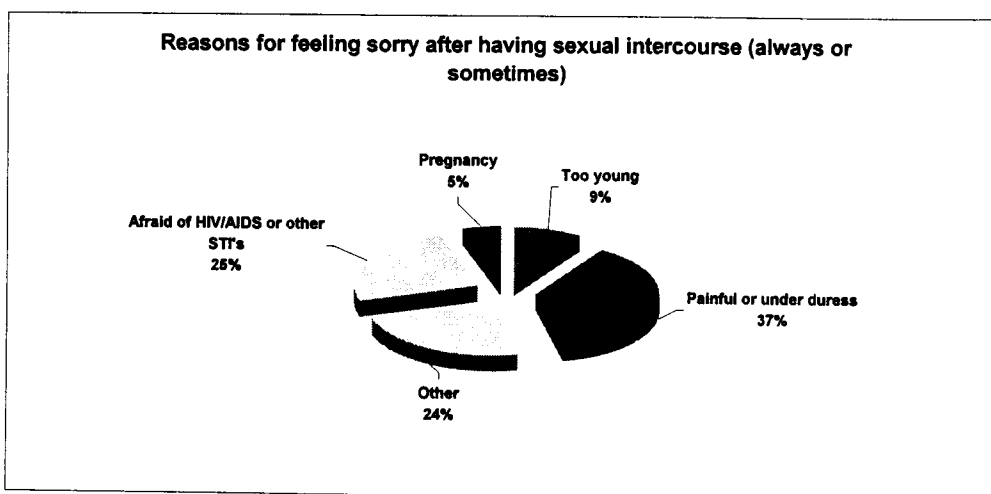


Figure 21: *Reasons for feeling sorry after having sexual intercourse ('always' or 'sometimes')*

9. DISCUSSION

Regardless of the poor levels of knowledge and misconceptions harboured by the adolescents, and the fact that many were sexually active, a high proportion of the respondents did not regard themselves as being at risk to HIV infection. However, opportunities for intervention design and development has been identified by this study, to assist in overcoming the reported barriers preventing adolescents from practicing safe sexual behaviour.

A more detailed discussion of the results will be provided which follows the same structure as the presentation of the results. Thereafter, a succinct section will follow to describe the direct implications that the results hold for intervention development that is grounded in the HBM. First however, the limitations of the study will be discussed briefly.

9.1. Limitations of the Study

Although numerous studies focusing on adolescent HIV/AIDS-related behaviour employs self-administered questionnaires that ensure critical- or reflexive self-analysis⁹³ as data-collection tools^{94,95}, there are inherent shortcomings to this method of data collection. The main shortcoming that exists when performing studies regarding beliefs or attitudes with structured questionnaires is the inability of the questionnaire to explore unknown aspects surrounding the beliefs or attitudes. Therefore, it may be advisable to perform qualitative research with the aid of focus group discussions to explore factors that underlie particular behaviours. The Grahamstown-study has the advantage of linkage with the national NPPHCN-study⁴⁰ that looked at the identification of numerous themes revealed by focus group discussions surrounding adolescent sexuality. The commonly identified themes from the NPPHCN-study have been incorporated into the questionnaire and has, therefore, to a certain extent, built on the study by quantifying subscription by adolescents to these commonly identified themes. A further aspect that limited the Grahamstown study included the exclusive focus on adolescents themselves, and did not consider attitudes or beliefs fostered by parents or guardians. Therefore, important contributions made by the family-environment with regard to adolescent sexual behaviour has eluded this study. However, perceived and potential support-bases have been identified by this study, which may warrant expansion of intervention development to different stakeholders having an influence on adolescent sexuality. Moreover, the current focus of this study is inclusive of the important influences of peer-group

pressure^{96,97}, particularly towards the economically disadvantaged, high-risk adolescents⁹⁸.

Although patterns, consistency and frequency of condom use are important elements to study⁵⁹⁻⁶⁷, the findings of previous studies demonstrated many weaknesses. One obvious difficulty involved the inability to measure condom use directly, and thus, the need to rely on interviews or questionnaires to obtain data. These data sources are subject to recall bias as well as the Hawthorne effect. Therefore, trends rather than absolute numbers proffered by this study should be interpreted and considered; and research subjects in this study were also cautioned as to this largely subliminal phenomenon.

Prevalence Odds Ratios, as calculated in this study, tend to be inflated due to its method of calculation. Therefore, these figures cannot be seen to conclude causality. It is for this reason that these figures should be interpreted with caution, and should possibly only serve to illustrate significant, or not significant, differences between responses received from different respondent categories.

A positive aspect of this study was the high level of observed/perceived external validity. Adolescents seemed to approach the questions seriously and reflexively. The sessions in which the questionnaires were administered attempted to allow sufficient time for reflection before answers were provided for individual questions. In an attempt to secure honest and truthful answers, the following were stressed:

- ❖ Anonymity and confidentiality.
- ❖ The aim of the study.
- ❖ Approachability of the facilitators.
- ❖ Ways in which answers should be indicated on the questionnaire.

It was further felt that the high level of internal validity achieved by this study bears testimony to the high levels of external validity observed and perceived.

9.2. Knowledge of the Respondents with regard to HIV/AIDS

This study has found that the knowledge of adolescents with regard to HIV/AIDS is surprisingly poor and superficial. This is contrary to the findings of numerous other studies conducted nationally³⁷⁻⁴⁰ and internationally⁴¹⁻⁵². Hence, the findings of similar studies investigating cognitive decision-making with regard to HIV/AIDS in adolescents, do not apply to the subjects sampled from the Rini and Joza areas of Grahamstown. This finding has serious implications for future design and implementation considerations as far as development of HIV/AIDS educational interventions are concerned. The knowledge of the adolescents with regard to HIV/AIDS will have to be strengthened dramatically. These adolescents are not equipped to view the disease in the serious manner that it deserves. Therefore, perceived susceptibility to the disease would be low. Although the levels of knowledge did not differ significantly among the genders, it was seen later that the sexual practices and beliefs between the genders were different. This possibly requires that different priority areas would have to be addressed

when the genders are educated. Possible explanations for the low level of knowledge observed relates to the fact that open-ended questions were included in the questionnaire to test knowledge, and respondents were provided with the opportunity to indicate that they were unsure of certain answers. It has been identified earlier that this may have been a shortcoming of previously performed studies.

Only 21.6% of the respondents knew what '*HIV-positive*' denotes, and fewer than 46% of the respondents knew how HIV infection could be contracted. This illustrates that the disease is not discussed with openness in the communities of the sampled adolescents. It is common practice for people to hide their seropositivity from the rest of the community for fear of being ostracized. Even though adolescents appear to have opportunities to talk openly about sexual matters, it appears that these discussions in the family environment only occur if adolescents approach their parents, rather than parents proactively approaching their adolescents. Widespread confusion over the methods by which HIV could be spread may be a contributory factor to unsafe sexual practices by the adolescents. In example, kissing and sharing of a toothbrush was widely regarded as a method by which the HI virus could be spread. This may be viewed by adolescents as necessary elements for displaying and experiencing intimacy with partners. Therefore, avoidance of these behaviours could be viewed as detracting from normal practices held dear by the respondents between intimate partners, leading to consequent total abandonment of safe sexual practices, such as using condoms during sexual intercourse since innocent

display of affection and intimacy may lead to HIV infection anyway. These misconceptions must be eradicated to illustrate that safe sexual behaviour is possible without detracting from rituals of intimacy and affection between partners. The high proportion of respondents who indicated that they did not know how HIV infection could be spread (44.8%) may be responsible for a sense of frustration in avoiding disease contraction among the respondents. Once again, the majority of the adolescents may experience a feeling of helplessness and powerlessness in avoiding HIV infection. This was reiterated by the fact that 42.6% of the respondents did not know that HIV infection could be prevented.

The majority of the respondents (57%) did not know that AIDS could not be cured. This may have created a sense of indifference to the disease. As a result, the findings of the study showed that the respondents did not understand the severity of the disease. The fact that HIV has such a long incubation period, together with the fact that respondents generally assume that the health services would be able to treat AIDS, could be responsible for creating a mood of complacency among the adolescents. The serious nature of the disease would have to be communicated to these recipients of future educational interventions. Moreover, 15% of the respondents were sure that AIDS could be cured. Most of these respondents illustrated that they have been subjected to, and subscribe to, fallacies regarding a cure for AIDS. This is expressed by the fact that most of these respondents (31.4%) believed that sleeping with a virgin could cure the disease, or that Traditional Medicine could cure the disease. Therefore, it could be expected that a large proportion of the respondents did not think that they

would die if they had AIDS. Although, girls knew proportionately more about risk factors to HIV infection than boys, the boys were more likely to know that AIDS inevitably leads to death. This is contrary to the belief that boys usually display a sense of invincibility, rather than girls.

Although the overall scoring of girls and boys with regard to knowledge on HIV/AIDS was similar, it was noticeable that some of the questions were better answered by specific genders (table 6). This is suggestive of the fact that joint discussions on HIV/AIDS should occur during future intervention implementation. Therefore, facilitated peer education could take place and be utilized for future interventions. Substantial differences in knowledge between boys and girls were seen for the questions relating to ways in which HIV infection could be contracted, and whether AIDS inevitably leads to death. The knowledge of boys regarding ways in which HIV could be contracted was much less than the girls (34% vs. 57%), and knowledge on the inevitable death outcome of AIDS was much higher in boys than in girls (85% vs. 69%). It could be that boys were more indifferent to acquiring knowledge on the disease than girls, and were more unlikely to subscribe to fallacies regarding cures for AIDS (e.g. cures by Traditional Healers or special ritual practices). The latter may also possibly explain the discrepancy in the levels of knowledge between the household financial status categories. The respondents from the lower category were less aware of the meaning of '*HIV-positive*' than respondents from the upper category (15.5% vs. 39.5%), but displayed higher levels of knowledge about the absence of a cure for AIDS, and the inevitable death outcome of AIDS (46.4%

vs. 31.6% and 80% vs. 68.4%, respectively). It is felt that this anomaly requires further investigation. This phenomenon may also indicate that the sample distribution did not allow for proportionate representation of household financial status categories, or that previous educational intervention designs were target group specific and executed well. Nevertheless, the levels of knowledge displayed by both categories of respondents were poor and needs urgent intervention. The variable proportionally correct responses recorded between individual schools may also warrant further investigation with larger amounts of pupils per school.

9.3. Beliefs of the Respondents surrounding HIV/AIDS

The beliefs of the respondents displayed by this study showed that the adolescents in the Rini and Joza areas of Grahamstown will have to undergo a paradigm shift before meaningful actions will be taken to engage in safe sexual behaviour. Although many of the respondents have probably not seen people who are living with full-blown AIDS in their communities, discrimination against these people appears to be widespread. This illustrates that the epidemic is in its early stages in the Rini and Joza areas of Grahamstown, which offers a good opportunity for implementation of interventions with effective results, such as controlling the spread of general STI's. Therefore, prompt intervention design and implementation should have effective results.

It was disconcerting to note that although the majority (73.6%) of the respondents believed that a single, unprotected sexual encounter could lead to HIV infection, 44.6% of the respondents did not believe that condoms could prevent the spread of HIV infection. Therefore, it could not be expected from the respondents to use condoms during sexual intercourse if they did not believe that it is effective at preventing a disease that they poorly understood.

Furthermore, the unfavourable view with which condoms are held in the study population is probably strengthened by the fact that it is deemed ineffective at preventing HIV infection. Mere promotion of accessibility and availability of condoms will not have any significant effect. The confidence of adolescents will have to be gained to change their beliefs for purposes of ensuring uninterrupted condom usage during adolescence. The girls are in particular need of convincing that condoms are effective at preventing HIV infection.

As seen by a previous study⁴⁰, the genders are likely to shift responsibility for condom availability to the opposite gender. This is mainly the case for girls. Most of the respondents (78.4%) indicated that it is a joint responsibility between the boy and girl. The girls in the lower household financial status category mostly acknowledge the traditional belief that boys are responsible for condom availability. This shows that culturally sensitive approaches are required in intervention design. However, the high number of respondents who indicated that it is the responsibility of both genders to have condoms available for sexual intercourse, possibly illustrates the fact that the adolescents are receptive to behaviours that do not discriminate between the genders, as is traditionally seen

in the cultural norms and values of the Xhosa population. Alternatively, or additionally, this sentiment could illustrate a subtle manner in which respondents shift responsibility away from themselves.

Many (44.6%) of the respondents were unsure whether their partners could be pleased sexually with the use of a condom during sexual intercourse. This points to the fact that feelings of intimacy and needs are not discussed between the genders. Openness in discussing sexual matters between partners must be stressed in the development of an educational intervention. This could possibly be regarded as a function of mutual respect between partners. The wishes of girls are usually disregarded in a male dominated cultural framework. This needs to be addressed by a future intervention programme. The current situation may have arisen due to the fact that boys are more subjected to peer group pressure than the girls where sexual behaviours are concerned. Although a very low proportion of the respondents (40.5%) indicated that they were sure their sexual partners could be pleased if a condom is used during sexual intercourse, a much higher proportion (62.6%) stated that they themselves could be pleased sexually if a condom is used. This also points to misunderstanding between the genders. This is particularly evident when considering the responses by the genders to the two questions. 33.3% of the boys stated that their partners could be pleased sexually if a condom is used, while 71.4% of the girls stated that they believed that they could be sexually pleased if a condom is used. It could be that the boys are largely using the perceived dissatisfaction of their sexual partners as an excuse to not using condoms during sexual intercourse. This should be

addressed during future intervention implementation, where it should be aimed at making condom use during sexual intercourse the norm rather than the exception.

The large discrepancy observed between the beliefs of boys and girls with regard to the necessity of sexual intercourse in a relationship, is evidence of the fact that boys are subjected to peer group pressure to engage in sexual intercourse at a young age. This has obvious repercussions for girls. Nearly half of all the girls included in the study believed that it is not necessary to have sexual intercourse in a relationship, as compared to less than a quarter of the boys. It is felt that boys should be provided with means to overcome peer group pressure to engage in sexual activity at immature ages. This may also have beneficial outcomes for the girls as a result.

Poor levels of frequency of condom use were reported and a relatively high proportion of the respondents did not perceive themselves as being at risk to HIV infection. More girls than boys did not believe that they were at risk to HIV infection. Further, the fact that such a high proportion of the respondents (72.3%) were sure, or unsure, whether they are indeed at risk of HIV infection, yet did not change their beliefs to reflect safe sexual behaviour, shows that the respondents are not empowered to change their sexual behaviours. The knowledge and beliefs of adolescents in the Rini and Joza areas of Grahamstown will have to be changed to create an awareness that will enable them to practice safe sexual behaviour. It will also be necessary to change the supportive

framework in which the sexual activities of adolescents take place, to become more enabling. The reference ages provided by adolescents at which they believed sexual activity should commence, are made redundant by the current situation that lends itself to the practicing of unsafe sexual behaviours, and consequently leads to a high level of susceptibility to HIV infection. Clearly, interventions must target youths before they become sexually active.

9.4. Sexual Practices of the Respondents

A very high proportion of the respondents were already sexually experienced (83.1%). This high level of sexual experience is by no means an isolated finding in the Rini and Joza areas of Grahamstown, only. Similar reports have emerged from Natal¹¹¹, Cape Town^{38,112} and other parts of the world^{113,114}. The reasons provided by respondents who were not sexually active yet, for abstaining, should be utilized by an educational intervention to delay sexual activity. Hence, moral values, religious principles and respect for partners should be incorporated into development of such an intervention.

Although the level of sexual activity is high among adolescents in the Rini and Joza areas of Grahamstown, the use of condoms is not. 41.5% of the respondents stated that they never used condoms, and only 36% used a condom the last time. The reasons for the low usage of condoms appear to be as a result of a lack of knowledge and reduced levels of satisfaction when condoms are used. It was probably for this reason that a third of all the respondents had

contracted an STI previously. The explanation for this high prevalence of STI's may be that early initiation of sexual activity and high levels of unprotected sexual activity are known to be closely associated with increased risks of STI's¹¹⁵⁻¹¹⁷. Apart from unplanned pregnancy, this may also increase the risk of future HIV infection^{111,113,117}, and cervical cancer^{117,118}. This therefore implies that a large proportion of the adolescents are presently at risk of HIV infection, since STI's do increase that risk¹¹⁹. Mechanisms for early treatment of STI's in adolescents will have to be incorporated into any future development of an intervention.

Only 7.8% of the boys stated that it was not their own decision to engage in coitus for the first time. In contrast, more than half of the girls experienced their first act of coitus under duress. This illustrates the position of girls in male-dominated rural Grahamstown society generally: girls have little bargaining power. Therefore, since girls have been seen to concede to sexual intercourse under duress more than the boys, it is probably true that girls have more '*opportunities*' to refuse sexual intercourse. As a result, the findings depicting girls to be more likely to have successfully refused sexual intercourse than the boys should not be seen as a lack of assertiveness on the part of the boys. Rather, it should be interpreted as reflecting that girls possess some means of refusing unwanted sexual advances. This question may have produced more useful results if rephrased and/or complimented by another. In addition, when considering the median age of first sexual experience of girls, it is observed that half of the girls became sexually active at an age less than 16 years of age,

pointing towards a high prevalence of at least *statutory rape*. This finding is further acknowledged by the fact that the boys indicated that the median age of their first sexual partners were estimated at 14 years of age. Although a large discrepancy was found between the estimated, median age of the first sexual partners of boys, and the reported median age of girls at which they become sexually active, it may be that a small proportion of girls become sexually active at the age reported by boys in this instance, and had many different sexual partners. However, these figures must be viewed with caution and requires further investigation. Nevertheless, factors will have to be considered by which girls can take control of their disposition and prevent 'forced' initiation of sexual activity at immature ages. Adequately trained guidance teachers, with strong linkages to Social Workers, could possibly fulfill this role in implementing a future intervention. Moreover, the age at which sexual intercourse is first initiated is an important factor to understand in considering ways to promote HIV prevention practices. It can be assumed that young adolescents would be likely to engage in sexual activities in contexts quite different from those of older adolescents, and they are unlikely to have the same means and understanding to negotiate HIV preventive practices, or at least, are likely to approach the problem in different ways¹¹⁰. Sexual activity must be understood at different age levels to enable the effective formulation of educational intervention programmes that will meet the needs of adolescents at different stages of their sexual development.

Boys have been shown to be more promiscuous than girls, since 35.9% of the boys indicated that they have had more than four lifetime sexual partners, as

compared to only 6.8% of the girls. It is probably for this reason that the boys were more likely than the girls to indicate that they use condoms 'sometimes'. Therefore, especially boys were seen to engage in high-risk taking behaviour.

Drugs and alcohol does not appear to play a major part in the sexual activity of the respondents. It was noticed however, that the boys were much more likely to have used drugs or alcohol immediately preceding their last sexual encounter. This means that a future intervention should not have to focus particularly on drug or alcohol abuse. It also needs to be mentioned that underreporting may have occurred which warrants further investigation.

The fact that nearly 20% of the respondents lived with their sexual partner illustrates that these adolescents are engaging in regular sexual activity. Further, the control exercised by parents or guardians over the sexual lives of their adolescents are poor. As cohabiting goes against cultural norms, it is suggested that a future intervention focus on culturally sensitive and acceptable methods in conveying its messages. This finding may also serve as indication that traditionally accepted cultural norms relating to adolescent sexuality may be undergoing, or have, changed or adapted to contemporary practices.

9.5. Opportunities for Future Intervention Development and Reported Barriers for Practicing of Safe Sexual Intercourse

The barriers and opportunities identified by this study should be taken cognizance of and utilized for future intervention development and implementation. The implications will briefly be discussed in this section of the document.

The adolescents included in this study stated a need to gain more information on HIV/AIDS. Only 10.8% of the respondents indicated that they thought that they knew enough about the subject. Clearly the scores obtained by the respondents on questions relating to knowledge on HIV/AIDS is testimony to this finding. This was also illustrated by the fact that many questions were asked to the facilitators after the questionnaires were administered. Obviously these children are yearning to gain a better understanding of the disease and would like to be empowered to take charge of their own sexual lives. It is anticipated that a well-planned and executed educational intervention could prove to be very interesting and enlightening to the adolescents. The areas identified by this study in which the adolescents lack understanding and knowledge must form the focus area of any future intervention. The impact of such an intervention holds true potential as it was observed that the respondents who stated that they used condoms inconsistently were more likely to state that they felt they do not know enough about HIV/AIDS, than those who indicated that they always use condoms.

Therefore, such an intervention might provide the necessary *cue to action* for the adolescents to use condoms more consistently.

The girls appear to possess the necessary assertiveness to refuse sexual intercourse, in that 63.0% of the girls stated that they have successfully refused sexual intercourse before. Although most of the girls made their sexual debut under duress, it appears as if they gain confidence and assertiveness with experience. This finding could possibly be utilized to promote secondary abstinence. However, these qualities should be instilled in the adolescents at an age before they succumb to the current situation. Moreover, the adolescents should be provided with adequate and effective support structures, to avoid unsolicited, forced advances by boys or older men. The people that are approached by adolescents for advice on sexual matters should possibly be empowered to provide the necessary support. By implication this means that all adolescents must be empowered to support one another, since 41% of the respondents listed their brother, sister or friends as the single most important person to which they could speak openly to about sexual matters. Moreover, parents, teachers, and health professionals must also be empowered to fulfill these roles.

This study has illustrated that condoms are accessible and available as required. Three quarters of the respondents stated that it is always possible to have condoms available for sexual intercourse. Furthermore, 71.9% of the respondents indicated that they do, or would, feel comfortable to collect

condoms at the clinic. Combined with the fact that 16% of the respondents stated that they could speak openly to health professionals or teachers about sexual matters, illustrates that the attitudes of health care professionals in Grahamstown are largely encouraging for adolescents to access the services.

Most of the boys felt that peers would tease them if they do not engage in sexual activity, although this was not the case for girls. This is a very serious obstacle for future intervention presentation. It is for this reason that collective attitude changes are required. Also, the support structures should possibly attempt to outweigh the pressures applied by peers. Creative ways would have to be devised to accomplish this feat. As remarked by Kelly¹¹⁰, "given that individual behaviours always depend upon practical and material conditions, behaviour change models need to be supported and sustained by changes at a structural level where such conditions are determined."

Parents were generally not identified as a source of information on HIV/AIDS. This is disconcerting as it implies that parents are not currently a support structure for the adolescents. As a result, future intervention development should also consider the role of the parent in assisting adolescents to engage in low risk sexual behaviour. Parent support groups may prove useful in this matter.

It was also very reassuring to find that nearly 90% of the adolescents indicated that they would like to get more information about HIV/AIDS, and join in discussions around adolescent sexuality issues. The findings of this study points towards widespread confusion and frustration in the adolescents regarding their

sexual milieu, and is further emphasized by the fact that the majority of the respondents indicated that they were sometimes, or always, sorry for engaging in sexual activity after such an episode. It was observed that only one quarter of the respondents felt sorry because of the threat posed by HIV/AIDS or other STI's. Other reasons for feeling disappointed for having had sexual intercourse includes factors such as being too young, falling pregnant, or experiencing pain or being forced. These are useful elements for constructing an educational intervention that could enforce reasons for abstinence, secondary abstinence, or consistently practicing safe sexual intercourse.

9.6. Synthesis of Results with the Health Belief Model

The HBM will prove to be useful in developing a health education intervention for adolescents in the Rini and Joza areas of Grahamstown. The model assumes that people fear diseases, and that health actions are motivated in relation to the degree of fear (i.e. perceived threat) and expected fear-reduction potential of actions, as long as that potential outweighs practical and psychological obstacles to taking action (i.e. net benefits). This study has identified a high level of uncertainty in the adolescents regarding their perceived susceptibility to HIV/AIDS. This is probably as a result of the low levels of knowledge recorded on the disease. Therefore, it cannot be expected that these adolescents fear HIV/AIDS with a degree necessary to motivate precautionary measures, because they are not certain whether they are at risk. This lack of fear has also been

shown by the observation that 57% of the respondents were unsure, or thought that AIDS could be cured.

This sense of fear can only be inculcated by providing the facts of the disease to these adolescents. It does bear mentioning however, that high levels of fear can produce ironic results, particularly among adolescents¹¹¹. Young people often mobilize defense mechanisms such as denial to avoid fear, rather than change behaviours to reduce risk. Complicating this issue further is that the severity of the disease is poorly understood²⁰. The use of fear-appeals to generate perceived susceptibility does not appear to be warranted, yet adolescents do need a better understanding of the health effects of HIV infection. Future programme efforts should rather emphasize the knowledge and skills necessary for adolescents to feel confident that they can reduce risk of infection.

When considering that safe sexual behaviour practices seems to elude the respondents, it is impossible to have a situation in which the benefits of preventing a disease which is poorly understood, would outweigh the barriers opposing such behaviour. Boys are particularly forced by peer group pressure to engage in risky sexual behaviour at an early age, and possibly to maintain such behaviour. It needs to be emphasized that the psychological obstacles to practicing safe sexual behaviour amongst adolescents in a high-risk environment, are deeply entrenched by the sense of belonging that exists during this stage of emotional and psychological development. The adolescents acknowledged the barriers to preventive actions and social pressures to increase risk in this study.

Both of these factors could be crucial determinants of adolescents' preventive practices²⁰. Enabling adolescents to deal proactively with social influences has proven to be an effective education approach¹¹². Instructional time should possibly be devoted to specifically identifying perceived barriers as a participatory exercise, and helping the adolescents to develop skills to overcome these barriers. The assertiveness necessary to empower especially females, for purposes of avoiding forced risk-taking behaviour, should be imparted to females before they are sexually active.

Most important, adolescence is characterized by experimentation with sexual intercourse and drug behaviours that can place them at risk for HIV infection²⁰. To be effective, HIV/AIDS education should begin prior to the onset of experimentation. In this regard, it may be necessary to overcome the unwilling attitudes of parents and teachers to commence sexual education at primary school level.

10. RECOMMENDATIONS

Interventions developed for black youths in the Rini and Joza areas of Grahamstown should increase the level of fear to HIV/AIDS in this population in a controlled manner. Concurrently, *health actions* for overcoming this inculcated sense of fear should also be explained and meticulously clarified by the interventions. The HBM further states that such health actions should be enabled

in a milieu that is void of, or limited in, practical and psychological obstacles to taking such actions. More specific recommendations include:

- The knowledge of the youths on the aetiology and severity of HIV/AIDS should be increased dramatically, so that they are equipped to formulate levels that could motivate adoption of HIV preventive behaviours. Imparting the necessary knowledge should take into account what the youths already know and rather concentrate on facts that will strengthen existing knowledge and eradicate misconceptions and myths. In this way, the interest of youths in wanting more information on HIV/AIDS, as illustrated by this study, may be built upon and utilised.
- Creative ways should be sought by which the information could be imparted to the youths. Methods such as role-play, drama, and presentations by PLWA should be considered, since the monotony of classroom teaching may detract from the effectiveness of interventions. Moreover, presentations by PLWA could provide the necessary *cues to action* to the youths for adopting health actions.
- Participatory discussions among youths that are skillfully facilitated, is regarded as a necessary component of any educational intervention. Sexual practices should be discussed with openness, and risky behaviours with socially/culturally acceptable alternatives pointed out. Many alternative sexual practices that have not enjoyed media exposure, such

as secondary abstinence and non-penetrative sex, could be suggested during such discussions and be investigated for acceptability. It is felt that participatory discussions may have an important role to play in illustrating susceptibility to HIV infection. Moreover, it is also considered important to have these discussions between genders, so that lessons could be learnt from, and about, each gender.

- Communicating benefits of safe sexual behaviour could possibly best be performed by PLWA. The PLWA in the community should form an integral part of any educational intervention, to provide an emotive slant to the programmes. Further, the self-esteem and acceptance of PLWA may also be improved in this way.
- Interventions should coordinate commitment between various roleplayers to lesson the practical and psychological barriers faced by adolescents. In example, peers should agree and accept a redefined set of norms governing their sexual behaviours, health authorities should maintain high levels of condom and advice availability and accessibility, parents should be empowered to become more proactive and supportive of their youths, and the schools could provide special services (e.g. reproductive guidance services).

- Interventions should also have as its aim, the control of the spread of other STI's. Closer monitoring by health authorities may be necessary in this regard.
- Promotion of uninterrupted condom use in adolescents must be included in any educational intervention. This strategy might be aided by clarifying misconceptions regarding partner satisfaction when condoms are used during sexual intercourse.
- Gender equality should be stressed. Open, facilitated discussions may be useful in sensitising particularly boys in this regard. The sexual needs and aspirations of girls will only be met if higher levels of gender equality are accomplished. In this way, sexual activity may be delayed in adolescents.
- Particularly boys should be provided with means to overcome peer group pressure to engage in sexual activity at immature ages. This is suggestive of the fact that any effective intervention will have to be broad in scope and target a wide audience.
- Reasons provided by adolescents who were not sexually active, for abstaining, should be utilised. Hence, moral values, religious principles, and respect for partners should be incorporated into educational interventions.

- Adolescents should be empowered to support one another, since most respondents in this study listed 'peers' as the single most important person to whom they could speak openly to about sexual matters. This may also indicate that peer group interventions could have effective results as part of a larger programme.

All of these facets must be incorporated into educational interventions that are aimed at empowering youths to take control of their own sexual lives to overcome risk to HIV infection, i.e. improving their sense of *self-efficacy*. This should ideally commence at, but not be limited to, ages before sexual activity commences. Finally, further research should be conducted on the development and implementation of such an educational intervention, grounded in the HBM, to conclude its effectiveness or ineffectiveness.

11. ETHICAL CONSIDERATIONS

The pupils selected for participation in the study were not compelled to complete the questionnaire. Although an appeal has been made to the selected pupils to contribute to the success of this study, they were not forced to do so. Moreover, the schools were granted the opportunity to refuse to participate as a whole, and individual consent letters were sent to all grade ten pupil parents beforehand {see Annexures 2 (English translation) & 3 (Xhosa translation)}.

A meeting was held with the District Manager of the Department of Education to obtain consent and support for the study. The District Manager provided a cover letter showing the department's support for the study, which was distributed to all schools included in the study population.

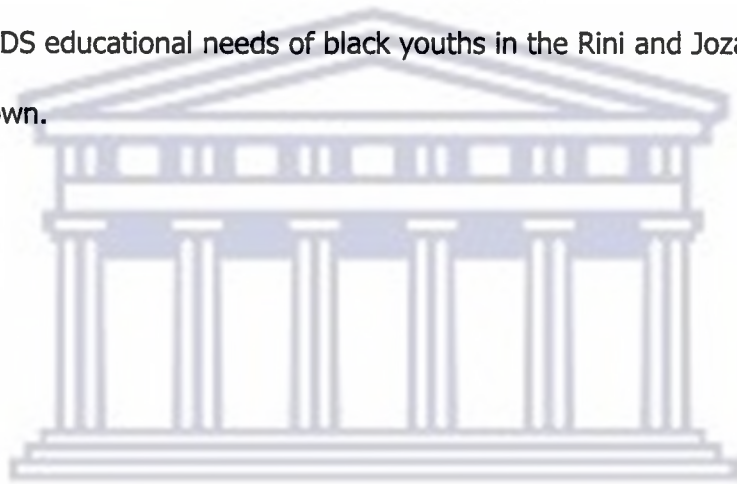
The facilitator and translator attempted to be non-judgmental and non-moralistic as far as possible. In addition, all results were reported anonymously. Hence, the names of individual students were not recoded on the questionnaire.

Confidentiality has been ensured by the fact that the researcher was the only person to see the completed questionnaires.

12. CONCLUSION

The HIV/AIDS health education needs of the black adolescents in the Rini and Joza areas of Grahamstown are unique. These adolescents have been shown to display a substantial need for knowledge on HIV/AIDS, harbour serious misconceptions and confusion, are not empowered to take control of their own sexual lives, and are faced with barriers that may seem insurmountable for practicing safe sexual behaviour. This has obvious implications for future intervention development and implications. Reasons should be sought for the reasons behind the unique needs of adolescents residing in and around Grahamstown. The variability of adolescent needs in different settings has also been shown in another study¹¹⁰, this probably confirms the need for customized intervention development at a local (health district office) level.

It is anticipated that this study could point the efforts of designing and implementing authorities in the right direction for addressing the HIV/AIDS educational needs of black adolescents in and around Grahamstown. Further qualitative and quantitative research is however necessary to investigate specific problem areas identified by this study. The variability of the results between this study and others in different settings in South Africa also needs investigation. Finally, the findings from this study should be used as departure point for developing a health education intervention, grounded in the HBM, in addressing the HIV/AIDS educational needs of black youths in the Rini and Joza areas of Grahamstown.



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ADOLESCENT HIV/AIDS QUESTIONNAIRE

INSTRUCTIONS:

Please indicate only one answer unless asked to do otherwise
All interviewees must answer the same question at the same time
All questions must please be answered truthfully, as the results will
be treated:

- Confidentially
- Anonymously
- Non-Moralistically

To indicate an answer, please colour in the appropriate box next to
the answer

Only indicate an answer once the facilitator has read the question in
English, and explained it in Xhosa

Please consider all possible options before answering

*Note that this exercise will not influence your school record
at all*

Record #:

1

1. Age:	_____ years
2. Gender:	<input type="checkbox"/> Male.....1 <input type="checkbox"/> Female.....2
3. Name of School:	_____
4. Describe your household's financial status by marking the option that describes it best:	<input type="checkbox"/>Not even enough money for basic things such as food and clothes.....1 <input type="checkbox"/>Money for food and clothes, but short on many other things.....2 <input type="checkbox"/>Most of the important things, but few luxury goods.....3 <input type="checkbox"/>Some money for extra things such as going away on holidays and luxury goods.....4
5. Do you know what HIV-positive means?	<input type="checkbox"/> Yes.....1 <input type="checkbox"/> No.....2 <input type="checkbox"/> Not sure.....3
6. Mention one way in which you can get infected with HIV: <i>Please do not mention having sex without a condom!</i>	_____ _____
7. Can AIDS be cured?	<input type="checkbox"/> Yes.....1 <input type="checkbox"/> No.....2 <input type="checkbox"/> Not Sure.....3
8. If you said 'yes' at no.7, please indicate how:	<input type="checkbox"/> Western Medicine.....1 <input type="checkbox"/> Sleeping with Virgin.....2 <input type="checkbox"/> Not having sex again.....3 <input type="checkbox"/> Traditional Medicine.....4 <input type="checkbox"/> Other.....5
9. If you have AIDS, will you die?	<input type="checkbox"/> Yes.....1 <input type="checkbox"/> No.....2
10. Do you feel that you know enough about HIV/AIDS?	<input type="checkbox"/> Yes.....1 <input type="checkbox"/> No.....2 <input type="checkbox"/> Not Sure.....3
11. Do you think that you are at risk of becoming infected with HIV?	<input type="checkbox"/> Yes.....1 <input type="checkbox"/> No.....2 <input type="checkbox"/> Not Sure.....3
12. Can HIV-infection be prevented?	<input type="checkbox"/> Yes.....1 <input type="checkbox"/> No.....2 <input type="checkbox"/> Not Sure.....3

<p>13. If you said 'yes' at no.12., give one way how it can be prevented: <i>Do not mention having sex with a condom</i></p>	<p>_____</p> <p>_____</p>
<p>14. Do the people from your community treat people with HIV/AIDS in the same way as they do other people?</p>	<p><input type="checkbox"/> Yes.....1</p> <p><input type="checkbox"/> No.....2</p> <p><input type="checkbox"/> Don't Know.....3</p>
<p>15. If you or your partner uses a birth-control pill or injection, will it prevent you from getting HIV/AIDS?</p>	<p><input type="checkbox"/> Yes.....1</p> <p><input type="checkbox"/> No.....2</p> <p><input type="checkbox"/> Don't Know.....3</p>
<p>16. Is it possible to get infected with HIV/AIDS if you sleep with a person who is infected, only once?</p>	<p><input type="checkbox"/> Yes.....1</p> <p><input type="checkbox"/> No.....2</p> <p><input type="checkbox"/> Don't Know.....3</p>
<p>17. Have you ever had sex before?</p>	<p><input type="checkbox"/> Yes.....1</p> <p><input type="checkbox"/> No.....2</p>
<p>18. If you said 'yes' at no.17., at what age did you have sex for the first time, and how old do you think your partner was?</p>	<p>You: _____</p> <p>Partner: _____</p>
<p>19. If you said 'yes', at no.17., was it your own decision to have sex for the first time?</p>	<p><input type="checkbox"/> Yes.....1</p> <p><input type="checkbox"/> No.....2</p> <p><input type="checkbox"/> I have not had sex before.....3</p>
<p>20. If you said 'no' at no.17., indicate what is the main reason that has prevented you from having sex until now: <i>Only one reason please</i></p>	<p>_____</p> <p>_____</p> <p>_____</p>
<p>21. At what age do you think is the right age to have sex for the first time?</p>	<p>_____ years old.</p>
<p>22. In the last two months, with how many different people have you had sex?</p>	<p>_____ people.</p>
<p>23. In total, with how many different people have you had sex? (<i>Estimate if you do not know exactly</i>)</p>	<p>_____ people.</p>
<p>24. Did you use drugs or alcohol before having sex the last time?</p>	<p><input type="checkbox"/> Yes.....1</p> <p><input type="checkbox"/> No.....2</p> <p><input type="checkbox"/> I have not had sex before.....3</p>

<p>25. Have you ever successfully refused sex to a person?</p>	<p><input type="checkbox"/>Yes.....1 <input type="checkbox"/>No.....2</p>
<p>26. Have you ever had an illness that affected your private parts, such as experiencing burning when urinating, sores on your private parts, or an unfamiliar discharge?</p>	<p><input type="checkbox"/>Yes.....1 <input type="checkbox"/>No.....2</p>
<p>27. How often do you use condoms?</p>	<p><input type="checkbox"/>Always.....1 <input type="checkbox"/>Sometimes.....2 <input type="checkbox"/>Never.....3 <input type="checkbox"/>I have not had sex before.....4</p>
<p>28. BOYS: Have you been to initiation school? If 'yes', at what age?</p>	<p><input type="checkbox"/>Yes.....1 <input type="checkbox"/>No.....2 _____ years old.</p>
<p>29. BOYS: If you have been to initiation school, were you provided with any sexuality education during the traditional ceremony?</p>	<p><input type="checkbox"/>Yes.....1 <input type="checkbox"/>No.....2</p>
<p>30. Can you be pleased sexually, if a condom is used during sex?</p>	<p><input type="checkbox"/>Yes.....1 <input type="checkbox"/>No.....2 <input type="checkbox"/>I have never had sex before.....3</p>
<p>31. Is it always possible to have condoms available for sex?</p>	<p><input type="checkbox"/>Yes.....1 <input type="checkbox"/>No.....2</p>
<p>32. Do you, or would you, feel comfortable to go to the clinic to get condoms?</p>	<p><input type="checkbox"/>Yes.....1 <input type="checkbox"/>No.....2</p>
<p>33. Who can you speak openly to about sexual matters? <i>Only give one person or institution please!</i></p>	<p>_____ _____</p>
<p>34. Do you live with your sexual partner?</p>	<p><input type="checkbox"/>Yes.....1 <input type="checkbox"/>No.....2 <input type="checkbox"/>I have never had sex before.....3</p>
<p>35. Do you think that you will be teased by friends if you do not have sex?</p>	<p><input type="checkbox"/>Yes.....1 <input type="checkbox"/>No.....2</p>
<p>36. Where did you get the most information about HIV/AIDS? <i>Only give the most important source where you obtained information about HIV/AIDS (One)</i></p>	<p>_____ _____ _____ _____</p>

37. Would you like to get more information about HIV/AIDS, and join in discussions around sexuality issues?	<input type="checkbox"/> Yes.....1 <input type="checkbox"/> No.....2
38. Can the use of condoms prevent one from getting HIV/AIDS?	<input type="checkbox"/> Yes.....1 <input type="checkbox"/> No.....2 <input type="checkbox"/> Unsure.....3
39. Whose responsibility is it to ensure that condoms are used during sex?	<input type="checkbox"/> Male.....1 <input type="checkbox"/> Female.....2 <input type="checkbox"/> Both.....3
40. Can your sexual partner be pleased if a condom is used during sex?	<input type="checkbox"/> Yes.....1 <input type="checkbox"/> No.....2 <input type="checkbox"/> Don't Know.....3
41. Is it necessary to have sex in a relationship?	<input type="checkbox"/> Yes.....1 <input type="checkbox"/> No.....2
42. Have you ever used a condom before?	<input type="checkbox"/> Yes.....1 <input type="checkbox"/> No.....2 <input type="checkbox"/> I have never had sex before.....3
43. Did you use a condom the last time you had sex?	<input type="checkbox"/> Yes.....1 <input type="checkbox"/> No.....2 <input type="checkbox"/> I have never had sex before.....3
44. Do you ever feel sorry afterwards, for having sex?	1... <input type="checkbox"/>Never 2... <input type="checkbox"/>Sometimes 3... <input type="checkbox"/>Always 4... <input type="checkbox"/>I have never had sex before
45. Please explain why you provided the answer that you did in no.44.:	<hr/> <hr/> <hr/> <hr/> <hr/>

Thank you very much for helping us!!! Remember that nobody will be told what you have written, and it will not influence your school record at all!!! This is a strictly confidential matter.

ANNEXURE 2

HIV/AIDS STUDY

Dear Parent/Guardian,

One of the biggest health problems that South Africa is facing today is HIV/AIDS. This disease infects people long before they become ill and eventually die of the disease. Until now, there is still no hope of finding a cure for this dangerous disease. The only way we can fight the spread of this disease is to ensure that our people do not get infected with this disease in the first place. However, this is a very difficult job to do, because we must ask all people to change their behaviour, and nobody likes to do this. Many health professionals have recognized that the only way to do this is to teach our children to adopt safe behaviours from an early age. Therefore, research will be conducted in Grahamstown to test what education the school children need to help them in preventing them from getting HIV/AIDS. For this reason, only some Grade 10 pupils will be asked to complete a questionnaire administered by a research team.

All Grade 10 pupils (boys and girls) have an equal opportunity of being selected for the study. Please take note that some sensitive questions will be asked of them regarding what they believe, and do, regarding intimate relationships. This will help the research team to develop an education package that will help our children to prevent them from getting HIV/AIDS. If you feel that you do not want your child to participate in this study, please let the school principal know by returning this letter after you have completed it. If you feel that it is a good thing needed for our children, and do not mind if your child participates, you can throw this letter away. Also remember that the children will not be asked to write their names on the questionnaire, and the answers provided will only be seen by the research team and nobody else. Even if the child refuses to participate, he/she will not be forced to do so. It will be their own decision to help the research team. This exercise has nothing to do with the school's academic programme.

Thank you very much,

The Principal

(Only send this piece back if you do not want your child to participate in the research)

My child's name is _____ (full name of child), and I **do not** want him/her to be considered to take part in this study.

Thank You,

Signature of Parent: _____

ANNEXURE 3

HIV/AIDS STUDY

3/04/2000

Mzali/Mnonopheli womntwana

Enye yeengxaki ezinkulu nezimandla uMzantsi-Afrika ojongene nazo kule mihla yi HIV/AIDS. Ubani uthi agule okanye simbulale esi sifo emva kwexesha elide kakhulu simosulele. Akukabikho themba lakufumana nyango lwesi sifo kunangoku. Icebo linye ke, kukuzama ukuthibaza ukwanda kwaso eluntwini. Ngumbandela onzima kakhulu ke lowo njengoko kubalulekile ukuba kuguqulwe iingcingane zabantu nendlela amabaziphethe ngayo, nto leyo engathandwayo ngabantu. Uninzi lwabezempilo lubonile ukuba linye icebo kukufundisa abantwana abasakhulayo ngeendlela ezikhuselekileyo zokuziphatha. Kungoko kuzakwenziwa uphando apha e Rhini lokuqonda ukuba mfundiso ni efunekayo ukunceda abantwana besikolo bangosuleleki sesi sifo (HIV/AIDS).

Uyaziswa ke ngoko ukuba kuza kucelwa abantwana abakwibanga lesibhozo (Grade 10) bathathe inxaxheba kuphando oluzakwenziwa. Bonke abantwana abakwelibanga (Amantombazana namakhenkwe) basethubeni lokukhethwa ngokulinganayo. Kolu phando kothi kubekho nemibuzo ebuthathaka ebuzwayo malunga nendlela abathandana ngayo, kulungiselelwa ukuqulunqwa imfundiso efunekayo. Ukuba kengoko awungethandi ukuba umntwana wakho abandakanyeke kolu phando, sicela ukuba wazise inqununu ngokuthi uphendule esi siquntshwana singezantsi usithumele kuye. Amagama abo bathathe inxaxheba awasayi kubhalwa kumaxwebhu emibuzo.

Uyaziswa kwakhona ukuba ukungathathi nxaxheba komntwana akusayi kumchaphazela ezifundweni zakhe njengoko olu phando lungenanto yakwenza nazifundo, engasayi kunyanzelwa ukuba enze oko.

Enkosi kakhulu

NB! Ukuba uzakuyithumela kwakhona esikolweni ndicela ukuba ibuyiselwe phambi komhla umhla wesithandathu (6) ku-April.

(Krazula uthumele emva kokufakela)

Igama lomntwana _____ (ngokupheleleyo)
andinqweneeli ukuba athathe inxaxheba kulo mmbandela.

Enkosi

Sayina apha : _____