

**AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN  
INACCURATE BELIEFS ABOUT HIV TRANSMISSION, AIDS  
STIGMA AND RISK PERCEPTION USING DATA FROM WAVE 2  
OF THE TRANSITIONS TO ADULTHOOD STUDY**

By

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## DECLARATION

Submitted in fulfilment / partial fulfilment of the requirements for the degree of Masters, in the Graduate Programme in Population Studies, University of KwaZulu-Natal, Durban, South Africa.

I declare that this dissertation is my own unaided work. All citations, references and borrowed ideas have been duly acknowledged. It is being submitted for the degree of Masters in the Faculty of Humanities, Development and Social Science, University of KwaZulu-Natal, Durban, South Africa. None of the present work has been submitted previously for any degree or examination in any other University.

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## **ABSTRACT**

People living with Human Immunodeficiency Virus (HIV) have been stigmatized since the epidemic began. Evidence suggests that stigma and discrimination contribute towards perpetuating the epidemic. South Africa has the largest number of people living with HIV in the world. Reducing stigmatization may therefore be an important factor in reducing new HIV infections. Studies in other countries have shown that people who possess inaccurate knowledge regarding the way HIV is transmitted have a greater tendency to stigmatize. Furthermore it was found that people who stigmatize are more likely to engage in risky sexual behaviour and to perceive themselves to be at low risk of contracting HIV.

Wave 2 of the Transition to Adulthood study which took place in 2001 interviewed 4185 young people in KwaZulu-Natal on their sexual behaviour. This present study has linked respondent's levels of HIV transmission knowledge to their stigmatizing attitudes. It was found that accurate knowledge had a significant impact on stigmatizing attitudes. Those respondents who possessed less knowledge were significantly more likely to stigmatize. Differences between levels of stigmatizing were also evident between race groups. Characteristics important to HIV prevention such as condom use and HIV testing were also linked to knowledge and stigmatizing. Respondents who had less knowledge and thus a greater tendency to stigmatize were more likely to have adverse attitudes towards using condoms. These respondents were therefore more likely to engage in risky sexual behaviour.

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## TABLE OF CONTENTS

Declaration	ii
Abstract	iii
Acknowledgements	iv
Table of Contents	v
Tables	vii
Figures	viii
List of Acronyms	ix
Chapter 1 INTRODUCTION	
Chapter 1.1: Background to the study	1
1.2: Defining Stigma	6
1.3: Aims and objectives of the research	8
1.4: Causes of stigma experienced by PLWHA	9
1.5: Conceptual framework	12
1.6: Structure of dissertation	15
Chapter 2 LITERATURE REVIEW	
2.1: Introduction	16
2.2: Manifestations of AIDS stigma	17
2.3: Studies investigating the relationship between inaccurate HIV transmission beliefs and stigmatizing attitudes outside Africa	20
2.4: Studies in African countries other than South Africa	22
2.5: Studies amongst adolescents	24
2.6: Stigma and risk perception	26
2.7: HIV and ‘Othering’	27
2.8: Studies examining Stigma, HIV/ AIDS knowledge and perceptions of sexual risk	30
2.9: Conclusion	32
Chapter 3 METHODOLOGY	
3.1: Introduction	34
3.2: Study area	34
3.3: The context	36
3.4: Sample selection	36
3.5: Data collection	37
3.6: Ethical procedures	38
3.7: Advantages and disadvantages of the quantitative approach	38
3.8: Strengths and limitations of the study	39
3.9: Analysis and measurements	40

Chapter 4	RESULTS AND ANALYSIS	
4.1:	Introduction	42
4.2:	Description of sample	42
4.3:	Analysis of stigmatizing attitudes	49
4.4:	Analysis of knowledge	56
4.5:	Analysis of relationship between stigmatizing and knowledge	62
4.6:	Conclusion	64
Chapter 5	DISCUSSION	
5.1:	Introduction	65
5.2:	Knowledge of accurate and inaccurate modes of HIV transmission and its effects on stigmatizing attitudes	66
5.3:	Effects of gender and race on stigmatizing attitudes	68
5.4:	Perception of risk and theoretical framework	70
Chapter 6	CONCLUSION AND RECOMMENDATIONS	
6.1:	Conclusion	73
6.2:	Recommendations	74
	REFERENCES	75
	APPENDICES	83
	Appendix A	

## TABLES

Table 1: Description of the sample characteristics	43
Table 2: Multiple responses of HIV transmission spontaneously reported grouped together according to mode of transmission	44
Table 3: Multiple responses reported that protect against HIV/ AIDS	45
Table 4: Perceptions of risk	46
Table 5: Percentage of respondents who stated they would not participate in particular activities with people that are HIV positive	47
Table 6: Perceptions of treatment of HIV positive people	48
Table 7: Item to item correlation and Alpha if deleted for stigmatizing responses	50
Table 8: Association of selected background characteristics on stigmatizing attitude scale	53
Table 9: Association of selected variables specifically related to HIV on stigmatizing attitude scale	54
Table 10: Association of willingness to use a condom on stigmatizing attitude scale	55
Table 11: Association of selected sample characteristics and knowledge	59
Table 12: Association of selected sample variables specifically related to HIV and knowledge	60
Table 13: Association between willingness to use a condom and knowledge	61
Table 14: Stigmatizing score versus knowledge score in percentages	62

## FIGURES

Figure 1: Location of study.....	35
Figure 2: Percentage distribution on stigmatizing scale based upon gender.....	51
Figure 3: Percentage distribution on stigmatizing scale based upon race.....	52
Figure 4: Percentage distribution of knowledge score based upon gender.....	56
Figure 5: Percentage distribution of knowledge score based upon race.....	57
Figure 6: Association between stigmatizing score and knowledge score.....	63

## **LIST OF ACRONYMS**

AIDS	Acquired Immunodeficiency Syndrome
HIV	Human Immunodeficiency Virus
HSRC	Human Sciences Research Council
PLWHA	People living with HIV/AIDS
UN	United Nations
UNAIDS	United Nations AIDS
WHO	World Health Organization

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 BACKGROUND TO THE STUDY**

Globally there is an estimated 33 million people living with Human Immunodeficiency Virus (HIV) with sub-Saharan Africa making up 67% of this total (UNAIDS, 2008). South Africa has the distinction of having the largest number of people living with HIV of any nation. In 2007 it was estimated that nationally the number of people living with HIV in South Africa was between 4.9 million and 6.6 million (World Health Organization, 2008). HIV prevalence rates in South Africa have risen steeply since 1990. Antenatal HIV prevalence rose from 0.7% in 1990 to 28% in 2007 (South African Department of Health, 2008). There are however large provincial variations in HIV prevalence rates. The province of KwaZulu-Natal has consistently had the highest rates of infection and is at the centre of the AIDS crisis (Kauffman, 2004).

According to Whiteside and Barnett (2002) most new infections are occurring in young adults with young women disproportionately affected. The United Nations defines “youth” as people aged between 15 and 24 years old. A further distinction is made between teenagers aged 13 to 19 and young adults between the ages of 20 and 24. This distinction is made because the “sociological, psychological and health problems they face may differ” (United Nations, 2008). The estimate of HIV prevalence for young women aged 15-24 attending antenatal clinics in 2001 in South Africa was 29.8% (Health Systems Trust, 2006). This figure had fallen to 23.1% in 2006.

However it should be noted that a large proportion of new infections take place between the ages of 20-24. For example in 2007 the infection rate for the age group 15 to 19 years was 12.9%. This rate jumped rapidly to 28.1% amongst 20-24 year olds (South African Department of Health, 2008). Nationally according to the Human Sciences Research Council (HSRC), HIV prevalence rates peak for females in the 25 to 29 years age group. In males the HIV rates peak between the ages of 30 to 39 (HSRC, 2005). HIV prevalence also differs between race groups. According to the HSRC (2005) "HIV prevalence in Africans is substantially greater than in any other racial group". Another factor which affects HIV prevalence is area of residence with the highest prevalence found in urban informal settlements (HSRC, 2005). The prevalence rates in urban informal settlements were found to be between 6 and 8.5 percent higher than in any other locality.

According to Carel (cited in Whiteside et al, 2005:26), "the most direct demographic consequence of AIDS is an increase in mortality". Traditional indicators of the health of a population such as life expectancy and infant mortality rates all show deterioration in South Africa. Life expectancy in 1993 before the AIDS epidemic got underway was 63 years (UN, 1996). By 2006 life expectancy had plummeted to 51 years (UNAIDS, 2008). Infant mortality rate in 1996 was 52 per 1000 live births (UN, 2001). By 2006 the infant mortality rate had increased to 56 per 1000 live births (UNAIDS, 2008). From these figures it can be seen that life expectancy and infant mortality have been tracking the rise in HIV prevalence that occurred towards the end of the twentieth century.

From the HIV statistics above it is evident that people with HIV make up a significant proportion of the South African population. It is imperative from a human rights perspective that people living with HIV are treated as equal citizens, free of all forms of discrimination. South Africa has one of the most progressive constitutions in the world.

According to the constitution no person may be unfairly discriminated against on grounds of race, gender, sex, pregnancy, marital status, ethnic or social origin, colour, sexual orientation, age, disability, religion, conscience, belief, culture, language and birth (South African Government Constitution, 1996). However since the beginning of the AIDS epidemic people living with HIV/AIDS (PLWHA) have been stigmatized worldwide (Klein, Karchner and O'Connell, 2002; Herek and Capitanio, 1993). In some cases PLWHA have been stigmatized by friends or family, rejected by their community or employers and even killed. The case of Gugu Dlamini, a young woman who was stoned to death in KwaZulu-Natal after revealing her status is an extreme example of discrimination enacted against PLWHA (Martin, 2004). This stigma and discrimination serves no purpose other than to alienate those few HIV positive people whose status has become public knowledge.

According to Kalichman and Simbayi (2004:572) "AIDS related stigmas are pervasive in some segments of South African society and such stigmas can impede efforts to promote voluntary counselling and testing". The former head of the World Health Organizations Global Program, the late Johnathan Mann, identified three phases of the HIV/AIDS epidemic "the epidemic of HIV, the epidemic of AIDS, and the epidemic of stigma, discrimination, and denial" Mann (cited in Parker and Aggleton, 2002:1). This prediction has turned out to be eerily correct. In South Africa high rates of HIV infection that occurred towards the turn of the twentieth century are now translating into increasing high levels of AIDS morbidity and mortality. Compounding this suffering has been the 'third epidemic' of stigma, discrimination and denial.

Historically in South Africa, discrimination and the resultant stigma related in the past to other contagious medical conditions such as smallpox and bubonic plague have many similarities to the current AIDS epidemic (Phillips, 2004). This discrimination was usually carried out in an attempt by those not infected to avoid the same fate. According to Phillips (2004:33) "blaming others in the face of a life threatening epidemic has a long pedigree in South Africa's epidemic history".

Similar to these previous epidemics there has been an ongoing transfer of blame for HIV infection between race groups and genders or because certain individuals are perceived to belong to a high-risk group. According to Petros et al. (2006) different racial groups are blaming each other for transmitting HIV. This reaction of blaming others for illness or misfortune is a common response to a potential threat. Historically, previously incurable illnesses such as syphilis and cholera have been linked to the “other” (Joffe, 1999).

However the difference between other epidemics and the HIV epidemic is that the virus has a long incubation period where a person may look and feel healthy but is able to transmit the virus to others. In other words HIV is an invisible or hidden disease, which can remain secret if an individual chooses not to disclose their status. Unless an individual shows visible signs of AIDS it is impossible without a blood test to separate or tell the infected from the uninfected. According to Whiteside et al. (2005) HIV is so lethal because it silently creeps through the population. This has allowed HIV to spread rapidly and become a generalized epidemic in a short space of time without any visible signs. The WHO (2004) defines the prevalence of HIV in a population as low-level, concentrated or generalized. An HIV epidemic becomes generalized when the HIV prevalence in pregnant women is consistently greater than 1%. South Africa therefore fits the criteria for a generalized epidemic. When an epidemic has become generalized as in South Africa, the distinction between high-risk groups and the general population becomes blurred. Stigma and discrimination ensure that the disease remains hidden and consequently HIV is able to continue its relentless spread.

Research in Portugal, Thailand and African countries other than South Africa indicate that people who possess inaccurate information about how HIV is transmitted show increased stigmatising attitudes and intolerance towards PLWHA (Dias, Matos and Goncalves, 2006; Lau, Tsui and Chan, 2005; Nyblade et al, 2003).

Identifying and addressing misconceptions surrounding HIV transmission should therefore reduce stigma. Additionally, research has found that people who possess inaccurate information about the ways HIV is transmitted were also less likely to take precautions against HIV infection and more likely to perceive that they were at lower risk of infection (Boer and Emons, 2004). In reality therefore many people who are at risk are under the impression that they are at little risk.

Using data collected in 2001 for the Transitions to Adulthood Study it will be investigated whether a relationship exists between inaccurate HIV transmission beliefs and stigmatizing attitudes amongst young people aged 14 to 22 years old in KwaZulu-Natal. It is during these ages that experimentation with sex occurs resulting in a high risk of contracting HIV. According to the Human Sciences Research Council (2005) amongst 15 year olds, 11.7% of males and 7.9% of females had already had sex. Amongst 20 year olds the figure was 74.8% for males and 80% for females. The key to reducing HIV prevalence levels is to ensure that young people remain free of infection. A reduction in HIV prevalence in young people would provide an indication that prevention strategies are working. A multifaceted strategy may need to be directed at young people for this to be successful. The Department of Health and Department of Education have implemented a Life Skills education course at schools with one of its aims to teach students about HIV/AIDS. More specific to this current research is that one of the goals of the life skills course is to teach students about ways in which HIV and other sexually transmitted diseases can and cannot be transmitted.

Stigma has been identified as one of the reasons for perpetuating the HIV epidemic. Inaccurate beliefs regarding HIV transmission may be fuelling stigma which, according to research, is an impediment to preventing infection. Stigma is also perpetuated through a process of 'othering' whereby AIDS is perceived to affect others but not the self. In South Africa and elsewhere 'othering' has occurred towards groups that are perceived to be at higher risk of HIV infection.

Furthermore in South Africa HIV related discrimination may be directed to a greater extent at women. According to van Niekerk (2005:62) “the position of women in the current HIV/ AIDS epidemic in South Africa is made even more precarious by the severe forms of stigmatisation that they face”. Research in other countries has found that girls are more tolerant than men towards HIV infected people Thomson et al. (cited in Dias, Matos and Goncalves, 2006). It may therefore be that males are responsible to a greater extent than females for this stigmatization.

In summary the goal of this study is to attempt to reproduce findings from studies done in other parts of the world, which showed that an association exists between inaccurate HIV transmission beliefs and stigmatizing attitudes. Other variables to be explored that may also affect stigmatizing are gender, race, perception of risk and religion.

## **1.2 DEFINING STIGMA**

Historically, Erving Goffman is acknowledged as the first to provide a framework for conceptualising stigma. Goffman (1963:3) defines stigma as “an attribute that is deeply discrediting”. This perceived negative attribute reduces that person in our minds “from a whole and usual person to a tainted, discounted one” (Goffman, 1963:3). Goffman’s theory differentiates between three categories of stigma, namely abominations of the body, blemishes of individual character and tribal stigma of race, nation and religion. More specifically diseases that create great stigma have certain common traits namely: the person is seen as being responsible for his or her illness, the disease is progressive without a cure and the disease is misunderstood amongst the general public. AIDS fits all these criteria.

It is important to differentiate between the concepts of HIV stigma and HIV discrimination. Herek (2002: 595) defines HIV/AIDS stigma as “an enduring condition, status, or attribute that is negatively valued by a society and whose possession consequently discredits and disadvantages an individual”. HIV discrimination on the other hand is carried out against the HIV infected individual and may be subtle or overt. Furthermore according to Green (1995) perceived or felt discrimination may be greater than actual or enacted stigma. In other words discrimination does not actually need to take place for a particular individual to feel stigmatized. According to Herek (2002:595) all that is required is a “few dramatic enactments of stigma” to make the entire target group feel stigmatized.

Herek (2002) differentiates further between two types of stigma, namely instrumental and symbolic stigma. Instrumental stigma focuses on people’s fear of contracting HIV and their perceptions about the contribution or burden that someone with AIDS will have on society. Symbolic stigma on the other hand focuses on moral judgments that people make about those who have contracted AIDS. Both instrumental and symbolic stigma interact with one another to contribute towards discrimination. Stigma and discrimination can be described as a tension or conflicting force that act against one another. On the one side is the individual who possesses the perceived negative attribute such as AIDS. On the other side is society made up of individuals of who only some will possess discriminatory attitudes and intentions. The problem is that an individual with a potentially stigmatizing condition such as AIDS does not know in advance who will be accepting of it.

Goffman (1963) differentiates between stigmas that are readily visible and those which are hidden from view or cannot easily be seen. HIV infection before the development of AIDS fits the criteria for a hidden stigma. Essentially Goffman (1963:42) argues that hidden stigmas create a situation whereby the individual with the stigma attempts to:

“manage information about his failings... [and] to display or not to display; to tell or not to tell; to let on or not to let on; to lie or not to lie; and in each case, to whom, how, when, and where”

As long as it remains disadvantageous and unpredictable to disclose stigmatized medical conditions such as AIDS, stigma and discrimination will continue to mutually reinforce one another.

### **1.3 AIMS AND OBJECTIVES OF THE RESEARCH**

AIDS has specific traits which lead to discrimination, fear and avoidance of those infected. According to Herek, Capitanio and Widaman (2002:372):

“AIDS related stigma and discrimination seem to be correlated with misunderstanding the mechanisms of HIV transmission, overestimating the risks of casual contact and negative attitudes towards groups disproportionately affected by the epidemic”.

The above statement encapsulates the aim for this research. The primary question to be investigated is;

- Whether young people who misunderstand and have inaccurate beliefs about how HIV is transmitted also exhibit greater stigmatizing attitudes towards PLWHA?

Research has also shown that people who harbour inaccurate knowledge and/or harbour stigmatizing attitudes towards PLWHA are also less likely to take precautions against HIV and perceive themselves to be at lower risk for infection (Lau, Tsui and Chan, 2005).

In addition research has shown that there may be gender differences in stigmatizing attitudes Thomson (cited in Dias, Matos and Gongalves, 2006). Women may face greater discrimination than men (van Niekerk, 2005). Furthermore a process of ‘othering’ between race groups and genders may be occurring.

Important secondary questions to be investigated are therefore;

- Whether a relationship exists between stigmatizing attitudes and young people’s perception of risk?
- Whether a difference exists in stigmatizing attitudes between males and females?
- Whether differences in stigmatizing attitudes between racial groups occur?

In summary the objective is to find out whether associations exist between the above variables and stigmatising attitudes. If it can be shown that these associations exist then it will provide an indication of some of the causes underlying stigma amongst the young people in KwaZulu-Natal. This will in turn provide some indication of the issues that may need to be addressed in order to reduce stigma.

#### **1.4 CAUSES OF STIGMA EXPERIENCED BY PLWHA**

“At an institutional or societal level, HIV related discrimination is reported to be widespread. This may be because at this level discrimination can become normalised through the existence of rules, policies and procedures” (Malcolm et al, 1998:352). AIDS stigma can be traced back to its origin of when the disease was first identified in gay people. Reaction to the AIDS epidemic can best be viewed in a top-down manner. Doctors announce the arrival of a new disease. Governments take action to control the spread of the disease.

The media portray AIDS as the 'grim reaper' and the general public begin to stigmatize against HIV positive individuals and those associated with high risk groups due to fear of infection. According to Tomaseveski (cited in Malcolm et al, 1998) by 1990 a total of 104 countries had enacted HIV related legislation with some of this legislation including compulsory detention and restriction of movement. Some countries such as the United States, China and Saudi Arabia restrict people with HIV/AIDS from entering their country (AVERT, 2008). In some countries such as the United Kingdom HIV positive people can be prosecuted for transmitting the virus to someone else (AVERT, 2008). This action may serve to drive AIDS underground. Prison terms may prevent people from getting tested as someone cannot be held accountable for infecting another person if they are unaware of their infection. Legislation and the manner in which governments have reacted to the epidemic can be seen as a foundation from which stigma can either be increased or decreased.

In South Africa there have been inconsistencies in the handling of the AIDS epidemic at government level. This may have served to exacerbate stigma. Stigma is essentially socially constructed and differs between populations and cultures. According to the Centre for the study of AIDS at the University of Pretoria (2008) "Stigma has been identified as a complex, diverse and deeply rooted phenomenon that is dynamic in different cultural settings". To present a balanced view of the social construction of stigma some of the other causes of stigma will be discussed here.

According to a study by Herek (2002:599) the best predictors of AIDS stigma is "beliefs about casual contact, attitudes toward gay men, authoritarianism, age and personal contact with people with AIDS". However there are other causes that may be unique to Africa. The underlying reason for stigma may differ to some extent along cultural lines. For example some causes of stigma are due to traditional African beliefs such as witchcraft. According to Walker, Reid and Cornell (2004:100) "many people in Africa believe in the power of witchcraft and attest to its effects on their daily lives".

A study done by Kalichman and Simbayi (2004) in a Black township in Cape Town found that one in three people endorsed the belief that AIDS was either caused by spirits or supernatural forces or they were not sure whether AIDS was caused by spirits or supernatural forces. This belief that AIDS is caused by witchcraft can have an extremely negative effect on those infected with HIV and lead to “social isolation and physical violence” (Walker, Reid and Cornell, 2004: 100). It would be very difficult to disclose a positive HIV status under these conditions.

Another reason for stigma, which is present in the general population, is the belief that AIDS is caused through deviant behaviour. According to Nyblade et al. (2003:9) “Stigma related to medical conditions is greatest when the condition is associated with deviant behaviour or when the cause of the condition is viewed as the responsibility of the individual”. Groups that were discriminated against before the HIV epidemic such as drug users and sex workers now also bear the brunt of HIV related discrimination as their behaviour has always been seen as deviant by so-called ‘mainstream’ society. According to Herek (2002:598) this type of stigma is an example of symbolic AIDS stigma and it “derives its force from the association of HIV with disliked groups”. Symbolic stigma could also manifest itself along racial lines if an individual or group is inclined in this direction.

Stigma may also be generated through confusion. In South Africa confusion has been generated at a high level by those in authority questioning the link between HIV and AIDS and advocating remedies for AIDS, which have no scientific basis. According to van der Vliet (2004:85), “plagues throughout history have spawned conspiracy theories, and HIV/AIDS has produced a bumper crop”. If confusion is being generated through an official position that AIDS is a conspiracy, or that scientists are wrong in their assumptions regarding HIV, then the question is where does that leave all the people that are sick and dying from AIDS?

If their illness is viewed as hypochondriac by those who believe in conspiracy theories or those who question the link between HIV and AIDS then this could potentially lead to strong stigma.

Strong stigma is also generated by fear of contagion. This essentially is the type of stigma that this study is attempting to show. According to Nyblade et al. (2003: 28) physical exclusion occurs through isolation of the person with HIV/AIDS. For example an urban woman in Tanzania stated:

‘When they found out that he was HIV positive, they started giving him his own spoon, water container, plate, cup and everything by himself’ (Nyblade et al, 2003:28)

Research has shown that many people possess inaccurate information that HIV can be casually transmitted (Herek, Capitano and Widaman, 2002; Nyblade et al, 2003). This creates fear which leads to the above example of stigma and discrimination.

In conclusion it is likely that people who stigmatize have different reasons for doing so. The action and example that leaders and government set may have a direct influence on the degree and severity of stigmatization in the population.

## **1.5 CONCEPTUAL FRAMEWORK**

This study will use a combination of two theoretical models to explain people’s attitudes towards risk and PLWHA. It may not be possible to directly link inaccurate knowledge of HIV transmission to a theory. Rather the actual manifestation of stigma or discrimination, which may be caused through inaccurate beliefs, may fit into the theoretical models. The theory used to explain the way people view risk in this study is based on optimistic bias theory.

The second theory is the punishment theory of disease. This will be used to explain people's attitudes towards those infected by HIV.

Optimistic bias theory deals with the 'othering' or 'not me' response. According to Kelley (cited in Joffe, 1999) people hold an egocentric illusion to risk. Essentially people attribute positive events to themselves and negative events to others. The optimistic bias model is a suitable explanation for why people who are at risk of contracting HIV may often perceive themselves to be at below average risk. According to Clarke (2000) at an individual level this may be true or untrue. However at a group or population level this phenomenon of people perceiving themselves to be at below average risk must be false. This is because it is impossible that everyone can be at less than average risk. Weinstein (1987) argues that one of the possible reasons that people show this trait is that they may have very little personal experience and knowledge of the risk and are consequently unable to make balanced judgements.

This concept is reinforced by Joffe (2003: 57) who states that "people overestimate the skills they possess that would allow them to avoid being affected by the risk". In the case of AIDS people distance or separate themselves from those people that they judge diseased. They often do not realise that their actions could place them in danger of becoming diseased themselves. By "discrediting other individuals or groups an individual or group confirms their own normalcy and legitimizes their devaluation of the other" Goffman (cited in Nyblade et al, 2003:8).

This phenomenon could account for 'othering' responses that may occur within and between race groups as well as between genders in this study.

The process of 'othering' can be viewed as a form of discrimination as it also involves a distancing of an individual or group from those perceived to be at risk. This is despite the fact that the individual or group doing the discriminating may actually be at risk.

The punishment theory of disease essentially states that disease is punishment for sins or poor lifestyle choices. Two forms of punishment theory associate disease with moral blame. The first is religious i.e. god inflicts punishment on the culpable person. The second is secular i.e. people bring disease upon themselves by their bad lifestyles. According to Walker, Reid and Cornell (2004: 75) "blaming has the effect of stigmatising illness and disease and creates categories of those who are at risk and those who are not". Research in the United States has shown that PLWHA are separated according to whether they are perceived as being innocent or blameworthy. A study by Herek, Capitano and Widaman (2002:374) in 1999 found that half of respondents believed that PLWHA are responsible for their illness and 25% of respondents believed that people who got AIDS through sex or drugs have "gotten what they deserve".

The punishment theory of disease could therefore be linked to the kinds of treatment people with AIDS face in the community. Blaming the victim for their illness together with other factors such as inaccurate HIV transmission beliefs could interact with one another to produce stigmatizing attitudes.

The next section of this introduction will describe the structure of the dissertation. To conclude however it should be evident that stigma and discrimination ensures that focus is diverted from the actual virus, which is the real enemy, to the person carrying the virus. The challenge to reducing stigma is to make people see the difference.

## **1.6 STRUCTURE OF DISSERTATION**

The introduction has provided the reader with some of the background to the severity of the AIDS epidemic globally and more specifically in South Africa. It has also defined stigma and provided a theoretical framework as well as the aims and objectives of the research. The literature review that follows this chapter begins with stigma experienced from the viewpoint of PLWHA. This is followed by previous studies on the phenomenon of inaccurate HIV transmission beliefs and stigmatising attitudes. It also looks at studies that have investigated the link between risk perception and risk behaviour. Chapter 3 describes the methodology and data collection of the Transition to Adulthood study. It also explains the context and location in which the study took place. The data analysis for this current study is also included in Chapter 3. The data analysis explains how the Transitions to Adulthood data was analysed for this study. Chapter 4 describes the results in graph and table form arising from the findings of the analysis. Chapter 5 discusses compares and integrates the results of this study with previous studies. It also discusses possible influences such as culture, which could account for differences between race groups. Chapter 6 concludes the study. The chapter concludes with recommendations and scope for further studies.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

The start of the recognition of AIDS as an epidemic began around 1980 when doctors in the United States noticed a cluster of similar rare diseases affecting gay men. It was assumed that this was a new disease affecting gays and was consequently given the name Gay Related Immune Deficiency Syndrome (GRID) by doctors. In hindsight this was the first act by mainstream society to distance themselves from AIDS and stigmatize other groups. At this time the heterosexual community was under the popular misconception that AIDS was a gay disease. In South Africa during the 1980's blame for AIDS was pointed at homosexuals, intravenous drug users and prostitutes (Walker, Reid and Cornell, 2004). After the disbandment of Apartheid, conditions were in place for the rapid spread of HIV as a result of much greater freedom of movement. However there is much debate by researchers as to the exact reasons why Africa and particularly South Africa have been so hard hit by the HIV epidemic (Kauffmann, 2004). One of the findings that has emerged is that stigma and discrimination have an important role to play in perpetuating the epidemic (Nyblade et al, 2003). According to the Executive Director of the Joint United Nations Program on HIV/AIDS, Dr Peter Piot, "if stigma and discrimination are not tackled, AIDS will blight the 21st century just as racism affected the 20th century" (UNAIDS, 2001).

## 2.2 MANIFESTATIONS OF AIDS STIGMA

Most people with HIV move through multiple social worlds in the course of a single day. Their stigma may be known in some of those worlds while they pass as uninfected in others (Herek, 2002:597)

Stigma is a social phenomenon, which can affect an HIV positive individual in many or all aspects of their lives. Stigma occurs in a diverse range of settings ranging from being discriminated against at work, school or home through to being denied medical care by staff that fears contagion. The following four studies that took place in Asia, the United States and South Africa provide evidence that AIDS stigma is a global phenomenon and can operate in all spheres of a person's life.

A large study done by Paxton et al. (2005) on AIDS-related discrimination in Asia provides a good point of departure. Interviews with 764 HIV positive people in four Asian countries were conducted. The questionnaire was based on eight dimensions of discrimination, which include; right to health, right to privacy, right to liberty and security of person, right to freedom from inhuman and degrading treatment or punishment, right to employment, right to marry and found a family, right to education and right to self-determination and association. The results from this study indicated that many people with HIV experience discrimination in health care settings and in their community. Over half of the sample experienced discrimination by health care workers. This discrimination ranged from refusal by healthcare workers to treat HIV positive respondents through to being coerced into having an HIV test. Breaches of confidentiality by healthcare workers were a common occurrence. Thirty four percent of respondents stated that their HIV positive status has been revealed without their consent. Within the community discrimination was also common. Thirty one percent of women and twenty percent of men stated that they faced ridicule, insult or harassment.

A second study by Vanable et al. (2006) in the United States found that HIV-related stigmatization was associated with a number of negative health and social consequences. The study incorporated 221 HIV positive men and women in New York State. Forty two percent of respondents reported that people behave negatively, twenty nine percent reported that people avoid being near them and 20% reported being excluded from social events. This discrimination caused a variety of problems, which compounded the suffering of living with HIV. Psychological adjustment difficulties and depressive symptoms were strongly correlated with stigma frequency. Stigmatization was also correlated with lapses in adherence to antiretroviral medication which allows the virus to rebound and contributes to drug resistance. According to Leonard (2000) depression may further lower the immune system and hasten the onset of AIDS.

A survey by Simbayi et al. (2007) in Cape Town, South Africa found that HIV positive people have high levels of internalised stigma. 420 HIV positive men and 643 HIV positive women were surveyed to ascertain levels of internalised stigma, discrimination experiences and the relationship of these variables with depression. The survey found that over 40% of respondents had experienced incidences of discrimination and 20% had lost their job or accommodation due to their infection. HIV infection leads many people to feel ashamed and internalise stigma. Thirty three percent of men and 23% of women felt 'dirty' over being HIV positive. Furthermore 57% of men and 53% of women felt it necessary to hide their HIV status from others. High levels of internalised stigma were closely associated with signs of depression. Overall the study found that 42% of respondents felt depressed in the last year.

Other examples of the manifestations of stigma are derogatory words and phrases to describe PLWHA. A study conducted by Nyblade et al. (2003: 30) found that "talking ill about a person with HIV and AIDS is described across all three countries

[Ethiopia, Tanzania and Zambia] as one of the most common and feared manifestations of stigma". For example in Ethiopia people with AIDS are called "mote bekeda" which translates to 'almost dead although still living'. In Tanzania people with AIDS are called 'maiti inayotembea' or 'walking corpse' (Nyblade et al, 2003:30). According to Dowling (2008) in South Africa Zulu phrases to describe people with AIDS include:

'Unelotto' which means she or he has the lotto.

'Ufuna imali kahulumeni' which means she or he wants money from the government

Both of these terms are using metaphor to describe a person with AIDS. The association between the lotto and AIDS being that one only has a very small chance of winning the lotto. This translates into someone who has AIDS only has a very small chance of living. The second metaphor refers to AIDS and the disability grant. Both of these phrases cast people with AIDS as victims with little hope. This would generate strong stigma in the community.

From the above examples it can be seen that AIDS stigma is a social construction and context dependent. The three studies provided evidence of the detrimental impact that stigma and discrimination have on PLWHA in different countries. Discrimination occurred in a wide range of settings. Health care settings should be a safe haven for people who are sick. However the study by Paxton et al. (2005) provides evidence that this is often not the case. Breaches of confidentiality occur and health care workers often refuse to treat HIV infected patients.

One of the most serious manifestations of AIDS stigma may occur in the workplace.

Even though legislation may be in place, that prohibits discrimination, an employer can often find a way of dismissing or of not hiring an HIV positive person.

A stark example of discrimination is the following account told by McGeary (cited in van Niekerk, 2005: 62):

Once Laetitia was diagnosed after falling sick in 1996, her employers fired her without asking her right diagnosis. Then she told her children, and they were ashamed and frightened...her mother raged about the loss of money if Laetitia could not work again.

Loss of employment can have far reaching implications for PLWHA as the above example demonstrates. The result is that PLWHA may not have the security of a regular income. According to Herek, Capitanio and Widaman (2002) people with AIDS have been discriminated against in employment, healthcare and at home. Within the community ridicule, insults, avoidance and isolation of PLWHA are commonplace leading to high levels of internalised stigma. This imposes further stress and pressure on those infected with HIV leading to depression and lowered immunity. The progression from HIV infection towards AIDS is ultimately hastened through the channels of stigma and discrimination.

### **2.3 STUDIES INVESTIGATING THE RELATIONSHIP BETWEEN INACCURATE HIV TRANSMISSION BELIEFS AND STIGMATIZING ATTITUDES OUTSIDE AFRICA**

The following three studies investigating the link between inaccurate HIV transmission beliefs and stigma took place in the United States, China and Thailand.

Misconceptions of HIV transmission and resultant HIV related stigma amongst the United States adult population are widespread. A study by Herek, Capitanio and Widaman (2002) found that in 1999, 33% of the adult population believed that HIV

could be contracted through donating blood, 41% of respondents believed that AIDS could be contracted from a public toilet and 50% believed that HIV could be caught from sharing a drinking glass. Support for coercive policies to restrict the freedom of people with HIV was also high. Sixteen percent of people felt that the names of people with HIV should be made public and 74% of people agreed that people from other countries who wanted to live in the United States should have a mandatory HIV test to prove they are not infected. A significant proportion of the respondents expressed discomfort and avoidant attitudes towards PLWHA. For example 30% of respondents said that they would not shop at a grocery store if they knew the owner had AIDS. Furthermore 22% to 30% of respondents reported they would be uncomfortable having their child attend school with an AIDS classmate. In conclusion Herek, Capitano and Widaman (2002) assert that respondents who have misconceptions about how HIV is transmitted are probably more likely to support restrictive policies against PLWHA. These respondents make up enough adults for PLWHA to be concerned about discrimination if their status becomes known. The results obtained in the United States were reproduced in culturally diverse settings.

Liu et al. (2005) examined the relationship between sexual risks, prevention practices and stigmatizing beliefs in China. Sexual risk behaviours included questions such as two or more sexual partners or having an episode of a sexually transmitted disease (STD). Preventive practices were assessed through frequency of condom use and willingness to undergo an HIV test. Knowledge questions regarding accurate and inaccurate ways in which HIV could be transmitted were also included. These were questions, such as whether taking a shower after sex can reduce the chance of getting HIV and is HIV caused by a virus? The study found that risky behaviours such as having multiple sex partners or having an STD were associated with an increase in stigmatizing beliefs. In other words those at greatest risk of infection showed stronger stigmatizing attitudes.

Boer and Emons (2004) investigated the relation between accurate and inaccurate beliefs about HIV transmission and stigmatizing attitudes in Thailand. Thailand has an HIV prevalence rate of 2.15% (Whiteside and Barnett, 2002). The study took place in the Chiang Rai province, which is most severely affected, Cash (cited by Boer and Emons, 2004). Some of the findings were that inaccurate knowledge about the ways HIV is transmitted lead to a significant increase in stigmatizing attitudes, such as fear and irritation towards PLWHA. Furthermore those people who held inaccurate beliefs “felt that AIDS was less severe, felt less vulnerable to HIV infection and reported a lower intention to use a condom” (Boer and Emons, 2004:175).

Some common themes emerge from these three studies that took place in different cultural settings. People often harbour both accurate and inaccurate beliefs about how HIV is transmitted concurrently. Those people who exhibit this tendency are more likely to give stigmatizing responses towards PLWHA. Furthermore people who held inaccurate beliefs and gave stigmatizing responses were often at greatest risk and less likely to take necessary precautions such as using condoms.

#### **2.4 STUDIES IN AFRICAN COUNTRIES OTHER THAN SOUTH AFRICA**

Sub-Saharan Africa is the worst affected continent in the world with about two thirds of all people living with HIV residing there at the end of 2004 (Whiteside et al, 2005). In 16 African countries more than one-tenth of the population (aged 15-49) is infected with HIV (Whiteside and Barnett, 2002). It is therefore apparent that a significant proportion of the population in Africa is living with HIV/AIDS. Studies on stigma in Africa have yielded similar results to those found in the rest of the world providing evidence of the uniformity of AIDS stigma worldwide regardless of HIV prevalence.

A study done by Nyblade et al. (2003) on AIDS stigma in Ethiopia, Tanzania and Zambia disentangled some of the underlying causes of stigma. Some of the main findings were that most of the respondents knew how HIV was transmitted but many misconceptions regarding transmission of HIV through casual contact remained. These misconceptions about the possibility of casual transmission caused people to avoid those infected or perceived to be infected with HIV. Furthermore people with HIV were blamed for their illness as they were perceived to be sexually deviant and immoral. In some cases HIV was seen as evil and a punishment from God for sexual transgressions. Generally people would not intend to deliberately stigmatize against people with HIV. However through their actions and words people were in fact showing stigmatizing attitudes. According to Nyblade et al. (2003: 21) “this lack of recognition of one’s actions creates a gap between good intentions not to stigmatize or discriminate and actual stigmatizing and discriminatory attitudes, languages and actions”.

Furthermore people often stigmatize in a subtle manner and are under the impression that the person whom they are stigmatizing against will not know or understand that they are being stigmatized. According to Jones et al. (1984: 181) “stigmatized individuals may have more insight into what others think of them”. This is because stigmatized individuals usually have prior experiences of being discriminated against. These prior experiences enable the stigmatized individual to easily pick up similar stigmatizing behaviour from other people.

A study done by Letamo (2004) in Botswana has very close parallels to this one under current investigation. In 2001 the prevalence amongst pregnant women was 44.9% in urban areas and 34.8% in rural areas (Whiteside et al, 2005). Letamo (2004) examined the link between misconceptions about HIV transmission and negative attitudes towards PLWHA.

A large majority of adolescents gave some stigmatizing responses. For example 68.6% of adolescents would not buy vegetables from an HIV/AIDS patient and 53.6% indicated that a teacher who was HIV positive should not be allowed to teach. Adolescents who believed that HIV could be transmitted by sharing a meal with an HIV positive person were three times more likely to state that they would be unwilling to care for a family member with AIDS. Furthermore Letamo (2004, 8) states:

“Misconceptions about how HIV infection may be transmitted tend to promote negative attitudes towards PLWA, Consistently respondents who believe that HIV infection can be transmitted through witchcraft or mosquito or sharing a meal with a PLWA, are statistically more likely to stigmatize and discriminate than other people.”

This study reinforces the fact that the prevalence of HIV in a population has little impact on stigma and discrimination. This is an unexpected finding as with over a third of the population infected with HIV one would expect greater tolerance. However Nyblade et al. (2003:17) argue that “in high prevalence situations people’s assumption that HIV can be casually transmitted is not surprising”. This phenomenon results in even greater stigma and isolation of PLWHA as people fear and avoid any type of casual contact that they falsely believe could transmit the virus.

## **2.5 STUDIES AMONGST ADOLESCENTS**

A study by Dias, Matos and Goncalves (2006) examined knowledge of modes of HIV transmission and AIDS-related stigma and attitudes towards AIDS infected people amongst adolescents in Portugal. Adolescents were required to respond to a questionnaire on ways that HIV could be transmitted.

The questions consisted of both accurate and inaccurate ways that HIV can be transmitted. For example transmission of HIV/AIDS by unprotected sexual intercourse would be classified as an accurate way of transmitting HIV whereas transmission of HIV through a cough or sneeze would be an inaccurate mode of transmission. The second part of the questionnaire included questions regarding attitudes towards people infected with HIV. For example whether HIV infected people should live apart from other people or whether adolescents with AIDS should be allowed to go to school. The study found that more of the respondents who were misinformed about HIV transmission gave stigmatizing responses on the attitude questions. In general adolescents were well aware of how HIV could be transmitted i.e. through unprotected sexual intercourse or intravenous drug use. However the proportion of respondents who also held misconceptions of how HIV could not be transmitted was also high. For example 55% of respondent's thought that transmission of HIV could occur through a drinking glass, fork or spoon. A further finding was that a higher education or higher school achievement translated into more positive attitudes towards HIV infected people. Furthermore girls were found to have a better knowledge of modes of HIV transmission than boys.

A second study by Bhattacharya, Cleland and Holland (2000) examined knowledge about HIV/AIDS and perceived risks of infection amongst Asian-Indian adolescents born in the USA. The study found that the majority of adolescents were aware that specific sexual acts, such as unprotected sexual intercourse could transmit the virus. However a large number of misconceptions remained. For example only 56% correctly answered that HIV could be transmitted by anal intercourse and only 51% were correct in stating that HIV could be transmitted through oral sex. Misconceptions of impossible ways of HIV transmission were common. Only 48% of adolescents correctly answered that HIV could not be transmitted by mosquitoes or insects and only 50% correctly answered that HIV could not be transmitted through donating blood.

Bhattacharya, Cleland and Holland (2000:208) conclude that “while most of the adolescents were aware that high-risk behaviours, such as unprotected sex, could transmit HIV, a large number were also ignorant of other transmission modes and held misconceptions that may produce anxiety and bias.”

Lau, Tsui and Chan (2005) attempted to reduce discriminatory attitudes of adolescents through a knowledge enhancement program in Hong Kong. A baseline survey regarding attitudes and knowledge was carried out two weeks before an intervention. The intervention consisted of showing the students a video of a person living with HIV/AIDS combined with a discussion forum, which helped clear up common misconceptions about AIDS and modes of transmission. The before and after intervention results showed a significant reduction in stigmatizing attitudes. Before the intervention 17% students were unwilling to have contact with PLWHA and 22% would avoid a friend if they knew he or she was HIV positive. After the intervention this figure dropped to 6.4% and 12% respectively. A further finding was that female students were less discriminatory than their male counterparts.

The above studies incorporating adolescents correspond closely with the results obtained from adult studies. Both adolescents and adults who possess inaccurate information consistently exhibit greater stigmatizing responses. This phenomenon is evident despite cultural and age differences. The study by Lau, Tsui and Chan (2005) provides evidence that intervention strategies aimed at combating misconceptions surrounding HIV transmission can significantly reduce stigmatizing responses.

## **2.6 STIGMA AND RISK PERCEPTION**

The topic under study in this current research is to assess whether an association exists between beliefs of inaccurate modes of HIV transmission and stigmatizing attitudes.

Research has shown that people who harbour inaccurate knowledge and/or harbour stigmatizing attitudes towards PLWHA are also less likely to take precautions against HIV and perceive themselves to be at low risk for infection (Herek, Capitano and Widaman, 2002). Perception of risk is therefore closely tied to inaccurate beliefs and stigmatizing attitudes.

Perception of risk will therefore be incorporated into this study as a third variable. The theoretical model that this study is using to explain risk perception is the optimistic bias model mentioned in the introduction. Douglas (1994:40) defines the concept of risk as “the probability of an event combined with the magnitude of the losses and gains that it will entail”. Individuals perceive the same risk differently according to diverse factors. These factors could range from the amount of knowledge that an individual possesses about the magnitude of the risk through to their personality type and whether they perceive the benefit to outweigh the risk that is to be taken. Optimistic bias seems to play an important role in the perception of risk. According to Burkholder, Harlow and Washkwich (1999:29) studies indicate that “people who are not in a previously stigmatized group, such as homosexuals, distance themselves from the disease”. This phenomenon of ‘othering’ is discussed below.

## **2.7 HIV AND ‘OTHERING’**

The phenomenon of ‘othering’ relates to optimistic bias theory. According to this theory people are inclined to believe that a negative event such as contracting HIV only occurs to others. This creates a situation whereby people believe that they personally are at little or no risk. Instead it is other individuals or groups that become the focus of the risk. The following two studies provide evidence that ‘othering’ may be occurring between and within different race groups and populations.

A study by Joffe (1999) provides evidence of men's perceived risk of HIV/AIDS infection in Britain and South Africa. One of the criteria for inclusion in the study was a high level of education i.e. completed secondary school and in college or university. The study found that greater than two thirds of the sample in both countries perceived that "their own chances of contracting HIV are below average" (Joffe, 1999:40). Furthermore many of the respondents linked AIDS with other nationalities and countries.

Black respondents in South Africa linked AIDS with the West and White respondents linked AIDS to Africa. White respondents in South Africa however did not identify themselves with Africa even though that is where they lived. Instead the respondents blamed out-groups or 'immoral' people for the spread of HIV. In other words the group or circle of people that a particular respondent associates with will collectively deny that HIV has anything to do with them. Britain has a low HIV prevalence compared to South Africa however both populations gave similar responses of denying that HIV was their problem. A process of 'othering' occurred regardless of the HIV prevalence or cultural differences in the respective study populations. Joffe (1999: 53) concludes that there is a possibility that "an identity protective process is at work". In other words respondents do not want to be identified with AIDS even though they may be at risk. They would rather distance themselves and their group from AIDS by transferring blame onto other groups thereby avoiding the reality that they could be infected themselves.

A second qualitative study by Petros et al. (2006: 67) entitled HIV/ AIDS and 'othering' in South Africa found that blame for HIV is 'being refracted through the multiple prisms of race, culture, homophobia and xenophobia.' This process of 'othering' cuts across all divides of education and socio-economic status. It was found that racial blaming for the spread of AIDS was commonplace. Some of the statements quoted from the study given by various race groups include;

Actually, I think a lot of people see it as a Black disease. They don't see it as a white disease...it doesn't happen in our cultures (White Jewish Women)

Europeans are infecting Black people; they are the ones that caused this epidemic. These women with whom we live are infected, because many of them sleep with these Europeans (Rural Black Man)

What I've noticed...the people on the border (army)...Zimbabwe...Mozambique ...Botswana border...lots of things are picked up there. And these people brought it home with them (Rural San Chief)

Both these statements reflect an 'othering' response to the spread of HIV. Whites do have a lower HIV prevalence compared to Africans. However HIV can infect anyone and it is incorrect to assume that HIV is exclusively a disease affecting Blacks as indicated by the White Jewish women. In contrast the rural Black man acknowledges that AIDS affects Black people. However the reason given is that White men are sleeping with Black women. In both instances responsibility for the disease is deflected to another out-group which in this instance is along racial lines.

Some of the xenophobic statements given include;

In the past we did not have it in our community...We had people from Zimbabwe who have AIDS and we got it from those people (Rural Traditional Leader)

The above two examples reflect an 'othering' response of Black South Africans towards Black Africans from other African countries. This is essentially a similar response to the 'othering' that occurs within race groups. According to Joffe (1999:54) "conspiracy theories are a way of distancing the in-group from the source of AIDS". Conspiracy theories perpetuate the cycle of stigma, silence and denial thereby further hindering prevention and treatment.

## **2.8 STUDIES EXAMINING STIGMA, HIV/AIDS KNOWLEDGE AND PERCEPTIONS OF SEXUAL RISK**

Optimistic bias theory can also be applied to the way people perceive their sexual behaviour. People at high risk of contracting HIV may subconsciously adjust the way that they view their own risk thereby avoiding the reality that they may be infected themselves.

Burkholder, Harlow and Washkwich (1999) conducted a study amongst United States university students to elucidate whether a connection existed between stigmatizing attitudes and sexual risk behaviour. The study found that increased stigmatizing behaviour was correlated with an increase in risky sexual behaviour, specifically condom self-efficacy. In contrast less stigmatizing was associated with a decrease in sexual risk behaviour. An unexpected finding however was that people who take part in risky sexual behaviour correctly perceive themselves to be at risk. Gerrard (cited by Burkholder, Harlow and Washkwich, 1999) argues that this actually does fit in with optimistic bias theory. This is because adolescents may be aware of the risk. However they alter the way they view the risk by convincing themselves that everyone else is taking risks therefore it is okay to continue with the risky behaviour. Burkholder, Harlow and Washkwich (1999: 37) conclude that the findings “support the notion that stigmatizing is related to greater behavioural risk for HIV/ AIDS”.

A further study conducted by Duncan et al. (2005) examined the relationship between stigma, HIV/ AIDS knowledge and sexual risk amongst South African and American university students. The study yielded some differences in the two student populations. Firstly South African students were less likely to stigmatize people with AIDS and gay people. Secondly South African students had a higher perceived risk of being infected with HIV. Finally South African students reported higher sexual risk activity than the American university students.

This observation ties in with optimistic bias theory as previously argued by Burkholder, Harlow and Washkwich (1999) above. Essentially people are aware of the risk and perceive themselves to be at risk but fail to change their risk behaviour. However a similar study by Hartung et al. (2002) amongst clinic attendees in KwaZulu-Natal yielded different findings to the study by Duncan et al. (2005) in respect of risk perception. Based on the results of their study Hartung et al. (2002: 830) states that:

The current sexual behaviour among young South Africans can best be described as a paradoxical triad of adequate knowledge of HIV/ AIDS related issues, nonetheless, continued risk behaviour and low self-perceived risk.

A further general observation was that males were more likely to stigmatize people with AIDS than females.

The above mentioned study by Hartung et al. (2002) examined the levels of AIDS awareness amongst 100 clinic attendees in rural KwaZulu-Natal. The study found that generally knowledge of the ways HIV can be transmitted and prevented were good. However, most of the respondent's perception of their own risk of contracting HIV was low despite this good knowledge. This low perception of their risk of HIV infection often translated into an increase in risky behaviour such as non condom use. However other factors may also be involved besides optimistic bias. Macintyre (2004) argues that low perception of risk may also be due to adolescent's perception that they are invulnerable to harm. Malcolm et al. (cited in Macintyre et al, 2004) puts forward another reason. Essentially if one admits to putting oneself at risk then that means that one may become stigmatized. It may also be that perceived levels of risk are deliberately downplayed when completing questionnaires as respondents are afraid of stigmatization even though the results may be anonymous.

A fourth study by Macintyre et al. (2004) used Transitions to Adulthood from Wave 1 to understand perceptions of HIV risk amongst adolescents in KwaZulu-Natal. Adolescents were divided into categories depending on their risk behaviour and their subjective perception of this risk behaviour. It was found that 20% of the adolescents reported high risk behaviours but perceived that they were at no or little risk of contracting HIV. Furthermore the study found that one of the factors that influenced risk perception was whether a strong family and community support system existed. However this factor was stronger for girls than boys.

Finally a study on perceptions of risk conducted by the Human Science Research Council (2005) showed that some people who are at risk and who tested HIV positive perceived themselves to be at low risk. The study found that 12.8% of females and 7.5% of males who perceived themselves to be at low risk tested positive in the study. However the study also found that those participants who admitted to being in a high risk category were also more likely to have gone for an HIV test.

It is therefore apparent that some respondents that are at risk correctly perceive themselves to be at risk. At the other extreme are those who are at risk and are actually HIV positive but perceive themselves to be at low risk.

## **2.9 CONCLUSION**

It is now 27 years since the first cases of AIDS were identified. It would have been anticipated that the public's perceptions and knowledge of AIDS would have altered as the epidemic matures and more scientific knowledge is known and disseminated about how the virus is transmitted. Each year however a new generation of susceptible young people become sexually active without the knowledge to protect them.

Even adults who have had continued exposure to the AIDS epidemic through the media and other avenues have inaccurate knowledge, which may result in them stigmatizing and believing that AIDS is something that happens to other people. The continued high HIV prevalence found in sub-Saharan Africa and specifically South Africa provides evidence that a new approach to combating the epidemic is required. The knowledge many people have about AIDS seems insufficient or inadequate. As Herek (2002) asserts just providing information about how HIV is transmitted and how infection can be prevented is inadequate. People may actually need to understand the underlying mechanism of 'why' HIV cannot be transmitted in certain ways for educational campaigns to be effective. In other words a greater understanding of the actual virus may be required. HIV is an invisible enemy and some imagination may be required to understand that its only purpose is to replicate by finding a new host, which in this instance is mankind. The virus makes no distinction between Black and White or male and female. It has no conscience. Humans have given HIV far greater power than it actually possesses through the process of stigma, discrimination and denial.

## **CHAPTER 3**

### **METHODOLOGY**

#### **3.1 INTRODUCTION**

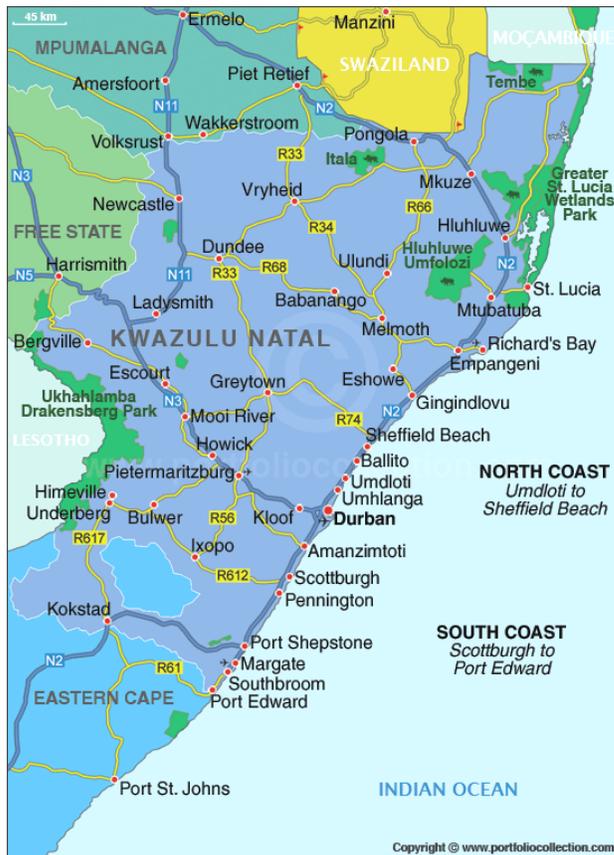
The primary aim of this study, which is covered more comprehensively in the introduction, is to find out whether an association exists between inaccurate beliefs about how HIV is transmitted and stigmatizing attitudes. Other variables to be explored that may affect stigma are race, gender and risk perception. The analysis will make use of secondary data collected in 2001 for the Transition to Adulthood study. The study consisted of two waves of data collection. The first wave took place in 1999. The second wave, which this study is utilising, took place in 2001. The first part of this chapter will begin with an outline of the area, from which the secondary data was collected. It will follow with the sample selection process, methods of data collection, methods of data analysis and ethical procedures that were followed. Limitations of the study will also be discussed. The second part of this chapter will detail how the secondary data from the Transitions to Adulthood study was analysed for this current study, investigating the association between inaccurate HIV transmission beliefs and stigmatizing attitudes.

#### **3.2 STUDY AREA**

KwaZulu-Natal is on the East coast of South Africa and covers 7.2% of the land of South Africa. In geographical size KwaZulu-Natal ranks seventh out of nine provinces in South Africa and has the distinction of being the most populous province, containing 20% or 9.4 million of South Africa's inhabitants in 2001. The map below depicts Durban and the North and South coasts.

The two areas within KwaZulu-Natal chosen for the collection of data were the Durban Metropolitan and Mtunzini Magisterial districts. Mtunzini is on the North coast approximately 18 kilometres past Gingindlovu on the map.

**Figure 1: Location of study**



These two areas were chosen as they were deemed to suitably represent urban, transitional and rural areas within KwaZulu-Natal. The population comprises of four main race groups. According to Statistics SA (2006) the majority of the population are African (84.9%) followed by Indians (8.5%), Whites (5.1%) and Coloured (1.5%). Approximately 54% of the population live in non-urban areas. The main language is isiZulu (80.9%) and the main religion is the Zion Christian Church (12.5%).

### **3.3 THE CONTEXT**

According to Rutenberg et al. (2001) the province of KwaZulu-Natal was deemed suitable for the Transitions study for three reasons. Firstly KwaZulu-Natal has one of the highest rates of HIV infection in the country. In order to devise strategies to reduce new infections it is vital to understand the underlying causes that may be contributing to these high infection levels. Secondly, experienced researchers from the School of Development Studies at the University of KwaZulu-Natal were available to assist and thirdly the life skills programme has been implemented in an uneven manner in schools. One of the objectives therefore was to find out the effectiveness of the life skills programme. Furthermore according to Kaufman (cited in Rutenberg et al, 2001:2), “very little research on adolescent reproductive behaviour exists in South Africa”. The Transitions to Adulthood study would help fill this gap in knowledge.

### **3.4 SAMPLE SELECTION**

This study will utilise data from Wave 2 of the Transitions to Adulthood Study which took place in KwaZulu-Natal in 2001. The initial study (Wave 1) took place in September and October 1999. Wave 1 data collection provides the foundation for the subsequent Wave 2 collection.

Wave 1 used a modified multi-stage cluster sample approach or segmentation method to identify appropriate young people between the ages of 14 and 22 for inclusion in the study. Before the field work commenced 120 enumeration areas were chosen from a sample of all the enumeration areas. The households that were selected in the enumeration areas that had one or more young people between the ages of 14 and 22 were included in the survey. The racial distribution of the household sample was African Rural (16%), African Urban (56%), Asian (19%), White (6%) and Coloured (3%). Interviews for Wave 1 were conducted and completed with 3096 young people in 2007 households.

Wave 2 of the data collection, which this study is utilising, took place between September and December 2001. All available young people that had been interviewed in Wave 1 in 1999 were re-interviewed. Loss to follow up of Wave 1 participants was 27%. Further interviews were also conducted with new participants using a slightly different selection procedure. Essentially the original 118 enumeration areas were divided into segments of preset size. One segment was then randomly selected from each enumeration area. In total 2349 households, which included Wave 1 households were visited yielding 4185 individual interviews. 2223 of these participants were re-interviewed from Wave 1. The balance of 1962 were new participants.

### **3.5 DATA COLLECTION**

Interviews were conducted and recorded by fieldworkers who matched the participant's gender, race and language. Interviews were conducted in a private room where possible. The questionnaire that was administered comprehensively covered the background details of the respondent. Two separate questionnaires were administered. One questionnaire was administered to an adult in the household. This questionnaire obtained the background details of the household.

The second questionnaire was administered to youths aged 14 to 22 living in the household. The section in this questionnaire relevant to this current research included HIV/AIDS knowledge, perception of risk and stigma. Answers to the questionnaire were firstly recorded on paper and then transferred to a database. The individual data was weighted to control for clustering and non-response.

### **3.6 ETHICAL PROCEDURES**

Ethical clearance for the data collection for the transition to Adulthood study was received from the University of KwaZulu-Natal. Informed consent was obtained for both questionnaires that were administered. Furthermore consent was also sought from the parents or guardians if the participant was younger than 16 years old. In addition ethical approval for this current research on inaccurate HIV transmission beliefs and stigmatizing attitudes was obtained from the ethics committee at the University of KwaZulu-Natal.

### **3.7 ADVANTAGES AND DISADVANTAGES OF THE QUANTITATIVE APPROACH**

According to Firestone (1987:16) “quantitative methods express the assumptions of a positivist paradigm which holds that behaviour can be explained through objective facts”. Essentially the quantitative approach lends itself to observable facts that can support and provide generalisations about the subject under investigation. Quantitative data can be reduced to provide objective statistical results on large sets of data. This allows for comparisons with similar studies. In addition, personal bias is avoided as the researcher remains detached regarding the content of the data. However the quantitative measurable approach comes at the cost of retaining the ‘richness’ of the data. Much of the actual meaning is lost as the data becomes reduced to numbers.

A further disadvantage is that a preset questionnaire such as the one used in the Transition to Adulthood study does not provide any information about how or why the respondent has answered in a certain way. The solution to the shortfalls of using quantitative data is to employ both quantitative and qualitative data collection methods. This may have helped to clarify to a greater extent some of the underlying causes of stigmatizing attitudes found in this present study.

### **3.8 STRENGTHS AND LIMITATIONS OF THE STUDY**

Limitations of the Transition to Adulthood study in relation to this present study revolve primarily around the questionnaire and the manner in which the questions were posed. For example the other studies on inaccurate HIV transmission beliefs specifically prompted respondents in respect of whether a particular mode of HIV transmission was correct or not. In this study respondents were requested to spontaneously state all the ways HIV could be transmitted. If specifically prompted more respondents may have stated that for example mosquitoes could transmit the virus. Due to this limitation it was only possible to associate levels of HIV transmission knowledge with stigmatizing attitudes. A further limitation is that it is possible that attitudes and HIV knowledge may have evolved since the Transition to Adulthood study was done. An updated study would help elucidate the present state of stigma amongst the youth of KwaZulu-Natal.

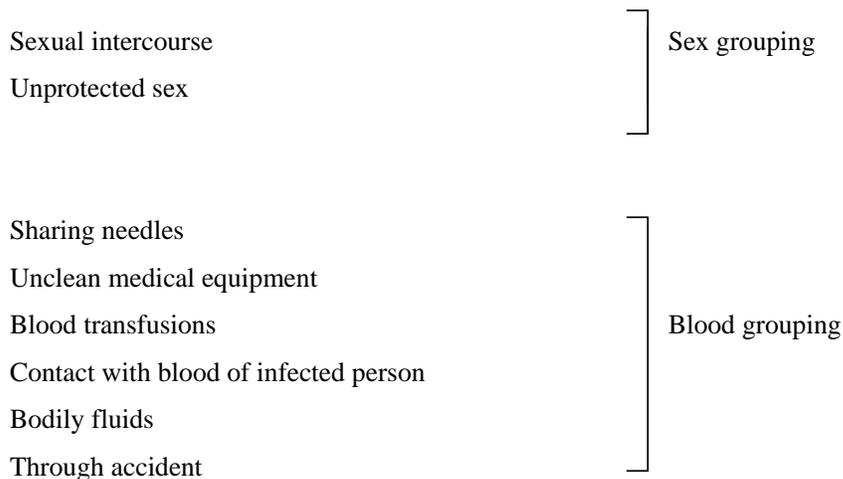
The great strength of this study was the large diverse sample size, which can be assumed with reasonable confidence to represent the population under study. Trained interviewers ensured the integrity and accuracy of the data.

### 3.9 ANALYSIS AND MEASUREMENTS

The data had already been entered into the SPSS computer program and all calculations were performed on the SPSS system.

Cross tabulations were performed in order to calculate percentages for background characteristics of the sample population. In order to measure overall stigmatizing attitudes, a scale was created that included ten stigmatizing questions. A score of two was given for an affirmative stigmatizing response and one for a non stigmatizing response. A minimum score was therefore ten for a respondent who gave no positive stigmatizing responses. A maximum score of twenty was given to a respondent who gave affirmative stigmatizing responses to all ten stigmatizing questions. The scale was tested for internal consistency using Cronbach's alpha.

A scoring system from 0 to 3 correct responses was used to measure accurate HIV transmission knowledge. Responses that indicated similar modes of HIV transmission were grouped together as follows:





If the respondent mentioned at least one item in the group than it was assumed that they understood the principle behind that particular mode of transmission. A maximum score of three was therefore given to a respondent who mentioned at least one response in each group. Responses given by respondents to modes of HIV transmission were spontaneous. In other words the respondents were not given any questions to answer. Consequently it was not possible to test the knowledge score for internal consistency.

Average stigmatizing attitude and knowledge scores were calculated for relevant sample characteristics. Analysis was carried out in order to ascertain whether there were significant differences in the average knowledge and stigmatizing attitude scores across categories of the characteristics. The knowledge and stigmatizing attitude scores were found to be highly skewed and parametric tests were unsuitable to obtain significance levels. On the advice of a statistician non-parametric Kruskal-Wallis tests were performed to test the hypothesis that average scores across categories are equal. The statistician also verified that the results had been reported correctly. Where the analysis involved multiple category variables, pair-wise analysis was used to find out where the differences exist. Spearman's Rho correlation test was used to ascertain whether a significant correlation exists between the stigmatizing scale and knowledge score.

## **CHAPTER 4**

### **RESULTS AND ANALYSIS**

#### **4.1 INTRODUCTION**

The results begin with a description of the sample. Percentages based on background characteristics, HIV transmission knowledge and individual stigmatizing responses are presented according to gender. Analyses of firstly stigmatizing attitudes and then HIV transmission knowledge follow using the stigmatizing scale and knowledge score discussed in the methodology. The final part of the results explores the relationship between stigmatizing and knowledge.

#### **4.2 DESCRIPTION OF SAMPLE**

This section introduces sample characteristics in table format. The sample is divided into males and females to clarify any percentage differences that may exist.

Table 1 presents the background summary of the Transition to Adulthood sample. A greater percentage of the respondents were female (52.5%). The racial composition consisted of 76% Blacks, 18% Indians, 4% Whites and 2% Coloureds. The majority of the sample resided in urban areas. Sixty seven percent of the sample lived in urban areas either in formal housing or informal or squatter settlements. The remaining 33% of the sample lived in rural areas or commercial farms. The main religion was Protestant (42.4%) followed by Zionist (14.3%). Ninety one percent of the sample were currently studying or had completed secondary or post secondary education. Fifty one percent of the sample had a steady boy or girlfriend.

**Table 1: Description of the sample characteristics**

<b>Characteristic</b>	<b>Number (n)</b>	<b>Distribution as percentage</b>	
		<b>Men %</b>	<b>Women %</b>
<b>Age</b>			
14-16	1207	27.8	29.9
17-19	1623	39.8	37.8
20-24	1354	32.4	32.3
<b>Race</b>			
Black	3179	75.3	76.6
Coloured	85	2.2	1.9
Indian	753	18.3	17.7
White	168	4.2	3.8
<b>Residence</b>			
Urban	2795	70.2	64.2
Rural	1376	29.8	35.8
<b>Education</b>			
Primary	226	10.7	6.2
Secondary	2141	78.8	80.9
Post-secondary	315	10.5	12.9
<b>Relationship Status</b>			
Single	2046	52.2	46.0
Steady Partner	2135	47.8	54.0
<b>Religion</b>			
Zionist	596	11.9	16.3
Protestant (Christian)	1774	38.5	45.9
Catholic	538	11.4	14.1
Hindu	468	11.8	10.6
None	522	20.4	5.4
Other	286	6.0	7.7
<b>Total sample size = 4185</b>			

Table 2 depicts the breakdown by gender of the sample who spontaneously reported that HIV could be transmitted via different modes. Spontaneous responses were grouped together according to the particular mode of transmission that the response represented i.e. sexual intercourse, blood and mother to child transmission (see scoring of knowledge in the methodology section). The vast majority of respondents had heard of AIDS (99.7%). Overall 96.6% percent mentioned that HIV could be transmitted through sexual intercourse. However 70.5% of men compared to 80.0% of women stated that HIV could be contracted through blood. The percentage of respondents who mentioned mother to child transmission was low. In respect of inaccurate modes of HIV transmission a small percentage (<1%) reported that HIV could be transmitted through mosquitoes.

<b>Table 2: Multiple responses of HIV transmission spontaneously reported grouped together according to mode of transmission</b>		
<b>Characteristic</b>	<b>Distribution as percentage</b>	
	<b>Men %</b>	<b>Women %</b>
Sexual Intercourse	96.5	96.7
Blood	70.5	80.0
Mother to child transmission	3.4	6.2
Mosquitoes/ insect bites	0.5	0.8
<b>Total sample size = 4185</b>		

Table 3 depicts the percentage of respondents who mentioned multiple ways of preventing AIDS. Approximately 90% of both men and women stated that condoms could prevent infection. Abstinence was mentioned by 35.1% and 40.3% of men and women respectively. A lower proportion of men (3.9%) than women (6.5%) thought that faithfulness could protect against infection.

<b>Table 3: Multiple responses reported that protect against HIV/AIDS</b>		
<b>Characteristic</b>	<b>Distribution as percentage</b>	
	<b>Men %</b>	<b>Women %</b>
<b>Methods of protection</b>		
Condom use	90.8	89.4
Abstinence	35.1	40.3
Faithfulness	3.9	6.5
Other	1.3	1.4
<b>Total sample size = 4185</b>		

Table 4 shows how respondents perceive risk. Twenty nine percent of men and 26.8% of women thought that their friends were at risk of contracting HIV. Respondents generally judged their own risk of contracting HIV as low. Only 7.6% of men and 8.0% of women perceived themselves to be at moderate or high risk of contracting HIV.

Eleven percent of men and 18.3% of women knew someone infected with AIDS. Overall thirty six percent of respondents knew of someone who had died of AIDS.

<b>Characteristic</b>	<b>Distribution as percentage</b>	
	<b>Men %</b>	<b>Women %</b>
Knows someone infected with AIDS	11.1	18.3
Knows someone who has died of AIDS	33.6	39.2
Close friends are at risk of getting AIDS	29.3	26.8
Perceived risk of HIV infection		
None	65.8	70.9
Low	26.5	21.0
Medium	3.4	3.6
High	4.3	4.5
<b>Total sample size = 4185</b>		

A larger percentage of women (18.9%) compared to 10.9% of men had been for an HIV test. Approximately 80% of both men and women would tell their partners if they found out that they were HIV positive.

Table 5 shows the percentage of respondents who would stigmatize against an HIV positive person according to the situation. Differences in percentage of stigmatizing responses between men and women are evident. Twenty four percent of men and 15% of women thought that infected students should be excluded from attending school. Eleven percent of men and 16.1% of women would not share a toilet with an HIV positive person. Twenty five percent of men and 27.5% of women would not share food with an HIV positive person.

Twenty three percent of men and 21.6% of women would not share a bed (no sex) with an HIV positive person. Similar percentages were evident for sharing kitchen utensils. Other stigmatizing responses varied between two and nine percent.

<b>Table 5: Percentage of respondents who stated they would not participate in particular activities with people that are HIV positive</b>		
<b>Characteristic</b>	<b>Distribution as percentage</b>	
	<b>Men %</b>	<b>Women %</b>
Share food	25.2	27.5
Share kitchen utensils	23.9	26.6
Share toilet	11.2	16.1
Share bed (no sex)	23.5	21.6
Touch or hug	6.6	9.1
Sit next to	3.8	5.2
Have as friend	4.5	5.9
Work with	4.3	4.9
Include in group	4.7	4.2
Allow infected relative to remain in house	2.8	3.4
Feed sick relative	4.0	5.1
Bathe sick relative	11.0	10.7
Help sick relative to toilet	7.6	8.3
Infected students should attend school	23.9	15.1
<b>Total sample size = 4185</b>		

Table 6 presents how respondents perceived that people with AIDS are treated in the community. Twenty nine percent of men and 35.8% of women thought that the treatment

of families where a relative had died of AIDS would be worse than if the death had occurred from some other illness. A greater percentage of women (31.3%) as opposed to men (26.8%) also thought that women with AIDS would be treated worse than an infected man. The second part of the table shows the type of attitudes that respondents thought that people with AIDS would be subjected to. Fewer men (32.2%) than women (24.2%) thought that people with AIDS would be isolated. One third of both sexes thought that PLWHA would be gossiped about. Between 6% and 20% of respondents thought that PLWHA would encounter love, kindness and help.

<b>Table 6: Perceptions of treatment of HIV positive people</b>		
<b>Characteristic</b>	<b>Distribution as percentage</b>	
	<b>Men %</b>	<b>Women %</b>
Treatment of families whose relative has died of AIDS		
Treated worse	28.9	35.8
Treated same	41.7	33.2
Treated better	4.9	7.0
Don't know	10.1	8.4
Never happened	14.4	15.6
Treatment of HIV infected women in community		
Treated worse	26.8	31.3
Treated same	49.4	40.3
Treated better	7.3	7.0
Don't know	16.5	21.4
Treatment of HIV infected people in community		
Isolation	32.2	24.2
Verbal abuse	6.5	9.7
Physical abuse	2.3	2.3
Rumours/ gossip	33.9	33.8
Rejection	12.5	16.3
Ejection from home	0.4	0.8
Love	12.8	6.7
Kindness	19.9	11.7
Help	14.9	15.5
Indifference	7.7	10.9
<b>Total sample size = 4185</b>		

### 4.3 ANALYSIS OF STIGMATIZING ATTITUDES

The following section makes use of the stigmatizing scale that was constructed from ten stigmatizing responses. The method of constructing the scale was fully explained in the methodology chapter. The stigmatizing scale in this section is used to obtain means for various sample characteristics relevant to HIV. Differences in the means were tested for, using the Kruskal-Wallis non-parametric test.

Table 7 shows the item to item correlation and alpha if deleted values for the ten stigmatizing responses used to construct the stigmatizing scale. According to Gliem et al. (2003) it is important to report Cronbach's alpha coefficient for internal consistency for any scales. The above scale was found to have an internal consistency of 0.861. George et al. (2003 as cited in Gliem et al, 2003) provides the following internal consistency rules ">.9-excellent, >.8-good, >.7-acceptable, >.6-questionable, >.5-poor, <.5-unacceptable". The value of alpha in this scale therefore falls into the good range. Table 4.7 shows the item to item total correlation and alpha if deleted. The item to item correlation ranged from 0.31 to 0.65. The corresponding alpha of deleted scores were all above 0.82. All the items on the scale were therefore kept.

**Table 7: Item to item total correlation and Alpha if deleted for stigmatizing responses**

	<b>Item-Item Total Correlation</b>	<b>Alpha if Deleted</b>
Share food	0.60	0.83
Share kitchen utensils	0.61	0.82
Share toilet	0.59	0.82
Share bed (no sex)	0.63	0.82
Touch or hug	0.65	0.82
Sit next to	0.62	0.83
Have as friend	0.63	0.83
Work with	0.60	0.83
Include in group	0.39	0.84
Allow infected relative to remain in house	0.31	0.85

Figure 2 shows the percentage distribution of stigmatizing attitudes on the stigmatizing scale from 10 to 20 based upon gender. From the graph it can be seen that little difference exists between males and females in respect of the strength of stigmatizing attitudes. Males do however show a slightly lower tendency to stigmatize than females. Males are marginally more predominant at the lower end of the scale and females marginally more predominant at the upper end of the scale. However these differences were not statistically significant (see table 8).

**Figure 2: Percentage distribution on stigmatizing scale based upon gender**

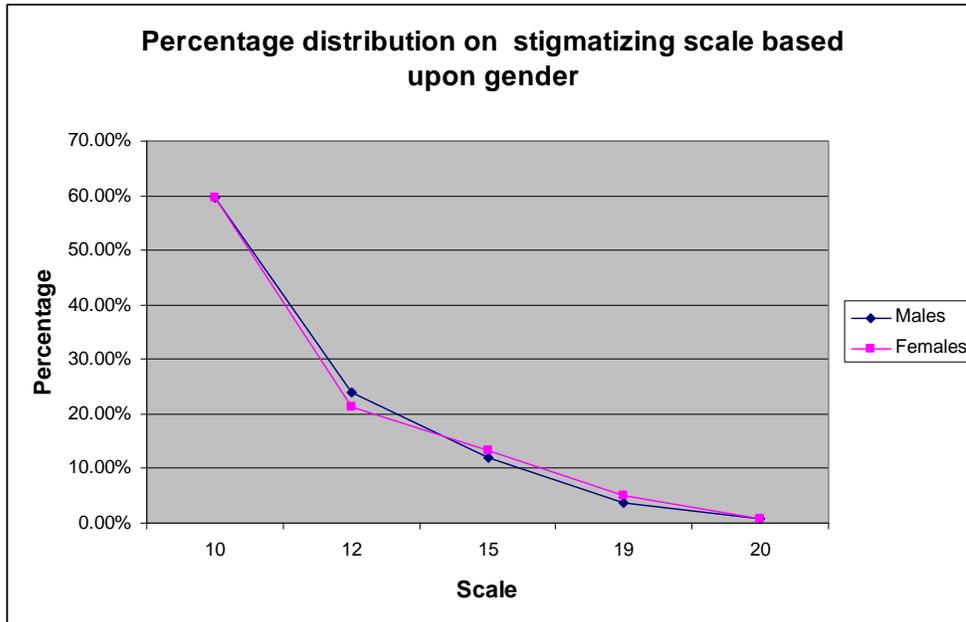


Figure 3 shows the percentage distribution on the same stigmatizing scale based upon race groups. It would appear from the scale that Coloureds have the lowest tendency to stigmatize whereas Blacks have the highest. Coloureds are predominant at the lower end of the scale whereas a higher percentage of Blacks are evident at the top end of the scale. Indians have a lower tendency to stigmatize than Whites. This was found to be statistically significant (see table 8).

**Figure 3: Percentage distribution on stigmatizing scale based upon race**

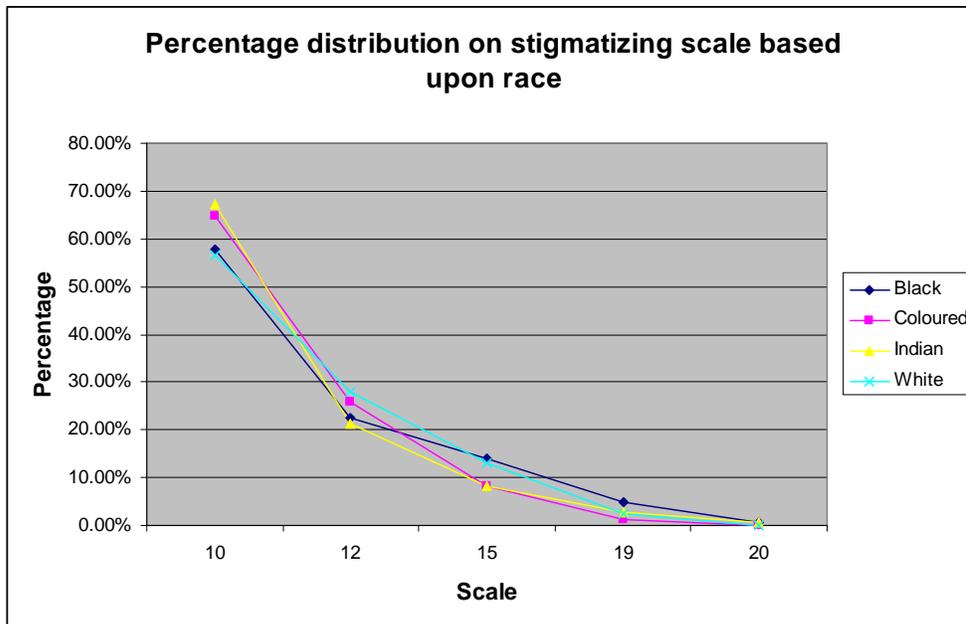


Table 8 shows the mean scores on the stigmatizing scale for various sample characteristics. No significant difference was found in stigmatizing attitudes between males and females. Significant differences in means were found between age groups. Younger respondents had higher mean stigmatizing scores ( $p < 0.01$ ). Pair wise analysis revealed that all combinations in terms of age and stigmatizing were significantly different. Significant differences were found in means between race groups ( $p < 0.01$ ). The black group showed the highest stigmatizing score and the coloured group the lowest. Pair-wise analysis revealed that Blacks had a significantly higher stigmatizing score than Indians and Coloureds. Pair-wise analysis also showed that Whites have a significantly higher stigmatizing score than Indians.

Levels of education also had a significant effect on stigmatizing attitudes. Pair wise analysis showed that respondents who only had a primary level education scored significantly higher on the stigmatizing scale than those with secondary or post secondary education ( $p < 0.01$ ). Respondent's who had life skills training had a significantly lower mean score on the stigmatizing scale ( $p < 0.05$ ). Interestingly significant differences in means were found between urban and rural respondents. Those that lived in rural areas were significantly more likely to stigmatize ( $p < 0.01$ ).

**Table 8: Association of selected background variables on stigmatizing attitude scale: Significance levels obtained from Kruskal-Wallis test**

<b>Variable</b>	<b>Categories</b>	<b>Mean</b>	<b>Significance Levels</b>
<i>Gender</i>	Male	11.10	.358
	Female	11.25	
<i>Age</i>	14-16	11.57	.000**
	17-19	11.18	
	20-24	10.82	
<i>Race</i>	Black	11.28	.000**
	Coloured	10.62	
	Indian	10.86	
	White	11.03	
<i>Education</i>	Primary	12.95	.000**
	Secondary	11.11	
	Post-secondary	10.51	
<i>Life skills course</i>	Yes	11.18	.040*
	No	11.44	
<i>Location</i>	Urban	10.94	.000**
	Rural	11.66	
<i>Religion</i>	Unimportant	11.19	.969
	Important	11.05	

\* $p < .05$ ; \*\* $p < .01$

Table 9 explores the relationship between stigmatizing and variables related to HIV and risk perception. Respondents in a steady relationship had a significantly lower mean stigmatizing score than those who were single ( $p < 0.01$ ). Knowing someone with AIDS, having had an HIV test and knowing someone who had died from AIDS significantly reduced mean stigmatizing scores ( $p < 0.01$ ). Respondents who thought that their friends were at risk also showed lower mean stigmatizing scores ( $p < 0.05$ ).

<b>Table 9: Association of selected variables specifically related to HIV on stigmatizing attitude scale: Significance levels obtained from Kruskal-Wallis test</b>			
<b>Variable</b>	<b>Categories</b>	<b>Mean</b>	<b>Significance Levels</b>
<i>Steady relationship</i>	Yes	11.03	.000**
	No	11.34	
<i>Had HIV test</i>	Yes	10.75	.000**
	No	11.25	
<i>Knows someone With AIDS</i>	Yes	10.95	.007**
	No	11.22	
<i>Knows someone who has died of AIDS</i>	Yes	11.03	.041*
	No	11.27	
<i>Friends risk of Contracting HIV</i>	Yes	11.05	.032*
	No	11.23	
<i>Own risk of Contracting HIV</i>	Low	11.17	.300
	Med/ high	11.28	
* $p < .05$ ; ** $p < .01$			

Table 10 shows the mean stigmatizing score versus willingness and attitudes towards condom use. Those respondents who used a condom at last sex had significantly lower stigmatizing scores ( $p < 0.01$ ). Pair wise analysis revealed that respondents who were not confident about using a condom had significantly higher mean stigmatizing scores than those who were very or somewhat confident. Respondents who showed positive attitudes towards using condoms had significantly lower mean stigmatizing scores in all other instances ( $p < 0.01$ ).

<b>Table 10: Association of willingness to use a condom on stigmatizing attitude scale: Significance levels obtained from Kruskal-Wallis test</b>			
<b>Variable</b>	<b>Categories</b>	<b>Mean</b>	<b>Significance Levels</b>
<i>Used condom at last sex</i>	Yes	10.89	.000**
	No	11.25	
<i>Confident about using a condom</i>	Very	10.91	.000**
	Somewhat	11.09	
	Not	11.67	
<i>Condoms reduce pleasure</i>	Disagree	11.01	.000**
	Agree	11.31	
<i>Condoms not needed in serious relationship</i>	Disagree	11.02	.000**
	Agree	11.61	
<i>A women loses respect if a condom is used</i>	Disagree	11.10	.000**
	Agree	11.63	
<i>Using condoms is a sign of not trusting partner</i>	Disagree	10.94	.000**
	Agree	11.92	
* $p < .05$ ; ** $p < .01$			

#### 4.4 ANALYSIS OF KNOWLEDGE

This section makes use of the HIV transmission knowledge score (0-3). The system of scoring knowledge was explained in the methodology section. Essentially three main modes of HIV transmission were identified. These three modes of HIV transmission include sex, blood and mother to child transmission.

Figure 4 shows the percentage distribution of the knowledge score (0-3) based upon gender. From the graph it is apparent that females have better HIV transmission knowledge than males. A larger proportion of females scored higher in the 2 to 3 correct responses range. A higher percentage of males scored only 1 correct response. This difference was found to be statistically significant (see table 11).

**Figure 4: Percentage distribution on knowledge score based upon gender**

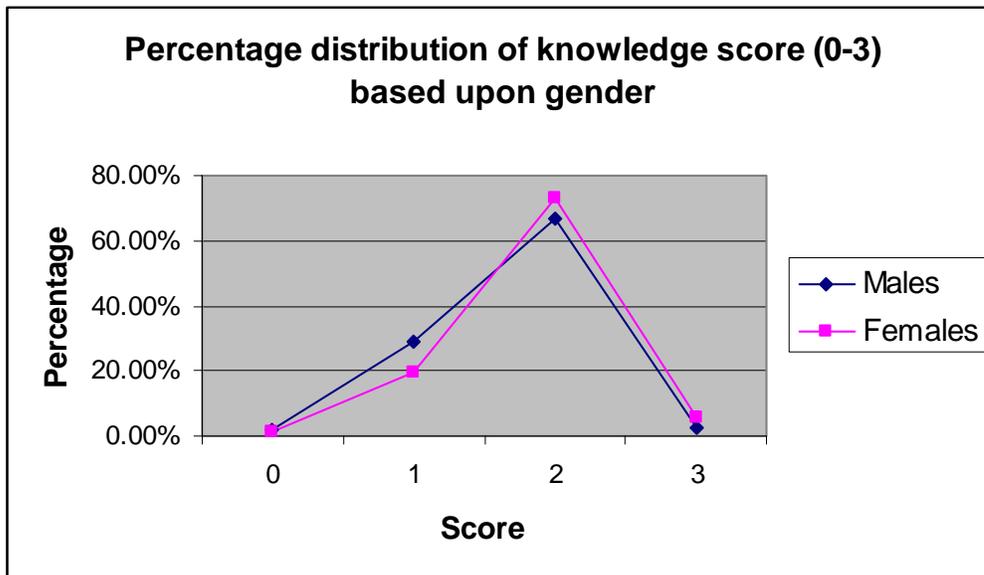


Figure 5 shows the percentage distribution of the knowledge score based upon race. From the graph it can be seen that the Coloured group have the highest knowledge of HIV transmission. The Coloured group are predominant in the two to three correct responses range. This difference was found to be statistically significant (see table 11).

**Figure 5: Percentage distribution of knowledge score based upon race**

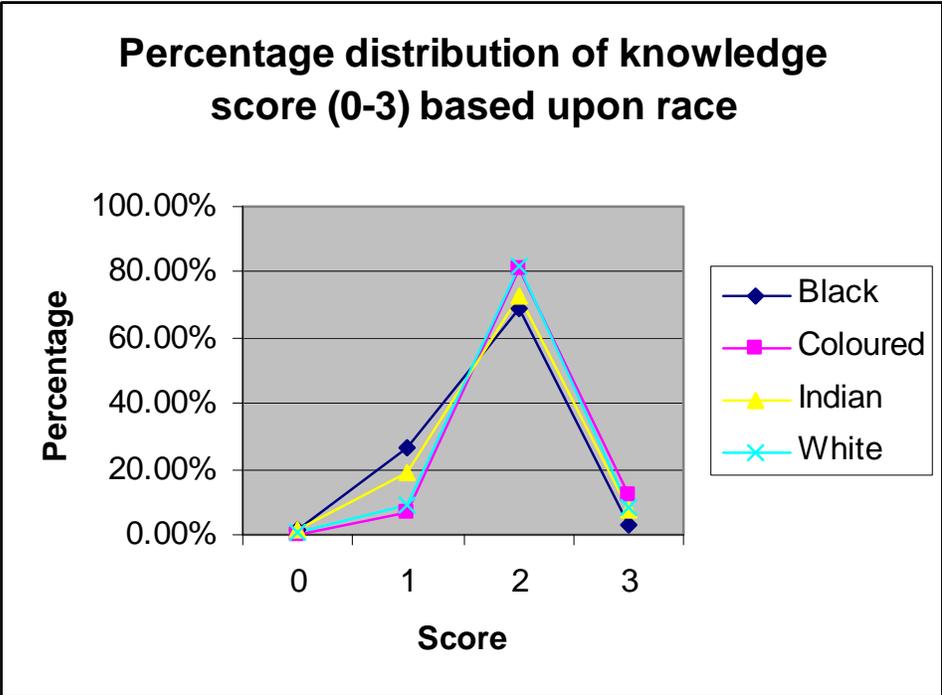


Table 11 shows the same characteristics as in table 8 based on knowledge scores. Females were found to have significantly higher mean knowledge scores than males ( $p < 0.01$ ). Younger respondents had significantly lower mean scores ( $p < 0.01$ ). Pair wise analysis showed that those respondents between the ages of 17 and 24 had significantly higher knowledge than respondents aged 16 or less. Significant differences were evident for race groups. The black group had the lowest knowledge and the coloured group the highest ( $p < 0.01$ ). Pair wise analysis also showed that Coloureds and Whites have significantly higher knowledge than Indians. Significant differences in mean knowledge were also evident for urban versus rural localities. Respondents in urban localities had significantly higher mean knowledge scores ( $p < 0.01$ ). As would be expected significant differences were also found in mean knowledge scores depending on levels of education. Pair wise analysis revealed that respondents who had a primary education had significantly less knowledge than those respondents who were in secondary or post secondary education ( $p < 0.01$ ). Further pair wise analysis revealed that respondents who were in post secondary education had higher knowledge than those in secondary education. Respondents who had life skills training had significantly greater mean knowledge ( $p < 0.01$ ) than those who did not have life skills training.

**Table 11: Association of selected sample characteristics and knowledge:  
Significance levels obtained from Kruskal-Wallis test**

<b>Variable</b>	<b>Categories</b>	<b>Mean</b>	<b>Significance Levels</b>
<i>Gender</i>	Male	1.70	.000**
	Female	1.83	
<i>Age</i>	14-16	1.69	.000**
	17-19	1.79	
	20-24	1.82	
<i>Race</i>	Black	1.73	.000**
	Coloured	2.05	
	Indian	1.85	
	White	1.98	
<i>Location</i>	Urban	1.81	.000**
	Rural	1.68	
<i>Education</i>	Primary	1.41	.000**
	Secondary	1.80	
	Post-secondary	2.02	
<i>Life skills course</i>	Yes	1.79	.009**
	No	1.72	
<i>Religion</i>	Important	1.79	.582
	Unimportant	1.78	
*p<.05; **p<.01			

Table 12 explores the relationship between variables specifically related to HIV and perception of risk. Respondents in a steady relationship showed significantly better mean knowledge ( $p < 0.01$ ).

Those respondents who knew someone with HIV, undergone an HIV test or knew someone who had died from AIDS had significantly greater knowledge ( $p < 0.01$ ). Those respondents who thought that their friends were at risk had significantly higher knowledge ( $p < 0.01$ ). There was no significant difference in knowledge in respect of whether respondents viewed their own risk as low or high.

<b>Table 12: Association of selected sample variables specifically related to HIV and knowledge: Significance levels obtained from Kruskal-Wallis test</b>			
<b>Variable</b>	<b>Categories</b>	<b>Mean</b>	<b>Significance Levels</b>
<i>Steady relationship</i>	Yes	1.81	.000**
	No	1.73	
<i>Had HIV test</i>	Yes	1.87	.000**
	No	1.76	
<i>Knows someone With AIDS</i>	Yes	1.90	.000**
	No	1.75	
<i>Knows someone who has died of AIDS</i>	Yes	1.82	.000**
	No	1.75	
<i>Friends risk of Contracting HIV</i>	Yes	1.82	.002**
	No	1.76	
<i>Own risk of Contracting HIV</i>	Low	1.77	.199
	High	1.81	
* $p < .05$ ; ** $p < .01$			

Table 13 explores the relationship between knowledge and condom use. No significant difference was found in terms of knowledge for respondents who had used a condom at last sex. Pair wise analysis revealed that respondents who were very or somewhat confident about using a condom had greater knowledge than those who were not confident. Significant differences in mean knowledge scores were evident for all other attitudes towards condoms. Those respondents who had positive attitudes towards condoms had higher mean knowledge scores ( $p < 0.01$ ).

<b>Table 13: Association between willingness to use a condom and knowledge: Significance levels obtained from Kruskal-Wallis test</b>			
<b>Variable</b>	<b>Categories</b>	<b>Mean</b>	<b>Significance Levels</b>
<i>Used condom at last sex</i>	Yes	1.79	.592
	No	1.78	
<i>Confident about using a condom</i>	Very	1.81	.000**
	Somewhat	1.80	
	Not	1.70	
<i>Condoms reduce pleasure</i>	Disagree	1.81	.000**
	Agree	1.74	
<i>Condoms not needed in serious relationship</i>	Disagree	1.79	.000**
	Agree	1.72	
<i>A women loses respect if a condom is used</i>	Disagree	1.79	.001**
	Agree	1.70	
<i>Using condoms is a sign of not trusting partner</i>	Disagree	1.81	.000**
	Agree	1.65	

\* $p < .05$ ; \*\* $p < .01$

#### 4.5 ANALYSIS OF RELATIONSHIP BETWEEN STIGMATIZING AND KNOWLEDGE

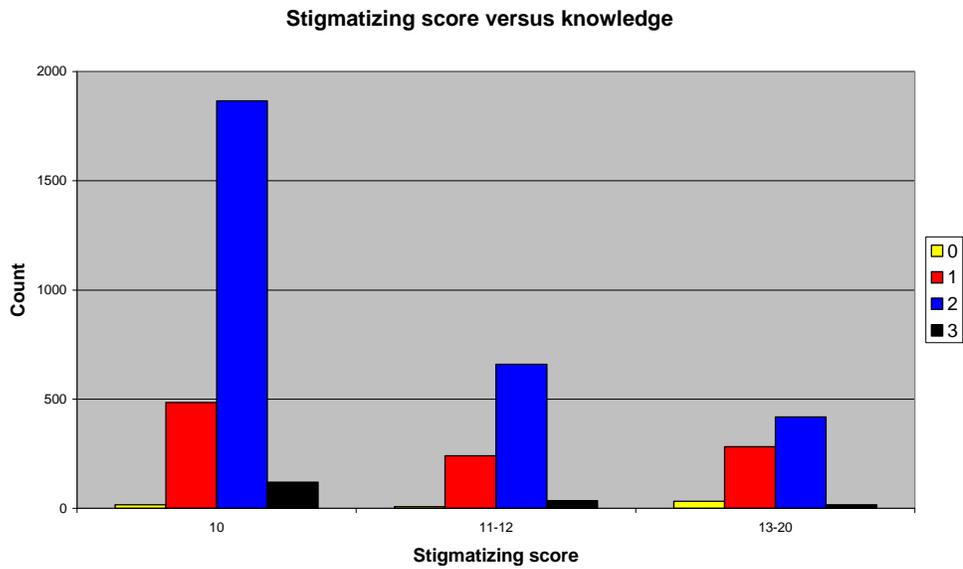
Thus far stigmatizing and knowledge have been analysed separately. This section explores the relationship between stigmatizing and knowledge.

Figure 6 and Table 14 show the relationship between the stigmatizing score (10-20) and the knowledge score (0-3). The graph and table clearly show that a trend exists between knowledge and stigmatizing. More than half (58%) of the small percentage of respondents who had no knowledge (0 score) are in the 13-20 range of the stigmatizing scale. Twenty eight percent of the respondents who had a knowledge score of one are in the 13-20 stigmatizing range on the scale. Fourteen percent and nine percent of the respondents who scored two and three on knowledge respectively are in the 13-20 range on the stigmatizing scale.

**Table 14: Stigmatizing score versus knowledge score in percentages**

		Knowledge Score			
		0	1	2	3
Stigma score	10	29	48	63.4	70
	11-12	13	24	22.4	20
	13-20	58	28	14.2	9
Total		100	100	100	100

**Figure 6: Association between stigmatizing score and knowledge score**



A significant negative correlation is evident between stigmatizing attitudes and knowledge (Spearman's rho -0.183,  $p < 0.01$ ).

## 4.6 CONCLUSION

Individual sample characteristics such as race, locality and other variables related to HIV have been compared for both knowledge and stigmatizing. In almost all instances significant results obtained in terms of knowledge on specific characteristics correspond with significant results for stigmatizing on the same characteristic. Characteristics relating to condom use were tested against the stigmatizing scale and knowledge score. Respondents who had not used a condom at last sex and had negative attitudes towards condoms had significantly higher mean stigmatizing scores in all instances. Respondents with favourable attitudes towards using condoms had significantly higher knowledge of HIV transmission. Correlation between the stigmatizing score and knowledge score show a highly significant negative correlation. In other words as stigmatizing increases knowledge decreases.

## **CHAPTER 5**

### **DISCUSSION**

#### **5.1 INTRODUCTION**

The results obtained from this study provide insight into levels of HIV transmission knowledge and stigmatizing amongst youth. Knowledge that sex could cause HIV was known by almost everyone. Stigmatizing attitudes varied according to the situation. As hypothesized a significant association was found between HIV transmission knowledge and stigmatizing attitudes. Less knowledge equated to greater stigmatization. Differences were also found in the strength of stigmatizing attitudes between population groups. Various characteristics such as knowing someone with HIV or having had an HIV test were associated significantly with whether a respondent showed better HIV transmission knowledge and reduced stigmatizing tendencies. Location also contributed towards levels of knowledge and stigmatizing attitudes. Respondents that lived in rural areas had significantly less knowledge and greater stigmatizing attitudes than those respondents that lived in urban areas. Respondents who used a condom at last sex and had positive attitudes towards using condoms also exhibited significantly reduced stigmatizing attitudes. These individual characteristics all have knowledge as a common denominator that influenced stigmatizing attitudes.

The discussion that follows will begin with HIV knowledge, stigmatizing and the relationship between them. This will be followed by the findings relating to race, gender and stigmatizing. The final part of the discussion will link risk perception and stigmatizing to optimistic bias and punishment theory.

## **5.2 KNOWLEDGE OF ACCURATE AND INACCURATE MODES OF HIV TRANSMISSION AND ITS EFFECTS ON STIGMATIZING ATTITUDES**

The findings in this study correspond with the results obtained by Hartung et al. (2002) in KwaZulu-Natal, who found that knowledge of HIV transmission was generally good. Ninety seven percent of respondents knew that HIV could be transmitted through sex. A further seventy five percent of respondents stated that blood could transmit HIV. Knowledge that HIV could be transmitted from mother to child was however low at five percent. It was found that knowledge of HIV transmission was significantly associated with age, gender and levels of education. Older respondents and those with higher education levels had better knowledge. Respondents that had undergone life skills training at school also possessed significantly higher knowledge. It was also found that females had better knowledge of HIV transmission than males. The findings that females possessed better knowledge was also evident in other studies. In the study by Dias, Matos and Goncalves (2006) it was also found females and those with higher school achievement had better knowledge. The phenomenon that females possess better knowledge may relate to the fact that females are generally expected to bear greater responsibility for reproductive health and preventing pregnancy than males. A further factor that influenced knowledge was the locality that a respondent had spent most of their life. Respondents in urban areas had significantly greater knowledge than respondents in rural areas.

Some notable differences were evident in this study in comparison to those outside South Africa regarding inaccurate modes of HIV transmission. About 25% of respondents in this study would not share food or kitchen utensils with an HIV infected person, presumably because they feared infection via this route. This is in comparison to 50% of the public in the United States who according to Herek, Capitanio and Widaman (2002) believed that HIV could be transmitted by sharing a drinking glass and 55% of Portuguese adolescents in the study by Dias, Matos and Goncalves (2006) who believed that HIV could be transmitted by a fork, drinking glass or spoon.

It is not obvious why this large discrepancy in inaccurate beliefs between studies exist. However the fact that South Africa has a much higher HIV prevalence and is the midst of a generalized epidemic may be responsible for altering beliefs. Cultural differences may also have a role to play. For example the study by Kalichman and Simbayi (2004) found that 33% of respondents in a township thought that witchcraft may be responsible for AIDS. To establish the significance of inaccurate beliefs regarding HIV transmission, it may be necessary to make questions more culturally specific.

The percentage of respondents that gave individual stigmatizing responses varied according to the situation. One major adverse finding was that 20% of respondents thought that an HIV infected student should not be allowed to remain in school. It would be disadvantageous for an HIV positive student to be open about their status under these conditions. Stigmatization within the school environment was also found in other studies. For example the study by Letamo (2004) in Botswana found that 53.6% of students thought that an HIV infected teacher should not be allowed to teach. It is therefore apparent that HIV stigma is present within the school environment, which may make life difficult for any HIV positive students.

Stigmatizing attitudes in the home environment also occurred to varying degrees. Approximately 5% to 10% of respondents in this study would not assist an HIV positive relative in various activities such as helping a sick relative to the toilet or assisting a sick relative to bathe. The study by Letamo (2004) in Botswana found that adolescents who stated that they would not share food with an HIV infected person were three times as likely to state that they would not care for a family member with AIDS. A combination of not wanting to share kitchen utensils, toilets and food together with not wanting to help a sick relative with the basic necessities of life would contribute towards excluding an HIV positive relative. This is also the view shared by Nyblade et al. (2003) who assert that physical exclusion occurs through isolation of the person with HIV/AIDS.

The relationship between stigmatizing and HIV knowledge is evident in the majority of the variables tested for significance on stigmatizing also corresponding in significance for knowledge. This relationship was confirmed by the highly significant inverse correlation found between stigmatizing and knowledge. Those respondents who scored low on HIV transmission knowledge were significantly more likely to show stronger stigmatizing attitudes. Attitudes towards using condoms were also linked to stigmatizing and knowledge. Greater knowledge leads to favourable attitudes towards condom use. Increasing knowledge may therefore substantially increase condom use leading to reduced HIV prevalence.

In summary a highly significant association was found between HIV transmission knowledge and stigmatizing attitudes. This study therefore provides further evidence that educating the youth about the possible and impossible ways HIV can be transmitted may be an important means of reducing HIV related stigma. Reducing HIV related stigma may in turn have a significant effect on reducing HIV prevalence levels.

### **5.3 EFFECTS OF GENDER AND RACE ON STIGMATIZING ATTITUDES**

Overall little difference in the profile and strength of stigmatizing attitudes was found between males and females. This is a surprising finding as women had significantly better HIV transmission knowledge than men. It is probable that women may harbour greater stigmatizing attitudes towards men as opposed to other women. The literature does indicate that HIV infected women are stigmatized to a greater extent. According to van Niekerk (2005) women face greater stigmatization in the community than men. A possible reason for this is that “gender inequality interacts with other social factors, for example poverty, generation and race” (Walker, Reid and Cornell, 2004:22). In this study it was found that stigmatizing was associated with unfavourable attitudes towards using condoms.

Gender inequality makes it more difficult for women to insist that men use condoms. Men are therefore responsible for stigmatizing if they refuse to use a condom and put their female partner at risk of contracting HIV. However it is also apparent that where there is no consensus or discussion as to whether a condom should be used then both partners are stigmatizing against each other.

The results from this study also found a significant difference in stigmatizing across race groups. Stigmatizing was highest amongst Blacks and lowest amongst Coloureds. HIV positive women may be stigmatized to a greater extent across all race groups. However there may be particular reasons why HIV positive African women face greater stigmatization in the community. Traditionally in the African culture women are expected to be subservient to men. Poverty contributes further towards gender inequality. The combination of these factors may ultimately lead to an HIV positive woman to be blamed and stigmatized to a greater extent for her condition than a man. Furthermore adults may stigmatize young women who are HIV positive by blaming them for their condition. According to Walker, Reid and Cornell (2004) virginity testing is common place in the African culture and girls are graded into A, B and C virgins. It is therefore apparent that adults may treat young HIV positive women with animosity for bringing shame on the community by losing their virginity through their supposed promiscuous lifestyle. A study conducted by Campbell (2005:809) reported one youth worker as stating that:

Children are not comfortable to disclose their HIV status to their parents. Their mother's gossip, saying 'I have an evil child at my house who has contracted this disease.'

Essentially Campbell (2005:808) asserts that stigma acts as a type of "social psychological policing". In other words stigma is being used as a type of control to monitor and regulate behaviour.

In conclusion different levels of stigmatizing across race groups were found in this study. This was found to be related to levels of HIV knowledge and possibly other factors such as cultural differences. No differences in stigmatizing attitudes were evident between males and females. However gender inequality make women more vulnerable to stigmatization. Women are also at a disadvantage when it comes to insisting on condom use. The results from this study showed that respondents who had unfavourable attitudes towards using condoms exhibited increased stigmatizing attitudes. Reducing stigmatizing attitudes should therefore increase condom use.

#### **5.4 PERCEPTION OF RISK AND THEORETICAL FRAMEWORK**

The two theories used to explain risk and stigmatizing attitudes in this study are optimistic bias and punishment theory of disease.

Optimistic bias refers to the phenomenon that people have an 'egocentric illusion' regarding risk. A negative risk such as contracting HIV is something that happens to other people. The study by Boer and Emons (2004) in Thailand found that stigmatizing was associated with a lower intention to use a condom. Similar results were found in this study. Those respondents who had higher stigmatizing attitudes had a greater probability of not using a condom at last sex and having negative attitudes towards using condoms. In other words stigmatization is associated with an increase in risky sexual behaviour and risk for contracting HIV. This phenomenon was also found in the study by Burkholder, Harlow and Washkwich (1999) who found that increased stigmatizing behaviour was correlated with an increase in risky sexual behaviour, specifically condom self-efficacy. This present study has linked knowledge of HIV transmission to stigmatizing. Less knowledge equates to greater stigmatizing which in turn equates to greater risk taking. It therefore follows that respondents who are more likely to take risks are less likely to understand the magnitude of the risk that they are taking.

This is also the view shared by Weinstein (1987) who asserts that people who have little knowledge of the risk are unable to make balanced judgements. Prior research has also shown that people who harbour inaccurate knowledge and harbour stigmatizing attitudes towards PLWHA are also less likely to take precautions against HIV and perceive themselves to be at low risk for infection (Liu et al, 2005; Herek, Capitano and Widaman, 2002). A process of 'othering' in the form of stigmatizing by those who have less knowledge seems to be occurring.

In this study there was no difference in stigmatizing between respondents who stated their personal risk of contracting HIV as high or low. However only 7.7% of respondents actually admitted to being in a moderate or high risk category. Thirty one percent of respondents in the high risk category used a condom at last sex in comparison to 62% of the respondents in the low risk category. It is therefore apparent that those respondents in the high risk group correctly identified that they were at risk as they were twice as likely not to have used a condom. Those respondents in the low risk group who had not used a condom at last sex can be said to have incorrectly perceived their risk. It was found that respondents who had not used a condom at last sex were significantly more likely to stigmatize. In other words these respondents were exhibiting a form of 'othering'. Therefore some respondents correctly identified that they were at risk. Other respondents who had not used a condom at last sex incorrectly stated that they were at low risk. Both categories can fit into optimistic bias theory. Respondents who correctly perceive themselves to be at risk may change the way they view the risk. This is the view held by Gerrard (cited in Burkholder, Harlow and Washkwich, 1999) who asserts that adolescents may be aware of the risk but convince themselves that everyone is doing it therefore it is okay to continue with the risky behaviour. Those respondents who are at risk but state that they are at low risk are essentially exhibiting an 'egocentric illusion' as outlined by optimistic bias theory.

Respondents who viewed their friends risk as low were also more likely to stigmatize. This phenomenon may relate to the assertion by Joffe (1999:53) that there is a possibility that “an identity protective process is at work”. Essentially those respondents who viewed their friends risk as low may prefer to be identified with a low risk group. The focus of the risk therefore becomes other out groups.

The punishment theory of illness essentially has two alternatives. People can view illness as either a punishment for sins or punishment for the way people have conducted their lives. Overall no significant differences in stigmatizing attitudes were found between those who viewed religion as important as opposed to those who viewed religion as unimportant. If AIDS was seen as a punishment for sins then it would have been expected that those who are religious would have shown greater stigmatizing attitudes. However this was not found in this study. A qualitative study would be needed to find out whether people actually blame HIV infected people for their condition.

In conclusion a process of ‘othering’ may be occurring by those who have less knowledge and stigmatizing attitudes. It is not evident from this study as to whether people view AIDS as a punishment or not.

## **CHAPTER 6**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **6.1 CONCLUSION**

The hypothesis of this study was that inaccurate beliefs regarding HIV transmission leads to an increase in stigmatizing and risk taking for HIV infection. The results have shown that knowledge of how HIV is transmitted influences stigmatizing attitudes. Less knowledge equates to greater stigmatizing. Furthermore less knowledge and increased stigmatizing leads to adverse attitudes towards using condoms and consequently an increase in risk taking. The evidence for the link between HIV transmission beliefs and stigmatizing attitudes has been identified in numerous studies including this one. However a dichotomy exists. Studies in other parts of the world have shown that people may have accurate knowledge of how HIV is transmitted but still harbour some inaccurate beliefs about how it cannot be transmitted. This phenomenon relates to the assertion by Herek (2002) that it may not be sufficient to just inform people of accurate and inaccurate modes of HIV transmission. People actually need to understand the underlying mechanism of how the virus is passed on from one person to another.

This study has identified differences in levels of HIV transmission knowledge and stigmatizing based upon characteristics such as race, location, age and levels of education. Resources to improve knowledge could be targeted where lower levels of knowledge are evident. The overall aim should be to improve everyone's knowledge of AIDS. Increasing knowledge and reducing stigmatization however may not necessarily result in a reduction in the stigma felt by people living with HIV. This is because stigma becomes internalized. Revealing an HIV positive status may always be unpredictable in its outcome.

In this study only a small percentage of respondents had actually been for an HIV test and knew their status at the time of the test. Respondents that exhibited stronger stigmatizing attitudes and were consequently taking greater risks had an increased likelihood of being HIV positive themselves. Paradoxically these respondents will also have the greatest stigma if they are ever diagnosed HIV positive. This is the crux of HIV stigma and discrimination.

## **6.2 RECOMMENDATIONS**

This study has linked HIV transmission knowledge to stigmatizing and risk taking. The answer to address stigmatizing attitudes and reduce risk taking is simply to improve knowledge regarding HIV. It was found that adolescents that had undergone life skills training had significantly better knowledge. This provides an indication that a formal program can work. However education should be on an ongoing basis. Scope for future studies is considerable. It would be of value to specifically structure inaccurate questions regarding HIV transmission along cultural lines. It would also be of interest to link HIV prevalence levels with knowledge, stigmatizing and risk taking. If a link such as this could be established then this would provide strong evidence that the tide of new HIV infections can be reduced through improving knowledge of HIV transmission.

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**APPENDICES**

**Appendix A**

Section 1: Background characteristics & migration

RECORD TIME AT START \_\_\_ : \_\_\_

No.	Questions and filters	Coding categories	Skip to
101	Record sex of the respondent	MALE 1 FEMALE 2	
102	In what month and year were you born?	MONTH [__ __] DON'T KNOW MONTH ] -1 YEAR [__ __] DON'T KNOW YEAR ] -1	
103	How old were you at your <u>last</u> birthday? <b>Compare and correct 102 if needed</b>	AGE IN COMPLETED YEARS [__ __] <b>R. must be between 14 and 24 years old</b> ]	
<b>THIS SURVEY ONLY INTERVIEWS YOUTH AGED 14-24. IF THE RESPONDENT IS YOUNGER THAN 14 OR OLDER THAN 24, DO NOT INTERVIEW THIS PERSON</b>			
104	What is your religion?	CATHOLIC 1 PROTESTANT (All Christian except catholic) 2 ZIONIST 3 ISHEMBE 4 TRADITIONAL 5 MUSLIM 6 HINDU 7 JEWISH 8 NONE 9 OTHER (specify) _____ 10	<b>→106</b>
105	<b>How important is religion to you?</b>	VERY IMPORTANT 1 SOMEWHAT IMPORTANT 2 NOT IMPORTANT 3 REFUSED -3	
106	<b>Record race of the respondent</b>	BLACK 1 COLOURED 2 INDIAN 3 WHITE 4 OTHER 5 (specify) _____	

107	What is the main language that you speak?	ZULU SOTHO XHOSA AFRIKAANS ENGLISH INDIAN/HINDUSTANI INDIAN/TAMIL OTHER (specify)	1 2 3 4 5 6 7 8	
108	In what type of place did you spend most of your life before the age of twelve? <b>Read options</b>	URBAN AREA, FORMAL HOUSING INFORMAL OR SQUATTER SETTLEMENT IN AN URBAN AREA COMMERCIAL FARM OTHER RURAL AREA (NON COMMERCIAL FARM)	1 2 3 4	
109	How long have you lived here in [name of place]?	< 1 YEAR NUMBER OF YEARS MY WHOLE LIFE DON'T KNOW	[ ] [ ] ] 96 -1	→112
110	How many times in your life have you moved from one place to another, including the move to this place?	[RECORD NUMBER OF MOVES]	[ ] TIME S	
111	What is the <u>main</u> reason why you moved to this place, where you now live?	SCHOOL//UNIVERSITY/TECHNIKON LOOKING FOR WORK HAVING WORK THERE PARENT(S)/CAREGIVER MOVED GOT MARRIED/MOVED IN WITH PARTNER CARE FOR FAMILY MEMBER TO LIVE WITH OTHER FAMILY MEMBER MOVED TO NEW / BETTER HOUSE OTHER (specify)	1 2 3 4 5 6 7 8 9	
112	What is your <u>current</u> relationship status?  READ OPTIONS. <b>PROBE IF SINGLE, WHETHER R IS WITH A STEADY BOY/GIRLFRIEND</b>	MARRIED/TRADITIONAL OR CIVIL LIVING TOGETHER SEPARATED DIVORCED WIDOWED SINGLE STEADY BOY/GIRLFRIEND	1 2 3 4 5 6 7	
113	Has Lobola (or Dowry) been arranged for you or your partner?	LOBOLA DOWRY NEITHER LOBOLA NOR DOWRY	1 2 3	
114	Is your birth/natural mother alive?	YES NO	1 2	→115
114a	How old were you when she died?	AGE	[ ] ]	



208b	What was the reason you changed schools?	Next grade in different school Respondent /family moved New school is better New school is less expensive Old school too dangerous Old school closed New school in better neighborhood New school closer to home/work Expelled/Asked to leave old school Scholarship to new school Other (Specify) Don't Know	1 2 3 4 5 6 7 8 9 10 11 -1	→209a →209a
208c	Who took the final decision to change schools? <b>Circle all that apply</b>	SELF MOTHER FATHER AUNT/UNCLE SIBLING GRANDPARENT OTHER RELATIVE TEACHER/COUNSELOR OTHER (SPECIFY)_____	1 2 3 4 5 6 7 8 9	
209a	What is the name of that school you attended before your current school?	NAME OF SCHOOL: .....		
209b	Where was the location of the school? (Interviewers: collect city and neighborhood/village, province or other meaningful identifying information)	..... ..... ..... .....		

210 (ALL WHO EVER ATTENDED SHOULD GET THESE QUESTIONS)

I want to ask you a few more questions about your schooling. Think back on your years of education in primary and secondary.

210a	Did you ever drop out or fail a grade in primary or secondary school, or were you ever held back a year?	YES NO	1 2	→ Ed.Ch k
210b	What grade(s) did you fail or drop out of, or grades that you were held back?	(Interviewers: Go to table Ed1 and complete information for <b>each</b> grade mentioned.)		

Table Ed1

Grades failed or grades R dropped out of (circle all grades mentioned) [col 1]	How old were you when you started the school year? [col 2]	Why did you not complete the grade? [Code list A] [col 3]	Did you ever return to this grade? 1=Yes 2=No If No go to col 6] [col 4]	How many times did you attend this grade? [col 5]	Did you ever pass this grade? 1=yes 2=no (if No go to next grade circled or Ed. chk) [col 6]	How old were you when you passed this grade? [col 7]
Grade 1/sub A						
Gr 2/sub B						
Gr 3/ std 1						
Gr 4/ std 2						
Gr 5/ std 3						
Gr 6/ std 4						
Gr 7/ std 5						
Gr 8/ std 6						
Gr 9/ std 7						
Gr 10/ std 8						
Gr 11/ std 9						
Gr 12/ std 10						

**ED.CHECK:****INTERVIEWER: CHOSE APPROPRIATE QUESTION:**

**(IF 210A=2/NO): JUST TO MAKE SURE, YOU NEVER FAILED A YEAR, OR REPEATED A YEAR IN PRIMARY OR SECONDARY SCHOOL?**

NEVER FAILED/REPEATED/DROPPED OUT → GO TO Q210C

OR

**(IF 210A=1/YES) : YOU TOLD ME THAT YOU DROPPED OUT OF OR DID NOT PASS GRADES... (INTERVIEWER: READ ALL CIRCLED GRADES FROM TABLE): IS THAT CORRECT?**

NO → RETURN TO TABLE

**YES → GO TO Q210C**

**CODE LIST A**

1 = needed to work	8 = no accessible school	15 = boycott of school
2 = could not pay school fees	9 = bad/poor school	16 = parents/family moved
3 = family removed student	10 = sick	17 = courses finished (matric)
4 = expelled	11 = pregnant	18 = school closed
5 = poor school performance	12 = care for sick relative	19 = look after children
6 = no place in school	13 = political concerns / violence	20 = other (describe)
7 = look after older relative	14 = failed exams	



E2	How old were you when you passed your matric?	AGE		
----	---	-----	--	--

E2.CHK I NOW WANT TO ASK YOU ABOUT YOUR EXPERIENCES AND EXPECTATIONS ABOUT DIFFERENT KINDS OF EDUCATIONAL AND TRAINING PROGRAMS BESIDES PRIMARY AND SECONDARY SCHOOL, PROGRAMS LIKE CERTIFICATE, DIPLOMA, TECHNIKON OR UNIVERSITY.

**FIRST, I WILL ASK YOU ABOUT CERTIFICATE, DIPLOMA OR OTHER TECHNICAL TRAINING.**

E3	Have you ever registered for a certificate, diploma, or a technical or business college?	YES NO	1 2	→E6
E4	How many have you registered for?			

**E5 CAN YOU PLEASE TELL ME ABOUT EACH COURSE YOU REGISTERED FOR?**

**Table Ed 3**

What is/are the course(s) you (have) registered for?  (Code List B)	Did you complete this program, are you currently enrolled, or did you not complete the program? 1=Completed 2=Currently enrolled 3=Not enrolled, not completed	Was/Is there an assessment or exam for this course?  1=YES 2=NO	What type of course is it?  1=Diploma 2=Certificate 3=Other specify	How old were you when you enrolled in the course?	[If 2=Completed] How old were you when you finished the program?

Code List B:

Dressmaking/sewing	1	Construction	8
Drivers license (regular)	2	Secretary/administrative	9
Drivers license (commercial)	3	Life skills training	10
Mechanic/engine repair	4	Hairdresser	11
Nursing/health technician	5	Language training	12
Teaching	6	Other (specify)	15
Computer skills	7		

**Table Ed 3 Check. You told me about [# of certificate/diplome, etc] program. Are there any others you had enrolled in that we have not talked about yet?**

**Yes → Return to Table Ed3**

**No → cont.**

E6	Do you think you will ever attend a certificate, diploma or technical school?	YES NO	1 2	→E8
----	---	-----------	--------	-----

E7	[If no] why not?	No money for program	1	
		No interest in these programs	2	
		Want to go University	3	
		No jobs for these skills	4	
		No time (children/other resp)	5	
		Already have work	6	
		Do not need these skills for the work I want	7	
		Do not qualify/would not be accepted	8	
		Other (specify)_____	9	

Now, lets talk about University.

E8	Have you ever registered for any University classes?	YES NO	1 2	→E13
E9	How old were you when you first registered for University classes?	AGE	____	
E10	For what course did you register?	SOCIAL SCIENCE SCIENCE COMMERCE ARTS/HUMANITIES ENGINEERING LAW MEDICINE EDUCATION OTHER (Specify)_____	1 2 3 4 5 6 7 8 9	
E11	Have you finished a University (Bachelors/diploma) degree?	YES NO	1 2	→Filter A
E12	How old were you when you finished?	AGE	____	GO TO Filter A
E13	Do you think you will ever attend University?	YES NO	1 2	→Filter A
E14	Why not?	No money for program No interest in these programs Want to go University ??? No jobs for these skills No time (children/other resp) Already have work Do not need these skills for the work I want Do not qualify/would not be accepted Other (specify)_____	1 2 3 4 5 6 7 8 9	

**FILTER A: CHECK 203**

**IS CURRENTLY NOT IN SCHOOL/studying [ ] →212 IF CURRENTLY IN SCHOOL/STUDYING, CHECK 204:**

**CURRENTLY IN SEC SCHOOL [ ] →214**

**CURRENTLY POST-SECONDARY [ ] →213**

212	INTERVIEWER: This question is for those not currently in school:  What is the <u>main</u> reason you are no longer enrolled in school?	Family could not pay school fees/too expensive Physically/mentally disabled (including too sickly) Needed/wanted to work Domestic responsibilities/care for child(ren) Poor performance in school Lack of interest in school Got married School inaccessible / too far away Expelled from school Poor school quality Pregnant / had a baby Had to care for sick family member Completed level/grade Matriculated Other (specify) _____ Don't know/don't remember	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 -1	
213	Have you attended primary or secondary school at any time since January 2000?	YES NO	1 2	→ 224
Now I would like to speak with you about some of your recent experiences in school. <b>Interviewer: If R. is in University or Technikon, but was in primary/secondary at some time since January 2000, emphasize that it is primary/secondary school we are interested in, not the university or technical school.</b>				
214	What is the <u>main</u> reason you or your family chose the school you currently attend/last attended?	No choice, only school in local area Only school with place available Nearest school to home Cheaper Scholarship provided Better school Exam scores qualified me for this school Wider choice of extra-curricular activities Wider choice of subjects Close to parents workplace Friends went there Siblings were there Offered life skills instruction Other (specify) _____ _____ (specify) Don't know	1 2 3 4 5 6 7 8 9 10 11 12 13 14 -1	
I would like to learn what you think about the school you are currently attending or last attended.				
21 5	In your opinion do/did the teachers treat boys and girls equally?	YES NO R. IS AT SAME SEX SCHOOL	1 2 3	→217 →217
21 6	Who do you feel is (was) treated more favorably, boys or girls?	BOYS GIRLS	1 2	
21 7	Have you ever been punished at school in the past 12 months?	YES NO	1 2	→219

21 8	How were you punished?  <b>Circle all responses given</b>	Expelled from class room 1 Expelled from school/suspended 2 Doing extra work/detention 3 Hitting /caning 4 Other (specify) 5 _____	
21 9	We know that there are sometimes problems in schools. Think about your school /the one you last attended. Which of these do you think apply? Read out options. Circle answer.  a) Dirty classrooms b) Crowded classrooms c) Teacher often absent in classroom d) Teachers drunk e) Teachers being threatened by student f) Noisy classrooms g) Drug dealing h) Bad security just outside school Sexual harassment by students j) Sexual harassment by teachers/staff	YE N S O  1 2 1 2	
22 0	Do/did you have access to copies of all required textbooks, some of the required textbooks, or none of the required textbooks?	ALL 1 SOME 2 NONE 3	→224
22 1	What was the <u>main</u> reason that you do/did not have copies of all required textbooks?	BOOKS TOO EXPENSIVE 1 BOOKS NOT PROVIDED BY SCHOOL 2 BOOKS NOT AVAILABLE 3 PARENTS DID NOT PROVIDE MONEY 4 OTHER (specify) _____ 5	

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### WORK ACTIVITIES

Now I want to talk to you about work that you might have ever done to earn money.			
224	Have you ever undertaken any kind of work, whether for yourself or for other people, for which you have earned money?	YES 1 NO 2	→ <b>CH K.23 5</b>
225	In what year did you first do any work for money?	YEAR _____	
225 a	Were you enrolled in school or studying when you first did any work for money?	YES 1 NO 2 DURING HOLIDAYS/ VACATION ONLY 3	

226	Have you done any such work during the last 12 months?	YES NO	1 2	→ <b>CH</b> <b>K.23</b> <b>5</b>
226 a	Were you enrolled in school or studying when you did any of this work in the last 12 months?	YES NO DURING HOLIDAYS/VACATION ONLY	1 2 3	
226 b	Who made the decision that you should work? (Interviewer: circle all that apply)	SELF MOTHER FATHER AUNT/UNCLE SIBLING GRANDPARENT OTHER RELATIVE TEACHER/COUNSELOR OTHER (SPECIFY) _____	1 2 3 4 5 6 7 8 9	



235	What would you say is/was the thing you spend <b>most</b> of the money you earn/earned from this activity? <b>Do not read out. Circle up to 2</b>	Entertainment for myself	1	
		Food for myself/my own child	2	
		Food for others in the family	3	
		Rent	4	
		Clothes for myself/my own child	5	
		Clothes for others in the family	6	
		Gave it to parents/caregivers	7	
		Presents or money given to girl/boyfriend	8	
		Saved money for later	9	
		Education expenses for myself	10	
		Education expenses for my child	11	
		Education expenses for other family	12	
		Purchases of durables (car, tv, furniture)	13	
		Pay accounts	14	
		Other (specify)	15	
235 a	Where do you keep the money that you don't spend?	BANK ACCOUNT	1	
		GIVE IT TO OTHER FAMILY MEMBER	2	
		I HIDE IT	3	
		STOKVEL	4	
		FUNERAL SOCIETY	5	
		I SPEND IT ALL	6	
		OTHER (specify)	7	

CHK. 235 We have just talked about working for money, but there are other kinds of work. We have just talked about work activities that you have done for which you earn money directly for yourself. You may also do other activities to assist family members or others. Sometimes this may be for cash, or it may be for food, or simply because your family expect you to help, but not for cash. Examples are odd jobs/ errands, piece work, helping a relative make food to sell, working at the counter of a family business, or helping at a crèche, even if its only for a morning.

235 b	Have you ever undertaken any kind of these activities, whether for yourself or for other people that you have not yet told me about?	YES	1	→ 236
		NO	2	
235 c	In what year did you first do any of these activities?	YEAR	_____	
235 c	Have you done any of these activities during the last 12 months?	YES	1	→ 236
		NO	2	
235 d	What activities have you undertaken over the past 12 months? (Most recent three) Describe type of activity Probe: any odd jobs, errands, etc.	1).....	.....	
		2).....	.....	
		3).....	.....	
		.....	.....	

#### WORK SEEKING

Now I want to talk to you about trying to find work.				
236	Have you ever spent time actively looking for work?	YES	1	→244
		NO	2	
237	In what year did you first actively look for work?	YEAR	_____	

238	What was the longest time you have spent actively looking for work before you either found work or gave up actively looking for work?	LESS THAN ONE 996 MONTH OR... [____] MONTHS	
239	Have you actively looked for work during the last 12 months?	YES 1 NO 2	→244
I would like you to think about the times you have looked for work over the past 12 months.			
240	What have been the different ways in which you have looked for work? Let R. describe ways of looking for work and then code appropriately.  Through a friend or family member Through an advert in the newspaper or elsewhere From point of employment (i.e. factory gate) From a collection point (i.e. street corner) Asking around in the neighbourhood Through an employment agency/placement service Other (specify) _____	<b>Code:</b> Activity 1: [____] Activity 2: [____] Activity 3: [____]	

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TIMEUSE I now want to ask you about your activities in the last 7 days.

**Interviewer: CHECK Q203. IF R IS CURRENTLY ENROLLED → Q245  
IF R IS NOT ENROLLED → Q249**

245. Did you miss any scheduled classes in the last 7 days? YES 1  
NO 2

246. Were you able to complete all assignments that were due in the last 7 days?

247. YES 1 (includes, lab work and group assignments)  
NO 2

247. Did you participate in all scheduled extra-curricular activities in the last 7 days? YES 1  
NO 2

248. How many hours did you spend in school or studying in the last 7 days? \_\_\_ hours

249. How many hours in the past 7 days did you spend doing unpaid chores or work around the house yesterday? (such as cooking, cleaning, fetching water, child care, yard work, and home maintenance) \_\_\_ hours

250. How many hours in the past 7 days did you spend working for pay? \_\_\_ hours

251. How many hours (in the last 7 days) did you spend in organized activities yesterday? (such as playing sports, attending religious services, and participating in clubs or group activities) \_\_\_ hours

Section 3 Exposure to Life Skills & Connectedness  
Life Skills

	<b>FILTER B: CHECK 213 AND FILTER A</b> <b>(include all those who are currently in secondary school or have ever gone to school since Jan 2000)</b>  HAS <i>EVER</i> GONE TO SCHOOL SINCE JANUARY 2000 [ _ ] ↓		<b>HAS <i>NEVER</i> GONE TO SCHOOL SINCE JANUARY 2000</b> [ _ ] → GO TO Q307																																							
301	Do/did you have a “Life Skills” or life orientation / sex education program at your school?	YES 1 NO 2 DON’T KNOW -1																																								
302	Do/did you recall the following subjects being discussed in class during this school year/your last year at school?  <b>Read out options. Circle appropriate answer for each subject.</b>  a. Self esteem/decision making/attitudes/values Understanding sexuality – relations with the opposite sex Reproductive biology Human growth and development – life cycle Contraception/preventing unwanted pregnancy Relationships – negotiation/assertiveness Violence and Sexual abuse – child abuse, incest and rape HIV/AIDS – preventing transmission – how to use a condom HIV/AIDS – looking after people with AIDS Sexually transmitted diseases (STDs) – prevention/symptoms Drugs and alcohol	<table border="0"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr><td></td><td>1</td><td>2</td></tr> </tbody> </table>		YES	NO		1	2		1	2		1	2		1	2		1	2		1	2		1	2		1	2		1	2		1	2		1	2		1	2	<b>If NO to all: →306</b>
	YES	NO																																								
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303	Who led the discussions or made the presentations of these subjects?  <b>More than one response possible</b>	TEACHERS / SCHOOL 1 COUNSELLORS 2 ADULT FROM OUTSIDE THE SCHOOL 3 STUDENTS FROM THE SCHOOL/PEERS 4 ADOLESCENTS/ YOUNG ADULTS FROM OUTSIDE THE SCHOOL 5 NURSE/HEALTH WORKER FROM CLINIC 6 OTHER (specify) _____																																								
304	Were most of these subjects discussed in: - Separate subjects in school time - Taught inside other subjects - As special events/presentations? <b>More than one response possible</b>	SEPARATE SUBJECTS IN SCHOOL TIME 1 INSIDE OTHER SUBJECTS 2 AS SPECIAL PRESENTATIONS/EVENTS 3																																								

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305	In last four weeks of regular class time at school, about how many hours were spent on these subjects. Interviewer help with calculations	[ ] HOURS DON'T KNOW / CAN'T REMEMBER	-1	
305 a	<b>Sometimes these topics are presented by organizations or speakers in places other than school. In the last 4 weeks have you ever attended presentations, participated in a group, watched or heard special TV or radio programs, or participated in special events which had discussions on these topics outside of school?</b>	YES NO	1 2	→ 306
305 b	<b>About how many hours during the last four weeks did you attend or listen to these special presentations?</b>	[ ] HOURS DON'T KNOW / CAN'T REMEMBER	-1	
305 c	<b>Can you tell me the names of the organizations making these presentations which you have attended in the past four weeks?</b>	DRAMAIDE SOUL CITY PLANNED PARENTHOOD LOVELIFE /NASHI I HAVE HOPE/OLD MUTUAL SOUL BUDDYZ SOCIETY FOR FAMILY HEALTH/ ABASHA PHEZULU AIDS FOUNDATION CLINIC/NURSE/MEDICAL PROFESSIONALS THE 'Y' (YMCA)/BETTER LIFE OPTIONS CHURCH GROUP/RELIGIOUS ORGANIZATION OTHER (SPECIFY) _____ DON'T KNOW/CAN'T REMEMBER	1 2 3 4 5 6 7 8 9 10 11 12 -1	

**CONNECTEDNESS**

306	For each of the following statements indicate whether you agree or disagree.	AGREE	DISAGREE
	a) I have many friends at this school.	1	2
	b) The teachers at this school care about the students.	1	2
	c) The principal at this school cares about the students.	1	2
	d) There is a teacher at this school that I can talk to if I have a problem.	1	2
	e) I participate in school activities outside of class.	1	2
	f) I would be much happier if I attended another school.	1	2
	g) There is a lot of fighting and violence among students at my school.	1	2
	I feel safe at school	1	2
	Sexual harassment is a problem at this school.	1	2
307	For each of the following statements indicate whether you agree or disagree.	AGREE	DISAGREE
	a) I have many friends in my neighborhood / community.	1	2
	b) I feel safe walking around in my neighborhood / community during the day.	1	2
	c) The adults in my neighborhood / community will help other families when they are in trouble.	1	2
	d) There is a lot of crime in my neighborhood / community.	1	2
	e) There is a lot of violence among young people in my neighborhood / community.	1	2
	f) I would be much happier if I lived in another community	1	2
	g) People in my neighborhood trust one another.		

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308 a	<p>Do you do any volunteering work in your community?</p> <p>Can you tell me what volunteer work you do?</p> <p>How many hours a week do you work as a volunteer?</p>	<p>YES NO (if no go to 308b)</p> <p>HOURS 1-2 2-4 &gt;10</p>	<p>1 2</p> <p>1 2 3</p>
308 b	<p>Do you belong to one of the following organizations? [Read out options; probe for others!]</p> <p>SAVINGS GROUP / STOKVEL COMMUNITY GARDEN GROUP SEWING GROUP SPORTS GROUP STUDY GROUP DANCING/SINGING, MUSIC OR CHOIR GROUP RELIGIOUS GROUP RELIGIOUS YOUTH GROUP OTHER YOUTH GROUP OTHER (specify) _____ OTHER (specify) _____ OTHER (specify) _____</p>	<p>YES N 1 O 1 2 1 2 1 2 1 2 1 2 2 1 1 2 Name.....Activity..... 1 2 ..... 3 2 Name.....Activity..... 3 ..... 3 Name.....Activity..... ..... Name.....Activity..... ..... Name.....Activity..... .....</p>	
309	<p>Who are the two individuals in your life that you feel closest to? Could you mention 1 person in your family and 1 person out side your family? What is the age of this person?</p> <p><b>(Interviewer: ask for <u>relationships</u>, not names!, i.e. father, sister, grandmother, friend, neighbour)</b></p>	<p>Person in family Relationship: [ ][ ] _____ — Age: [ ] Sex: M F</p>	<p>Person outside family Relationship: [ ][ ] _____ — Age: [ ] Sex: M F</p>



404	Do you personally know anyone who is infected with HIV/AIDS?	YES NO UNSURE NR/REFUSE	1 2 3 -3	→406 →406
405	What is your relationship with this person/these persons?  <b>Multiple answers possible</b> <b>Circle all mentioned by R</b>	CLOSE FAMILY MEMBER OTHER RELATIVE CLOSE FRIEND FRIEND ACQUAINTANCE NEIGHBOUR MYSELF OTHER (specify) _____ NR/REFUSE	1 2 3 4 5 6 7 8 -3	
406	Do you personally know anyone who has died or you think has died of AIDS?	YES NO UNSURE NR/REFUSE	1 2 3 -3	→408 →408
407	What was your relationship with this person/these persons?  <b>Multiple answers possible</b> <b>Circle all mentioned by R</b>	CLOSE FAMILY MEMBER OTHER RELATIVE CLOSE FRIEND FRIEND ACQUAINTANCE NEIGHBOUR OTHER (specify) _____ NR/REFUSE	1 2 3 4 5 6 7 -3	
408	Do you think most of your close friends are at risk of getting the AIDS virus?	YES NO DON'T KNOW	1 2 -1	
409	<b>If R. has mentioned he/she is HIV positive (if Q405 =7) →415</b> Do you think you have no risk, a small risk, a moderate risk or a great risk of getting the AIDS virus in the next 12 months?	NO RISK SMALL RISK MODERATE RISK GREAT RISK [IF VOLUNTEERED: IS HIV POSITIVE] REFUSE	1 2 3 4 5 -3	→415 →41 1

410	What is the <u>main</u> reason why?  <b>Do not read out. Circle one answer.</b>	ABSTINENT/NO SEX HAS ONLY ONE PARTNER ALWAYS USES CONDOM USES CONTRACEPTIVE USES TRADITIONAL MEDICINE HAS SEX WITH A VIRGIN PARTNER IS FAITHFUL NO NEEDLE USE NO BLOOD CONTACT THERE IS NO SUCH THING AS AIDS IT CAN'T HAPPEN TO ME HAS MULTIPLE PARTNERS PARTNER IS INFECTED HAS UNPROTECTED SEX DRUG USE ACCIDENTS CONTACT SPORTS RAPE OTHER (specify) _____ DON'T KNOW	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 -1	
411	If you wanted to have a test for HIV, where could you go?  <b>Do not read out. Select all that apply.</b>	HOSPITAL/CLINIC PRIVATE DOCTOR FAMILY PLANNING CLINIC PHARMACY BLOOD BANK SELF-TESTING KIT SCHOOL WORK MOBILE CLINIC OTHER (specify) _____ DON'T KNOW REFUSE	1 2 3 4 5 6 7 8 9 10 -1 -3	
412	I will not ask you for the result, but have <i>you</i> ever had an HIV/AIDS test?	YES NO NR/REFUSE	1 2 -3	→413
412 a	Would you want to be tested in the future?	YES NO	1 2	→415 →415
413	Did you find out the results of your test?	YES NO NR/REFUSE	1 2 -3	→415 →415
414 a	Why did you not find out the results of the test?	DID NOT WANT TO KNOW WAS SCARED TO FIND RESULT WAS TOLD I COULD NOT FIND OUT TEST NOT RELIABLE NO ONE TOLD ME OTHER (specify) _____ DON'T KNOW NR/REFUSE	1 2 3 4 5 6 -1 -3	

415	If you found out that you were infected with the AIDS virus, would you tell your partner if you had one? In case R. says he/she is HIV+, rephrase: When you found out you were HIV+, did you tell your partner if you had one?	YES NO  DO NOT HAVE PARTNER NR/REFUSE	1 2  3 -3	→417  →417 →417
416	Why would you not tell your partner? <b>Interviewer: Do not read options</b> <b>Circle all mentioned by R.</b>	WOULD FEEL ASHAMED AFRAID TO LOSE PARTNER SCARED OF VIOLENT/AGRESSIVE REACTION EVERYBODY WOULD KNOW NONE OF HIS/HER BUSINESS OTHER _____ (specify)	1 2 3 4 5 6	
417 a	Who (else) would you tell? <b>Interviewer: Do not read options</b> <b>Circle all mentioned by R.</b> Probe: Anybody else?	PARENTS BROTHER/SISTER OTHER FAMILY MEMBERS FRIENDS CLASS MATES EMPLOYER/CO-WORKERS RELIGIOUS LEADER NO ONE OTHER _____ (specify)	1 2 3 4 5 6 7 8 9	
417 b	If a member of your family got HIV or AIDS, would you want it to be a secret?	YES NO DON'T KNOW REFUSE	1 2 -1 -3	
418	Would you be willing to [read option] someone in your family if he or she became sick with AIDS? a. feed b. bathe c. help to toilet	YES  NO	1 1 1 2 2 2	

420	Would you [read each option] somebody who is infected or you suspect is infected with the HIV virus? a. Share food with b. Share kitchen utensils with c. Share a bed with (no sex) d. Touch: holding hands/hugging e. Sit next to f. Use same toilet as g. Have as a friend Work together with Like to throw an infected relative out of the house Exclude someone who was infected from your group	YES 1 1 1 1 1 1 1 1 1 1 1	NO 2 2 2 2 2 2 2 2 2 2 2	
419	Do you think that a student who is infected with HIV should be allowed to remain in school?	YES NO	1 2	
420 b	Are families who have lost someone to AIDS treated better, same or worse by people in your community than those who have lost someone to another disease/accident?	Treated Worse Treated Same Treated Better DON'T KNOW	1 2 3 -1	
420 c	Is a woman with HIV or AIDS treated better, same or worse by people in your community than an infected man?	Treated Worse Treated Same Treated Better DON'T KNOW	1 2 3 -1	
420 d	What kinds of treatment do people with AIDS and families face in this community? Do not read R can mention more than one answer	Isolation Verbal abuse Physical abuse Rumours/gossip Rejection Ejection from home Rejection from community Love Kindness Help Other _____	1 2 3 4 5 6 7 8 9 10 12	

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STD's: Knowledge and Experience

421	Have you ever heard of diseases <i>other than HIV/AIDS</i> that can be transmitted through sexual intercourse?	YES NO	1 2	→501
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422	Can you describe any symptoms of STD's in <u>women</u> ?  <b>Do not read out the symptoms</b> Circle <i>all</i> symptoms mentioned by R Probe: "Any others you know of?"	ABDOMINAL PAIN 1 FOUL SMELLING DISCHARGE 2 BURNING PAIN ON URINATION 3 GENITAL ULCERS/SORES 4 SWELLINGS IN GROIN 5 ITCHING 6 OTHER (specify) _____ 7 DON'T KNOW -1	
423	Can you describe any symptoms of STD's in <u>men</u> ?  <b>Do not read out the symptoms</b> Circle <i>all</i> symptoms mentioned by R Probe: "Any others you know of?"	GENITAL DISCHARGE 1 BURNING PAIN ON URINATION 2 ITCHING 3 GENITAL ULCERS/SORES 4 SWELLINGS IN GROIN 5 CAN'T RETRACT FORESKIN 6 OTHER (specify) _____ 7 DON'T KNOW -1	
424	What, if anything, can a person do to avoid getting STD's?  <b>Do not read out</b> Circle <i>all</i> ways mentioned by R Probe: "Any others you know of?"	ONE CAN'T DO ANYTHING 1 USE CONDOMS 2 NON PENETRATIVE SEX/THIGH SEX 3 WASHING/DOUCHING WITH 4 (specify substance) _____ 5 _____ 6 _____ 7 AVOID CASUAL PARTNERS 8 ABSTINENCE FROM SEX 9 AVOID SEX WORKERS -1 USE TRADITIONAL MEDICINE/HERBS OTHER (specify) _____ DON'T KNOW	
425	Have you ever had an STD?	YES 1 NO 2 DON'T KNOW -1	→500
426	Where did you go to get it treated/cured?	Pharmacy 1 Doctor's office 2 Clinic/hospital 3 Traditional Healer 4 Didn't go anywhere 5 Other 6 Refuse -3	



508	Which method did you use?  <b>Interviewer: Do not read out Probe for the method!</b>	PILL 1 IUD/LOOP 2 INJECTABLE/DEPOPROVERA 3 CONDOM 4 FEMALE CONDOM 5 TRADITIONAL METHOD/HERBS (Specify _____) 6 NON PENETRATIVE SEX/THIGH 7 SEX 8 SAFE DAYS/ABSTINENCE 9 WITHDRAWAL BEFORE 10 EJACULATION OTHER (specify)_____	
509	The first time you had sex did you use a method to prevent disease?	YES 1 NO 2	→51
510	Which method did you use?  <b>Interviewer: Do not read out</b>	PILL 1 INJECTABLE/DEPOPROVERA 2 CONDOM 3 FEMALE CONDOM 4 TRADITIONAL METHOD/HERBS (Specify _____) 5 WASHING/DOUCHING WITH (specify) _____ 6 _____ 7 NON PENETRATIVE SEX/THIGH 8 SEX 9 SAFE DAYS/ABSTINENCE 10 WITHDRAWAL BEFORE EJACULATION OTHER(specify)_____	
511	Thinking about first time you had sexual intercourse, could you tell me which statement best describes your experience? <b>Read out:</b> “I was willing” “I was persuaded” “I was tricked” “I was forced” “I was raped”	WILLING 1 PERSUADED 2 TRICKED 3 FORCED 4 RAPED 5 REFUSE -3	
512	Have you ever received anything such as money, gifts, help with schoolwork or something else, which was given to you so you would have sex with him/her?	YES 1 NO 2 DON'T KNOW/DON'T -1 REMEMBER -3 NR/REFUSE	→51 →51 →51

513	What did you receive?  <b>Do not read out. Multiple responses possible</b> Probe: Anything else?  <b>If R says "gift", probe for type of gift!</b>	MONEY 1 FOOD 2 SCHOOL FEES 3 HELP WITH SCHOOLWORK 4 DRUGS (including glue) 5 ALCOHOL 6 SHELTER / RENT 7 CLOTHES 8 TRANSPORT 9 JEWELRY 10 ENTERTAINMENT (movies / video games) 11 OTHER 12 (specify) _____	
514	Have you ever given anything to someone so they would have sex with you?	YES 1 NO 2 DON'T KNOW/DON'T 1 REMEMBER -1 NR/REFUSE -3	→51 →51 →51
515	What did you give?  <b>Do not read out. Multiple responses possible</b> Probe: Anything else?  <b>If R says "gift", probe for type of gift!</b>	MONEY 1 FOOD 2 SCHOOL FEES 3 HELP WITH SCHOOLWORK 4 DRUGS (including glue) 5 ALCOHOL 6 SHELTER / RENT 7 CLOTHES 8 TRANSPORT 9 JEWELRY 10 ENTERTAINMENT (movies / video games) 11 OTHER 12 (specify) _____	
516	Has any man or woman ever touched you in an unwanted sexual way, such as touching, kissing, grabbing or fondling?	YES 1 NO 2 DON'T KNOW/DON'T 1 REMEMBER -1 NR/REFUSE -3	
517	Have you ever had sexual intercourse when somebody was physically forcing you, hurting you, or threatening you?	YES 1 NO 2	→51
518	Have you ever tried to refuse sex but not been successful?	YES 1 NO 2	

<b>Interviewer: Ask 520-536 about the <u>most recent</u> sexual partner in the last 12 months, then ask 520-536 about the 2<sup>nd</sup> most recent partner in the last 12 months and finally about the third most recent partner in the last 12 months.</b>	Partner 1 (MOST RECENT)	Partner 2	Partner 3
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520	Think about your <u>most recent</u> sexual partner. How would you describe this partner? <b>[Read out options]</b> 1. Spouse 2. Casual acquaintance 3. Friend 4. Girlfriend/Boyfriend 5. Fiancé(e) 6. Relative 7. Partner is/was teacher 8. Partner is/was sex worker 9. Other (specify)	1 2 3 4 5 6 7 8 9 _____ -	1 2 3 4 5 6 7 8 9 _____ -	1 2 3 4 5 6 7 8 9 _____ -	
521	How old is/was this partner? AGE IN YEARS -1 DON'T KNOW -3 REFUSE	[____] -1 -3	[____] -1 -3	[____] -1 -3	
522	What is/was his/her race? 1. Black 2. Coloured 3. Indian 4. White 5. Other (specify)	1 2 3 4 5 _____ -	1 2 3 4 5 _____ -	1 2 3 4 5 _____ -	
523	What is/was their sex?	MALE 1 FEMALE 2	MALE 1 FEMAL 2 E	MALE 1 FEMAL 2 E	
524	Does he/she live in the same neighbourhood /area?	YES 1 NO 2	YES 1 NO 2	YES 1 NO 2	
525	When did you start your sexual relationship?	Month [____] Year ____	Month [____] Year ____	Month [____] Year ____	
526	How many times did you have sex with him/her in the last month?	[____]	[____]	[____]	
526a	Have you ever had dry sex with him/her?	YES 1 NO 2	YES 1 NO 2	YES 1 NO 2	
527	Is he/she still your sexual partner?	YES 1 NO 2	YES 1 NO 2	YES 1 NO 2	
519	With how many <b>partners</b> have you had sex in the last 12 months?	NUMBER OF PARTNERS [____] NO PARTNERS IN THE PAST 12 96 MONTHS -3 NR/REFUSE			→53 →53

528	Have/had you ever talked to him/her about: <b>(read out each option and circle answer)</b> a) Avoiding or delaying sex b) Ways to avoid pregnancy c) Use of condoms d) Avoiding HIV/AIDS e) Avoiding sexually transmitted diseases	YES 1 1 1 1 1	NO 2 2 2 2 2	YES 1 1 1 1 1	NO 2 2 2 2 2	YES 1 1 1 1 1	NO 2 2 2 2 2
529	How confident are you that you could convince him / her that he or she should use a condom if you wanted to use one?	VERY FAIRLY NOT	1 2 3	VERY FAIRLY NOT	1 2 3	VERY FAIRLY NOT	1 2 3
531	What was the <u>main</u> reason you used a condom? <b>Do not read options</b>  1. Own concern to prevent pregnancy 2. Own concern to prevent STD/HIV 3. Own concern to prevent pregnancy and STD/HIV 4. Did not trust partner/feels partners has other partners 5. Partner insisted/partners choice 6. Other (specify)  8. Don't know						
532	The last time you had sex, who made the decision to use a condom	SELF PARTNER BOTH OTHER (specify)  DON'T KNOW	1 2 3 4  -1	SELF PARTNER BOTH OTHER (specify)  DON'T KNOW	1 2 3 4  -1	SELF PARTNER BOTH OTHER (specify)  DON'T KNOW	1 2 3 4  -1
533	How often do/did you use a condom with this partner?	ALWAYS USUALLY SOMETIMES RARELY NEVER	1 2 3 4 5	ALWAYS USUALLY SOMETIMES RARELY NEVER	1 2 3 4 5	ALWAYS USUALLY SOMETIMES RARELY NEVER	1 2 3 4 5
534	The last time you had sex with him/her, did you or your partner use or do something to prevent pregnancy?	YES NO → <b>if other partner →520</b> <b>if no partner →537</b>	1 2	YES NO → <b>if other partner →520</b> <b>if no partner →537</b>	1 2	YES NO → <b>if other partner →520</b> <b>if no partner →537</b>	1 2



539	Did you do any of the following the last time you had a genital ulcer/sore or abnormal genital discharge: Read out. Circle appropriate answers. Probe for anything else.		YES	N O
	a. Seek advice/medicine from a health worker in a government clinic?	1	1	2
	A2. Seek advice/medicine from a private doctor?	1	1	2
	b. Seek advice/medicine from a pharmacist ?	1	1	2
	c. Seek advice/medicine from a traditional healer?	1	1	2
	d. Took medicine you had at home?	1	1	2
	e. Tell your sexual partner about the discharge/ sore?	1	1	2
	f. Stop having sex when you had the symptoms?	1	1	2
	g. Use a condom when having sex during the time you had the symptoms?	1	1	2
	h. Obtain a diagnosis?			2
	i. Anything else? _____	Specify:		
540	If you had a fever, where would you go?	Nowhere Traditional Healer Pharmacy Government clinic Private Doctor School Clinic	1 2 3 4 5 6	

Section 6 Condom use and accessibility

I would like to ask you some questions about condoms and condom use.			
601	Do you know of a place where one can get condoms?	YES NO	1 2
			<b>→604</b>

602	Where is that?	HOSPITAL/HEALTH	1	
		CENTER/CLINIC	2	
	<b>Do not read out</b>	MOBILE CLINIC	3	
		FIELD WORKER	4	
	<b>Probe: Any other places?</b>	PHARMACY	5	
		PRIVATE DOCTOR	6	
	<b>Circle all mentioned by R</b>	SHOP	7	
		CHURCH	8	
		SCHOOL / SCHOOL CLINIC	9	
		FRIENDS/RELATIVES	10	
		TRADITIONAL HEALER	11	
		PRIVATE SALE BY NURSE / SISTER	12	
		AT WORK	13	
	OTHER	(specify)		
603	How confident are you that you could get a condom if you needed one?	VERY CONFIDENT	1	
		SOMEWHAT CONFIDENT	2	
		NOT CONFIDENT	3	
604	How confident do you feel that you know how to use a condom effectively?	VERY CONFIDENT	1	
		SOMEWHAT CONFIDENT	2	
		NOT CONFIDENT	3	
604 a	How many boys/girls your age in your circle of friends do you think regularly use a condom?	NONE	1	
		A FEW	2	
		HALF	3	
		MOST	4	
		DON'T KNOW	-1	
604 b	Would your friends laugh at you for only having sex using a condom?	YES	1	
		NO	2	
		DON'T KNOW	-1	
605	Now I am going to read some statements. After I read each statement, I want you to tell me whether you agree or disagree with the statement.	AGREE	DISAGREE	
	a) You can easily get condoms any time you want to.	1	2	
		1	2	
	b) Carrying condoms is difficult because it makes it look as if one has planned to have sex.	1	2	
		1	2	
	c) Using condoms reduces sexual pleasure.	1	2	
	d) When a relationship moves from casual to serious, it is no longer necessary to use a condom.	1	2	
		1	2	
		1	2	
	e) A woman loses a man's respect if she asks him to use a condom.			
f) It is embarrassing to buy or ask for condoms				
g) Using a condom is a sign of not trusting your partner.				



709	Have you ever belonged to a gang – even for a very short time?	YES NO	1 2	
710	Have you ever been arrested?	YES NO	1 2	

Section 8 Reproductive Health

Now I would like to ask you some questions about pregnancy and having children.				
801	During which part of the monthly cycle does a woman have the greatest chance of becoming pregnant? <b>[If R answers “at ovulation” probe for when R thinks ovulation takes place]</b>	IN THE MIDDLE OF HER CYCLE DURING HER PERIOD RIGHT AFTER HER PERIOD HAS ENDED JUST BEFORE HER PERIOD BEGINS SAME CHANCE ALL THE TIME OTHER (Specify _____) DON'T KNOW /DON'T REMEMBER	1 2 3 4 5 6 -1	
802	Can a girl get pregnant if she has sex only once?	YES NO DON'T KNOW/DON'T REMEMBER	1 2 -1	
804	Which family planning methods do you know to avoid getting pregnant?  <b>Circle all methods mentioned by R</b>  <b>Probe: “Any other method you know of?”</b>	PILL INJECTABLE/DEPOPROVERA CONDOM FEMALE CONDOM TRADITIONAL METHOD/HERBS (Specify _____) WASHING/DOUCHING WITH (specify) _____ _____ NON PENETRATIVE SEX/THIGH SEX SAFE DAYS/ABSTINENCE WITHDRAWAL BEFORE EJACULATION OTHER(specify)_____	1 2 3 4 5 6 7 8 9 1 0	

I would like to discuss what young people, such as yourself and your friends, talk about. Young people may talk to different people about different things that concern them. They may talk to family members, friends, teachers or health personnel/counselors. I am going to read a list of topics that young people may talk about. I would like you to tell me whether you have discussed this topic in the last six months and, if so, with whom you have discussed the topic.



811	<b>Have you heard about family planning during the last month :</b> Read out a) <b>On the radio?</b>  b) <b>On television?</b>  c) <b>In a newspaper or magazine?</b>	ON THE RADIO  ON TELEVISION  IN NEWSPAPER/MAGAZINE	YES 1  1  1	NO 2 2 2	
812	<b>From which programs on TV and Radio do you get your information on HIV/AIDS or family planning?</b>  <b>Interviewer: Do NOT READ OUT</b>	SOUL CITY LOVELIFE OTHER _____		1 2 3	
<b>812 FILTER: RESPONDENT IS FEMALE [ _ ]                      RESPONDENT IS MALE: [ _ ] → SECTION 9</b> ↓					
<b>FILTER: CHECK QUESTION 602:</b>  <b>GIRL HAS HAD SEXUAL INTERCOURSE [ _ ]                      GIRL NEVER HAD SEXUAL INTERCOURSE : [ _ ] → FUN Q'S</b> ↓					
Now I would like to talk with you about pregnancy, and any children you may have had.					
812	<b>I would like to know if you have ever been pregnant. Even if you did not actually give birth – if you had a miscarriage, or an abortion, or the baby died before or just after birth – that still counts for me as a pregnancy. Keeping this in mind, have you ever been pregnant?</b>  (Interviewer: If the answer is “NO”, probe once: Including pregnancies that ended in miscarriage or abortion, or in which the baby died?)	YES NO DON'T REMEMBER NR/REFUSE		1 2 -1 -3	→Fun Q →Fun Q →Fun Q
	<b>How old were you when you first got pregnant?</b>	AGE [ ][ ]			
812 a	<b>Are you currently pregnant?</b>	YES NO DON'T REMEMBER NR/REFUSE		1 2 -1 -3	→F. 813 →F. 813 →F. 813
812 b	<b>Did you want to become pregnant?</b>	YES NO DON'T KNOW		1 2 -1	

<b>FILTER 813: CHECK 812 AND 812A</b> <b>GIRL HAS BEEN PREGNANT OR IS CURRENTLY PREGNANT [ _ ]</b>		<b>GIRL HAS NEVER BEEN PREGNANT : [ _ ]</b>	
↓			
→FUN Q'S			
813	How many times have you been pregnant? (interviewer: INCLUDE current pregnancy)	[____] TIMES	
814	Were you in school when you first fell pregnant?	YES 1 NO 2	→818
815	Did you ever leave school because you fell pregnant?	YES 1 NO 2	→818
816	Did you resume school after the pregnancy?	YES 1 NO 2 STILL PREGNANT WITH FIRST BABY 3	→818 →818
817	What was the <u>main</u> reason you did not resume school after the pregnancy?	TAKING CARE OF THE BABY 1 NOT INTERESTED 2 COULDN'T GET PLACE IN SCHOOL 3 COULD NOT PAY SCHOOL FEES 4 GOT A JOB 5 SHAME 6 SCHOOL DID NOT ALLOW 7 FAMILY DID NOT ALLOW 8 BABY'S FATHER/MOTHER DID NOT ALLOW 9 OTHER (specify) 10	
818	Have you ever been pregnant when you did not want to be?	YES 1 NO 2 DON'T KNOW/DON'T REMEMBER -1	
819	Have you ever tried to end a pregnancy?	YES 1 NO 2 DON'T KNOW/DON'T REMEMBER -1	→825 →825
820	The last time you tried to end a pregnancy, where did you try to end your pregnancy?	HOSPITAL / CLINIC 1 PRIVATE DOCTOR IN 2 DOCTOR'S OFFICE 3 NURSE/SISTER IN PRIVATE HOME 4 AT HOME 5 TRADITIONAL HEALER 6 OTHER (specify)	→822 →822

825	Now I would like to ask you about any babies you may have had, including babies who were born alive but later died, even when shortly after birth. Have you ever given birth?	YES 1 NO 2	→827
826	In total, how any babies have you given birth to, including any that may have been born alive, but later died?	NUMBER [_____]	

827	<p>FILTER: CHECK 825</p> <p><b>GIRL HAS EVER GIVEN BIRTH [ _ ]                      GIRL HAS NOT GIVEN BIRTH [ _ ]</b></p> <p>→ 'FUN' Q'S</p> <p style="text-align: center;">↓</p> <p style="text-align: center;"><b>Complete birth history on next page</b></p>
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	<b>FUN QUESTIONS TO END WITH:</b> <b>1. What is your favorite radio or TV show?</b> _____ <b>2. Who is your favorite singer or group?</b> _____ <b>3. Who is your favorite sports star?</b> _____
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**END OF QUESTIONNAIRE**

Thank the respondent for his/ her participation.

Also, explain that we would like to obtain his/her name and address and that of two friends/relatives who would know where R. would go if he/she was to move in the next 2 years. It is very important that we know how to locate the respondent for the third round of the study.

**Ask for two contact addresses in addition to respondent's address:**

<b>1. Name</b>	
<b>Street: nr.</b>	
<b>Flat (apartment)/ Building Name</b>	
<b>Postal Code</b>	
<b>City/town</b>	
<b>Tel: (code)number</b>	( )

<b>2. Name</b>	
<b>Street: nr.</b>	
<b>Flat (apartment)/ Building Name</b>	
<b>Postal Code</b>	
<b>City/town</b>	
<b>Tel: (code) number</b>	( )

INTERVIEWER: CHECK THAT MATERIALS HAVE BEEN LEFT WITH RESPONDENT

REFERRAL LIST   
 PAMPHLETS

**RECORD TIME AT END OF INTERVIEW \_\_\_\_ : \_\_\_\_**