ATTITUDES, KNOWLEDGE AND RELATIONSHIP BEHAVIOUR RELATING TO HIV/AIDS IN THE CONTACT SPORTS RUGBY AND SOCCER AT THE UNIVERSITY OF LIMPOPO (TURFLOOP CAMPUS)

NONHLANHLA BANYINI

MINI-DISSERTATION

Submitted in fulfillment of the requirements for the degree of

MASTERS

in

CLINICAL PSYCHOLOGY

in the

FACULTY OF HUMANITIES

(School of Social Sciences)

at the

UNIVERSITY OF LIMPOPO

SUPERVISOR: Prof KA Nel

2015

DECLARATION

I declare that **ATTITUDES, KNOWLEDGE AND RELATIONSHIP BEHAVIOUR RELATING TO HIV/AIDS IN THE CONTACT SPORTS RUGBY AND SOCCER AT THE UNIVERSITY OF LIMPOPO (TURFLOOP CAMPUS)** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before any other degree at any other institution.

……. **……..**

Full names **Date**

…….

Student number

ACKNOWLEDGEMENTS

I want to thank the following persons for their contributions to this dissertation.

- Thank you to my supervisor, Prof KA Nel, for her guidance and support.
- Rugby and soccer athletes at the University of Limpopo for their willingness to participate in this study.
- Rugby and soccer coaches/managers and players at the University of Limpopo.
- Mr Netshidzivhani V the statistician, for helping me with the statistical analysis.
- My family, friends and colleagues for their support.

ABSTRACT

The purpose of this study was to find out if athletes who participate in soccer and rugby are aware of the risk of HIV infection in contact sports. The sample consisted of male rugby (n=23) and soccer (30) players registered at the University of Limpopo (Turfloop campus). The research was a quantitative in approach with a cross sectional survey design. A qualitative element, in the form of open-ended questions, made the study more holistic as participants were able to express their thoughts freely. Quantitative data were analysed using descriptive statistics (frequencies, percentage and bar-graphs). Thematic Content Analysis was used to analyse the qualitative data obtained from open-ended questions. Thirteen themes were gleaned from the data namely, prevention, well-being, medical assistance, confidentiality, discrimination, fear and anxiety, emotional support, strategy, participation, mandatory testing, risk and relationship ambiguity. Results of the study, both qualitative and quantitative, generally supported previous research in that there are gaps in HIV knowledge, although not statistically significant. Relationship behaviour in terms of an HIV positive diagnosis reflected ambiguity amongst the participants with some participants stating they would tell their partners but many being unsure or not prepared to tell their partners about their status for fear of the relationship ending.

Contents Page **Page number**

CHAPTER 3: THEORETICAL FRAMEWORK

CHAPTER 4: RESEARCH METHODOLOGY

CHAPTER 5: RESULTS AND ANALYSIS

CHAPTER 6: DISCUSSION AND CONCLUSION

List of frequcncy tables, tables and chi - square tables

List of figures

CHAPTER 1: INTRODUCTION

1.1 Introduction

The former Secretary General of the United Nations stated, in his 2006 World AIDS Day address, that AIDS has become the greatest challenge of our generation (Annan, 2006). An HIV diagnosis is a life-changing event that requires people to deal with the disease, as well as coping with AIDS related stigma. According to Statistics South Africa an estimated 200,000 people will die of HIV/AIDS in 2013 (Mascolini, 2013).

There is a need for the education of both professional and amateur athletes concerning the risks of HIV transmission on the sports field, in particular contact sports athletes (Germanos, 2006). There is a risk of HIV transmission during contact sport practice and competition, although it is slight. This could occur through blood exchange when a bleeding wound in an HIV-infected athlete comes into contact with an open wound in an athlete who is not HIV infected (CDC, 1996; Schwellnus & Derman, 2005). If the athletes are both HIV-positive, there is a risk of re-infection. There is a higher risk of HIV transmission in contact sport than in non-contact sport due to the increased risk for blood exchange.

According to Mkize (2009) the psychosocial effects of disclosing a positive HIV diagnosis have been found to be mostly detrimental to individuals in African countries. Disclosure of a positive HIV diagnosis can result in increased stigmatisation and discrimination. Admission of a positive HIV status is problematic in the sporting arena, as most sports where HIV transmission is likely to take place are team sports, where athletes rely on one another for support and often have close contact on the field of play for instance, rugby (Partington, 2001).

1.2 Background to the study

Transcending race, politics or language, sport unites a country (Partingon, 2001; Germanos, 2006). Sport more than any other South African institution, has been noted as having the power to unite the nation after the end of apartheid. For example, when the Springboks won the Rugby World Cup in 1995, Nelson Mandela donned the No. 6 shirt of the team's captain, Francois Pienaar, and they embraced in a natural sign of racial reconciliation (Labuschagne, 2009; Van Heyningen, 2012). However, according to Labuschagne (2009) sport in South Africa remains largely divided along ethnic lines. For instance, football (hereafter referred to as soccer) is the most loved sport in South Africa, amongst Blacks who constitute the greater

part of the population. Cricket, on the other hand, is the second most loved sport in South Africa and is traditionally the sport of the White and Indian South African communities. Currently cricket has a following, albeit small, amongst Black ethnic groups. Rugby is also becoming a more popular sport amongst Black ethnic groups however; it is still most popular amongst people of Afrikaner and English descent.

Sport has often been used as a forum or platform, for educating people and creating awareness of other cultures, as well as a method of promoting healthy lifestyles and attitudes (Germanos, 2006; Hamel, 1992). The present research is designed to produce the information that is required for an understanding of the education needs of the sporting population pertaining to HIV infection. It will also be used for collecting various baseline data with regards to the level of risk-taking behaviour amongst University of Limpopo (Turfloop campus) athletes, specifically those playing high risk blood contact-sports such as rugby and soccer.

1.3 Research problem

HIV/AIDS is a widely researched topic and there have been numerous studies conducted in the area of knowledge, attitudes, perception and behaviour (KAPB) related to HIV/AIDS (Maponyane, 2013; Nel, 2003; Nqojane, 2009). However, little research has been conducted on HIV and sports participation (Germanos, 2006; Partington, 2001).

Contact sports like rugby and soccer comprise of aggressive contact, which often leads to blood injury (Partington, 2001). Soccer is a sport where mild head injuries (MHI) and blood injuries frequently occur, some of which can have serious outcomes. Although soccer was historically designated a non-contact sport it has, in the last two decades, been re-designated as a contact sport (Giannotti, Al-Sahab, McFaull & Tamim, 2010; Kolodziej, Koblitz, Nimsky & Hellwig, 2011). Although there are laws governing how injuries should be treated during contact sports, blood injured athletes often participate for some time in a game (after a blood injury), before being sent off for attention (Germanos, 2006). This makes the chance of them coming into contact with other athletes, while bleeding, quite high. The proposed research will be conducted to find out the knowledge athletes have about HIV/AIDS and if they know what their chances are of contracting HIV during participation in the contact sports rugby and soccer.

The demographic composition of the contact sport players at the University of Limpopo (Turfloop campus) is Black African from mostly disadvantaged backgrounds, unlike other studies on the same phenomena for instance, Germanos (2006) where the majority of the sample were Whites with a few Coloureds and Blacks. In addition to this, unlike the study by Germanos (2006) which took place at the University of the Witwatersrand, which had a sample of professional athletes, the study will focus specifically on amateur players. A questionnaire adapted from Germanos (2006) was used in this study. The present study is thus, a replication of the study by Germanos (2006). It must also be noted that the level of attention after a blood injury is not as high in amateur sports as it is in professional sport.

1.4 Aim of the study

The aim of the research is to find out if athletes who participate in soccer and rugby (contact sports) at the University of Limpopo (Turfloop campus) are aware of the risk of HIV infection in contact sports.

1.5 Objectives of the study

The objectives of the study are to:

1.5.1 determine the level of HIV/AIDS knowledge amongst rugby and soccer players at the University of Limpopo (Turfloop campus);

1.5.2 examine the attitudes that rugby and soccer players at the University of Limpopo (Turfloop campus) have towards athletes who may be HIV positive;

1.5.3 investigate if rugby and soccer players at the University of Limpopo (Turfloop campus) believe that an athlete who participates in rugby or soccer, and who is HIV positive, should be excluded from playing any contact sport;

1.5.4 produce baseline data with regard to the level of risk taking behaviours in players of the contact sports rugby and soccer at the University of Limpopo (Turfloop campus).

1.6 Significance of the proposed research

The study will help evaluate if HIV/AIDS knowledge and education has reached contact sports players, specifically those competing in the contact sports rugby and soccer, at the University of Limpopo (Turfloop campus). The study is also needed to see if this population

is aware that HIV transmission can occur through blood injuries in contact sport. The findings may have implications for the HIV/AIDS education needs for this population**.**

1.7 Summary

Literature reveals that there is a small risk of HIV infection during contact sport but it exists. The study will be a means to observe if the contact sport population is aware that HIV transmission can occur through blood injuries in contact sport.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

According to the National Institute of Allergy and Infectious Diseases (NIAID, 2013) the implementation of scientifically proven HIV prevention strategies is helping to reduce the number of new infections globally. The annual HIV global infection rate fell by 22% from 2001 to 2013. According to NIAID (2013) this is because there was a significant scale-up of proven strategies, coupled with the discovery of new HIV treatment(s). It was also postulated that a safe, effective and durable HIV vaccine is an essential cornerstone to any long-term strategy in achieving HIV prevention.

Misconceptions about HIV/AIDS arise from various sources, from misunderstanding about scientific knowledge regarding HIV infections and the aetiology of AIDS, to misinformation propagated by individuals and groups with ideological stances that deny a causative relationship between HIV infection and the development of AIDS (Flanagan, 2001; Groce & Trasi, 2004). HIV/AIDS was once believed to be a disease of homosexual men and drug users. Athletes, on the other hand, were seen as individuals who had perfect physical strength and fitness and who appeared immune to illness (Germanos, 2006). Reports of famous athletes, originating from the Center of Disease Control (CDC) in the United States of America, becoming infected with HIV in recent years have highlighted the importance of HIV education amongst professional and amateur athletes (CDC, 1996). This led to several serious issues including determining the risk of HIV transmission through sport participation and, if a risk exists, discovering the amount of risk that would be accepted by all involved in the various sporting codes. In addition, there has been a debate over mandatory HIV testing and if players should be excluded from sport based on a positive HIV test (Brown et al., 1994; Umeh, 1997). This has led to concern for non-HIV positive athletes competing in contact sports against those who are HIV-positive, as there are often blood injuries (Umeh, 1997).

In the United States of America (USA) over the past decade, the number of people living with HIV has increased, while the annual number of new infections has remained stable (CDC, 2013). According to Mascolini (2013) HIV/AIDS will account for 32% of all the deaths in South Africa in 2013, this is a decline from 48% in 2005. Recently, South African health Minister Dr Aaron Motswaledi introduced a fixed-dose combination of Antiretroviral (ARV) treatment. This will result in all HIV positive patients in the country taking a single

pill a day from around July 2013 onwards (SAnews, 2013). As there is a very high percentage of infection in South Africa it is likely that contact sports athletes will compete against athletes who are HIV positive (Germanos, 2006).

Peltzer, Matseke, Mzolo and Majaja (2009) found that stigmatising attitudes toward Persons with AIDS (PWAs) reduces an individual's willingness to have themselves tested for HIV infection. This increases the risk of HIV transmission. In addition, other researchers have found that the most significant barriers to voluntary counselling and testing (VCT) services are the fear of being known (by counsellors), fear of being HIV positive and stigmatisation (Kanyemba, 2010; Ulasi et al., 2008). Other reasons given for not testing are a fear of a positive result, and the resultant belief that a positive result means an immediate death sentence (O'Hara, 2007).

2.2 Risk of HIV transmission in Sport

According to Grosset-Janin et al. (2012), most athletes, at both amateur and professional levels of sport, do not give any thought to the possibility of contracting HIV while pursuing a healthy activity. They are not concerned, or aware, that there is the possibility of blood being exchanged through a clash of heads for example, in rugby. Medical experts agree that the chances of this happening are comparatively small. The risk is higher where there tends to be more blood injury, especially in the facial area. It is also worthy of note that young Black males, aged 13 to 29 years, have the highest annual rates of HIV infections in the United States. Young Black men who have sex with men (MSM) are the only subgroup with significant increases in HIV incident infections in recent years. Black men, particularly MSM, are also disproportionately affected by other STIs (Lanier & Sutton, 2013). There is one case of HIV seroconversion in a soccer player, which has only recently been designated a full contact sport, reported by Torre, Sampietro, Ferraro, Zeroli and Speranza (1990). It is more likely that the hepatitis B virus presents a greater risk to athletes who play contact sport, because of its higher concentration in blood and its greater stability in the environment (Mast, Goodman, Bond, Favero, & Drotman, 1995).

Grosset-Janin et al. (2012), indicate that sports involving close contact as well as those that incur injury to the skin such as the martial arts, wrestling, rugby or boxing, expose participants to a higher risk of HIV and hepatitis B transmission. According to Germanos (2006) estimates do differ across various sporting codes. However, sport with the lowest risk of HIV transmission involves little physical contact for example, tennis, cricket and

gymnastics. Low contact sports such as basketball, volleyball and hockey constitute a moderate risk of HIV infection. Designated contact sports such as rugby and soccer thus have a higher risk of HIV infection. However, the main pathways of transmission of blood borne infections in athletes are similar to those experienced in the general population. The greatest risk to the athlete for contracting any blood borne pathogen infection is through sexual activity and parenteral drug use, and not in the sporting arena (Schöffl, Morrison & Küpper. 2011).

According to Deering et al. (2011), background Large-scale international sports events such as the 2010 Winter Olympics Games in Vancouver, Canada had an impact on the vulnerability of sex workers to HIV and sexually transmitted infections (STIs). Despite significant focus on the social legacy of large-scale sports events, there is however, limited research evaluating the impact of such events on sex work. Their study examined the impact of the 2010 winter Olympics on sex work patterns, safety and HIV and other STI infection of sex workers in Vancouver. On the basis of their results they concluded that there were significant changes in sex work patterns, safety and HIV and STI vulnerability of sex workers immediately before and during the 2010 winter Olympics compared to post-Olympic patterns. They also added that displacement of sex workers away from main streets and commercial areas had significant public health implications, since this was shown to promote violence, coercive unprotected sex and increased risk for STIs. However, in a study in South Africa during the 2010 soccer world cup it was found that no major increases were detected in the demand or supply of paid sex (Richter, Luchters, Ndlovu, Temmerman & Chersich, 2012).

According to the International Federation of Sports Medicine (1997) there is some evidence that moderate exercise may have particular psychological and immunological benefits for a patient with HIV. However, HIV positive persons should seek medical attention and legal counselling before engaging in heavy contact sport participation (Germanos, 2006). According to Schwellnus and Derman (2005) sports administrators, coaches and managers should be involved in educating athletes with respect to the disease, and ensure that adequate medical care is available when athletes participate in sport and incur a blood injury.

2.3 HIV prevention

Schöffl, Morrison and Küpper (2011) report that mandatory HIV testing or widespread screening is not recommended however, voluntary testing is recommended for all high risk athletes in the same way as for non-athletes. They further note that HIV positive climbers should not be banned from climbing or climbing competitions. They state that the risk of HIV transmission from infected athletes to other athletes is very low, thus the focus should be on preventive activities and education.

Gupta, Parkhurst, Ogden, Aggleton and Mahal (2008) argue that social, economic, political and environmental factors directly affect HIV risk and vulnerability. Most HIV prevention literature portrays women as especially vulnerable to HIV infection because of biological susceptibility and patriarchy which allows males the privilege of dictating sexual activity (Higgins, Hoffman & Dworkin, 2010). The authors also report that heterosexual men are perceived as active transmitters of HIV but not active agents in its prevention.

Gupta et al. (2008), report that the fundamental goal of HIV/AIDS prevention is to change community perceptions about sexual behaviours that positions individuals at risk of infection. For the past two and a half decades, HIV prevention has been dominated by individual-level behavioural interventions that seek to influence knowledge, attitudes and behaviours such as promotion of condom use, sexual-health education and educating injecting drug users about the dangers of sharing needles. They assert that this needs to change as these approaches have had limited success. The authors report that the uses of structural approaches, using the aforementioned concepts in HIV prevention have been limited for several reasons: absence of clear definitions, lack of operational guidance and limited data on the effectiveness of structural approaches to the reduction of HIV incidence. A structural approach to HIV prevention is the process of selecting a set of interventions that address structural factors to reduce HIV risk at the individual and/or group level. Structural factors are elements outside of individual knowledge or awareness that have the potential to influence the vulnerability of individuals and groups to HIV infection. The factors can include social (for example, stigma, gender inequality) legal-political (for example, laws and regulations), cultural (for example, religious beliefs), and economic (for example, lack of livelihood opportunity) factors (USAID, 2013).

According to Collins, Coates and Curran (2010) ABC (Abstinence, Be faithful and Condoms) is today's most commonly cited acronym for HIV prevention. ABC however, falls short of the global effort needed to reduce HIV transmission. Firstly, the ABC's mix up different prevention strategies. A (for abstinence) and B (for be faithful) are behaviours, C (for condoms) is a commodity. The implication of this string of concepts is that anyone can achieve protection if they choose one or more options from the short list. The authors highlight that it is time to stop focusing on the ABC's and elevate the debate on HIV prevention beyond individual interventions. Advancing global HIV prevention means holding national governments, donors and global agencies responsible for prevention efforts that are custom-made to national epidemics, bring quality interventions on a large scale and address environmental factors in socio-cultural vulnerability. The urgency is to ensure that countries have comprehensive prevention efforts in place that respond to their own unique situations.

Sport is being increasingly recognised for the contribution it can make to the Millenium Development Goals, one of which is directed towards combating the HIV/AIDS pandemic (Lindsey & Banda, 2010). In addition to this, it has become a popular tool for HIV prevention, based on claims that it can foster life skills that are necessary to translate knowledge, attitudes and behavioural intentions into actual behaviour (Delva et al., 2010).

According to Kaufman et al. (2011), previous observational and quasi-experimental studies in sub-Saharan Africa have suggested the effectiveness of youth-targeted HIV prevention interventions using sport as an educational tool. In their research it was found that sports-based interventions could play a valuable role in HIV prevention efforts globally, particularly those targeting early adolescents. Sports based HIV prevention has gained much publicity in recent years as it makes youth targeted HIV prevention initiatives more effective (Kaufman, Spencer & Ross, 2012).

According to a systematic review undertaken by Kaufman, Spencer and Ross (2012), there is strong evidence that sports based interventions have, at least, a short-term effect on HIV-related knowledge, stigma, self-efficacy, reported communication and reported recent condom use. However, the authors' state there is no evidence that these interventions result in an increased uptake of HIV counselling and testing services. Furthermore, they conclude that reported attitudes, reported communication, and reported sexual behaviour are subject to desirability bias, for that reason they may not be valid or exaggerated. In line with the above, Delva et al. (2010), determine that empirical evidence of the effectiveness of sport-based HIV

prevention programmes is lacking. However, the results of a study by Maro, Roberts and Sørensen (2009) demonstrate that youth-friendly and community-based programs that use sport assist in the process of reducing the risk of HIV/AIDS infections for youths.

Where the HIV virus has already been contracted, physical activity has been recommended based on beneficial effects described in HIV-infected patients (Stein, Hechler, Jessen, Neumann & Jessen, 2009). The authors therefore conducted a study in which they evaluated actual sport activity in HIV-infected versus non-infected individuals. The authors concluded that fewer HIV-infected individuals reported to participating in physical activity than non-infected individuals.

2.4 HIV and AIDS knowledge

HIV/AIDS is widely accepted as being one of the main causes in the increase of the number of orphans in Africa (SACMEQ, 2011). The estimated number of orphans aged 0-17 years due to HIV/AIDS in South Africa rose from 580,000 in 2001 to 1.9 million in 2009. Peltzer, Matseke, Mzolo and Majaja (2009) state that over 30% of women and men in the South African national HIV household survey of 2005 indicated that they had previously been tested for HIV (of which 91% were aware of their test results). Their research focused on describing the associations between socio-demographic, behavioural and social characteristics and knowledge of HIV status amongst a nationally representative sample in South Africa. The research concluded that education about HIV/AIDS and access to HIV counselling and testing (HCT) in rural areas, in particular amongst Black African population groups, needs to be improved.

Odu and Akanle (2008) investigated the relationship between the sexual behaviour and knowledge of HIV/AIDS amongst the youth in South West Nigeria. In addition, they looked at different types of sexual behaviour and whether youths have the knowledge of key basic concepts of HIV/AIDS. They found that most respondents were sexually active and engaged in high risk behaviours without using condoms for instance, casual sex, same sex male partners, multiple heterosexual partners and for females, sex in exchange for money or favours. It was also found that many youths have misconceptions about HIV transmission. It was also reported that many of the youthful participants were still at school and participated in sports. Germanos (2006) found that athletes had high knowledge about HIV/AIDS but noted some misconceptions about transmission. She also found that athletes wanted proper

prevention of transmission in sports as although they stated they thought that athletes (if HIV positive) should participate in sport, they felt it was dangerous.

According to Kalichman and Simbayi (2004) and Nqonjane (2009) in different studies the relationship between traditional beliefs about the cause of HIV/AIDS, and stigma related to the pandemic, is mediated by AIDS-related knowledge. In addition, HIV/AIDS education efforts should be culturally sensitive to those who hold traditional beliefs about sex to counteract HIV/AIDS stigmatisation. Knowledge about the virus and how to avoid contracting it, the authors postulated, is likely to encourage some people to practice safe sex, such as using condoms, reducing the number of sexual partners and avoiding needle sharing (for those who abuse substances). They concluded that nonetheless, knowledge alone is unlikely to change individual sexual behaviour(s) sufficiently to prevent the spread of HIV infection which is supported by older and recent studies on HIV infection (Ainsworth, 1998; Lance, 2001; Nel, 2003; Richter & Swart-Kruger, 1995; Nqojane, 2009; Maponyane, 2012).

According to the United Nations sport is an effective platform to increase HIV/AIDS knowledge and awareness (UNAIDS, 2003). Maro et al. (2009), conducted a study with the purpose of investigating the effectiveness of an on-going AIDS education intervention programme using peers in a sport context. The NGO is based in Dar es Salaam, that currently delivers sports and youth development programmes for over 1,000 boys and girls who live in some of the poorest communities in Tanzania. A secondary purpose of the study was to determine whether a mastery-based motivational strategy would enhance the effectiveness of the peer coaches. The two groups were in-school children, who received traditional HIV/AIDS education, and out-of-school children, who received peer based HIV/AIDS education. The results of the study concluded that the intervention using peers in sport was more effective in conveying HIV prevention knowledge than the in-school children group. Further, the authors noted that the school-based HIV education was less effective than the informal education obtained by the out-of-school children. The study also noted that HIV education and prevention strategies conducted through conventional adult-directed institutions such as schools, families and religious bodies have proven to be ineffective in reducing the rate of HIV infection. Another of their conclusions postulated that the use of peer coaches within the EMIMA (2013) programme was found to be a reliable and effective means of HIV/AIDS education (Emima is a Swahili acronym for Education, Sport and Physical Activity).

Bankole, Biddlecom, Guiella, Singh and Zulu (2007) report that there is a great need for the development of HIV intervention and prevention strategy programmes and approaches for out of school adolescents, given the high rates of school dropout in many countries in Africa. They suggest that programmes that provide sexual health information to young adolescents who are not attending school may be channelled through multiple sources, such as the media, public campaigns, sports and other types of activities in which young people engage, religious institutions and health providers. In support of this Glick, Randriammonjy and Sahn (2009) state that HIV/AIDS education efforts must be designed to target and be understood by uneducated and poor subpopulations. Wardell (2009) conducted a study that analysed the appropriateness of an HIV/AIDS education campaign in the Caribbean, called Football for Lives (FfL) which targeted children and adolescents. They found that students' knowledge of HIV/AIDS and other STIs did increase as a result of the programme.

2.5 Attitudes toward mandatory HIV testing and participation of HIV-positive athletes in sport

According to Umeh (1997) and Germanos (2006) the issue of mandatory HIV testing in sport remains relevant. Feller and Flanagan (1997) report that the medical community, athletic administrators and the courts have debated whether competitive athletics places both HIV positive and negative in significant danger, however, both the public and those directly involved in the administration of competitive sports often appear uncertain of both the actual risk of transmission of HIV infection in the athletic setting and the risk of exercise for immunocompromised individuals. Since there is evidence of bloodshed in contact sport, obligatory HIV testing has been advocated as a measure to prevent the spread of the retrovirus during sporting activities. In contrast, the rights of HIV-positive athletes are also of great concern, as mandatory HIV testing may be seen as an infringement of the athletes' human rights and privacy. This has led to the contention that compulsory HIV testing of athletes may initiate the demand, by sport authorities, for other forms of testing (for instance, for Hepatitis B). It must be noted however, mandatory drug testing is used in most sports at amateur and professional levels (Umeh, 1997).

The critical question concerns the consequences of a positive HIV test result. Such consequences include whether or not HIV-positive players should be excluded from sport (particularly, contact sport) participation based on their positive status. However, there is little documented risk of HIV infection in sports as research is limited. The majority of

medical experts agree that an HIV positive status should not exclude an athlete from participation in most sports. Routine HIV testing is therefore, considered to be unjustified (Hamel, 1992; Umeh, 1997).

Umeh (1997) states that whether the test results of athletes should be kept confidential, or whether team mates and competitors have the right to be made aware of HIV-positive results is another issue. The conflict, in this instance, surrounds the rights and responsibilities of HIV-positive athletes. It can be argued that it is ethical to inform members of a sporting team (for example, other athletes, coaches and medical doctors) about an individual's HIV status so that the correct preventive measures can be adopted on the playing field. According to the Constitution of the Republic of South Africa (section 14 of the South African Bill of Rights, 1996) every individual has the right to privacy. In this way, if the HIV results of an athlete are revealed to the whole team, the player's human right has been violated. Interestingly, this is not the case with known drug use for instance, the use of illegal steroids. This indicates that HIV carries greater stigma and discrimination than the use of anabolic steroids to enhance athletic performance. In the USA, in several states, individuals with HIV who have infected other individuals who were HIV negative have been found guilty of aggravated assault (Germanos, 2006).

McGoldrick (2012) reports that according to the International Federation of Associated Wrestling Styles and the International Boxing Federation, HIV testing is compulsory for participants in those contact sports. The author notes that in general, the decision to compete should be personal to the individual with HIV. An earlier study by Feller and Flanagan (1997) postulates that when an HIV infected athlete wishes to engage recreationally or competitively in sport, individualised recommendations regarding participation should be based on the clinical status of the athlete, the possible immune response to the exercise in question, and the risk of blood exposure in the specific sport. The author's report that studies of the HIV knowledge of college students suggests that many athletes have mistaken beliefs about the risks of contracting HIV/AIDS. They further note that despite the small chance of contracting the virus during athletic competition, many athletes would not want to compete against anyone known to be infected with HIV.

Balfe, Brugha, O'Connell, Vaughan and O'Donovan (2012) found similar attitudes towards HIV testing and noted several factors influence men's attitudes towards screening. Two central themes underlie and influence many of these factors: men's needs to make positive

impressions on others, and men's identification with particular ideals of masculinity. It was reported that men had a high willingness to self-test for HIV at home when self-testing kits were introduced in America, with self-testing the preferred option for future tests (Choko et al., 2011). The authors found that in settings where regular visits to every home by external HIV/AIDS counsellors was not practicable and that options based on self-testing offer a more sustainable approach that can contribute towards HIV testing. However, it was noted that the tests must have proper instructions noting that testing at a clinic should be undertaken if a positive result is noted. They also reported that post-test support may be compromised.

2.6 Relationship Behaviour

Hamel's (1992) study suggests that due to the lifestyle of professional athletes, which includes extensive travel and groupies (mostly female fans), they are presented with a unique opportunity for increased sexual exposure thus many indulge in short term sexual liaisons. This may result in athletes not protecting themselves from HIV and other sexually transmitted infections (STIs) properly. Male athletes often boast about their popularity with females and the ease with which sexual encounters are likely to occur (Umeh, 1997). Having many sexual partners increases the risk of HIV transmission and it is this risky behaviour that is often undisclosed in sporting circles (Ainsworth, 1998; Germanos, 2006). In addition to this, drug use puts some athletes at risk of HIV infection. Anabolic steroids are often administered with needles, and if needles are shared with HIV positive athletes, the virus can be transmitted. Athletes try to conceal steroid and other illegal drug use thus estimating how widespread this practice is remains difficult. Consequently, the possibility of HIV transmission, through these means, remains unknown (Hamel, 1992; Umeh, 1997). Huang, Jacobs and Derevensky (2010) conducted a study that focused on examining the prevalence of patterns of sexual risk-taking behaviour (that is, unprotected sex and having multiple sex partners) in relation to levels of gambling problems and heavy episodic drinking status among American college athletes. They reported that among the college athletes who were sexually active in the previous year, males reported significantly higher prevalence of unprotected sex and multiple sex partners than females. Furthermore, it was discovered that as the level of severity of drinking alcohol increased, the prevalence of sexual risk taking behaviours amongst male athletes increased.

Habel, Dittus, De Rosa, Chung and Kerndt (2010) reported that early studies suggested that student athletes may be less likely than non-athletes to engage in risky sexual behaviour. The result of their study indicated that one-third of students reported daily participation in sports. This group had higher reported levels of sexual intercourse and oral sex than their peers who did not play a sport daily. The increases in risk were greater for middle school sports participants than for their high school counterparts. Among sexually experienced students, daily sports participants also reported more condom use at last intercourse than their less experienced non-sports playing peers. Based on their results, the authors concluded that students who participate in sports daily have a higher risk for STI infection and pregnancy. They recommend that health professionals should provide more interventions at schools in terms of sexuality and STI infection. It was also noted that in America adolescents find it difficult to obtain contraceptives, STI testing and prevention counselling.

Sebele (2009) found that there is a significant association between age of first sexual debut and athletic participation. In this study high risk behaviours such as multiple partnerships and younger age of first sexual debut were higher among athletes as compared to non-athletes. Another finding was that the majority of students (athletes and non-athletes), reported inconsistent condom use.

2.7 Exercise and HIV and AIDS

Regular moderate exercise can play a role in the management of early, asymptomatic individuals with HIV infection, as it has cardiovascular benefits (Schwellnus & Derman, 2005). Exercise has been proven to provide many health benefits, which range from increased aerobic fitness to improved mood. It is argued that current research implies that persons with HIV/AIDS can have many of the same benefits from exercise as those who are not infected. Resistance exercise safely increased the strength of older patients living with HIV adults, allowing them to achieve performance levels observed among otherwise healthy controls. These findings favour the recommendation of resistance exercise for elderly adults living with HIV adults (De Souza, Jacob-Filho, Santare´m, Zomignan & Burattini, 2011).

HIV-infected adults who exercise suffered significantly less neurocognitive impairment compared to patients who do not exercise. Exercise has been shown to improve strength, cardiovascular function and psychological status of adults living with HIV. Despite recent advances in antiretroviral treatment, impaired brain functioning is a reality faced by nearly half of all people living with HIV. This ranges from asymptomatic neurocognitive

impairment, to more pronounced deficits that interfere with daily functioning, such as problems with financial management, driving and taking medication regularly. The major benefit of exercise to the brain seems to be the reduction of neurocognitive risk factors, such as high blood pressure and abnormally high levels of lipids in the blood. Metabolic syndrome is associated with the use of antiretroviral treatment. It is also linked to an increase in cerebrovascular risk factors, such as diabetes, hypertension and obesity. According to Stöppler (2012) metabolic syndrome is a cluster of metabolic risk factors that come together in a single individual. Stöppler (2012) further explains that the metabolic factors include insulin resistance, hypertension (high blood pressure), cholesterol abnormalities, and an increased risk for clotting. Patients are reported to be most often overweight or obese. Physical exercise, together with other modifiable lifestyle factors such as education, social engagement, cognitive stimulation and diet could be fruitful interventions to support people living with HIV (Brown, 2013). The overall immunological safety of exercise for persons with HIV/AIDS has been widely researched. However, several studies have shown that CD4 cell counts do not change significantly with improved exercise regimes (NCHPAD, 2013).

It is important that the benefits of exercise for people who are HIV infected becomes better known. More research needs to be carried out, and completed, to provide evidence for the benefits of exercise to an HIV positive population. Future research should include large sample sizes and should differentiate studies between genders and stages of HIV infection. Other than the physical and emotional benefits, implementing exercise into the treatment of persons with HIV/AIDS is cost-effective and may provide alternative treatments to medication for certain symptoms. Currently, persons who are HIV infected live much longer lives than at the start of the pandemic in the 1980's due to better pharmacological interventions. It is likely that engaging in physical activity will further enhance the quality, not necessarily the longevity, of their lives (NCHPAD, 2013).

To further substantiate the above, Mustafa et al. (1999), in their research studying the relationship between exercise and the human immunodeficiency virus (HIV) disease progression found that moderate physical activity may slow HIV disease progression. According to Health24 (2009) a study by the Department of Health and Environmental Control in South Carolina (America) indicated that HIV positive patients who exercised three to four times a week were less likely to develop AIDS than those who did not exercise at all. It not only slowed HIV progression, but increased blood counts as well. It was also stated that when an HIV positive individual exercises he or she has to consider a number of things,

including level of fitness, their HIV treatment, and which type of exercise is appropriate for them.

2.8 Sport and life skills

Life skills enable individuals to succeed in environments in which they live for instance, families, schools, workplaces and communities. Sport is a particularly appropriate environment to learn skills that can be transferable to other environments. These skills include abilities such as performing under pressure, setting goals, handling both success and failure, solving problems, communicating, meeting deadlines and challenges, working with a team and within a system, and receiving and benefiting from feedback (Danish, Nellen & Owens, 1996). On the other hand Holt, Sehn, Spence, Newton and Ball (2012) have criticised the popular view that sport builds character and helps children learn life skills. According to these researchers there is evidence indicating that youth sport participation has been associated with negative issues such as aggression, breaking rules and modelling inappropriate behaviours, particularly amongst older adolescent male athletes. Some of these poor behaviours include the misuse of alcohol and illegal drugs which can result in poor decisions regarding sex for instance, not using a condom (Partington, 2001). At the same time the there are numerous positive developmental indicators that have been associated with sport participation, including improved self-esteem, positive emotional regulation, good problem-solving skills, goal attainment, positive social skills and improved academic performance (Holt et al., 2012).

According to Holt et al. (2012), there are particular ways in which sport produces both positive and negative outcomes. The outcomes of sport are dependent on the way in which sport is viewed by parents and coaches and experienced by children. Different types of coaching and experiences will lead to different types of outcomes. Positive outcomes, such as learning life positive life-skills such as self-discipline, must be taught to young athletes. The researchers state that life skills do not naturally occur as a result of playing sport, they must be taught.

Given the urgent need for effective HIV prevention efforts, it is critical to ensure that policymakers and funders direct resources into interventions that maximise any public health impact. School based HIV prevention has proven promising in its potential, but disappointing in its inability to demonstrate effectiveness or sustained effects on reported behaviours (Kaufman, Spencer & Ross, 2012). The authors noted that HIV prevention intervention

programmes amongst adolescents need to include a focus on HIV awareness. The lack of HIV awareness may reduce the perceptions of severity and vulnerability of contracting HIV, which may reduce a child's protection motivation. Protection Motivation Theory was originally created to help explain fear appeals (Rogers, 1975). According to the author we protect ourselves based on four factors: the perceived severity of a threatening event, the perceived probability of the occurrence, or vulnerability, the efficacy of the recommended preventive behavior, and the perceived self- efficacy. Fundamentally, threat appraisal and the coping appraisal bring about protection motivation. Secondly, HIV stigma reduction should be built into the existing HIV prevention programmes among adolescents. HIV knowledge education and stigma reduction intervention among adolescents may benefit the HIV testing and treatment that subsequently prevent the HIV epidemic.

Li, Zhang, Mao, Zhaol and Stanton (2011) state that HIV prevention programmes among children and young adults in China needs to prepare them for future engagement in protective behaviours such as condom use, by improving their knowledge in relation to their vulnerability and the severity of HIV/AIDS. It also needs to help this group understand that using condoms protects them from HIV infection and thus will increase their self-confidence in relation to condom use.

2.9 Global research on athletes and HIV/AIDS

HIV/AIDS is a worldwide pandemic, with continued increases in the number of newly diagnosed cases and persons living long-term with the disease (Clem & Borchers, 2007). Athletes are at risk of blood borne infections through bleeding injuries or injection of drugs with contaminated syringes (Kordi & Wallace, 2004). Brown, Drotman, Chu, Brown and Knowlan (1995) conducted research that determined the risk of HIV infection for blood injuries in professional football. Based on their findings they concluded that although blood injuries occur in professional football competitions they occur infrequently. The authors estimated that the risk for HIV transmission during such competition is remote but not impossible. The authors recommended that the role of artificial playing surfaces on the incidence or severity of bleeding injuries should be investigated.

According to Clem and Borchers (2007) athletes may be at risk of infection based on behaviours associated with participation in their sport and away from competition. Sports medicine physicians must be aware of the risk of HIV/AIDS in the athlete, diagnosis and treatment options, the effect of HIV/AIDS on exercise, and strategies for prevention of

HIV/AIDS in athletic competition. In support of this Kordi and Wallace (2004) note that prevention should focus on reducing non-sport associated risky behaviour, as well as dealing appropriately with bleeding injuries on the sport field.

Kokotailo, Koscik, Henry, Fleming and Landry (1998) investigated the risky health behaviours of female inter-collegiate university athletes in America and compared them with their non-athlete peers. Contrary to some of the above mentioned studies, the athletes were found to engage in significantly fewer risk-taking behaviours than the non-athletes and were found to be at less risk of HIV and STI infection. Kokotailo et al. (1998), reported that high levels of risky behaviours generally indicated the need for increased efforts to change risky behaviours in all college women not just athletes. Kordi and Wallace (2004) further report that the risk of transmission of hepatitis B virus is particularly high in athletes in contact and collision sports, those who live in or travel to endemic regions, injecting drug abusers, and those who practice first aid when there is no healthcare practitioner available. They recommend that all athletes, who participate in this type of sport, regardless of age should be vaccinated against Hepatitis B.

According to Huang et al. (2006), HIV lipodystrophy syndrome is a recognized complication of potent antiretroviral therapy and is characterised by dramatic changes in body fat stores, both central and peripheral. Lipodystropyhy is a metabolic disease in which fat distribution in the body becomes abnormal, often as a result of taking protease inhibitor drugs. Furthermore, fat is lost from the face, arms, and legs, and is built up in other places, especially the breasts, abdomen, and back of the neck (Oxford Dictionary, 2014). Huang et al. (2006), posit that women with HIV and lipodystrophy would have significantly poorer body image as compared to women without HIV and to women with HIV without lipodystrophy. The results of the study reflected that HIV and lipodystrophy status among women is associated with poor body image. Therefore they recommend that universal efforts should be made in the HIV medical community to recognise body image issues particularly among persons affected by lipodystrophy, so that appropriate intervention and support may be provided. In some cases participation in sports may be indicated.

2.10 South African research on athletes and HIV/AIDS

The South African Sports Medicine Association (SASMA, 2001) reports that the risk of HIV infection in a particular sport is determined by the seroprevalence of HIV in the participants of that sport, the risk of open wounds, the risk of viral transfer should blood make contact

with another player's wound and the risk of two players making contact. According to Cycling South Africa (2010) within its HIV AIDS policy, in cycling the risk of contracting HIV/AIDS is relatively low. However, there is a potential risk in contracting the HIV virus through cycling as bleeding is common with the majority of cycling injuries. Further, the policy stipulates that an athlete should inform the coach that s/he is HIV infected so that appropriate interventions can be made in the event of an injury. The policy further states that the individual should be treated in a calm, open honest way.

According to SASMA (2001) compulsory testing is controversial because it may impact on an individual's democratic rights and their employment rights in professional sport. This testing can only be performed if informed consent is given. Additionally, SASMA claims that unless expensive virus specific testing is performed, testing does not guarantee safety. For this reason SASMA (2001) warns that as routine testing does not provide sufficient guarantee against possible transmission of HIV, such testing cannot be recommended and therefore does not advise compulsory testing in sport. Furthermore, it is noted that education about the disease is still crucial in the prevention of HIV. It is recommended that individuals who have HIV infection disclose their status to the medical personnel responsible for the care of a team and that this information is dealt with confidentially.

SASMA (2001) indicates that there is no scientific evidence that an asymptomatic person is unfit to play sport. The physiological responses to exercise in such asymptomatic individuals are unaltered. However, exercise performance and the training response is impaired in patients with more advanced HIV disease. Patients infected with HIV should be advised to undertake a complete physical examination and to gain medical clearance prior to commencement of an exercise programme. The prescription of an exercise programme should be individualised, integrating the physical fitness of the patient, the stage of HIV disease and concomitant medication used. Physical activity programmes should be initiated early, while the patient is still asymptomatic. Other support in the form of nutritional and psychological counselling should also be included in the complete management of the patient.

In a study conducted by Lembethe, Chiware, Kaufman and Ley (2012) results indicated the following: half of the participants considered the risk of HIV transmission in sport as moderate, one third regarded it as low, and 15% perceived it as a high risk. Furthermore, close to half of the participants felt that athletes must be tested before they participate in

sport. The majority of participants reported that they would be willing to take an HIV test, although only 60.7% stated they tested for HIV infection regularly. When asked whether they would stay away from a player with HIV in the field of sport 23.7% were not sure and 8.5% said that they would stay away.

Netball players (the majority of whom were female) expressed more willingness to take part in HIV testing than male rugby and soccer players. They also indicated that they were tested regularly for HIV. Rugby players seemed to be more likely to stay away from people who they knew were HIV infected both on and off the field of play than netball and soccer players (Lembethe et al., 2012).

2.11 Treatment of persons with HIV/AIDS

The impact of the HIV or AIDS pandemic in South Africa in the 1990's was devastating for many of its citizens. Between the years 1996 and 2002 life expectancy at birth declined from 57 to 52.5 years and then to 50.2 years in mid-2008. Prevalence rates amongst people aged 15-45 climbed from 10.8% in mid-2008 to 11.5% (WHO 2008; SSA 2008). The Treatment Action Campaign (TAC, 2013) was the first association which forced, through tireless campaigning, multi-national drug companies to permit the import of cheaper ant-retrovirals. President Mbeki, however, questioned the scientific theory which postulated that HIV was the cause of AIDS, while the minister of health (at the time) asserted that the government could not afford to treat AIDS (although research had proven it was cheaper to treat the retrovirus than opportunistic diseases). Conspiracy theories about HIV/AIDS being a western plot to undermine Africa abounded. However, after a campaign to gain public support and litigation in the high and constitutional courts the TAC obtained orders forcing the government of the day to roll out treatment, first for expectant mothers in December 2001 and then in November 2003 for the broader population (TAC, 2013).

2.12 Summary

The literature review gave an overview of HIV research related to sporting codes. It noted for instance that, sports involving close contact as well as those that incur injury to the skin expose participants to a higher risk Hepatitis B transmission and a relatively small risk of HIV transmission. It was also reported that regular exercise improves the lives of HIV positive persons if the exercise is appropriate. Further, it was indicated that HIV testing in sports is neither routine nor recommended. Research suggests that male athletes are more

likely to take sexual risks than non-athletes. Prevention programmes need to be effective and aimed at specific groups and it is likely that sport can play a role in this regard. The following chapter outlines the theoretical framework for the study.

CHAPTER 3: THEORETICAL FRAMEWORK

3.1 Introduction

In this chapter an operational definition of the key terms of the study are given. Furthermore, the theoretical background is discussed. The theoretical background of the study is based on Erikson's (1956) stages of psychosocial development. Particular focus has been placed on the Intimacy versus Isolation stage as it is the age group in which the sample falls. The original theory is used as, although around sixty years old, it is still relevant in contemporary society.

3.2 Operational definitions used in the study

The following definitions, adapted from Germanos (2006), will be used in the proposed study.

3.2.1 Attitude: For the purpose of this study, an attitude is a positive or negative evaluation of other contact sport participants based on their HIV positive status.

3.2.2 Knowledge: For the purpose of this study, knowledge is the state or fact of knowing, understanding and awareness of HIV/AIDS and concepts relating to it.

3.2.3 Relationship behaviour: these are the behaviours that are displayed off the field by rugby payers and boxers. These behaviours can either put them at greater or lesser risk to contract HIV.

3.2.4 Contact sport: any sport in which physical contact between players is an accepted part of play. For the purpose of this study, contact sport refers to rugby and soccer players at the University of Limpopo.

3.3 Erikson's theory of Psychosocial Development (1956)

One of the fundamentals of Erikson's (1956) theory (See appendix 5 for a list of all the stages in the theory) is the development of ego identity, which relates to the individual sense an individual has of self which is developed through social interaction for instance, playing team sports. According to Marcia (1980) identity can be seen as a self-structure - an internal, self-constructed, dynamic organization of drives, abilities, beliefs and individual history. It has content consisting of decisions, investments, and commitments tied to current and future roles, goals, and relationships. Consequently, identity embraces multiple domains and arises as adolescents confront alternatives available in a culture by exploring their fit and making investments in those chosen (Pittman, Keiley, Kerpelman & Vaughn, 2011). The better

developed this structure is the more aware individuals appear to be of their own uniqueness and similarity to others and of their own strengths and weaknesses in making their way in the world. The less developed this structure is the more confused individuals seem about their own distinctiveness from others and the more they have to rely on external sources to evaluate themselves. An individual's identity structure is dynamic, not static. Elements are continually being added and discarded. Over a period of time an individual's sense of self may shift (Marcia, 1980). According to Erikson (1956), this identity is always changing because of new experiences and information that we gain throughout our lives.

A well-developed identity structure, like a well-developed superego, is flexible. It is open to changes in society and to changes in relationships. Marcia (1980) reports that this openness assures numerous reorganisations of identity contents throughout the identity achieved person's life, although the essential identity process remains the same growing stronger through each crisis. Each stage is related to becoming competent in a specific area of life. If the stage is handled properly the individual will acquire a sense of mastery, which can be referred to as ego strength. If an individual manages a stage badly a sense of inadequacy develops. The theory focuses on stages where internal psychological needs and drives are mediated by a variety of social influences. The theory places particular emphasis on identity development and the importance of socio-cultural factors, which are relevant to the South African context (Stevens & Lockhat, 1997). The stages as categorised by Erikson (1956) are trust versus mistrust, autonomy versus shame and doubt, initiative versus guilt, industry versus inferiority, identity versus role confusion, intimacy versus isolation, generativity versus stagnation, and integrity versus despair. It is also suggested by Erikson (1956) that the ability to establish meaningful relationships depends on the successful resolution of the five earlier stages (Ramokgopa, 2001). According to the theory, successful completion of each stage results in a healthy personality and successful interactions with others. Failure to successfully complete a stage can result in a reduced ability to complete further stages and therefore a more unhealthy personality and sense of self. These stages, however, can be resolved successfully at a later time (Erikson, 1956). Although each of the stages is associated with a particular segment of the lifespan, they are not bound by chronological age. Furthermore, although there is a central time for working on each of the stages, none of them is ever fully resolved. All eight stages are present at all times, and an individual can possibly revisit earlier tasks and/or preview future tasks (Merriam, Courtenay & Reeves, 1997).

In the context of this research the stage of psychological conflict described in Erikson's (1956) theory, which is related to early adulthood, will be particularly useful. The stage is conceptualised as intimacy versus isolation. It is during this stage that most young adults attempt to gain economic independence and try to establish their identity, through working or studying. Intimacy requires that young adults give up some of their independence. By doing this they have to re-define their identity to include the values and interests of others in various social and work-related contexts. In terms of sport, this stage requires young adults to act together as a team and not act as individuals. This requires them to balance individual needs, which include romantic relationships and friendships with teamwork (sport, for instance) and work relationships (Erikson's, 1956). For this reason, athletes (the chosen sample) are at a stage whereby they have much sexual energy. As previously mentioned, in the literature review (See paragraph 2.8) some take part in high risk sexual behaviours and other drug-use activities that may increase their chances of being infected with HIV (Partington, 2001).

Young adults are eager to blend their identities with friends fundamentally, they want to fit in (Wardell, 2009). In addition, successful completion can lead to comfortable relationships and a sense of commitment, safety, and care within a relationship (Erikson, 1956). If the required intimacy is achieved, young adults are generally co-operative, tolerant, and accepting of differences in culture, background and values (Berk, 2004). If the individual is however, unable to establish intimate relationships in various contexts, feelings of isolation, loneliness, sometimes depression and self-absorption result (Erkison, 1956; Gallahue & Ozmun, 1998).

Erikson (1956) reveals that individuals at this stage are afraid of rejections such as being turned down or having their partners breaking up with them. They are familiar with pain, and to some of them, rejection is painful, their egos cannot bear the pain (Wardell, 2009). This leads to discrimination of persons who are different from the perceived norm, for instance the individual who cannot (or does not want to participate in team sports). These individuals are often discriminated against for being different and are often termed loners (Germanos, 2006).

According to Merriam et al. (1997), Erikson's model of psychosocial development suggest that each of eight stages unfolds in a particular sequence, and each becomes the primary issue of concern at specified times in the life cycle. However, Erikson (1956) does not address how the emergence of these eight stages might be affected by a diagnosis of terminal illness. Merriam et al. (1997), conducted a study in which the purpose was to understand how an HIV-positive diagnosis affected movement through Erikson's stages of development. The

results indicated that within Erikson's stages of development: (1) The fifth stage of identity versus role confusion was revisited and the sense of self is redefined; (2) the three adult hood stages of intimacy versus isolation, generativity versus stagnation, and ego integrity versus despair were dealt with simultaneously and, in most cases, resolved favourably; and (3) intimacy and generativity enabled and supported the resolution of the tasks of identity and ego integrity.

It must also be noted that the presence of HIV infection creates additional barriers to intimacy such as physical illness, stigma, and a fear of infecting loved ones or children, that may significantly impact this stage of development (Ashford, LeCroy, & Lortie, 2001). Young adults, regardless of their HIV status, have a drive to fulfil their desire for intimacy. However, HIV is often spread through physically intimate acts such as sexual intercourse. The disease can create a significant barrier to sexual intimacy (Kirshenbaum et al., 2004). This barrier may also serve as a difficulty for some athletes to continue playing freely with fellow athletes who may be HIV positive.

3.4 Summary

The use and relevance of Erikson's (1956) theory is explained in the aforementioned paragraphs. The particular focus on the stage of identity versus isolation is noted in relation to the investigation. The following chapter gives a detailed overview of the research methodology used in the present study.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

The following chapter deals with how the research was conducted. It gives an overview of the research design, sampling, data collections, tools used for data collection, data analysis, research propositions, reliability, validity and bias. It also gives the ethical considerations taken into account by the researcher.

4.2 Research Design

The study utilised a cross-sectional survey research design. It was cross-sectional because it measured the variables under consideration at one point in time. This type of design is useful for descriptive purposes and thus, was appropriate for this study due to its descriptory nature.

4.3 Population

The population under scrutiny was all contact sports' players at the University of Limpopo (Turfloop Campus), Capricorn District, Limpopo Province.

4.3.1 Sampling

The sampling procedure was non-probability in nature. Non – proportional quota sampling is the non-parametric equivalent of stratified random sampling (Terre Blanche, Durrheim & Painter, 2009). This allowed for the sample to be selected on the basis of certain variables necessary for the study. These variables included gender (males), age (18-24 years) and the nature of the sport (that is, designated contact). It was decided to use contact sports where a relatively large number of students participated. In contact sports there is more likely to be an exchange of blood than in non-contact sports (Germanos, 2006). On contacting the university sports clubs it was found that the contact sports with the most participants were soccer and rugby. There were approximately 55 male rugby players at the University of Limpopo and 100 soccer players when the study took place. In the last two decades soccer, which was originally designated a non-contact sport is now designated a contact sport owing to the increased pace of the game and the many collisions that take place between players (Maite, 2014). The sample size decided on was 30 rugby players and 30 soccer players as it was appropriate for this type of descriptory study. The final sample consisted of the 23 questionnaires which were returned by the rugby players and the 30 questionnaires which were returned by the soccer players, 53 in all (an 88% return rate). It was decided to use an

all-male sample, as the level of female participation in any contact sport at the university is minimal.

4.4 Data Collection

Sixty questionnaires were distributed to the 30 participating rugby and 30 participating soccer players through the relevant clubs at the University of Limpopo (Turfloop Campus). Permission was requested from the two club coaches, that is, rugby and soccer for the researcher to address the athletes. The athletes were informed about the research and asked if they would be willing to participate. Athletes interested in participating in the study were then requested to fill in the questionnaires. A time and date was set, appropriate to each group of athletes. The researcher then went to the clubs and administered the questionnaires. This was on more than one occasion, due to the numbers involved. The questionnaires were administered at the same venue, a clubhouse near the participating clubs. After the participating athletes had filled in the questionnaires the researcher collected them.

4.4.1 Survey questionnaire

The questionnaire (See Appendix B) that was used was adapted from the one compiled by Germanos (2006). The questionnaire is self-report in nature which provides the participant with a certain level of anonymity. The names of participants were not requested in the demographic section of the questionnaire to ensure confidentiality. The only demographic information that was included were variables like: age, relationship status and sport played. The research instrument comprises of 4 sections, namely: 1) Demographics; 2) Knowledge; 3) Attitudes and 4) Sport and HIV prevention. Factual information such as general HIV/AIDS knowledge, mode of transmission, prevention and treatment, and knowledge in relation to sport were evaluated. Twenty-six statements needed to be answered by participants who indicated if they were true or false or unsure. Three other items were included in this section to determine the respondent's sources of information and communication regarding HIV/AIDS.

Sub-sections of the questionnaire were used in studies by Bandawe and Foster, (1996); Ndeki, Klepp, Seha and Leshabari, (1994); Pattullo et al., (1994); and Umeh (1997). Several open-ended questions, used in the aforementioned studies were used in order to gain a more comprehensive understanding of the athletes' attitudes. The entire instrument was tested for internal consistency by Germanos (2006). On the subsection of the survey which yielded

quantitative data a high internal consistency was reported (Cronbach alpha .88). The open-ended questions were valid as indicated by the responses in the study by Germanos (2006) as no ambiguous, biased or leading questions were found.

4.5 Data Analysis

4.5.1 Quantitative data

Quantitative data were analysed using descriptive statistics, including frequencies, percentage and bar-graphs. Descriptive statistics describe large amounts of data in a way that is understandable and useful. In this way, descriptive statistics help to simplify large amounts of data in an appropriate and logical manner (Terre Blanche et al., 2009). The chi – square test was used, as it is a statistical procedure which can be used with categorical data, to see if there was any significant difference between the sporting code participants (rugby and soccer) in terms of the study propositions.

4.5.2 Qualitative data

Thematic Content Analysis (TCA) was used to analyse the qualitative data obtained from the open-ended questions. This is a data collection technique which provides a rich description of the social setting under investigation (Terre Blanche et al., 2009). By studying patterns in the data the participants' perceptions about the constructs under investigation were assessed. It is essential to ensure that the interpretation of data is as objective as possible, thus the data was examined more than once to attain adequate understanding of the responses and the findings generated. The process involved sifting through the data which led to the reporting of a number of distinct themes. The steps used to analyse the data are summarized below.

4.5.2.1 Familiarisation and immersion – this was carried out by working with the text and reading it through many times so that meanings and interpretations can be made. In this way the researcher paid attention to patterns that may be occurring. The result of this phase was preliminary codes and detailed notes (Terre Blanche et al., 2009).

4.5.2.2 Inducing themes which arose naturally out of the data under consideration. The result of this phase was comprehensive codes of how data answers research question. Data reduction was done in order to create categories for more efficient analysis (Terre Blanche et al., 2009).

4.5.2.3 Coding which entails putting the data into analytically appropriate themes. The meaning of the themes was described in this phase. The researcher also described what was missing from the analysis (Terre Blanche et al., 2009).

4.5.2.4 Elaboration - which entails keeping on coding until no new themes are found. In this stage, the researcher looked at how the themes support the data and the overarching theoretical perspective. Where the analysis seemed incomplete, the researcher went to go back and find what is missing (Terre Blanche et al., 2009).

4.5.2.5 Interpretation and checking, this is an account or interpretation of the themes or thematic categories found in the data (adapted from Terre Blanche et al, 2009). In accordance with this stage the researcher needed to define what each theme is, which aspects of data are being captured, and what is interesting about the themes. This included a comprehensive analysis of what the themes contribute to understanding the data (Terre Blanche et al., 2009).

4.5.2.6 After the final themes had been reviewed, the researcher began the process of writing the final report. In line with this final stage, when the researcher writes the report and reflects on the process, he or she must decide which themes make meaningful contributions to understanding what is going on within the data. The write up of the report should contain enough evidence that themes within the data are relevant to the data set (Terre Blanche et al., 2009).

The data were analysed using colour coding as this makes it easier for the researcher and reader to understand the processes involved (see appendix 3).

4.6 Research propositions

Research propositions are used in studies which use purposive or convenience samples when there is no random sampling as hypotheses can only be used when a sample where each member of a population has an equal chance of being selected for a study.

4.6.1 Athletes who play the contact sports rugby and soccer will not differ in their level of knowledge about HIV/AIDS.

4.6.2 Athletes who play the contact sports rugby and soccer will not differ in their level of knowledge about transmission of HIV/AIDS.

4.6.3 There will be some differences between rugby and soccer players in terms of misconceptions about HIV transmission in contact sport.

4.6.4 There will be no significant differences between athletes who play rugby and soccer in terms of their knowledge as related to sport and HIV/AIDS.

4.7 Reliability and Validity

The extent to which results are consistent over time and an accurate representation of what is being studied is referred to as reliability. A research instrument is considered be reliable if it yields similar results over time, and if used in studies with similar methodology (Joppe, 2000). The quantitative scale, which formed part of the protocol, developed by Germanos (2006) and used in this study has high levels of internal reliability, test and-re-test reliability and internal consistency (Cronbach Alpha .88). Germanos (2006) improved the design of the instrument by compiling questions from different sources for instance, various related studies where reliability and validity had been demonstrated.

Validity determines whether the research instrument truly measure what it was intended to measure (Joppe, 2000). The survey protocol scale was validated by Germanos (2006) thus it measures what it is designed to measure. Within validity, the measurement does not always have to be similar, as it does in reliability. However, a test cannot have high validity unless it also has high reliability. It is vital for a test to be valid in order for the results to be accurately applied and interpreted (Geoffrey, Bernstein & Phares, 2009).

4.8 Bias

Bias is defined as any tendency which prevents unprejudiced consideration of a question. In research, bias occurs when systematic error is introduced into sampling or testing by selecting or encouraging one outcome or answer over others. Bias can occur in the planning, data collection, analysis, and publication phases of research (Pannucci & Wilkins, 2010). Threats to reliability and validity can arise through administrator bias. When the researcher is aware, and has insight into this fact, the objectivity of the process is strengthened (Joppe, 2000).

The identities of the respondents were not recorded and the respondents filled in the questionnaire in the absence of the researcher. For this reason, respondents were assured of confidentiality. Response bias was thus addressed as respondents made to feel able to give a true reflection of their opinions and experiences. When administering the questionnaires, the administrator maintained a neutral attitude towards respondents. This ensured that respondents did not feel prejudiced in any manner. For this reason administrator bias was reduced. In addition to this, the questionnaire had a combination of both close and open-ended questions.

4.9 Ethical considerations

Ethical procedures maximise the protection of the participants and enhance the quality of the research.

4.9.1 Informed consent

The coaches of the relevant sport clubs/teams were approached for consent for the athletes to participate in this study. Once consent had been obtained, the information letter was given to the participants notifying them of the purpose of the research, as well as their right to decline participation and withdraw from the study at any time, without any negative consequence (Germanos, 2006), in order for them to participate freely. The researcher also addressed the athletes and gave the same information verbally. Athletes were required to complete a consent form before filling out the questionnaire. In addition to this participants were given the opportunity to ask clarifying questions from the researcher.

4.9.2 Confidentiality

Their right to privacy was observed throughout the study. The information that was obtained was treated confidentially. Further, in the interest of confidentiality, the questionnaires were kept separately from the consent forms (after they have been collected) and no identifying details were included on the questionnaires.

4.9.3 Permission

Permission to conduct the research will also be gained through the relevant University of Limpopo (Turfloop Campus) ethics committees. The coaches of the relevant sport clubs/teams were approached for consent for the athletes to participate in this study as were the athletes themselves.

4.10 Summary

The study gave an in-depth account of how the research was undertaken. The following chapter gives the study results arising out of the data analysis as described in this chapter.

CHAPTER 5: RESULTS AND ANALYSIS

5.1 Introduction

This chapter presents the results of the study. Firstly, the study demographics will be presented in section A. In section B the results from the HIV/AIDS knowledge section of the questionnaire are presented in the form of frequency tables and bar graphs. Thirdly, section C, which consists of seventeen open-ended questions, which were designed to elicit the athletes' attitudes towards HIV/AIDS are presented and discussed in terms of the research framework.

5.2 Section A: Demographics

This section focuses on the study demographics and is presented using frequency tables.

Frequency table 1: Age

Age	Frequency	Percent %
18	1	1.9
19	4	7.5
20	5	9.4
21	9	17.0
22	11	20.8
23	7	13.2
24	16	30.2
Total	53	100.0

Frequency table 1 indicates that of the 53 respondents, 1 (1.9%) is 18 years old, 4 (7.5%) are 19 years old, 5 (9.4%) are 20 years old, 9 (17%) are 21 years old, 11 (20.8%) are 22 years old, 7 (13.2%) are 23 years old, 16 (30.2%) are 24 years old. The mean age of the athletes is 22.1 years (SD = 1.708).

Frequency table 2: Relationship status

Relationship status	Frequency	Percent %
Single	42	79.3
Married	2	3.8
Living with partner	5	9.4
No steady relationship	4	7.5
Total	53	100.0

Frequency table 2 indicates that of the 53 respondents, 42 (79.3%) are single, 2 (3.8%) are married, 5 (9.4%) are living with a partner and 4 (7.5%) have no steady relationship.

Frequency table 3: Ethnic group

Ethnic group	Frequency	Percent %
Northern Sotho	29	54.7
Tsonga	5	9.4
Swati	3	5.7
Venda	1	1.9
Shona	5	9.4
Ndebele	1	1.9
Xhosa	1	1.9
Southern Sotho	1	1.9
Other	7	13.2
Total	53	100.0

Frequency table 3 indicates that of the 53 respondents, 29 (54.7%) are Northern Sotho, 5 (9.4%) are Tsonga, 3 (5.7) are Swati, 1 (1.9) is Venda, 5 (9.4) are Shona, 1 (1.9%) is Ndebele, 1 (1.9%) is Xhosa, 1 (1.9%) is Southern Sotho and 7 (13.2%) are from other ethnic groups that were not specified by the participants.

Frequency table 4: Sporting code

Sport	Frequency	Percent %
Rugby	23	43.4
Soccer	30	56.6
Total	53	100.0

Frequency table 4 indicates that of the 53 respondents 23 (43.4%) are rugby players and 30 (56.6%) are soccer players.

Frequency table 5: Duration of participation in the sports codes (rugby and soccer)

Duration of participation	Frequency	Percent %
No indication	9	17.0
< 1 year	1	1.9
1-3 years	16	30.2
4-6 years	6	11.3
7-9 years	2	3.8
10 years and above	19	35.8
Total	53	100.0

Frequency table 5 indicates that of the 53 respondents, 9 (17.0%) did not indicate the duration for which they have been participating. 1 (1.9%) participant has been participating for less than a year, 16 (30.2%) have been participating between 1 and 3 years, 6 (11.3%) have been participating between 4 and 6 years, 2 (3.8%) have been participating between 7 and 9 years and 19 (35.8%) have been participating 10 years or more.

Frequency table 6: Level of participation

Level of participation	Frequency	Percent %
Not specified	1	1.9
Amateur	48	90.6
Provincial	2	3.8
National	2	3.8
Total	53	100

Frequency table 6 indicates that of the 53 respondents, 1 (1.9%) did not specify his level of participation, 48 (90.6%) are amateur players (school and university), 2 (3.8%) are provincial players and 2 (3.8%) are national players.

5.3 Section B: HIV/AIDS knowledge questionnaire

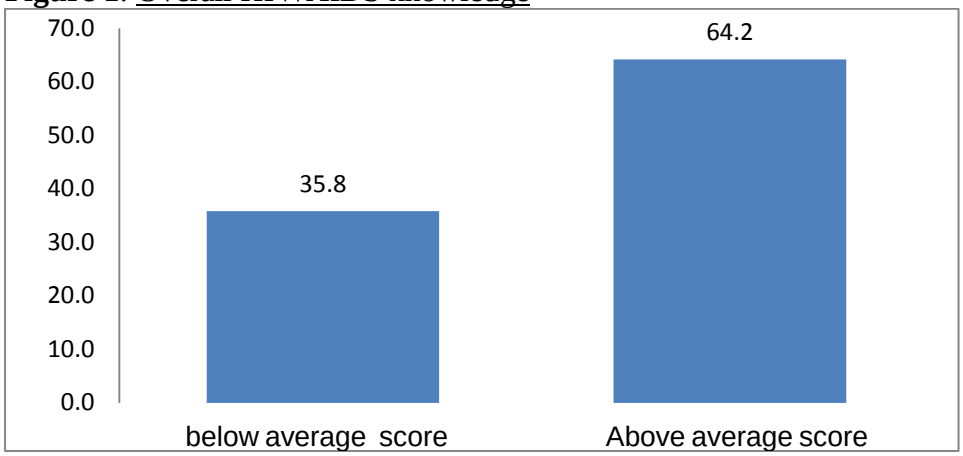
Section B presents the HIV/AIDS knowledge of participants and is presented in the form of frequency tables and bar graphs (figures).

5.3.1 Overall HIV/AIDS related knowledge

Frequency table 7: Overall HIV/AIDS knowledge

HIV and AIDS knowledge	Frequency	Percent %
Below average knowledge	19	35.8
Above average knowledge	34	64.2
Total	53	100.0

Figure 1: Overall HIV/AIDS knowledge

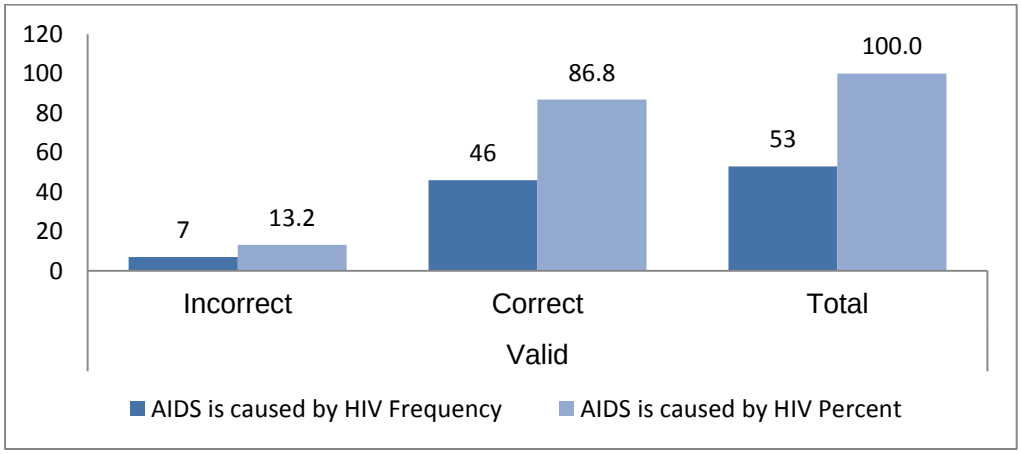


Frequency table 7 and figure 1 indicate that the majority of the sample had above average scores on this section (64.2%) while 35.8 participants had a below average score. It is worrying that over a third of participants had a below average score as HIV/AIDS knowledge is promoted through many spheres for instance, written media, the internet and television. There have also been many national intervention programmes in South Africa for instance, such as the Khomani project (a government funded intervention) and Soul City (a privately funded intervention).

Frequency table 8: AIDS is caused by HIV

	Frequency	Percent %
Incorrect	7	13.2
Correct	46	86.8
Total	53	100.0

Figure 2: Aids is caused by HIV

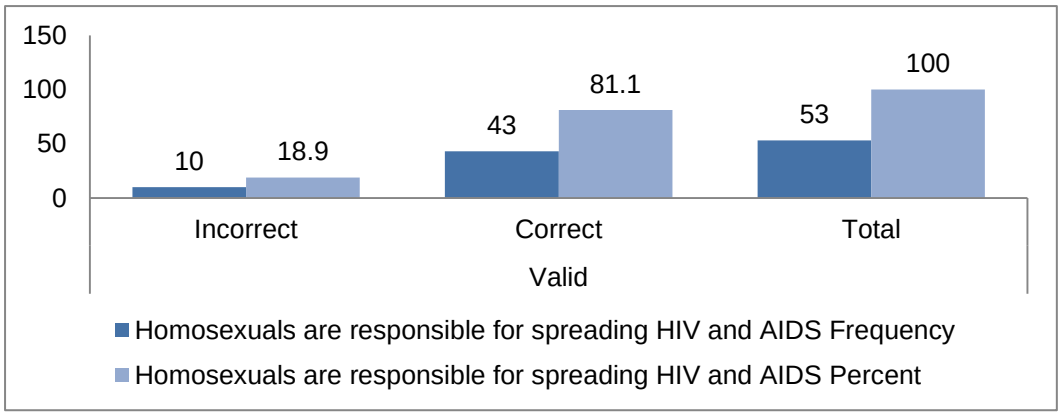


Frequency table 8 and figure 2 indicate how many athletes know that HIV is caused by HIV. Of the 53 respondents, 46 (86%) answered correctly and indicated that it is true that AIDS is caused by HIV. Nevertheless, 7 (13.2%) answered incorrectly and indicated that it is false that AIDS is caused by HIV.

Frequency table 9: Homosexuals are responsible for spreading HIV/AIDS

	Frequency	**Percent %**
Incorrect	10	18.9
Correct	43	81.1
Total	53	100.0

Figure 3: Homosexuals are responsible for spreading HIV/AIDS



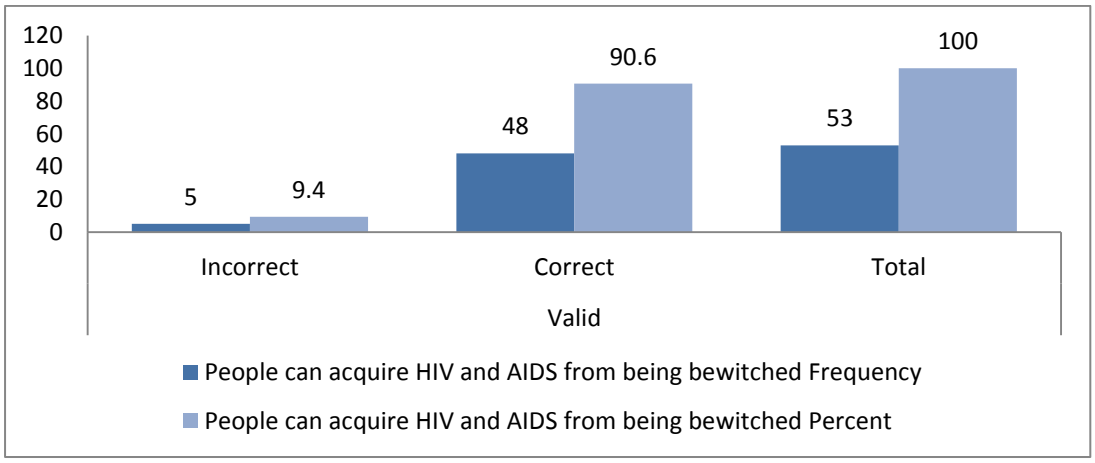
Frequency table 9 and figure 3 indicates whether athletes agree with the claim that homosexuals are responsible for spreading HIV. Forty three (81.1%) answered correctly by indicating that this is false. Only 10 (18.9%) answered incorrectly and indicated that the claim is true. This shows that there a good level of knowledge about the spreading of HIV

and homosexuality. It is however worrying that a substantial number of athletes are still misinformed on the issue.

Frequency table 10: People can acquire HIV/AIDS from being bewitched

	Frequency	Percent %
Incorrect	5	9.4
Correct	48	90.6
Total	53	100.0

Figure 4: People can acquire HIV/AIDS from being bewitched

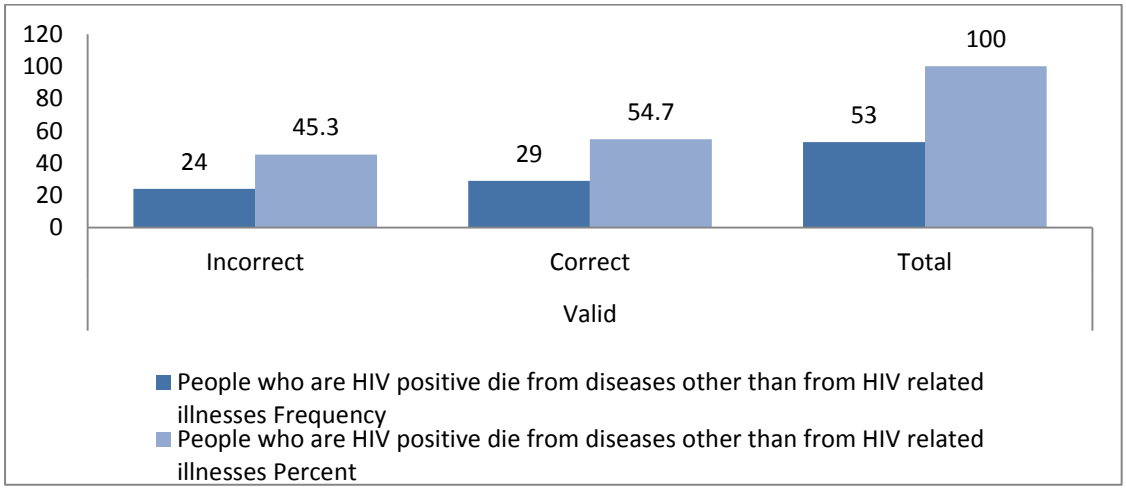


Frequency table 10 and figure 4 indicates how athletes responded to the item "people can acquire HIV and AIDS from being bewitched". Forty eight (90.6%) answered correctly and indicated that it is false. Conversely, 5 (9.4%) answered incorrectly and indicated that it is true.

Frequency table 11: People who are HIV positive die from diseases other than HIV related illness

	Frequency	Percent %
Incorrect	24	45.3
Correct	29	54.7
Total	53	100.0

Figure 5: People who are HIV positive die from diseases other than HIV related illness

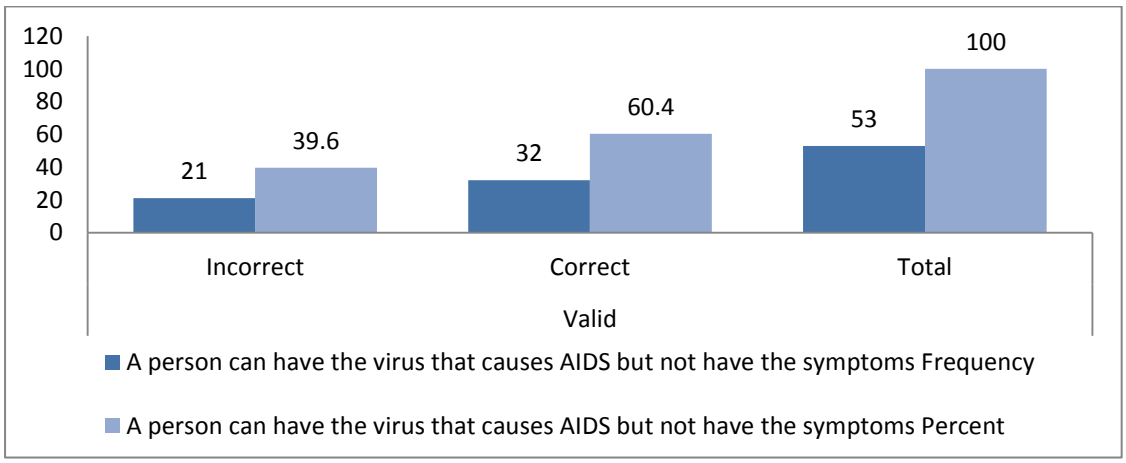


Frequency table 11 and figure 5 indicates how many athletes believe the claim that people who are HIV positive die from diseases other than from HIV related illnesses. Twenty-nine (54.7%) answered correctly by agreeing with the statement, choosing true while 24 (45.3%) did not agree with the statement. This shows that there are still misconceptions amongst the athletes regarding this statement.

Frequency table 12: A person can have the virus that causes AIDS but not have symptoms

	Frequency	Percent %
Incorrect	21	39.6
Correct	32	60.4
Total	53	100.0

Figure 6: A person can have the virus that causes AIDS but not have symptoms



Frequency table 12 and figure 6 show that 32 (60.4%) of athletes know that a person can have the virus that causes AIDS but not have the symptoms. On the other side 21(39.6%) of the

athletes believe that there is no way a person with HIV will not show the symptoms. This is alarming and shows that there is a lot of misinformation in this area among the athletes.

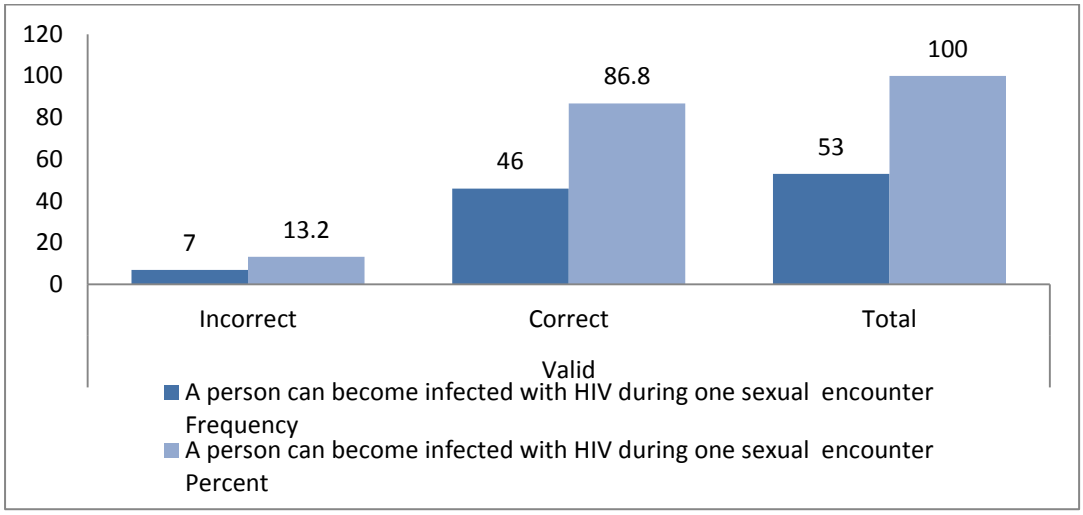
5.3.2 Mode of HIV transmission and misconceptions

The following section looks at athletes knowledge about HIV transmission and misconceptions about HIV transmission.

Frequency table 13: A person can become infected with HIV during one sexual encounter

	Frequency	Percent %
Incorrect	7	13.2
Correct	46	86.8
Total	53	100.0

Figure 7: A person can become infected with HIV during one sexual encounter

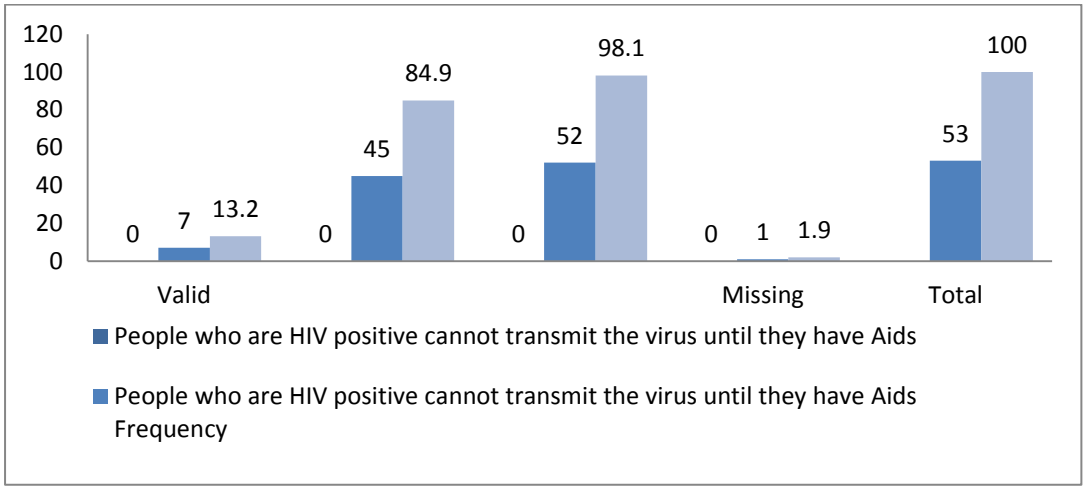


As shown in frequency table 13 and figure 7 most of the athletes 46 (86.8%) understand that a person can become infected with HIV during one sexual encounter. A few (13.2%) or 7 individuals believe that it is impossible to have an HIV infection during one sexual encounter. This may be an indicator of sexual irresponsibility amongst these players.

Frequency table 14: People who are HIV positive cannot transmit the virus until they have AIDS

	Frequency	Percent %
Incorrect	7	13.2
Correct	45	84.9
Total	52	98.1
Missing (unanswered)	1	1.9
Total	53	100.0

Figure 8: People who are HIV positive cannot transmit the virus until they have AIDS

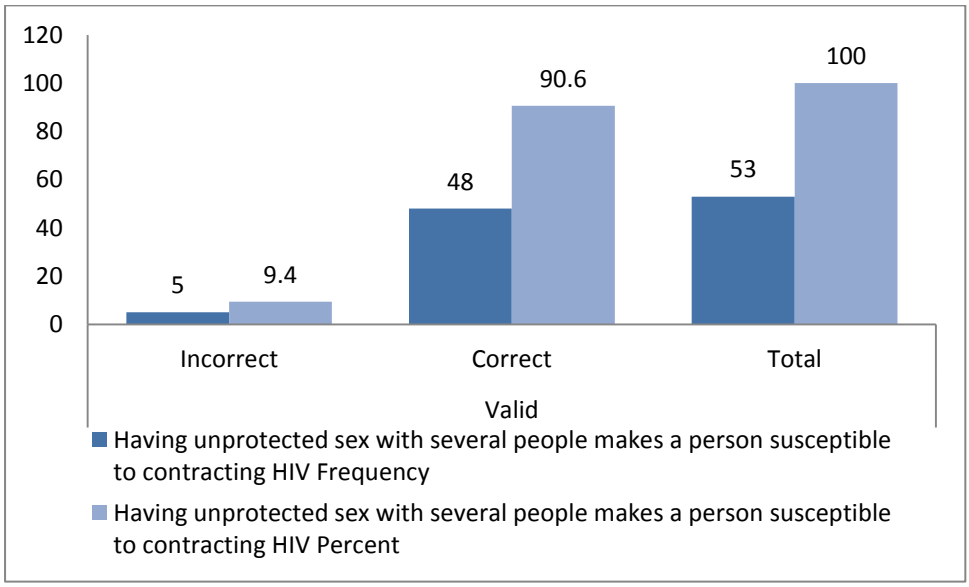


Frequency table 14 and figure 8 indicates that 7 (13.2%) of athletes believe that people who are HIV positive cannot transmit the virus until they have AIDS. Forty five (84.9%) answered correctly and indicated that the statement is false. Once again this is problematic as 7 athletes are not aware that an individual can transmit the virus when he or she does not show any AIDS symptoms. One athlete (1.19%) did not respond the question and appears on the figure and frequency table as missing, in this case meaning unanswered. Perhaps the participant felt uncomfortable answering this question did not see the question or did not know the answer thus did not respond.

Frequency table 15: Having unprotected sex with several people makes a person susceptible to contracting HIV

	Frequency	**Percent %**
Incorrect	48	90.6
Correct	5	9.4
Total	53	100.0

Figure 9: Having unprotected sex with several people makes a person susceptible to contracting HIV

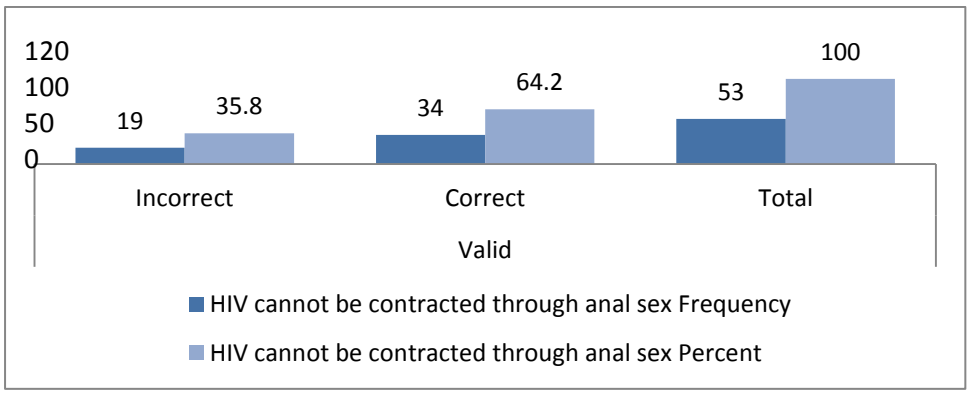


Frequency table 15 and figure 9 indicate that 5 (9.4%) answered the question incorrectly and asserted that it is false that having unprotected sex with several people makes one susceptible to contracting HIV. This implies that there are a small percentage of athletes that do not know this is incorrect and thus are likely to have unprotected sex with more than one partner. Forty-eight (90.6%) of the athletes gave a correct response. This indicates that most of the athletes are aware of the increased risk of contracting HIV when having sex with more people.

Frequency table 16: HIV cannot be contracted through anal sex

	Frequency	Percent %
Incorrect	19	35.8
Correct	34	64.2
Total	53	100.0

Figure 10: HIV cannot be contracted through anal sex

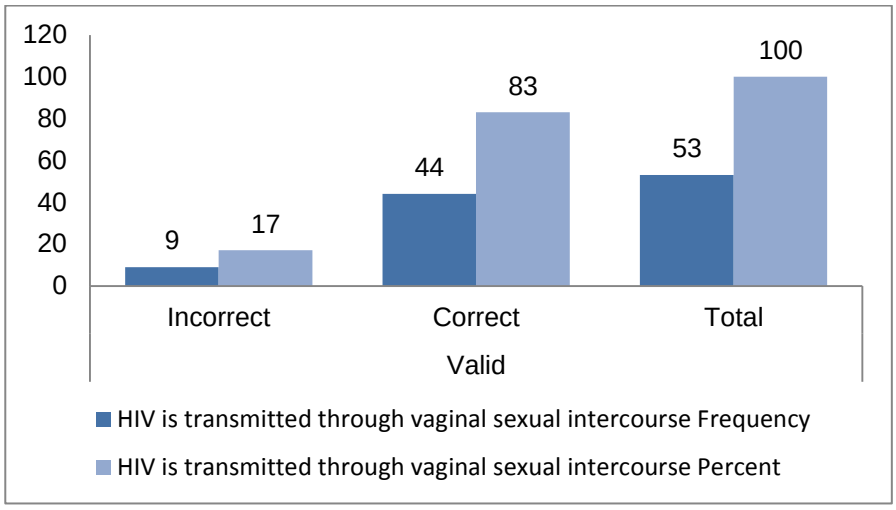


Frequency table 16 and figure 10 reveal that 19 (35.8%) responded incorrectly and indicated that it is true that HIV cannot be contracted through anal sex. Thirty-four (64.2%) responded correctly and indicated that the statement is false. The majority of the athletes are aware that it is possible to contract HIV through anal sex however, over a third were not aware of this which indicates misconceptions and lack of knowledge about how HIV can be contracted.

Frequency table 17: HIV is transmitted through vaginal sexual intercourse

	Frequency	Percent %
Incorrect	9	17.0
Correct	44	83.0
Total	53	100.0

Figure 11: HIV is transmitted through vaginal sexual intercourse

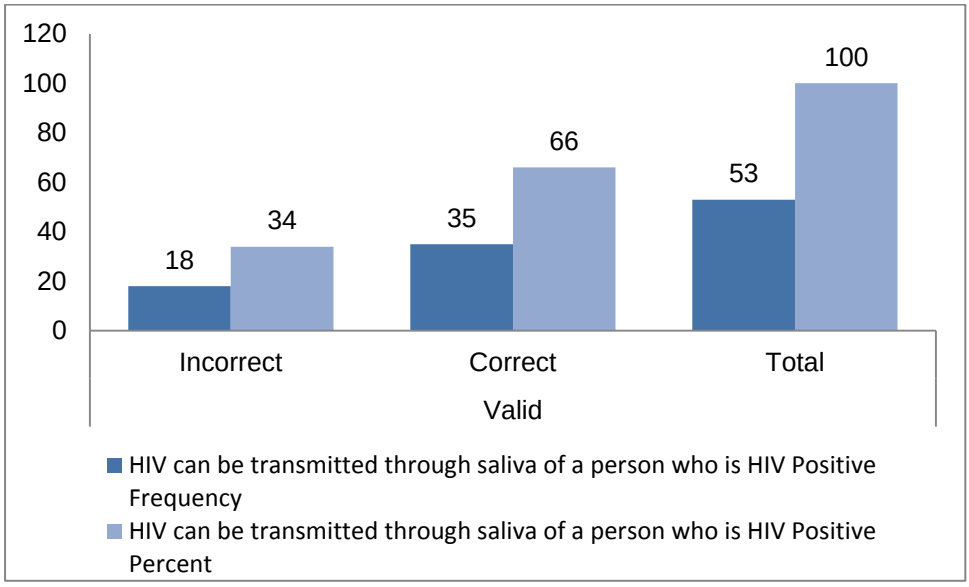


Frequency table 17 and figure 11 show that 44 (83%) of the athletes know that HIV is transmitted through vaginal sexual intercourse. Nine (17%) of the athletes thought it incorrect that HIV is transmitted through vaginal intercourse. This is a worrying trend as it indicates that these participants are not taking note of scientific knowledge which has proved this issue, which is that HIV is transmitted through vaginal intercourse.

Frequency table 18: HIV is transmitted through the saliva of a person who is HIV positive

	Frequency	Percent %
Incorrect	18	34.0
Correct	35	66.0
Total	53	100.0

Figure 12: HIV is transmitted through the saliva of a person who is HIV positive

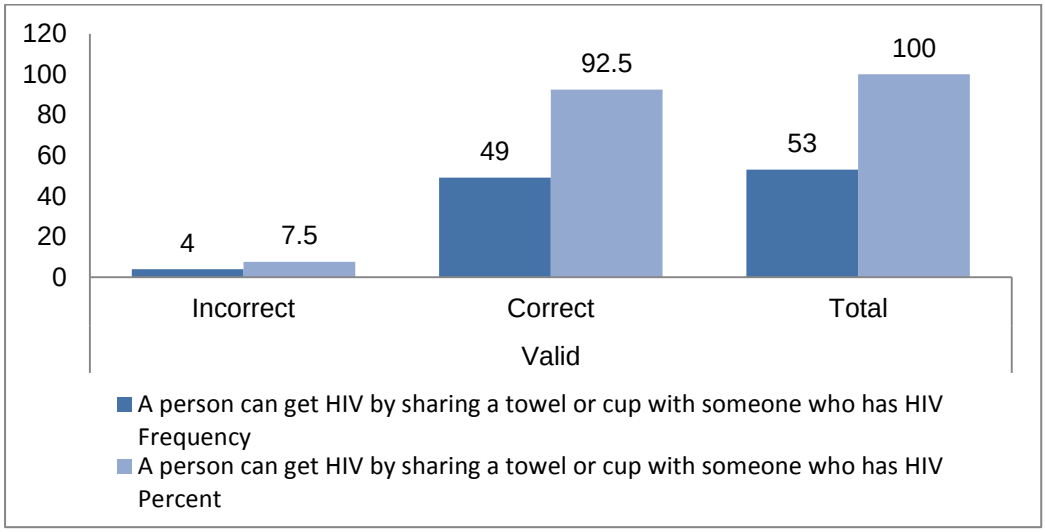


As seen in frequency table 18 and figure 12 the majority of the participants correctly responded to the statement "HIV is transmitted through the saliva of a person who is HIV positive" by indicating that it's false. The minority 18 (34%) responded incorrectly and indicated that it is true. In scientific theory HIV could be transmitted through saliva but it would need several litres of saliva to transmit the virus thus it cannot, and has not happened. It is thus accepted that saliva is not a route of HIV infection (Community Aids Response, 2013).

Frequency table 19: A person can get HIV by sharing a towel or cup with someone who has HIV

	Frequency	**Percent %**
Incorrect	4	7.5
Correct	49	92.5
Total	53	100.0

Figure 13: A person can get HIV by sharing a towel or cup with someone who has HIV

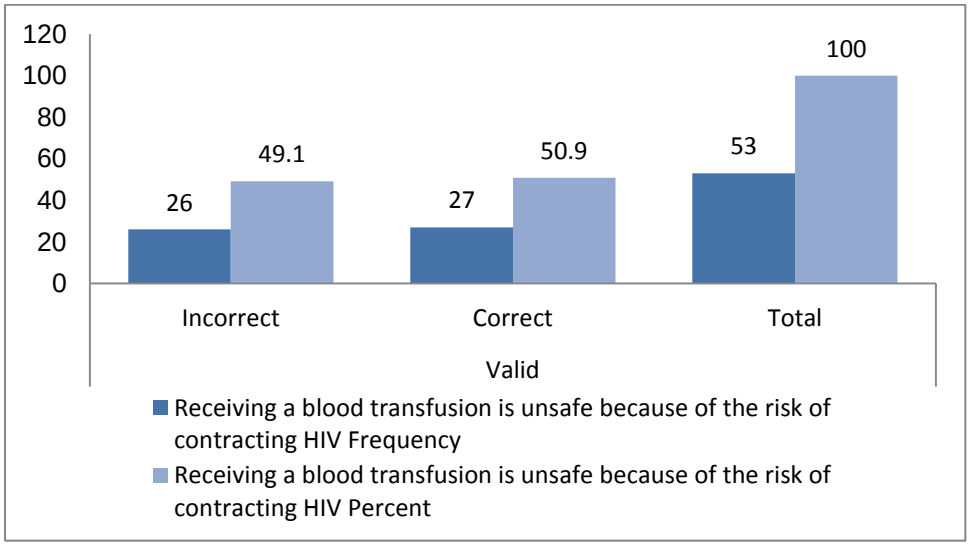


Frequency table 19 and figure 13 indicate show that most of the athletes know (49 participants or 92.5%) that an individual cannot get HIV by sharing a towel or cup with someone who is HIV positive. However, 4 (7.5%) believe that it is possible, and therefore answered incorrectly. Although a small percentage it relates to these individuals possibly discriminating against someone who is known to be HIV positive.

Frequency table 20: Receiving a blood transfusion is unsafe because of the risk of contracting HIV

	Frequency	Percent %
Incorrect	26	49.1
Correct	27	50.9
Total	53	100.0

Figure 14: Receiving a blood transfusion is unsafe because of the risk of contracting HIV

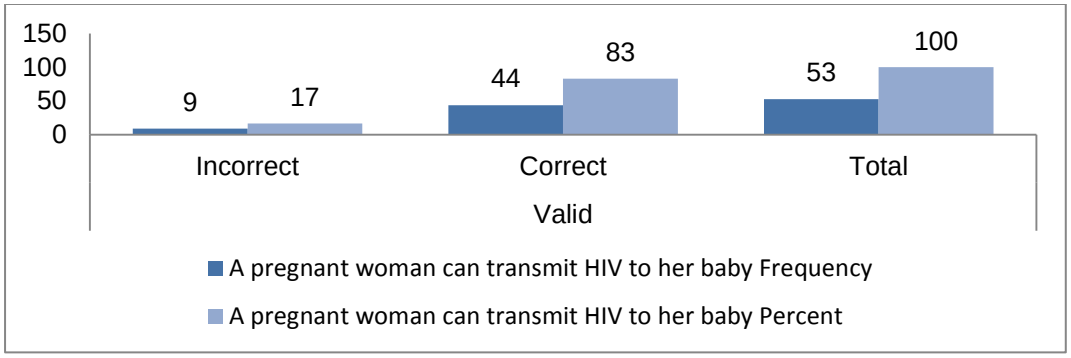


Frequency table 20 and figure 14 indicates that 27 (50.9 %) of the athletes answered correctly. Twenty-six (49.1%) of the athletes believe that receiving a blood transfusion is unsafe. This is incorrect in the South African context, as with the screening measures available today, blood transfusions are not unsafe. This is problematic as it could lead to an individual not having a blood transfusion (which could save their lives) because of this fear. It suggests that more knowledge on this issue needs to be made available to the general public.

Frequency table 21: A pregnant woman can transmit HIV to her baby

	Frequency	Percent %
Incorrect	9	17.0
Correct	44	83.0
Total	53	100.0

Figure 15: A pregnant woman can transmit HIV to her baby

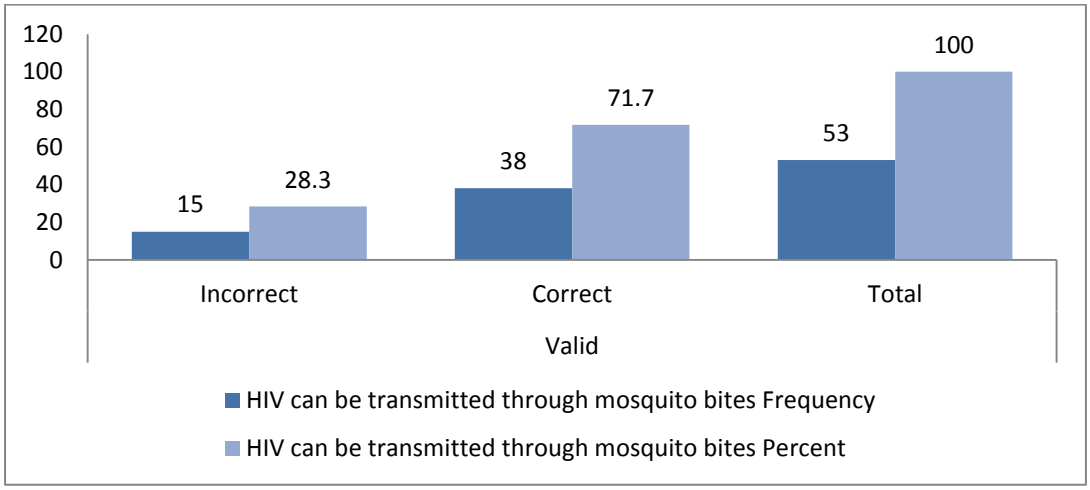


Frequency table 21 and figure 15 indicate that the majority of participants 44 (83%) know that a pregnant woman can transmit HIV to her baby. Nine participants 9 (17%) answered that this was incorrect. This suggests, as much information pertaining to mother-to-child transmission has been given through the media, that a percentage of students are not taking note of HIV and AIDS information that is disseminated through the media.

Frequency table 22: HIV can be transmitted through mosquito bites

	Frequency	Percent %
Incorrect	15	28.3
Correct	38	71.7
Total	53	100.0

Figure 16: HIV can be transmitted through mosquito bites



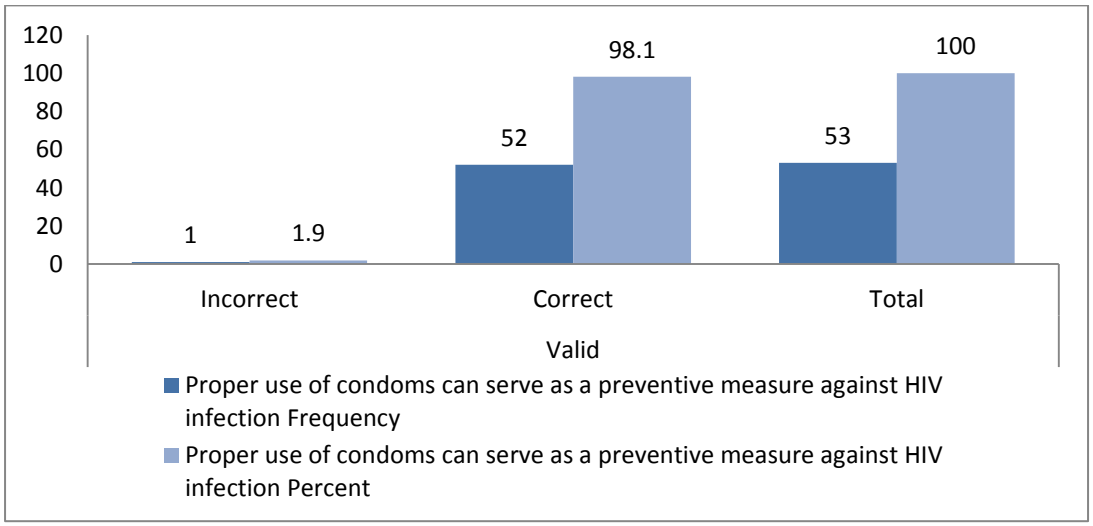
According to frequency table 22 and figure 16, fifteen (28.3%) athletes assert that HIV can be transmitted through mosquito bites. Thirty eight participants (71.7%) answered correctly by indicating that the statement is false. This shows that although majority of the athletes are well informed on the matter, a substantial still have misconceptions about HIV transmission.

5.3.3 HIV prevention and treatment

Frequency table 23: Proper use of condoms can serve as a preventative measure against HIV infection

	Frequency	Percent %
Incorrect	1	1.9
Correct	52	98.1
Total	53	100.0

Figure 17: Proper use of condoms can serve as a preventative measure against HIV infection

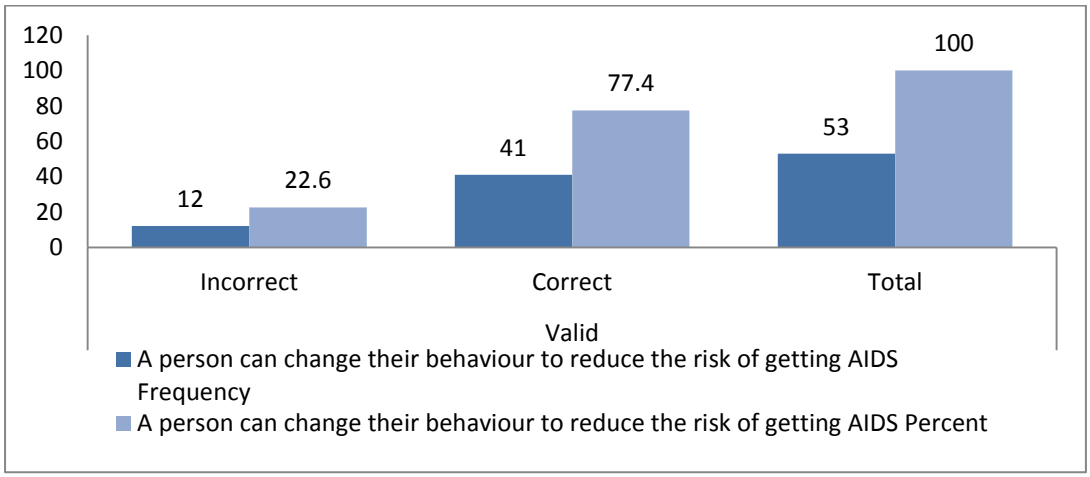


According to frequency table 23 and figure 17 almost all of the athletes (52, 98.1%) agree with the statement that proper use of condoms can serve as a preventative measure against HIV infection. Only 1 (1.9%) answered incorrectly and indicated that the statement is false.

Frequency table 24: A person can change their behaviour to reduce the risk of getting AIDS

	Frequency	**Percent %**
Incorrect	12	22.6
Correct	41	77.4
Total	53	100.0

Figure 18: A person can change their behaviour to reduce the risk of getting AIDS

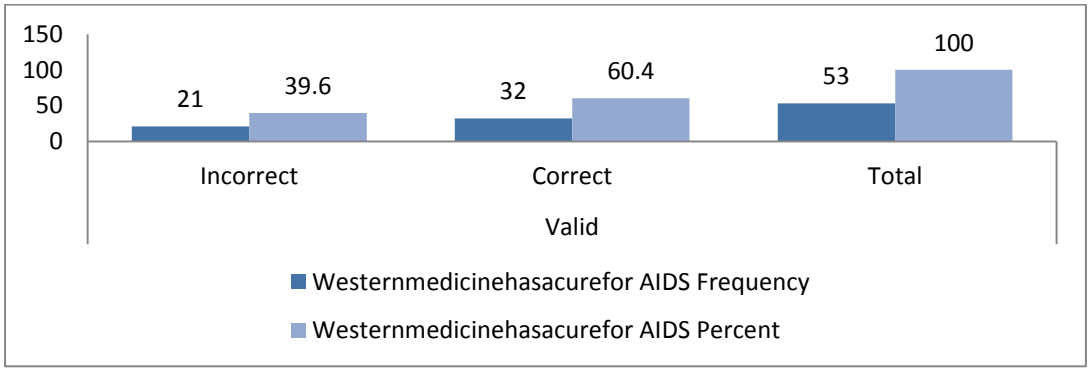


Frequency table 24 and figure 18 indicates that 41 (77.4%) of the athletes responded correctly to the statement, "A person can change their behaviour to reduce the risk of getting AIDS" by indicating that it's true. Conversely 12 (22.6%) of the athletes believe that the statement is false. This shows that majority of the athletes are aware healthier lifestyle practices are necessary to reduce the risk of contracting HIV.

Frequency table 25: Western medicine has a cure for AIDS

	Frequency	**Percent %**
Incorrect	21	39.6
Correct	32	60.4
Total	53	100.0

Figure 19: Western medicine has a cure for AIDS

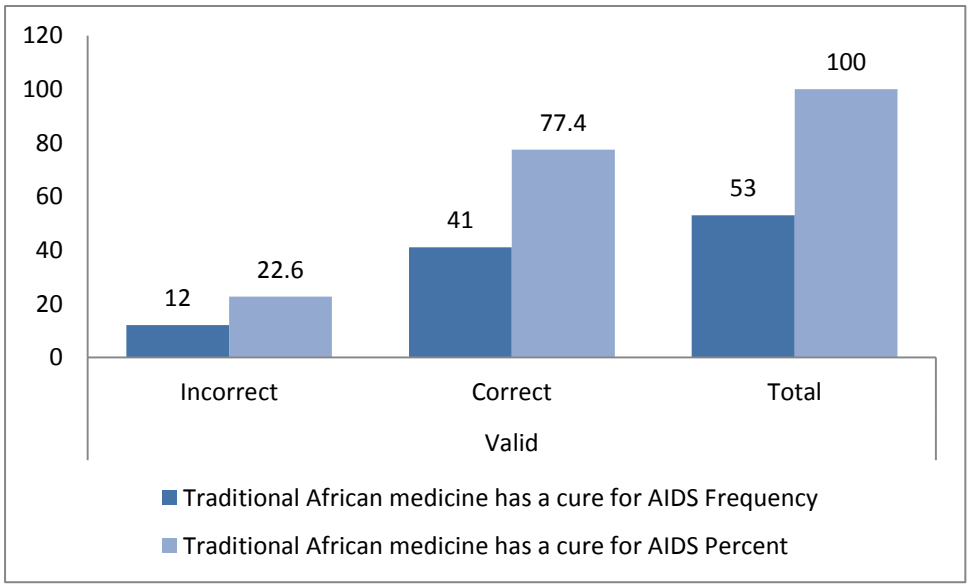


Thirty two (60.4%) of the athletes assert that western medicine has a cure for AIDS, as shown in frequency table 25 and figure 19. This is over a third of the sample and indicates that there are misconceptions about this as western medicine does not have a cure for AIDS. Twenty one (39.6%) of the athletes indicated that the claim is incorrect. It is likely that ante-retrovirals which treat the illness over time (as a chronic illness) are thought of as a cure however, this statistic needs further investigation.

Frequency table 26: Traditional African medicine has a cure for AIDS

	Frequency	Percent %
Incorrect	12	22.6
Correct	41	77.4
Total	53	100.0

Figure 20: Traditional African medicine has a cure for AIDS

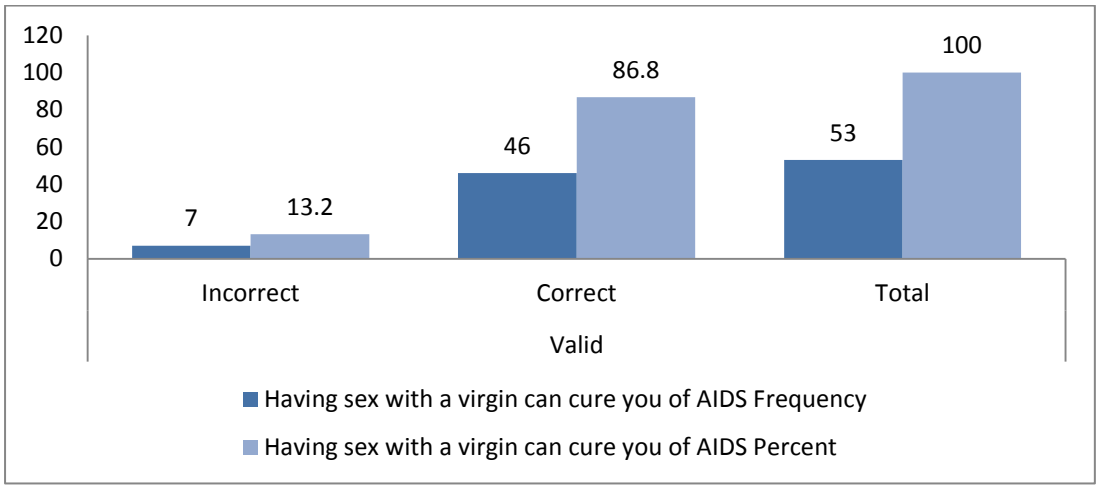


Frequency table 26 and figure 20 reveal that 41 (77.4%) of the athletes believe that traditional African medicine has a cure for AIDS. Twenty two point six% answered correctly that the statement is incorrect. This statistic reveals that more participants think African medicine can cure AIDS than western medicine. This is worrying as it may lead individuals to thinking that AIDS is curable and not a chronic, lifelong and life-threatening illness.

Frequency table 27: Having sex with a virgin can cure you of AIDS

	Frequency	Percent %
Incorrect	7	13.2
Correct	46	86.8
Total	53	100.0

Figure 21: Having sex with a virgin can cure you of AIDS



The majority of the athletes (46, 86.8%) responded incorrectly to the item by indicating that it is correct. A minority of athletes (13.2%, 7) responded correctly to the item. This is an extremely problematic statistic as the majority of athletes think the statement is true which is likely to promote the myth that sleeping with a virgin can cure an individual of AIDS. It may also promote forced sex or rape. This could pose a danger on campus, particularly to first entering females who are often presumed to still be virgins.

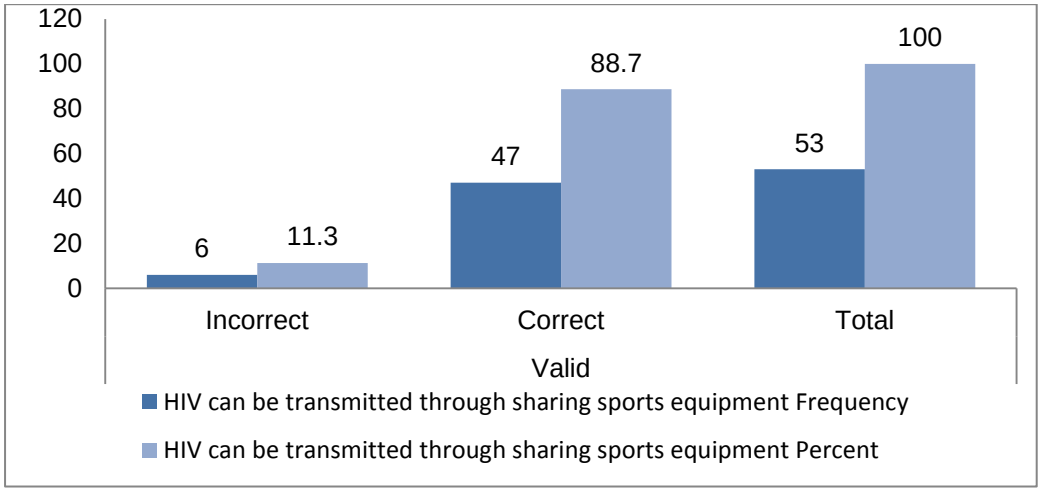
5.3.4 HIV and AIDS knowledge as related to sport

This part of the questionnaire discusses HIV and AIDS knowledge as it relates specifically to sport.

Frequency table 28: HIV cannot be transmitted through sharing sports equipment

	Frequency	Percent %
Incorrect	6	11.3
Correct	47	88.7
Total	53	100.0

Figure 22: HIV cannot be transmitted through sharing sports equipment

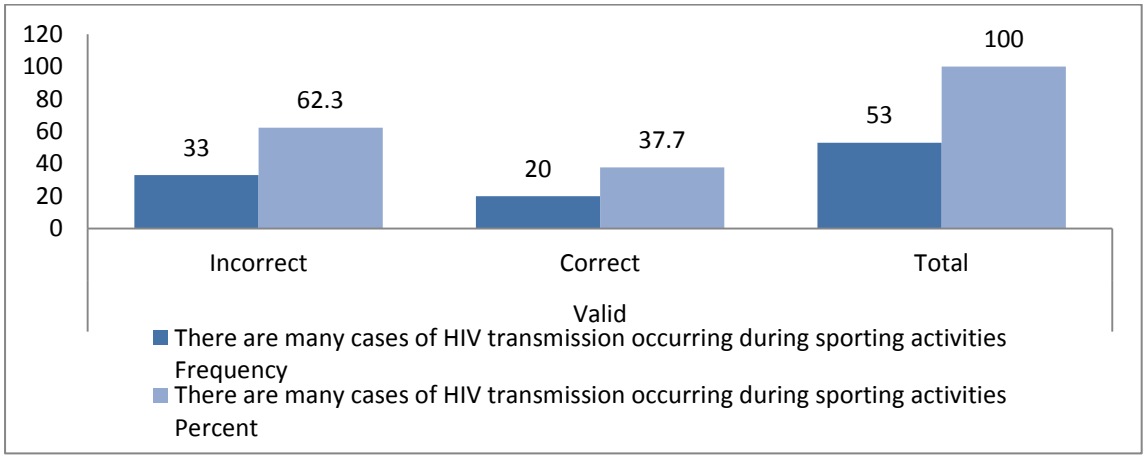


Most of the athletes (88.7%) know that HIV cannot be transmitted through sharing sports equipment. However, 6 (11.3%) of the athletes indicated that it is true that HIV can be transmitted through sharing sports equipment. This shows that some athletes still have misconceptions about how the HIV virus is transmitted.

Frequency table 29: There are many cases of HIV transmission occurring during sporting activities

	Frequency	Percent %
Incorrect	33	62.3
Correct	20	37.7
Total	53	100.0

Figure 23: There are many cases of HIV transmission occurring during sporting activities

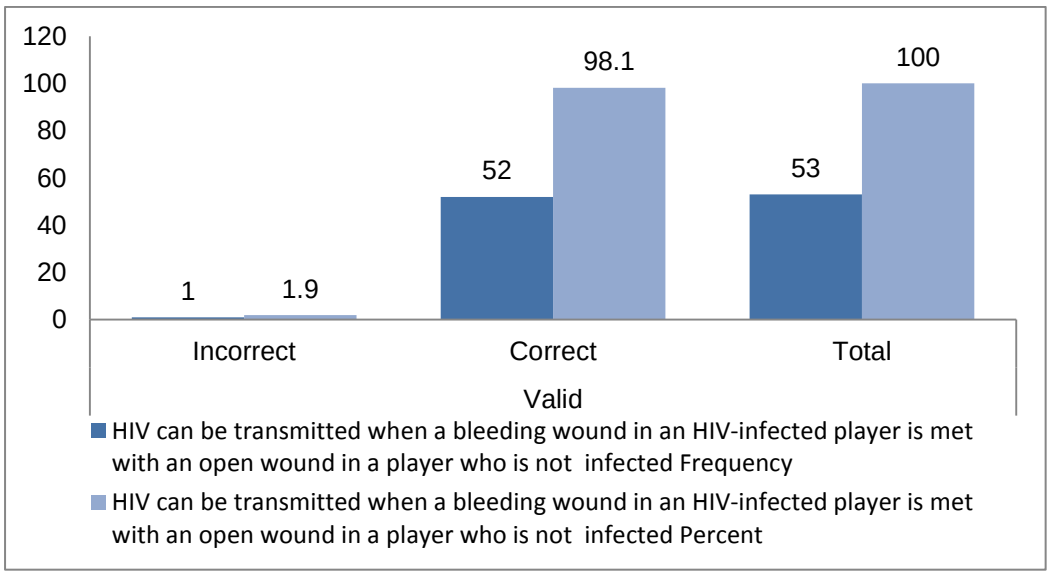


Frequency table 29 and figure 23 show that majority of the athletes (33, 62.3%) responded to the item correctly. However, over a third of the sample, 20 athletes or 37.7% thought that HIV transmission occurs during sporting activities. This is another misconception as it is very difficult to transmit HIV through sporting activities, particularly sports such as rugby and soccer.

Frequency table 30: HIV can be transmitted when a bleeding wound in an HIV infected player is met with an open wound in a player who is not infected

	Frequency	Percent %
Incorrect	1	1.9
Correct	52	98.1
Total	53	100.0

Figure 24: HIV can be transmitted when a bleeding wound in an HIV infected player is met with an open wound in a player who is not infected

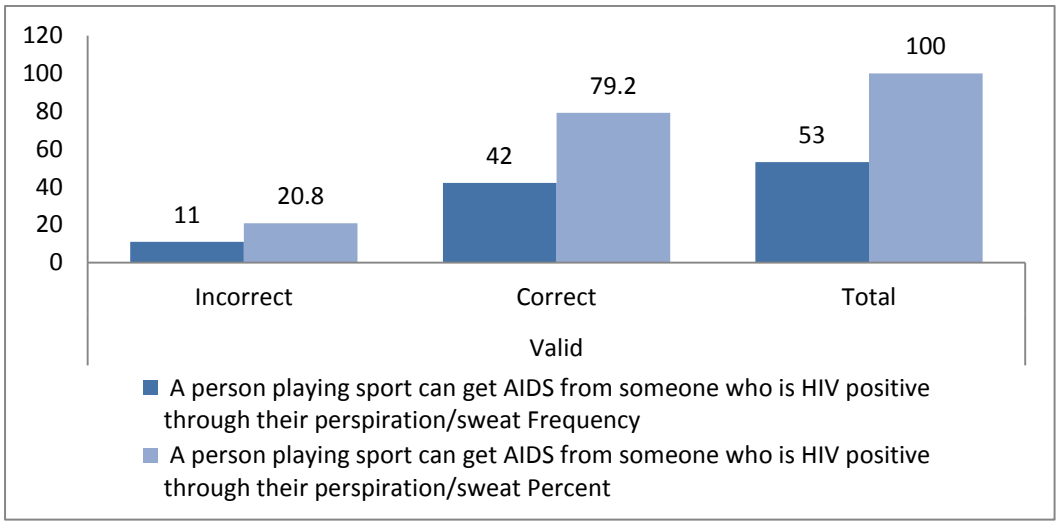


According to frequency table 30 and figure 24 the majority of the athletes (52, 98.1%) are aware that HIV can be transmitted when bleeding of an HIV- infected player is met with an open wound in a player who is not infected. Only 1 (1.9%) responded incorrectly and asserted that the statement is incorrect.

Frequency table 31: A person playing sport can get AIDS from someone who is HIV through perspiration/sweat

	Frequency	Percent %
Incorrect	11	20.8
Correct	42	79.2
Total	53	100.0

Figure 25: A person playing sport can get AIDS from someone who is HIV through perspiration/sweat

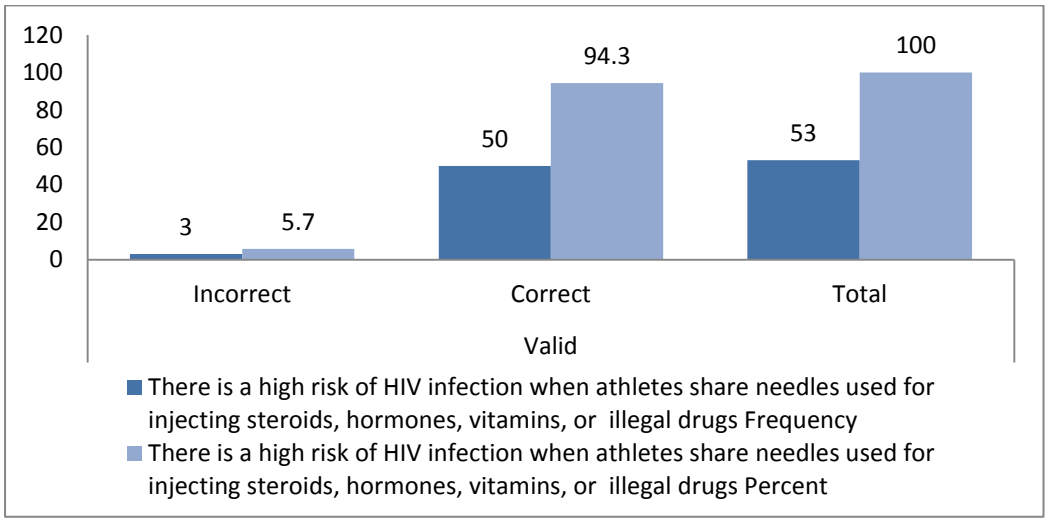


Frequency table 31 and figure 25 shows that most of the athletes (42, 79.2%) responded to the statement incorrectly. They are not aware that a person playing sport cannot get AIDS from someone who is HIV positive through their sweat. Conversely, 11 (20.8%) of the athletes indicated that the statement is true, which is incorrect and displays lack of knowledge and/or misconceptions about how HIV is transmitted.

Frequency table 32: There is a high risk of HIV infection when athletes share needles used for injecting steroids, hormones, vitamins or illegal drugs

	Frequency	Percent %
Incorrect	3	5.7
Correct	50	94.3
Total	53	100.0

Figure 26: There is a high risk of HIV infection when athletes share needles used for injecting steroids, hormones, vitamins or illegal drugs

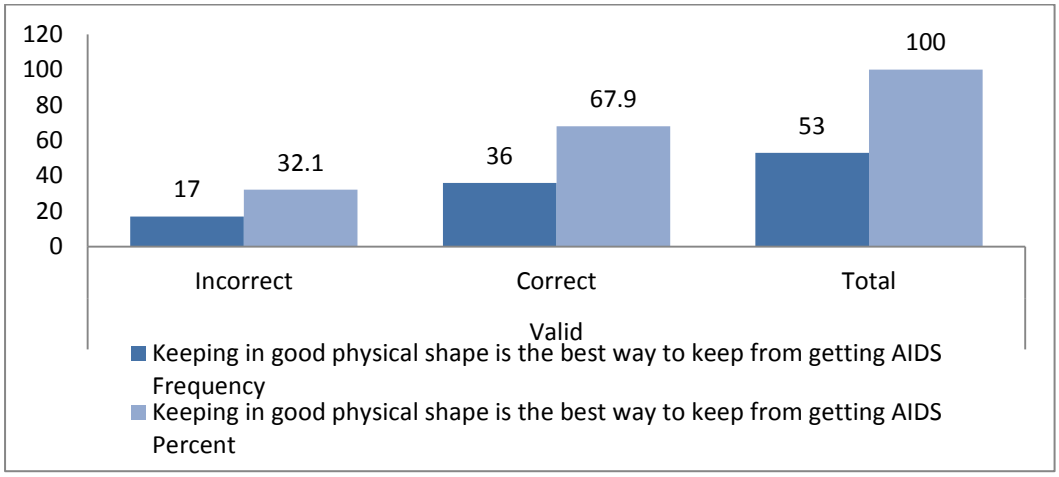


Frequency table 32 and figure 26 show that 50 (94.3%) responded correctly to the item and agreed that there is a high risk of HIV infection when athletes share needles used for injections. However, 3 (5.7%) responded incorrectly by indicating that the statement is false.

Frequency table 33: Keeping in good physical shape is the best way to keep from getting AIDS

	Frequency	Percent %
Incorrect	17	32.1
Correct	36	67.9
Total	53	100.0

Figure 27: Keeping in good physical shape is the best way to keep from getting AIDS



Frequency table 33 and figure 27 indicate that 36 (67.9%) of the athletes maintained that the statement, "Keeping in good physical shape is the best way to keep from getting AIDS.

Thirty six (36) of the athletes (67.9%) responded that the statement is correct, which it is not. This is problematic as it is close to two thirds of the sample. Seventeen (17) of the participants responded correctly that the statement is incorrect (32.1%). This is another statistic which indicates that athletes in the sample have areas of poor knowledge about HIV/AIDS.

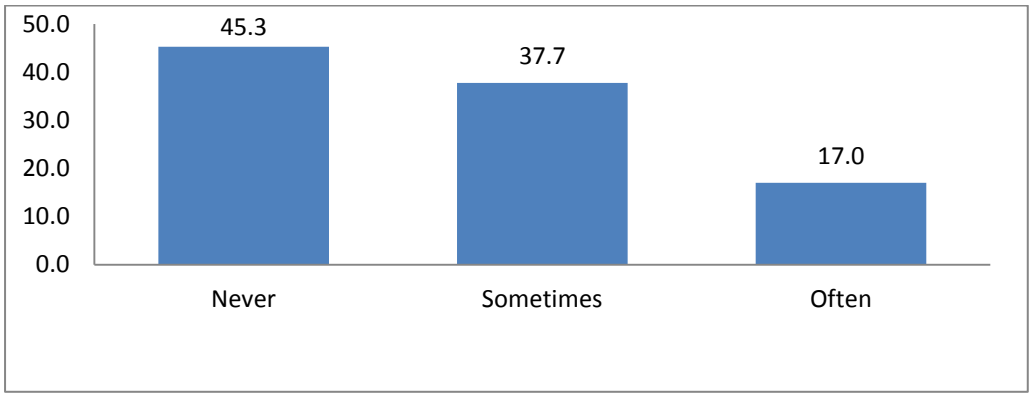
5.3.5 Communication and discussion about HIV/AIDS

The following section gives athletes responses about how they receive communications about HIV and AIDS. It also indicates with whom they discuss HIV/AIDS.

Frequency table 34: How often have you heard about HIV/AIDS from somebody involved in your sport, e.g. coaches, managers, sports administrators?

	Frequency	Percent %
Never	24	45.3
Sometimes	20	37.7
Often	9	17.0
Total	53	100.0

Figure 28: How often have you heard about HIV/AIDS from somebody involved in your sport, e.g. coaches, managers, sports administrators?

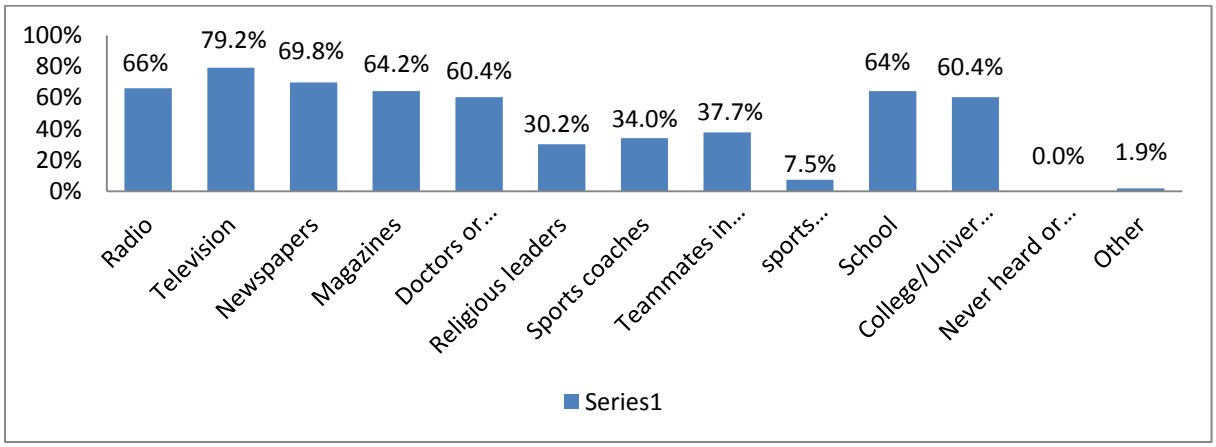


Frequency table 34 and 2 figure 28 indicates that 24 (45.3%) participants have never heard about HIV and AIDS from their coaches, managers and/or sport administrators. Twenty (37.7%) participants had sometimes heard about HIV/AIDS from coaches, managers and/or sport administrators. Only 9 (17.0%) indicated that they often hear about HIV/AIDS from their coaches, managers and sport administrators.

Frequency table 35: Where have you heard or read about HIV and Aids?

Communication medium	Frequency	Percentage%
Radio	35	66
Television	42	79.2
Newspapers	37	69.8
Magazines	34	64.2
Doctors or health workers	32	60.4
Religious leaders	16	30.2
Sports coaches	18	34.0
Teammates in your sport	20	37.7
sports administrations	4	7.5
School	34	64.0
College/University/Technikon	32	60.4
Never heard or read about it	0	0.0%
Other	1	1.9%

Figure 29: Where have you heard or read about HIV and Aids?



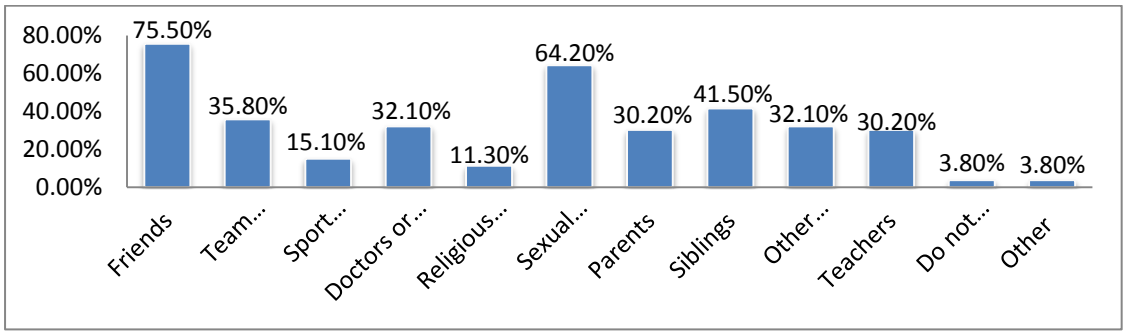
Frequency table 35 and figure 29 indicate the different mediums of communication which the participants have used to be informed about HIV/AIDS. Thirty five (66%) indicated radio, 42 (79.20%) indicated television (which is the highest percentage), 37 (69.80%) indicated newspapers, 34 (64.20%) indicated magazines, 32 (60.40%) indicated health workers, 16 (30.20%) indicated religious leaders, 18 (34 %) indicated sport coaches, 20 (37.70%) indicated teammates, 4 (7.50%) indicated sports administrators, 34 (64%) indicated from

school, 32 (60.40%) indicated tertiary educational institutions and 1(1.90%) gained information through unspecified other means. None of the participants indicated that they had never received information about HIV/AIDS.

Frequency table 36: With whom do you discuss HIV/AIDS?

	Frequency	Percentage%
Friends	40	75.5
Team mates in your sport	19	35.8
Sport Coaches	8	15.1
Doctors or health workers	17	32.1
Religious leaders	6	11.3
Sexual partners	34	64.2
Parents	16	30.2
Siblings	22	41.5
Other family members	17	32.1
Teachers	16	30.2
Do not discuss it	2	3.8
Other	2	3.8

Figure 30: With whom do you discuss HIV/AIDS?



Frequency table 36 and figure 30 indicate with whom athletes discuss HIV/AIDS. Forty (75.50%) indicated friends (this is the mostly used discussion mode), 19 (35.80%) indicated fellow athletes, 8 (15.10%) indicated sport coaches, 17 (32.10%) indicated health workers, 6 (11.30%) indicated religious leaders, 34 (64.20%) indicated sexual partners, 16 (30.20%) indicated parents, 22 (41.50%) indicated siblings, 17 (32.10%) indicated other family members, 16 (30.20%) indicated teachers, 2 (3.80%) indicated that they do not discuss the matter at all and another 2 (3.80%) indicated that they discuss the matter with other persons not specified on the questionnaire. The results indicate that most of the participants discuss HIV and AIDS with others and only a few do not discuss HIV/AIDS at all.

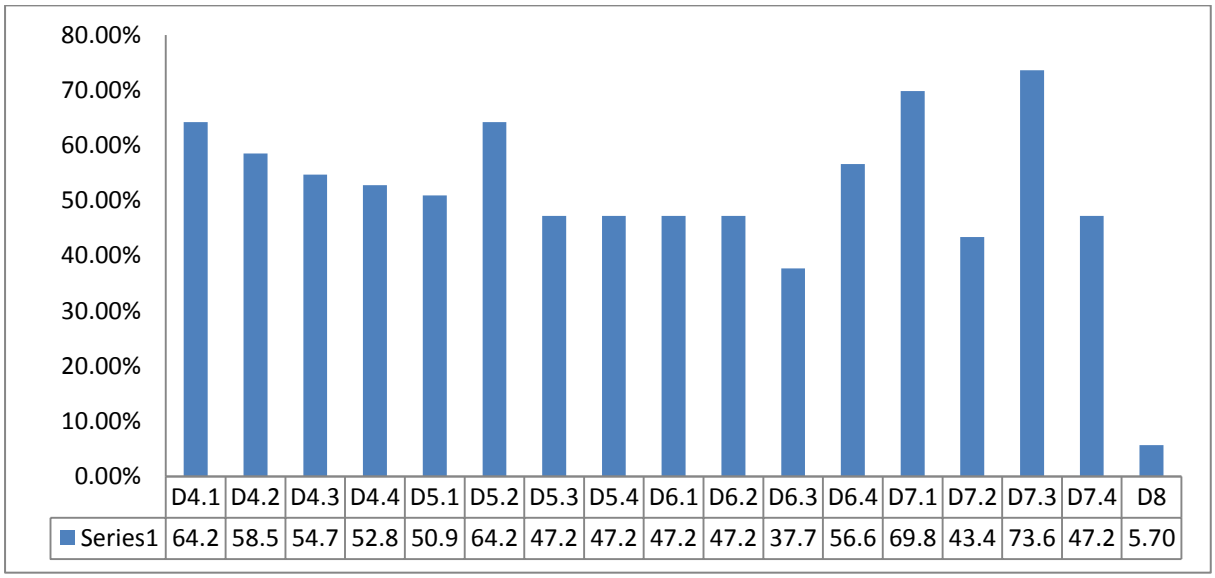
5.3.6 Life skills or values developed as a result of participation in sport

This section gives an indication of whether the participants think they developed life skills and values because they participated in sport.

Frequency table 37: What life skills or values do you think that you have developed as a result of participation in sport?

Item No		Frequency	Percentage%
D4.1	Effective communication with peers or colleague (Interpersonal skills)	34	64.2
D4.2	Performing well under pressure	31	58.5
D4.3	Development of leadership skills as well learning from guidance given	29	54.7
D4.4	Developing a good sense of responsibility	28	52.8
D5.1	Effective decision- making and judgment	27	50.9
D5.2	Managing stress	34	64.2
D5.3	Handling success and failure effectively	25	47.2
D5.4	Acquiring coping strategies	25	47.2
D6.1	Sportsmanship	25	47.2
D6.2	Meeting deadlines and challenges	25	47.2
D6.3	Receiving and benefiting from feedback	20	37.7
D6.4	Developing self-esteem and self-confidence	30	56.6
D7.1	Health and fitness	37	69.8
D7.2	Problem solving	23	43.4
D7.3	Teamwork and cooperation	39	73.6
D7.4	Setting goals	25	47.2
D8	More skills and time management	3	5.7

Figure 31: What life skills or values do you think that you have developed as a result of participation in sport?



	D4.1	D4.2	D4.3	D4.4	D5.1	D5.2	D5.3	D5.4	D6.1	D6.2	D6.3	D6.4	D7.1	D7.2	D7.3	D7.4	D8
Series1	64.2	58.5	54.7	52.8	50.9	64.2	47.2	47.2	47.2	47.2	37.7	56.6	69.8	43.4	73.6	47.2	5.70

Frequency table 37 and figure 31 indicate the life skills or values athletes think they have developed as a result of participation in sport. Thirty four **(**64.2%) indicated effective communication; 31 (58.5%) indicated performing under pressure; 29 (54.7%) indicated leadership skills and learning from guidance given; 28 (52.8%) indicated a sense of responsibility; 27(50.9%) indicated effective decision making; 34 (64.2%) indicated managing stress; 25 (47.2%) indicated handling success and failure effectively; 25 (47.2%) indicated acquiring coping strategies; 25 (47.2%) indicated sportsmanship; 25 (47.2%) indicated meeting deadlines and challenges; 20 (37.7%) indicated receiving and benefiting from feedback; 30 (56.6%) indicated self-esteem and self-confidence; 37 (69.8%) indicated health and fitness; 23 (43.4%) indicated problem solving; 39 (73.6%) indicated teamwork and cooperation; 25 (47.2%) indicated setting goals and 3 (5.7%) indicated more skills such as time management. Team work and cooperation appears to have developed in majority of the sample.

5.4 Qualitative results – HIV and Aids attitudes and relationship behaviour

The results for the qualitative section of the research are presented in this section. The qualitative data is taken from Section 3 of the questionnaire and is made up of open-ended questions which were adapted from a questionnaire by Germanos (2006). Thematic Content Analysis (TCA) was used to analyse the qualitative data. The transcript of participants'

answers can be found in appendix 3. Themes arising out of the data were colour coded for ease of analysis.

5.4.1 Emerging Themes

Thematic Content Analysis (TCA) was used to analyse qualitative data and to glean major themes from the responses provided by the participants. These themes are first presented in paragraph format, giving examples of responses that represent each theme. After this the themes are summarised in a tabular format for clarity and ease of reading. The themes were gleaned from reading and re-reading of questions in Section 3 and 4 of the questionnaire namely HIV and Attitudes and relationship behaviour. The themes are drawn from the concepts in each sub-section of this part of the questionnaire namely, HIV testing, disclosing HIV test results, sports participation of HIV positive athletes and coaches, attitudes towards HIV positive athletes, prevention of HIV transmission on the sports field, Education about HIV and AIDS, HIV and AIDS relationships (on and off the sports field) and sport and HIV prevention. Appendix D gives a breakdown of participants' responses in the aforementioned order which does not necessarily reflect the order of themes gleaned from the data. Examples of responses from each theme are given from the transcripts and highlighted. Many more responses fit in with the given themes and are highlighted in the transcript (in the colour codes for each theme). The themes that are presented are also underpinned by the theoretical framework for the study namely Erikson's theory of Psychosocial Development (1956).

5.4.2 Theme 1: Prevention

The theme prevention stems from responses that note preventing transmission of HIV and Aids and using Voluntary Testing and Counselling (VCT) services plus concern about HIV transmission (or catching the virus). Participants indicated that there should be prevention as they want to have relationships both off and on the field. The following responses underpin this theme.

"*There should be prevention! Better precautions by doctors lead to better prevention of the virus spreading through the team. I don't want to get HIV because I want a girlfriend."*

"Yes, good prevention then it will be easier for everyone to be careful when another athlete is injured. My team mates must be careful so we can stay friends."

"*Yes there should be. It will help eliminate the spread of HIV in sports because you'll know the statuses of your team mates and can be friends with them."*

"*Yes to reduce the risk of infection so you can have relationships."*

This theme relates to Erikson's (1956) notion that at this life stage there is a strong need for intimacy. Hence being prevented from being HIV positive is important in order to continue with intimacy, both in personal and team relationships. However, it may also be indicative of a discriminatory attitude towards those with HIV infection as it might point towards participants not wanting friends or relationships with those who are infected. Many of the participants noted that they were happy to go for VCT as being aware of one's status is a preventative measure. For instance, if participants know they are HIV positive they will ensure that they use condoms when having sex. It was also reported that the counselling received at VCT helped them "stay negative." In terms of

I feel good [about going for VCT] because this will help me to know my status and also the counselling helps me to stay negative.

"I don't have a problem testing for HIV. I do it every six months since I'm sexually active. It helps me know my status so I can be able to take care of myself."

"*Confident, because it's better for a person such as myself to know my status and protect those I love."*

"If I get a chance I would do it all over and over again, because I need to protect myself and my girlfriend."

"I have tested a lot of times and the feeling is always amazing and it keeps me motivated to stay clean and be careful."

5.4.3 Theme 2: Wellbeing

The theme wellbeing denotes how individuals take care of themselves or perceive how they should take care of themselves and people who know how to live positively with HIV. It indicates that the participants perceived that persons who are HIV positive should take part in sport in order to have a positive and healthy sense of self or wellbeing. Participants also indicated that it is better to be aware of one's HIV status as it will allow individuals to better

take care of themselves and thus have a healthy wellbeing, both physical and psychological. This theme is gleaned from responses such as:

"*Yes they should be tested so that athletes will know their status and if they are positive, they should live positively and those who have negative behaviours should change their behaviours to stay healthy."*

"*No they shouldn't be prevented from being in a team and being physically active will help boost their immune system*."

"*They should not prevent people with HIV to participate in sports as it is good for their health and would keep them physically fit and help their mind."*

"*The benefits are they keep healthy and are healthy as they also watch what they eat. So in general athletes take care of themselves physically and mentally."*

According to Merriam, Courtenay and Reeves (1997) the fifth stage of identity versus role confusion (Erikson, 1956) is revisited in the case of being diagnosed with a fatal disease and the sense of self is redefined. In line with Merriam et al. (1997), athletes indicate that HIV positive individuals should continue playing sports for the sake of fitness. In other words athletes believe that an HIV positive athlete should incorporate an HIV diagnoses with his identity to ensure a sense of wellbeing in both a physical and psychological sense. The theme well-being also relates to keeping healthy which is reflected by the following responses.

"*Athletes don't have time to engage in risk behaviours which will result in contracting HIV."*

"*Exercise is always the better way of being healthy, and participating in sports keeps you away from the bad influences in life."*

"*The time you take doing sport keeps you fit and healthy and you can have good friendships without having to look for the girls around campus."*

"You spend a lot of time participating and trying to improve which keeps you occupied taking your time looking for too many sexual activities. It is then better to have one girlfriend and keep healthy."

Sport is a particularly appropriate environment to learn positive skills that can be transferable to other environments (Danish, Nellen & Owens, 1996). There are numerous positive developmental indicators that have been associated with sport participation, including

improved self-esteem, positive emotional regulation, good problem-solving skills, goal attainment, positive social skills and improved academic performance (Holt, Sehn, Spence, Newton and Ball (2012). Contrarily, Holt et al. (2012), assert that youth involved in sport can be aggressive and are prone to inappropriate behaviours, particularly older adolescent male athletes. For this reason participation in sport will not automatically result in healthy lifestyle choices. However, Erikson (1956) claims that a better self-esteem has the tendency of leading to delayed sexual activity which may be true of some individuals who participate in sport. Since improved self-esteem can be one of the benefits of sports participation it follows that an individual will make healthier decisions regarding lifestyle choices generally if involved in sports.

5.4.4 Theme 3: Medical assistance

The theme medical assistance stems from the responses that indicate when the medical team is aware of an athlete's positive HIV status they can take appropriate precautionary measures. This theme is gleaned from responses such as the following.

"*I think there should be mandatory HIV testing for athletes because medics can then know how to treat you."*

"*Medical assistance on the pitch and for the team is important so that anyone who has disclosed their status can be helped with blood injuries."*

"*There are always medics before the game starts, the game will not start without their presence. This is good because they know how to take care of blood injuries."*

"*The medics are using gloves to help players that are injured or with bleeding injuries so no one can get infected. We always have medics at games."*

The above finding relates to statements made by Schwellnus and Derman (2005) who note that sports administrators, coaches and managers should ensure that adequate medical care is available when athletes participate in sport and incur a blood injury. It appears the participants feel confident in the medical attention that they receive. This in turn reflects and is related to the notion that they are confident in their sporting (leisure) relationships with their medical team which relates to their need for familiarity (intimacy) in relationships (Erikson 1956). However, there were some participants who reported that they do not have adequate medical attention on the field. There were fewer participants who had negative

experiences and, as the participants play in the same teams, may reflect that these experiences were isolated or that the participants were not as confident, or at the same psychosocial developmental level as the majority of the participants. Examples of these statements are reported as follows.

"S*o far I haven't seen or heard anything. They don't seem to give us enough medical attention."*

"*I don't think the paramedics that assist know enough. Players often return to the field and bleed through the bandage."*

"*Nothing, they don't do anything there is always blood."*

5.4.5 Theme 4: Confidentiality

The theme confidentiality stems from the responses that indicate that an athlete's HIV status is private and they should test for HIV only if they want to. The theme further maintains that the coach should be the one person that is informed about a positive HIV status. However, other athletes should not be informed by the coaching or managerial staff about the HIV status of athletes as that is a "personal choice." This theme is underpinned by the following responses.

"*I think informing the coach is important as it would [help] in monitoring the HIV positive athlete and not over using the player….. but as for informing teammates that should be a personal choice."*

"No, it must not be because HIV testing is personal. It is someone's privacy, and in soccer it is unnecessary because no open wound is allowed. Players must cover his wound so it's unnecessary. It is only necessary to tell the coach so he knows not to push too hard and he must not tell others."

"*No, status is [a] secret. If you are sick and off for a time then perhaps you can tell the coach but only if it is confidential and you can trust him. You can't tell other players as it is a personal thing."*

Cycling South Africa (2010) stipulates that an athlete should inform the coach that s/he is HIV infected so that appropriate interventions can be made in the event of an injury. The policy further states that the individual should be treated in a calm, open honest way. Rugby

and soccer players appear to be in favour of that policy but are not in favour of letting other athletes know. Essentially, this means they are likely to fear being discriminated against and perhaps losing intimate and social relationships in terms of Erikson's (1956) theory.

5.4.6 Theme 5: Discrimination

The theme discrimination stems from responses where participants indicated that should an athlete's positive HIV status be disclosed, discrimination may result or negative consequences ensue. This theme is gleaned from examples of responses as follows.

"*I don't feel comfortable [revealing my status] as I don't know how others will take it and also I fear discrimination."*

"*No! There would be discrimination, at the end of the day we are all human."*

"*No it would be discrimination towards that player."*

"They should be prevented as it might seem like it is discrimination but it is safer for the rest of us."

Young adults are still eager to blend their identities with friends. They want to fit in (Wilder, 2003). Erikson (1956) highlighted that individuals at the stage of intimacy versus isolation are afraid of rejection from friends, family and intimate partners. Germanos (2006) concluded that HIV infection carries greater stigma and discrimination than the use of anabolic steroids to enhance athletic performance. This infers that athletes are afraid of being discriminated against because intimate or familiar relationships play a pivotal role in this stage of their development (Erikson, 1956). For this reason athletes fear discrimination because of an HIV infection as they need to maintain relationships with their team members and fear that if they are known to be HIV positive these relationships will not be maintained. However, there were several participants who reported that they would not discriminate against an HIV positive athlete. This suggests that these individuals are more confident and have worked through the identity versus isolation stage of their psychosocial development. It could also suggest that these individuals could be HIV positive or have close friends or family members who are HIV positive.

"I wouldn't discriminate against such a player as I know for a fact that he needs our support."

"I will react in a supportive and positive way to such a player."

"*Good, I will accept his status as a human just like us."*

5.4.7 Theme 6: Fear and anxiety

The theme fear and anxiety stems from being nervous about testing and testing HIV positive. These participants fear the implications of a positive result. It was also reported that some participants fear playing with, or against, athletes who are HIV positive. Some individuals felt they *did not have time* to go for testing. Students do not have classes all day and VCT can be obtained over weekends. They also have over 14 weeks of holidays a year which means they could go for testing in this period. It is therefore likely that fear and anxiety, which they do not admit to unconsciously (and sometimes consciously) stops them from going for VCT. The following responses underpin this theme.

"*It is scary, no matter how many times I hear about it [HIV testing] or am advised to do it. It makes me very scared and anxious.***"**

"It would be hard for me to compete against an HIV positive athlete since I know the risks of playing a contact sport, more especially against an HIV positive athlete.

"*I would feel scared and worried because I think it's actually intimidating and torture to live with such a disease. I would not want to get it."*

"*Nervous as I fear HIV."*

"I would panic but have to know my status."

"*I will fear the person who is HIV positive in my team, because there is a high risk of HIV infection when you play the contact sport with a person who is diagnosed with HIV."*

"I will fear at times."

Peltzer, Nzewi and Mohan (2004) found that stigmatising attitudes toward Persons with AIDS (PW's) reduces an individual's willingness to have themselves tested for HIV infection. This increases the risk of HIV transmission. In addition, other researchers have found that the most significant barriers to voluntary counselling and testing (VCT) services are the fear of being known (by counsellors), fear of being HIV positive and stigmatisation (Kanyemba, 2010; Ulasi et al., 2008). Other reasons given for not testing are a fear of a

positive result, and the resultant belief that a positive result means an immediate death sentence (O'Hara, 2007). In terms of Erikson's (1956) psychosocial theory participants would also fear refection by friends, team mates and intimate partners which leads to isolation rather than intimacy.

5.4.8 Theme 7: Emotional support

The theme emotional support stems from the responses that indicate that emotional support is needed for an HIV positive athlete. This support should come from close family members, friends and/or team mates. The following responses support the abovementioned theme.

"They should inform their coach so that they can be aware that they can still play sports and they can get support".

"I wouldn't want everyone to know but only those who are close to me. It will help emotionally because I'll need support."

"An HIV positive person needs exercise and support in dealing with the pandemic. All those are found in sport participation."

"I will give him support and even encourage him to take medication accordingly and be sure he has a proper support group around him."

"Of course it takes guts to disclose but with professional help and support from friends and family I will be strong enough to."

Successful completion of the intimacy versus isolation stage can lead to comfortable relationships and a sense of commitment, safety, and care within any type of relationship (Erikson, 1956).This theme stresses the importance of intimacy and support in its various forms. Many of the participants are aware that that HIV positive athletes need support from significant others, family and friends.

5.4.9 Theme 8: Strategy

The theme strategy stems from the responses that indicate some empathy for HIV positive players but, at the same time, participants feel that the strategy or tactics in their sports should be revised if HIV positive athletes are known to participate. Fundamentally this may demonstrate discriminatory attitudes as non-acceptance of HIV positive players in a team is

likely to lead to their stigmatisation both on and off the sport fields. This theme is gleaned from responses such as those that follow.

"*I feel pity for them and I think the strategy of full contact should change and they should play touch rugby as not much contact is allowed."*

"*There would definitely be a change in strategy. There will be less contact or no contact at all otherwise this would cause trouble."*

"Yes, there must be a change because it must be made certain that any contact does not lead to bloodshed and contact must be reduced with any other player."

"Scared, if no tactical change, because I can also be affected when we contact"

'It depends [on] how dangerous that sport is because if it's like blood shedding it wouldn't be safe for others who are HIV negative."

"I don't think I will play the contact sport against HIV positive athletes."

"I would feel insecure because if it may happen that he or she get injured and our blood may contact and there's a possibility of me getting infected are high."

It is apparent that although many responses in the survey say the right thing for instance, discrimination should not happen and support should be given to HIV positive individuals. However, these responses indicate that there is still much hesitancy about sport injuries. In contact sports, the risk of HIV transmission is very low thus ordinary precautions such as taking a bleeding athlete off the field, covering the wound and wearing gloves is sufficient (Brown et al., 1995). Participants have knowledge and want to say the correct thing but, it seems that their sense of self-preservation may, at times, outweigh their need for team friendships. Fundamentally, self-preservation and isolation are likely to outweigh the need for intimacy (according to Erikson's 1957 theory) in a team sport setting.

Conversely some participants felt there was no need for a change in strategy. These participants are more likely better informed than those who wanted a tactical change. They are also likely to be more mature and have a need for intimacy in all settings that are work and leisure related. The following responses underpin this statement.

"There is nothing wrong with them, so I don't think it would be necessary to change the schedule/strategy."

"No, I will treat them as I treat others no need for changes."

"No, people who are HIV positive are the same as those who are uninfected. They are normal people just they have the disease (HIV)."

"HIV is transferred though blood so soccer it's not a fight it's a game, playing with an infected player will not change anything."

"I will just forget about his status and focus on sport."

5.4.10 Theme 9: Awareness

The theme awareness stems from the responses provided by participants about how HIV and AIDS education programmes will help them to make informed decisions concerning their health. The theme is gleaned from responses such as the following.

"The more people know about the dangers and general effects of HIV the better the attitudes towards HIV and the infected people, so it is good to have programmes."

"*Education programmes raise awareness amongst sport personnel on what HIV really is and ways to prevent it."*

"*It will make a good change to have programmes at the sports clubs because some of the sport participants do not have any idea of how one gets infected and how to prevent it and whether it's manageable or not."*

"Enhance and even educate us about being safe and healthy."

"It will be more helpful because most do not have enough information. Some athletes just touch a wound of an injured person with bare hands."

"This will reduce the behaviour of some athletes who like sleeping around with different partners and also educating society in general through sports."

Athletes are at a stage whereby they have much sexual energy, based on their age (Erikson, 1956). It is therefore very important for them to have insight into HIV awareness generally and how sexual behaviours and other behaviours such as touching wounds with bare hands can impact on their health and thus their personal lives. This is important to them in terms of intimacy as they desire friendships and relationships and not isolation (Erikson, 1956). This will in turn assist them to make informed decisions regarding HIV awareness. However,

some participants did not seem to think that being aware was important which is likely because they are still in an earlier phase of psychosocial development which causes confusion with self-identity and confidence, which is identity versus role confusion (Erikson, 1956).

"An educator will talk about HIV but in sports not that much is needed."

"No idea about why it is necessary to talk about sport and HIV."

"It will have no effect [Education programmes]."

"It makes people aware of what is happening [in] HIV/AIDS world. But most people are ignorant, the more we talk about, the more they mess up. Perhaps education is not enough. Anyway, almost everyone knows about HIV/AIDS."

5.4.11 Theme 10: Participation

The theme participation stems from the responses provided by participants which indicate that participation in sports has no effect on lifestyle in terms of HIV infection. Participants also generally indicated that *everyone has the right to participate in any kind of sport* and were not concerned for instance because HIV transmission through sport is *very rare*. The following statements support the theme.

"*I don't think participating prevents or changes you in any way. I think it just takes a certain set of mind to be aware and have a healthy lifestyle."*

"*It will have no effect participating in sport as it does not have anything to do with HIV."*

"*Nothing will help really unless an individual is willing to change his or her ways."*

"*I do not think participation in sports changes behaviour that leads to contracting HIV."*

"It does not prevent HIV or AIDS (Sport participation)."

Some studies indicate that empirical evidence of the effectiveness of sport-based HIV prevention programmes is lacking (Delva et al., 2010). This supports the above statements. Conversely, some studies indicate that sport has a positive effect on HIV education (Kaufman, Spencer & Ross, 2012) as shown by the following responses.

"*Because they are always occupied with sports, if the sport that particular person is playing has an HIV/AIDS awareness programme, he or she can learn a lot about the disease."*

"The role of sports coaches as role models and mentors has a vital component of HIV/AIDS prevention programmes using sport. These coaches can also be peers to other young people of a similar age."

"By keeping players busy and occupied, most soccer players who play in sport have sex less because of the hard training regime they encounter during sport participation. This is good as, in that way, sport participation can help reduce HIV infection."

"It will help [sport participation] by keeping an individual emotionally and physically healthy because most of the time they will be spending their time training or playing games."

The latter statements reflect the need by individuals of this age to forge intimate friendships with others through team work. Team friendships are the opposite of athletes who prefer sports which isolate them from others (for instance, tennis). Educationalists generally prefer schools to put the emphasis on team sports which, in terms of Erikson's (1956) theory would seem the appropriate thing to do. The responses also infer that some participants feel that keeping busy means less time for unhealthy occupations.

5.4.12 Theme 11: Mandatory testing

Many of the participants felt that mandatory testing was necessary however, it is unclear how they thought this would be of benefit to players as a whole as many had previously noted that knowledge related to VCT was confidential. However, it may be that the participants thought that the players should know their status so they could take preventative steps (in terms of transmission) if they had a blood injury while participating in a sporting event. However, mandatory testing is difficult as some young adults may not be ready to take the step. As young adults require intimacy and may feel that having a positive HIV status will compromise that as it may serve as a barrier to intimacy. It may be that finding out a positive status could lead some individuals to feel despair (Kirshenbaum et al., 2004). Some athletes may feel that they do not want to participate in sport for fear of transmitting HIV (through blood injury). In terms of Erikson's (1959) developmental theory this may lead to isolation rather than intimacy. The following statements support the development of this theme.

"In rugby, I strongly suggest that there should [be mandatory testing]."

"*Yes there should be mandatory HIV testing in the team so that we can all know our status and we can also encourage each other to take medication if one is affected, because if we don't know our status that's when someone is going to infect others."*

"Yes because most of the youth do not bother themselves about their medical status, so by having this most youth may be helped since many youth are found in sport activities."

"Yes, because we all risk ourselves playing physical sports."

"Yes because some of them may not have time to go to clinic to check their status due to a lot of work."

5.4.13 Theme 12: Risk

Generally, participants thought there was *risk* involved in playing a sport when an individual is HIV positive, particularly a contact sport. Although the reported risk of HIV transmission through sport is very low, though it is possible if there is unrestrained bleeding, the statements of participants suggests they think there is a higher risk. Grosset-Janin et al. (2012), note that medical experts state that the risk of HIV transmission is quite small but blood exchange, particularly if an injury is not monitored, could be problematic. In terms of Erikson's (1959) developmental theory participants are unlikely to want to take a risk as they risk isolation rather than intimacy. They would probably *isolate* themselves from relationships if they were HIV positive or find them more challenging and it is also likely that if they were known to HIV positive they would risk discrimination and further isolation. The following statements underpin the theme.

> *"I won't compete, because chances of getting the disease are there."*
>
> *"I wouldn't feel in a good way because in contact sports any danger can happen like bad injuries which involve blood."*
>
> *"I don't think that works, because people have time to themselves, besides playing sports. Someone can go and have sexual intercourse for one day and become infected, so it's up to an individual lifestyle/behaviour when they are not on the sports field. It is risky if they have unprotected sex…that is why they need testing so we don't all have to take the risk."*
>
> *"It's going to be challenging considering the fact that my health is at risk, in a way."*

"I would not share the same equipment, it's too risky."

"I think it depends on the kind of sport. If it's a fighting or contact sport yes I can have a problem."

5.5 Themes presented in a tabular format

The aforementioned themes are presented in tabular format for ease of reading. A general meaning is given for each theme.

Table 1: General meaning of themes

Theme	General meaning of the theme
1. Prevention	Ensuring that there is no transmission of blood on the field.
2. Well being	Relates to mental and physical health through sports participation.
3. Medical assistance	The theme relates to first aid team on the sporting field.
4. Confidentiality	The theme relates to confidentiality in terms of an athlete's HIV status. Athletes generally assert that an individual's HIV status is a private matter
5. Discrimination	Relates to discrimination and non-discrimination of athletes by their peers.
6. Fear and anxiety	The theme relates to fear and anxiety about HIV and Aids.
7. Emotional support	Relates to emotional support being needed.
8. Strategy	Athletes feel that full contact should be avoided when tackling HIV positive individuals.
9. Awareness	Athletes feel that HIV educational programmes facilitate making informed decisions.
10. Participation	Playing sport enhances the lifestyles of participants but it does not guarantee immunity from any problems or challenges resulting from negative behaviour(s).
11. Mandatory testing	Testing for the HIV retrovirus should be mandatory.
12. Risk	Participants felt that it is a risk to their health playing sport, especially contact sport with HIV positive individuals.

5.6 Summary

The results from the study are presented and discussed. The following chapter presents a discussion of the research results and research conclusion.

CHAPTER 6: DISCUSSION OF FINDINGS, LIMITATIONS, RECOMMENDATIONS AND CONCLUSION

6.1 Introduction

The research has the following propositions which will be discussed in terms of the study results and the intimacy versus isolation stage of Erikson's Psychosocial Theory (1956).

6.1.1 Athletes who play the contact sports rugby and soccer will not differ in their level of knowledge about HIV/AIDS.

6.1.2 Athletes who play the contact sports rugby and soccer will not differ in their level of knowledge about transmission of HIV/AIDS.

6.1.3 Athletes who play the contact sports rugby and soccer will hold some misconceptions about HIV transmission in contact sport.

6.1.4 There will be no significant differences between athletes who play rugby and soccer in terms of their knowledge as related to sport and HIV/AIDS.

6.2 A brief summary of Erikson's (1956) psychosocial theory relating to intimacy versus isolation

This research focused on Erikson's (1956) developmental stages of psychosocial development focusing on intimacy versus isolation, which is the stage that the young adult participants in the study had to complete. This particular stage looks at how young adults find independence and establish their identity through relationships with significant others and act together in work or sports teams and have to find a balance between both (that is, romantic and work/sport relationships (Erikson's, 1956). Young adults are eager to blend their identities with friends. They want to fit in (Wilder, 2003). At this point in their lives they find rejection difficult and it is likely that HIV creates barriers to both romantic and work or sports relationships (Ashford et al., 2001).

6.3 Discussion of proposition 1: Athletes who play the contact sports rugby and soccer will not differ in their level of knowledge about HIV/AIDS.

The proposition was tested using the frequency distribution of the respondents' responses to section 2 (1.1-1.5) of the questionnaire, which is generally focused on HIV/AIDS knowledge. Additionally, the differences between rugby and soccer athletes' knowledge on HIV/AIDS were tested. A Chi-square test was used in this regard. The findings are presented in the table below.

Chi-square table 1: Result for proposition 1 (marked effects significant if p≤00.05)

	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	3.277	4	.513
Likelihood Ratio	3.692	4	.449
Linear-by-Linear Association	1.828	1	.176
N of Valid Cases	53		

Chi square table 1 shows that p = 0.513, which is greater than p≤00.05. This implies that there is no significant difference between athletes participating in rugby and soccer and levels of general knowledge pertaining to HIV/AIDS. The proposition is therefore supported.

Erikson (1963) noted that in this stage individuals attempt to gain economic independence and try to establish their identity, through working or studying and establishing meaningful intimate relationships. In the process they gain a lot of information on various learning areas. For this reason athletes also have a lot of information on HIV.

6.4 Discussion of proposition 2: Athletes who play the contact sports rugby and soccer will not differ in their level of knowledge about transmission of HIV/AIDS.

The proposition was tested using the frequency distribution of the respondents' responses to the items in Section 2 (1.6 – 1.15) of the questionnaire. In addition to this, the Chi-Square test was used to determine the differences between rugby and soccer players with regard to their knowledge on HIV transmission. The findings are presented in the table below.

Chi square table 2: Result for proposition 2 (marked effects significant if p≤00.05)

	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	7.361	7	.392
Likelihood Ratio	9.247	7	.235
Linear-by-Linear Association	3.443	1	.064
N of Valid Cases	53		

Chi square table 2 indicates that p = 0.392 which is greater than p≤00.05. This implies that there is no significant difference in the level of knowledge of rugby and soccer players pertaining to the knowledge of HIV transmission. The proposition is therefore supported.

According to this finding there is no significant difference in the amount of information on HIV/AIDS that both rugby and soccer athletes are exposed to. Referring to an item on the questionnaire which wanted athletes to indicate with whom they discuss or from whom they have heard about HIV, this result shows that there is no significant difference between rugby and soccer athletes in terms of their sources. Particularly looking at the team's management, this finding implies that there is no significant difference between rugby and soccer athletes in terms of the amount of HIV information that they are exposed to in their teams.

6.5 Discussion of proposition 3: There will be some differences between rugby and soccer players in terms of misconceptions about HIV transmission in contact sport.

The proposition was tested using the frequency distribution of the respondents correct and incorrect responses to the items in Section 2 (1.6 – 1.15) of the questionnaire. In addition to this, the Chi-Square test was used to determine the differences between rugby and soccer players with regard to their knowledge on HIV transmission. The findings are presented in table 3.

Chi square table 3: Result for proposition 3 (marked effects significant if p≤00.05)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.355	4	.079
Likelihood Ratio	8.897	4	.064
Linear-by-Linear Association	6.887	1	.009
N of Valid Cases	53		

Chi square table 3 indicates p = 0.079 which is greater than p≤00.05. This implies that there are no significant differences in terms of misconceptions about HIV transmission amongst the participants of the contact sports soccer and rugby. The proposition is therefore not supported.

This shows that both rugby and soccer athletes are exposed to the same amount of information on HIV/AIDS. Referring to an item on the questionnaire which wanted athletes to indicate with whom they discuss or from whom they have heard about HIV, this result shows that there is no significant difference between rugby and soccer athletes in terms of their sources. Particularly looking at the team's management, this finding implies that there is no significant difference between rugby and soccer athletes in terms of the amount of HIV information that they are exposed to in their teams.

6.6 Discussion of proposition 4: There will be no significant differences between athletes who play rugby and soccer in terms of their knowledge as related to sport and HIV/AIDS.

The proposition was tested using the frequency distribution of the respondents' responses to the items in Section 2 (1.21 – 1.26) of the questionnaire. In addition to this, the Chi-Square test was used to determine the differences between rugby and soccer players with regard to their knowledge on sport and HIV/AIDS. The findings are presented in table 4.

Chi square table 4: Result for proposition 4 (marked effects significant if p≤00.05)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.685	2	.710
Likelihood Ratio	.679	2	.712
Linear-by-Linear Association	.338	1	.561
N of Valid Cases	53		

Chi square table 4 indicates p = 0.710 which is greater than p≤00.05. This implies that there is no significant difference between sports (rugby and soccer) participants in terms of their knowledge about HIV and AIDS as related to sport and HIV and AIDS. The proposition is therefore supported.

In line with the finding for proposition 3, the findings imply that rugby and soccer athletes are exposed to a similar amount of information in relation to sports and HIV/AIDS. Additionally, (45.3%) of the athletes indicated that they never heard about HIV/AIDS from their coaches, managers and sports administrators. However, most have heard about it from mediums like television (79.2%) and newspapers (69.8%). Furthermore, athletes mostly indicate that they mostly discuss HIV/AIDS with friends (75.5%) and sexual partners (64.2%). It is clear that the strong mediums through which they hear and discuss HIV are less likely to discuss it in the context of contact sports.

6.7 Discussion of statistically significant results, if any

There are no statistically significant different results between athletes participating in rugby and soccer and levels of general knowledge pertaining to HIV/AIDS (see 6.1, 6.2, 6.3, 6.4 and 6.50). Erikson (1963) noted that in this stage individuals attempt to gain economic independence and try to establish their identity, through working or studying and establishing meaningful intimate relationships. In the process they gain a lot of information and thus knowledge about various areas of learning that are important to them. Because of this athletes generally have much knowledge or information about HIV/AIDS.

Furthermore, results indicate that there is no significant difference in the level of knowledge of rugby and soccer players pertaining to the knowledge of HIV transmission. There were no significant differences in the amount of HIV/AIDS information that rugby and soccer athletes reported. Athletes from both groups heard about HIV from similar sources particularly team management. They were also exposed to similar amounts of HIV/AID’s information.

6.8 Discussion of results that, although not significant, indicate gaps in knowledge

Five (9.4%) of the participants believe that HIV can be acquired from being bewitched. Over a third (nearly a half) of the participants (45.3%) do not know that people who are HIV positive die from diseases other than HIV related illness. Over a third of the participants (39.6%) do not believe that an individual can be HIV positive and be asymptomatic. Thirty five percent (35%) of the participants believe that HIV cannot be contracted through anal sex. Thirty four percent (34%) of the participants indicated that HIV can be transmitted through the saliva of a person who is HIV positive, which to all intent and purpose, in terms of transmission is not true (although the virus may be present in the saliva). Close to half of the participants (49.1%) believe that receiving a blood transfusion is unsafe while 39% believe that western medicine has a cure for HIV/AIDS. A large percentage of participants (62.3%) believe that many cases of HIV transmission occur during sporting activities. Thirty two percent (32%) of participants believe that keeping in good physical shape is the best way to keep from becoming infected with HIV/AIDS.

The results show that there are still some gaps in knowledge with regard to HIV/AIDS amongst a portion of the sample. Broadly, this implies that amongst this sample there are still some misconceptions pertaining to HIV/AIDS knowledge, although not statistically significant.

6.9 Discussion of qualitative analysis

Participants indicated that there should be prevention which suggests that they need sports team plus work and romantic relationships which implies a need for intimacy rather than isolation. Participants also value wellbeing and indicated that participation in sport is important for good health and many indicated that knowing one's HIV status would also add to well-being. However, some participants expressed fear and issues with discrimination. Many participants posited that an individual's HIV status is a private matter thus confidential however; others felt that mandatory testing should be in place and that they would not feel comfortable playing in a team with an HIV positive individual (which suggests discrimination). This in spite of the fact that some participants noted medical assistance was adequate however; some felt medical assistance was inadequate. Strategy on the sport field should relate to avoiding full contact which implies that in sports like rugby rules may need changing. Participants felt that HIV/AIDS awareness programmes helped them make informed decisions pertaining to their lifestyles. Although many participants felt that playing

sport enhances well-being it was noted that this does not stop athletes from indulging in negative behaviours which could lead to HIV infection. Participants felt that it was a risk to their health competing or playing sport with individuals who were HIV positive. Generally, the sample felt that emotional support from family, friends, team management and staff was needed for HIV positive athletes.

6.10 Methodological strengths and weaknesses of the study and research recommendations

This section gives the methodological strengths and weaknesses of the study and provides recommendations for future research.

6.10.1 Methodological weaknesses

The sample could have included a broader spectrum of contact sport codes. This would have been better for example, boxing and Taekwondo (a martial art). The questionnaire is lengthy (17 open ended questions and 29 closed questions). Although the response rate was high it may have been even higher if the questionnaire was shorter. A random sample would have allowed inferential statistical procedures which would have added to the reliability of the study.

6.10.2 Methodological strengths

The quantitative part of the questionnaire had a high internal reliability (0.70 Cronbach Alpha). Participants were given the freedom to fill in the questionnaire in their own time which added to the high return rate. The open-ended questions were adapted from a questionnaire used by Germanos (2006) which added to the reliability of the research protocol.

6.10.3 Recommendations for future research

A larger study should be conducted across more contact sporting codes using a random sample. A similar study should be conducted amongst non-contact sport players to see if findings are comparable.

6.11 Overall conclusion

Overall, results of the study support those found in research by Germanos (2006). Results of the study, both qualitative and quantitative, generally indicate that intimacy is important for participants thus Erikson's (1956) psychosocial theory is still relevant today. There are gaps in knowledge, although not statistically significant. Adding to this finding is that it was revealed that the strong mediums through which they hear and discuss HIV are less likely to discuss it in the context of contact sports. These gaps should be addressed to prevent HIV infection and transmission. In turn, this should lead to less discrimination as knowledge and information help individuals make proper and informed decisions. However, the research shows that there is no significant difference in the amount of information on HIV/AIDS that both rugby and soccer athletes are exposed to. Interestingly, although many participants felt that playing sport enhances well-being, it was noted that this is not sufficient to prevent athletes from indulging in negative behaviours which could lead to HIV infection. This implied that sexual behaviour is not primarily dependant on sports participation or lack thereof. Finally, this chapter reflected future study recommendations and noted weaknesses and strengths of the research. In order to make a better comparison in future, it is recommended that a larger variety of codes be included.

References

Ainsworth, M. (1998). Setting government priorities in preventing HIV/AIDS. Retrieved from http://www.worldbank.org/fandd/English/

Annan, K. (2006). AIDS the greatest challenge of our generation. Retrieved from http://www.un.org/radio/print.asp?NewsID=4568

Ashford, J. B., LeCroy, C. W., & Lortie, K. L. (2001). *Human behaviour in the social environment (2nd ed.)*. Belmont, CA: Wadsworth/Thompson Learning.

Balfe, M., Brugha, R., O'Connell, E., Vaughan, D., & O'Donovan, D. (2012). Men's attitudes towards chlamydia screening: a narrative review. *Sexual Health, 9:* 120–130.

Bandawe, C. R., & Foster, D. (1996). AIDS-related beliefs, attitudes and intentions among Malawian students in three secondary schools. *AIDS Care, 8*(2), 223-232.

Bankole, A., Biddlecom, A., Guiella, G., Singh, S., & Zulu, E. (2007). Sexual behaviour, knowledge and information sources of very young adolescents in four Sub-Saharan African countries. *African Journal of Reproductive Health, 11* (3):28-43.

Berk, L. E. (2004). *Development through the lifespan*. Boston: Allyn & Bacon.

Bill of Rights of the Constitution of the Republic of South Africa. (1996). Retrieved from http://www.info.gov.za

Brown, A. (2013). Physical exercise is associated with less neurocognitive impairment among HIV-infected adults. Retrieved from http://www.springer.com/about+springer/media/springer

Brown, L. S., Drotman, D. P., Chu, A., Brown, C. L., & Knowlan, D. (1995). Bleeding injuries in professional football: estimating the risk for HIV transmission. *Annals of Internal Medicine, 122*(4), 271-274.

Brown, L.S., Phillips, R.Y., Brown, C.L., Knowlan, D., Castle, L., Moyer, J. (1994). HIV/AIDS policies and sports: the National Football League. *Med Sci Sports Exerc., 26:*403-7.

CDC (2013). Center for Disease Control and Prevention HIV in the United States at a glance. Retrieved from http://www.cdc.gov/hiv/statistics/basics/ataglance

Choko, A.T., Desmond, N., Webb, E.L., Chavula, K., Napierala-Mavedzenge, S., Gaydos, C.A., Makombe, S.D., Chunda, T., Squire, S.B., French, N., Mwapasa, V., & Corbett, E.L. (2011). The Uptake and Accuracy of Oral Kits for HIV Self-Testing in High HIV Prevalence Setting: A Cross-Sectional Feasibility Study in Blantyre, Malawi. Retrieved from http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1001102

Clem, K. L., & Borchers, J. R. (2007). HIV and the athlete. *Clinics in Sports Medicine*, *26*(3*)*, 413-424.

Collins, C., Coates, T.J., & Curran, J. (2010). *Moving Beyond of the Alphabet Soup of HIV prevention*. US National Library of Medicine – National Institute of Health. Retrieved from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2873858/

Cycling South Africa (2010). Information HIV/AIDS. Retrieved from http://www.cyclingsa.com/

Danish, S., Nellen, V., & Owens, S. (1996). Community-based life skills programs: Using sports to teach life skills to adolescents. In Van Raalte, J.L. & Brewer, B.W., (Eds.). *Exploring Sport and Exercise Psychology*. (pp. 205-225). Washington, DC: APA.

De Souza, P.M.L., Jacob-Filho, W., Santare´m, J.M., Zomignan, A.A., & Burattini, M.N. (2011). Effect of progressive resistance exercise on strength evolution of elderly patients living with HIV compared to healthy controls. *Clinical Science. 66*(2*),* 261-266.

Deering, K., Chettiar,J., Chan,K.., Taylor, M., Montaner, J., & Shannon, K.. (2011). The impact of the 2010 Winter Olympic Games on sex work patterns, safety and sex worker vulnerability to HIV and sexually transmitted infections. Retrieved from http://www.sti.bmj.com/content/87/Suppl_1/A128.1

Delva, W., Michaelson, K., Meulders, B., Groeninck, S., Wasonga, E., Ajwange, P., Temmerman, M., & Vanreusel, B. (2010). Special Issue: AIDS Impact, 9th International Conference Special Issue Gaborone, Botswana. HIV prevention through sport: the case of the Mathare Youth Sport Association in Kenya. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/095401210

EMIMA. (2013). Sport and Development.org-EMIMA. Retrieved from http://www.sportanddev.org/connect/organisation.cfm?org=161

Erikson, E. (1956). The problem of ego identity. *Journal of the American Psychoanalytic Association, 4*: 56–121.

Feller, A., & Flanagan, T. P. (1997). HIV-Infected Competitive Athletes. *Journal of General Internal Medicine, 12*: 243–246. Retrieved from: http://www.onlinelibrary.wiley.com/doi/10.1046/j.1525-1497.1997.012004243

Flanagan, J. (2001). South African men rape babies as 'cure' for Aids. Retrieved from http://www.telegraph.co.uk/news/worldnews/africa

Gallahue, D. L., & Ozmun, J. C. (1998). *Understanding motor development: Infants, children, adolescents, adults*. Boston: McGraw-Hill.

Geoffrey, P.K., Bernstein, D.A., & Phares, V. (2009). *Introduction to clinical psychology. 7th ed*. Upper Saddle River, NJ: Pearson Prentice Hall, 2009. Print.

Germanos, V. (2006). *Attitudes, knowledge and relationship behaviour relating to HIV and AIDS in contact sport.* Unpublished Master's Dissertation, Wits University, Johannesburg.

Giannotti, M., Al-Sahab, B., McFaull, S., & Tamim, H. (2010). Epidemiology of acute head injuries in Canadian children and youth soccer players. *Head Injury, 41*(9), 907–912.

Glick, P., Randriamamonjy, J. & Sahn, D.E. (2009). Determinants of HIV Knowledge and Condom Use among Women in Madagascar: An Analysis Using Matched Household and Community Data. *African Development Review. 21*(1*):*147-179

Groce, N.E., & Trasi, R. (2004). Rape of individuals with disability: AIDS and the folk belief of virgin cleansing. *Lancet,* 1663–1664.

Grosset-Janin, A., Nicolas, X., & Saraux, A. (2012).Sport and infectious risk: A systematic review of the literature over 20 years. *Médecineet Maladies Infectieuses, 42*: 11.

Gupta, G.R., Parkhurst, J.O., Ogden, J.A., Aggleton, P., & Mahal, A. (2008).Structural approaches to HIV prevention. *The Lancet*, 372 – 396.

Habel, M. A., Dittus, P. J., De Rosa, C. J., Chung, E. Q., & Kerndt, P. R. (2010). Daily Participation in Sports and Students' Sexual Activity. *Perspectives on Sexual and Reproductive Health, 42*(4), 244-250.

Hamel, R. (1992). AIDS: Assessing the risk among athletes. *The Physician and Sports medicine, 20* (2), 139-146.

Higgins, J.A., Hoffman, S., & Dworkin, S.L. (2010). Rethinking Gender, Heterosexual Men, and Women's Vulnerability to HIV/AIDS. *American Journal of Public Health, 100*(3), 435-445.

Holt, N. L., Sehn, Z. L., Spence, J. C., Newton, A., & Ball, G. D. C. (2012). Possibilities for positive youth development through physical education and sport programs at an inner city school. *Physical Education and Sport Pedagogy*, *17*, 97-113.

Huang, J. H., Jacobs, D. F., & Derevensky, J. L. (2010). Sexual risk-taking behaviors, gambling, and heavy drinking among US college athletes. *Archives of sexual behavior*, *39*(3), 706-713.

Huang, J.S., Harrity, S., Lee, D., Becerra, K., Santos, R., & Mathews, W.C. (2006). Body image in women with HIV: a cross-sectional evaluation. *AIDS Research and Therapy, 3*(17), 7 – 12.

International Federation of Sports Medicine. (1997).AIDS and sports, FIMS Position Statement Retrieved from http://www.fims.org/fims/frames.asp

Joppe, M. (2000).*The Research Process.* Retrieved from http://www.ryerson.ca/~mjoppe/rp.htm

Kalichman, S.C., & Simbayi, L. (2004).Traditional beliefs about the cause of AIDS and AIDS-related stigma in South Africa. *AIDS Care, 16*(5).

Kanyemba, P.C.B. (2010). *Uptake of Voluntary Counselling and Testing at Ngungu Mini - hospital, Zambia.* Unpublished Masters Dissertation, University of the Western Cape, Cape Town.

Kaufman, Z.A., Spencer, T.S. **& Ross,** D.A. (2012). Effectiveness of Sport-Based HIV Prevention Interventions: A Systematic Review of the Evidence. Retrieved from http://www.download.springer.com/static/pdf/3/art%253A10.100

Kaufman, Z.A., Welsch, R.L., Erickson, J.D., Craig, S. Adams, L.V., & Ross, D.A. (2011). Effectiveness of a sports-based HIV prevention intervention in the Dominican Republic: a quasi-experimental study. Retrieved from http://www.tandfonline.com/doi/abs/10.1080/09540121

Kirshenbaum, S. B., Hirkey, A. E., Correale, J., Goldstein, R. B., Johnson, M. O., Rotheram-Borus, M. J., & Ehrhardt, A. A. (2004). "Throwing the dice": pregnancy decision making among HIV-positive women if four U.S. cities. *Perspectives on Sexual and Reproductive Health. 36*(3), 106-113.

Kokotailo, P. K., Koscik, R. E., Henry, B. C., Fleming, M. F., & Landry, G. L. (1998). Health risk taking and human immunodeficiency virus risk in collegiate female athletes. *Journal of American College Health*, *46*(6), 263-268.

Kolodziej, M. A., Koblitz, S., Nimsky, C., & Hellwig, D. (2011). Mechanisms and Consequences of head Injuries in soccer. Retrieved from http://www.medscape.com/viewarticle

Kordi, R., & Wallace, W. A. (2004). Blood borne infections in sport: risks of transmission, methods of prevention, and recommendations for hepatitis B vaccination. *British journal of sports medicine*, *38*(6), 678-684.

Labuschagne, A. (2009) Sport in South Africa - Nation builder or instrument of nationalization? Retrieved from http://www.unisa.ac.za/.../pol/docs/nationbuilder-sport.labuschagne.rtf

Lance, L. M. (2001). HIV/AIDS perceptions and knowledge in heterosexual college students within the context of sexual activity: Suggestions for the future. *College Student, 6*: 234-242.

Lanier, Y. & Sutton, M.Y. (2013). Reframing the Context of Preventive Health Care Services and Prevention of HIV and Other Sexually Transmitted Infections for Young Men: New Opportunities to Reduce Racial/Ethnic Sexual Health Disparities. *American Journal of Public Health.,103*(2):262-269.

Lembethe, A., Chiware, J., Kaufman, Z. & Ley, C. (2012) Perceptions of South African university athletes towards people living with HIV. Retrieved from http://www.grassrootsoccer.org/wp-content/uploads/Ayanda-poster.pdf

Li, X., Zhang, L., Mao, R., Zhao, Q. & Stanton, B.(2011). Effect of social cognitive theory-based HIV education prevention program among high school students in Nanjing, China. *Health Education Research, 26*(3)419-431.

Lindsey, I. & Banda, D. (2010) Sport and the fight against HIV/AIDS in Zambia: A 'partnership approach'? *International Review for the Sociology of Sport, 46*(1) 90–107.

Maite, P. (2014). *Cumulative mild head injuries in football (soccer): A comparison of cognitive deficit and post-concussive symptomology between University of Pretoria (AmaTuks) football players and University of Limpopo volleyball controls in South Africa*. Phd (Unpublished), Medunsa, Ga-Rankuwa.

Maponyane, E.S. (2012). *University of Limpopo (Medunsa campus) undergraduate students' knowledge, attitudes, behaviours and beliefs regarding HIV and Aids.* Unpublished Masters Dissertation.University of Limpopo (Medunsa campus), Ga-Rankuwa, Pretoria.

Marcia, J.E. (1980). *Handbook of Adolescent Psychology.* New York York: Wiley and Sons

Maro, C.N., Roberts, G.C. & Sørensen, M. (2009). Using sport to promote HIV/AIDS education for at-risk youths: an intervention using peer coaches in football. *Scandinavian Journal of Medicine & Science in Sports, 19*:129-141.

Mascolini, M. (2013). South African AIDS death rate is dropping, but 1 in 10 still has HIV. Retrieved from http://www.iasociety.org

Mast, E.E., Goodman, R.A., Bond, W.W., Favero, M.S., & Drotman,D.P. (1995).Transmission of blood-borne pathogens during sports: risk and prevention. *Ann Intern Med, 122*:4.

McGoldrick, C. (2012). In-Depth Review: HIV and Employment. Occupational Medicine, *62*:242–253.

Merriam, S. B., Courtenay, B. C., & Reeves, P. M. (1997). Ego development in the face of death: How being HIV positive affects movement through Erikson's adult stages of development. *Journal of adult development*, *4*(4), 221-235.

Mkize, L. (2009). *The psychological effects of disclosing a positive HIV diagnosis: A preliminary investigation.* Unpublished Masters Dissertation. University of Limpopo (Medunsa Campus), Ga-Rankuwa, Pretoria.

Mustafa, T., Sy, F.S., Macera, C.A., Thompson, S.J., Jackson, K.L., Selassie, A., Dean, L.L. (1999) . *Association between exercise and HIV disease progression in a cohort of homosexual men*, *9*(2):127-31.

NCHPAD (2013). National Center on Health, Physical Activity, and Disability-*Benefits of exercise for people with HIV/AIDS*. Retrieved from http://www.ncpad.org

NIAID (2013). National Institute of Allergy and Infectious Diseases *HIV Vaccine Awareness Day*. Retrieved from http://www.niaid.nih.gov/

Ndeki, S. S., Klepp, K. I., Seha, A. M., & Leshabari, M. T. (1994). *Exposure to HIV/AIDS Information, AIDS knowledge, perceived risk and attitudes toward people with AIDS among* primary school-children, *2*,183-191.

Nel, K. (2003). *A survey of students' knowledge, behaviour and resultant attitudes towards HIV/AIDS on the University of Zululand campus.* Unpublished Masters Dissertation. University of Zululand, Kwadlangezwa.

Nqojane, V. (2009). *Attitudes, knowledge and perceptions towards HIV/Aids, condom use and Voluntary Counselling and Testing (VCT) amongst University of Zululand Students during the HIV/Aids pandemic.* Unpublished Masters Dissertation. University of Zululand, Kwadlangezwa.

O' Hara, R.J. (2007). *Perceptions and attitudes of first year student nurses towards voluntary HIV counselling and testing at the Western Cape College of Nursing.* Unpublished Masters Dissertation, Cape Town

Odu, B. K., & Akanle, F. F. (2008).Knowledge of HIV/AIDS and Sexual Behaviour among the Youths in South West Nigeria. *Humanity & Social Sciences Journal*, *3* (1): 81-88.

Oxford Dictionary (2014). *Language Matters.* Retrieved from http://www.oxforddictionaries.com/definition/english/lipodystrophy-syndrome

Pannucci, C.J., & Wilkins, E.G. (2010). Identifying and Avoiding bias in research: National Institute of Health. *Plast Reconstr Surg*., *126*(2):619-625

Partington, K. (2001). *Cumulative mild head injury in contact sport: an evaluation of the cognitive profiles of adolescent rugby players compared with non-contact sport controls.* Unpublished Honours project: Rhodes University, Grahamstown.

Pattullo, A. L. S., Malonza, M., Kimani, G. G., Muthee, A., Otieno, P. A. O., Odhiambo, K., Moses, S., & Plummer, F. A. (1994). Survey of knowledge, behaviour and attitudes relating to HIV infection and AIDS among Kenyan secondary school students. *AIDS Care*, *6* (2).

Peltzer, K., Matseke, G., Mzolo,T., & Majaja, M. (2009). Determinants of knowledge of HIV status in South Africa: Results from a population-based HIV survey. Retrieved from http://www.biomedcentral.com/1471-2458/9/174.

Pittman, J. F., Keiley, M. K., Kerpelman, J. L. and Vaughn, B. E. (2011), Attachment, Identity, and Intimacy: Parallels Between Bowlby's and Erikson's Paradigms. *Journal of Family Theory & Review*, *3*: 32–46.

Ramokgopa, I.M. (2001). *Developmental stages of an African child and their psychological implications:* A comparative study. Phd (Unpublished).University of Limpopo, Polokwane.

Richter, L., & Swart-Kruger, J. (1995). AIDS risk among street children and youth: Implications for interventions. *South African Journal of Psychology, 25*, 31-38.

Richter, M., Luchters, S., Ndlovu, D., Temmerman, M. & Chersich, M.F. (2012) Female sex work and international sport events - no major changes in demand or supply of paid sex during the 2010 Soccer World Cup: a cross-sectional study. Retrieved from http://www.biomedcentral.com

Rogers, R. W. (1975). A protection motivation theory of fear appeals and attitude change. *Journal of Psychology, 91*, 93-114.

SAnews (2013). Fixed dose combination ARVs rolled out. Retrieved from http://www.sanews.gov.za/south-africa/fixed-dose-combination-arvs-rolled-out

SASMA. (2001). HIV and its role in sport. Retrieved from http://www.sasma.org.za/?p=129

Schöffl, V., Morrison, A. & Küpper, T. (2011). Risk of Transmission of Blood Borne Infections in Climbing – Consensus Statement of UIAA Medcom. *International Journal Sports of Medicine,32(3):*170-173. Retrieved from http://www.thieme-connect.com/ejournals

Schwellnus, M., & Derman, W. (2005).Exercise and HIV disease. *The Journal of Modern Pharmacy, 12*(5), 37-38.

Sebele, M. K. (2009). *A Comparative Study on High Risk Sexual Behavior of Male Student Elite Athletes, Male Student Non-athletes and Male Student Recreational Sport Participants at the University of Botswana*. Phd (Unpublished). University of the Western Cape, Cape Town.

SACMEQ (2011). Southern and Eastern Africa Consortium for Monitoring Educational Quality *Learner and teacher knowledge about HIV and AIDS in South Africa Policy Brief*. Retrieved from http://www.sacmeq.org/downloads/policy

SSA (2008). Statistics South Africa Aids statistics. Retrieved from http://www.beta2.statssa.gov.za/%3Fpage_id%3D964

Stein, L., Hechler, D., Jessen, A.B., Neumann, K. & Jessen, H. (2009). Sports behaviour among HIV-infected versus non-infected individuals in a Berlin cohort. *International Journal of STD And Aids*, *3*(1):25-29.

Stevens, G., & Lockhat, R. (1997).Coca-Cola kids – Reflections on black adolescent identity development in post-apartheid South Africa. *South African Journal of Psychology*, *27* (4), 250-255.

Stöppler, M. C. (2012) MedicineNet.com. Metabolic Syndrome. Retrieved from http://www.medicinenet.com/metabolic_syndrome/article.htm

Terre Blanche, M., Durrheim, K., & Painter, D. (2009). *Research in practice*. Cape Town: UCT press.

Torre, D., Sampietro, C., Ferraro, G., Zeroli, C., & Speranza, F. (1990).Transmission of HIV-1 infection via sports injury. *The Sports Journal*, *2,* 2-3.

TAC (2013). Treatment action campaign – campaigning for people's rights. Retrieved from http://www.tac.org.za/

Ulasi, C.I., Preko, P.O., Baidoo, J.A., Bayard, B., Eheri, J.E.,Jolly, C.M., & Jolly, P.E.(2008). HIV/AIDS-related stigma in Kumasi, Ghana. *Health & Place*, *15:* 255– 262.

Umeh, D. C. (1997). AIDS in sports participation: Knowledge and opinions of male and female college athletes. In D. C. Umeh (Ed.).*Cross-cultural perspectives on HIV/AIDS.* Cape Town: Oxford.

UNAIDS (2003). Joint United Nations Programme on HIV/AIDS (UNAIDS) and World Health Organisation (WHO). AIDS Epidemic Update. Geneva: UNAIDS.

USAID (2013). United States Academic International Development *Structural Interventions: An Overview of Structural Approaches to HIV Prevention.* Retrieved from http://www.aidstar-one.com/focus_areas/prevention/pkb/structural_interventions/overview_structural_approaches_hiv_prevention?tab=introduction

Van Heyningen, S. (2012). Race, Gender and Sport in Post-Apartheid South Africa. Retrieved from ww.mitpressjournals.org/doi/abs/

Wardell, C. (2009). *Implementation and Evaluat ion of a Sports-Based HIV/AIDS Prevention Education Program for Preadolescent s in St. Lucia.* Retrieved from http://www.grassrootsoccer.org/wp-content/uploads/Wardell_St_Lucia_final.pdf

WHO (2008). Aids statistics. Retrieved from http://www.who.int/research/en/

Appendix 1: Covering letter

University Of Limpopo (Turfloop campus)

Department of Psychology

Dear participant

Invitation to participate in a research study entitled: Attitudes, knowledge and relationship behaviour relating to HIV and AIDS in contact sport.

My name is Nonhlanhla Banyini. I am a 1st year Masters student in Clinical Psychology. I would like to invite all male rugby and soccer players in the campus to participate in the study. The aim of this study is to examine the knowledge, attitudes and relationship behaviour with respect to HIV and AIDS among athletes participating in contact sport. This study also includes a preliminary investigation into whether sport participation facilitates the development of life skills which would act as a buffer against the risky behaviours that increases vulnerability to infection. Recent research indicates that most athletes have a good level of HIV/AIDS knowledge, but some misconceptions still remain. It is important that you fill in the questionnaire as honestly as possible and return it to your coach. Your answers to this questionnaire will be treated confidently. Your co-operation will be highly appreciated.

For further inquiries you can email me at: nhlanhla.banyini@gmail.com or e-mail my supervisor Prof KA Nel at: knel@ul.ac.za

Thank you

Nonhlanhla Banyini

Appendix 2 HIV and AIDS in Sport Questionnaire

GENERAL INSTRUCTIONS

This questionnaire is part of a study of male athletes and their attitudes, knowledge and relationship behaviour related to HIV and AIDS. This questionnaire is divided into four sections: **Section 1:** Demographic information (e.g. age, marital status); **Section 2:** HIV and AIDS knowledge **Section 3:** HIV and AIDS attitudes and **Section 4:** Sport and HIV prevention.

Please fill in all details on this questionnaires indicated in each section. Please answer all questions completely and as honestly and openly as possible. There are no right or wrong answers to the questions relating to your attitudes (section 3) and behaviour (section 4). Please do not write your name anywhere on this questionnaire. This is to ensure that your answers remain confidential. If at any stage you feel you cannot continue answering the questionnaire or you have any questions, please alert the researcher and they will help you. Individual answers will not be shared with anyone and this questionnaire will only be seen by the researcher and her supervisor.

SECTION 1: DEMOGRAPHIC INFORMATION

Please answer all questions

1. Age: _____ years (if you are younger than 18 years or older than 24 years please do not continue to fill in the questionnaire).

2. Relationship status (please tick):

Single	
Married	
Living with Partner	
No steady relationship	

3. Ethnic group (please tick):

Northern Sotho	
Tsonga	
Swati	
Zulu	
Other:	

4. At present in which sport do you participate (Please tick the appropriate block)

Rugby		Soccer		Rugby and soccer	

5. How many years have you participated in rugby or soccer? _____ years/months.

SECTION 2: HIV/AIDS KNOWLEDGE

1. The following questions concern HIV/AIDS related knowledge. Please read each statement and mark the option that best suits your belief.

General HIV/AIDS Related Knowledge:			
1.1. AIDS is caused by HIV	True	False	Unsure
1.2. Homosexuals are responsible for spreading HIV/AIDS	True	False	Unsure
1.3. People can acquire HIV/AIDS from being bewitched	True	False	Unsure

1.4. People who are HIV positive die from diseases other than from HIV related illnesses	True	False	Unsure
1.5. A person can have the virus that causes AIDS but not have the symptoms	True	False	Unsure
Mode of HIV Transmission:			
1.6. A person can become infected with HIV during one sexual encounter	True	False	Unsure
1.7. People who are HIV positive cannot transmit the virus until they have Aids	True	False	Unsure
1.8. Having unprotected sex with several people makes a person susceptible to contracting HIV	True	False	Unsure
1.9. HIV cannot be contracted through anal sex	True	False	Unsure
1.10. HIV is transmitted through vaginal sexual intercourse	True	False	Unsure
1.11. HIV can be transmitted through saliva of a person who is HIV Positive	True	False	Unsure
1.12. A person can get HIV by sharing a towel or cup with someone who has HIV	True	False	Unsure
1.13. Receiving a blood transfusion is unsafe because of the risk of contracting HIV	True	False	Unsure
1.14. A pregnant woman can transmit HIV to her baby	True	False	Unsure
1.15. HIV can be transmitted through mosquito bites	True	False	Unsure
HIV Prevention and Treatment:			
1.16. Proper use of condoms can serve as a preventive measure against HIV infection	True	False	Unsure
1.17. A person can change their behaviour to reduce the risk of getting AIDS	True	False	Unsure
1.18.Western medicine has a cure for AIDS	True	False	Unsure
1.19. Traditional African medicine has a cure for AIDS	True	False	Unsure
1.20. Having sex with a virgin can cure you of AIDS	True	False	Unsure
HIV/AIDS Knowledge as related to sport:			
1.21. HIV can be transmitted through sharing sports equipment	True	False	Unsure
1.22. There are many cases of HIV transmission occurring during sporting activities	True	False	Unsure

1.23. HIV can be transmitted when a bleeding wound in an HIV-infected player is met with an open wound in a player who is not infected	True	False	Unsure
1.24. A person playing sport can get AIDS from someone who is HIV positive through their perspiration/sweat	True	False	Unsure
1.25. There is a high risk of HIV infection when athletes share needles used for injecting steroids, hormones, vitamins, or illegal drugs	True	False	Unsure
1.26. Keeping in good physical shape is the best way to keep from getting AIDS	True	False	Unsure

2.1. How often have you heard about HIV/AIDS from somebody involved in your sport, e.g. coaches, managers, sports administrators?

Never	
Sometimes	
Often	

2.2. Where have you heard or read about HIV/AIDS? Please tick

Radio		
Television		
Newspapers		
Magazines		
Doctors or health workers		
Religious leaders		
Sports coaches		
Teammates in your sport		
Sports administrators		
School		
College/University/Technikon		
Never heard or read about it		
Other (please specify)		

2.3. With whom do you discuss HIV/AIDS?

Friends	
Team mates in your sport	
Sport Coaches	
Doctors or health workers	
Religious leaders	
Sexual partners	
Parents	
Siblings	
Other family members	
Teachers	
Do not discuss it	
Other (please specify)	

SECTION 3: HIV/AIDS ATTITUDES and relationships

The following questions concern HIV/AIDS related attitudes. There are no right or wrong answers. For each of the following questions, please answer in the space provided.

HIV Testing

1. Explain whether there should be mandatory HIV testing for athletes in your sport.

_____

_____

_____

_____

2. How would you feel about testing for HIV? Explain

_____

_____

_____

Disclosing HIV Test Results

3. Explain whether HIV positive athletes should inform their coach and other athletes of their status.

_____

_____

4. If you became infected with HIV, how would you feel about disclosing your status? Explain

Sport Participation of HIV Positive Athletes and Coaches

5. Explain whether an athlete who becomes infected with HIV should be prevented from participating in sport.

6. If you became infected with HIV, how would you feel about continuing to participate in sport? Explain

7. Explain whether you are concerned about contracting HIV during sport participation.

8. How would you feel about a coach/manager with HIV or AIDS being involved with the sports team? Explain

Attitude toward HIV Positive Athletes

9. How would you react to an athlete, diagnosed as HIV positive, participating in your team? Explain.

10. How would you feel about competing in contact sport against HIV positive athletes? Explain whether there would be a change in strategy towards the sport.

11. Explain whether you would use the same changing room or equipment with an athlete who is HIV-positive.

Prevention of HIV Transmission on the Sports Field

12. What precautions (e.g. wearing gloves) do coaches and medical personnel take to prevent HIV transmission in your sport?

13. Explain whether you think these precautions are adequate.

Education about HIV/AIDS

14. What effect will HIV/AIDS education programmes have on sport in general and on sexual habits in particular? Explain

HIV/AIDS and relationships (on and off the sports field)

15. Would knowing an athlete was infected with HIV affect your relationship with him? Explain either a negative or positive answer.

16. Would you tell your partner if you became infected with HIV? Explain either a negative or positive answer.

17. Would you tell your coach and team mates if you were infected with HIV? Explain either a negative or positive answer.

SECTION 4: SPORT AND HIV PREVENTION

1. How does participation in sport lead to the development of a healthy lifestyle? Explain

2. How does participation in sport prevent individuals adopting behaviours which lead them to contracting HIV? Explain

3. What benefit does sport participation have for HIV-positive athletes or individuals? Explain

4. What life skills or values do you think that you have developed as a result of participation in sport? (Please tick the box next to the appropriate option; mark as many as are appropriate).

Effective communication with peers or colleagues (interpersonal skills)		Performing well under pressure		Development of leadership skills as well as learning from guidance given		Developing a good sense of responsibility	
Effective decision-making and judgment		Managing stress		Handling success and failure effectively		Acquiring coping strategies	
Sportsmanship		Meeting deadlines and challenges		Receiving and benefiting from feedback		Developing self-esteem and self-confidence	
Health and fitness		Problem solving		Teamwork and cooperation		Setting goals	
Time management other skills (please specify)							

Thank you for your time and participation in this study; it is truly appreciated.

Appendix 3 Record of transcripts. If an open-ended question was not answered by a participant it was not recorded. The transcript is colour coded according to the appropriate themes found in table 1.

Section 3: HIV/AIDS ATTITUDES

1. **Explain whether there should be mandatory HIV testing in your sport.**
   Responses:

   Respondent no. 1: ***There should be! Better precautions by doctors lead to better prevention of the virus spreading through the team. I don't want to get HIV because I want a girlfriend.***

   Respondent no. 2: ***"In rugby, I strongly suggest that there should [be mandatory testing]."***

   Respondent no. 3: ***Yes they should be tested so that athletes will know their status and if they are positive, they should live positively and those who have negative behaviours should change their behaviours to stay healthy.***
   Respondent no. 4: ***Yes, it will be easier for everyone to be careful when another athlete is injured. My team mates must be careful so we can stay friends.***
   Respondent no 5: ***There should be HIV Testing and counselling for athletes as we are continuously in contact with each other, especially in rugby where the possibility of blood contact is high.***
   Respondent no. 6: ***Yes so that everyone knows his/her status so that if one is positive then that person has to start living positively and if not then protect oneself so that one won't get it.***
   Respondent no. 7: ***No they shouldn't be prevented from being in a team and being physically active will help boost their immune system.***

   Respondent no. 12: ***No, because if they are tested against their will, it will be unfair on them, however, if the[y] are given a chance or option then they can get tested.***
   Respondent no. 13: ***I think there should be mandatory HIV testing for athletes because medics can then know how to treat you***

   Respondent no. 14: ***In my verdict I think there has to be a mandatory HIV testing for sportsmen because it may help the medic or whoever is around to know how to help you when bleeding.***

   Respondent no. 15: ***Yes! Because it is a contact sport. It would be safer for everyone if we all knew our statuses.***

   Respondent no. 16: ***I think there should be, because most of the guys who are sexually active are afraid to test.***

   Respondent no. 17: ***I don't think it will be a good thing, that's an individual decision to take and knowing your status might at first time might even lower your performance.***

   Respondent no. 18: ***Yes there should be in order to protect one another.***

   Respondent no. 19: ***Yes there should be. It will help eliminate the spread of HIV in sports because you'll know the statuses of your team mates and can be friends with them.***

   Respondent no. 20: ***It's always been an individual's option to get tested so no it shouldn't be mandatory for HIV testing.***

   Respondent no. 21: ***It should be there because athletes can get more people to to get tested and because they are role models.***

Respondent no. 22. ***Yes to reduce the risk of infection so you can have relationships.***

Respondent no. 24: ***It would help as to being able to monitor the intake of supplements and ARV's.***

Respondent no. 25: ***Yes there should be in case player's open wounds come into contact.***

Respondent no. 26: ***I don't think it will be accepted by athletes as it will change the relationship among players***

Respondent no. 27: ***No there should not be mandatory testing for athletes because to get tested is a choice and not a mandate***

Respondent no. 29: ***I think there should be because there are injuries in rugby which also include a lot of open wounds and bleedin.***

Respondent no. 31: ***They should not prevent people with HIV to participate in sports as it is good for their health and would keep them physically fit and help their mind.***

Respondent no. 32: ***Yes, some, well most are students. So it would be such a good thing for the students to be tested every 6 months.***

Respondent no. 33: ***Yes I think it would encourage our teammates to get tested and know their status.***

Respondent no. 34: ***There should be mandatory HIV testing for athletes because we need to know status of our teammates. We easily get injured so it is important to protect us and others by HIV testing.***

Respondent no. 35: ***There should. To help people be aware of the disease and its effects.***

Respondent no. 36: ***"Yes there should be mandatory HIV testing in the team so that we can all know our status and we can also encourage each other to take medication if one is affected, because if we don't know our status that's when someone is going to infect others."***

Respondent no. 37: ***"Yes because most of the youth do not bother themselves about their medical status, so by having this most youth may be helped since many youth are found in sport activities."***

Respondent no. 38: ***I think there should be in order for the athletes to know their statuses and live a healthy lifestyle.***

Respondent no. 39: ***"Yes, because we all risk ourselves playing physical sports."***

Respondent no. 40: ***There should not be mandatory testing for athletes.***

Respondent no. 41: ***There shouldn't be one, since people hardly hurt each other to an extent of one bleeding, unless if it is done as an optional to make players feel confident***

Respondent no. 42: ***HIV testing should be mandatory so that they can create awareness amongst other players who are unaware.***

Respondent no. 43: ***Yes because some of them may not have time to go to clinic to check their status due to a lot of work."***

Respondent no. 44: ***It's not compulsory***

Respondent no. 45: ***Because we have to know each other's status and be careful.***

Respondent no. 48: ***No, because it's not necessary to do so.***

Respondent no. 49: ***Yes, because when you're injured they can help you quick.***

Respondent no. 50: ***No, because some members isolate those members as people still have the wrong mentality about HIV.***

Respondent no.51: ***No, there shouldn't be hence the process is voluntary, only advice should be provided.***

Respondent no.52: ***Yes there should be mandatory HIV testing so that people can know their status.***

Respondent no. 53: ***I don't think it should be mandatory for athletes to be tested because it is an individual's secret to know their own status. It can only be advisable for individuals to test for HIV.***

Respondent no. 54: ***Yes I must be on the safe side, to know all our HIV status as teammates.***

Respondent no. 55: ***There must be mandatory HIV testing in my sport because many does not test and are not willing to test.***

Respondent no. 56: ***Yes because accidents do happen in sport when you can find one bleeding. So if we know your status we will be careful when helping individuals whom are HIV positive.***

Respondent no. 57: ***There should be mandatory HIV testing for athletes because in most of the sports, most of the time people get injured, and others bleed, so if people who are helping them are not being careful, they can get the virus.***

Respondent no. 58: **"*No, it must not be because HIV testing is personal it is someone's privacy, and in soccer it is unnecessary because no open wound is allowed, players must cover his wound so it's unnecessary. It is only necessary to tell the coach so he knows not to push too hard and he must not tell others."***

Respondent no. 59: ***I think there must be so that we can know about our status.***

2. **How would you feel about testing for HIV? Explain**
3.

Respondent no. 1: ***A bit nervous at times but because of its advantages, I feel it is a risk worth being taken. Knowing my status makes me feel complete in a way. It's a way of caring for myself and others***

Respondent no. 2: ***It feels good. More especially if one knows their own lifestyle***
Respondent no: ***I feel good [about going for VCT] because this will help me to know my status and also the counselling helps me to stay negative***

Respondent no. 4: ***I don't have a problem testing for HIV. I do it every six months since I'm sexually active. It helps me know my status so I can be able to take care of myself.***
Respondent no. 5: ***Good as I will know my health status and be able to maintain good lifestyle if I am positive or negative.***
Respondent no. 6: ***Feel good. It is good to know my status.***

Respondent no. 7: ***I am really scared to test for HIV. Before I go to test the first question is that what if I am HIV positive? But because of the good work of the counsellors are doing, I end up tested.***
Respondent no. 12: ***Confident, because it's better for a person such as myself to know my status and protect those I love***

Respondent no. 13: ***Very afraid because it [is] kind of scary***

Respondent no. 14: ***I would feel great because I will know my status***

Respondent no. 15: ***Wouldn't mind because I test frequently.***

Respondent no. 16: ***It is scary, no matter how many times I hear about it [HIV testing] or am advised to do it. It makes me very scared and anxious***

Respondent no. 17: ***Am not gonna feel good because I know that a lot of things will change after knowing my status and apart from that, the fact that am infected.***

Respondent no. 18: ***It's scary you don't know whether you are positive or negative.***

Respondent no. 19: ***If I get a chance I would do it all over and over again, because I need to protect myself and my girlfriend***

Respondent no. 20: ***I believe it is a good idea; it's good to know your status***

Respondent no. 21: ***I often get tested so I feel good about it. I feel that I am doing the right thing***

Respondent no. 22: ***I think they should look for other ways because some people like me are scared of needles.***

Respondent no. 24: ***I am open to testing as I do it every almost every three months***

Respondent no. 25: ***One should test often in order to know their status***

Respondent no. 26: ***Scared, but I will be taking a great step, of knowing my status.***

Respondent no. 27: ***I don't have a problem with it because I believe it benefits me***

Respondent no. 29: ***I feel safe and okay about it***

Respondent no. 32: ***I will definitely do it without thinking twice***

Respondent no. 33: ***I have tested a lot times and the feeling is always amazing and it keeps me motivated to stay clean and be careful***

Respondent no. 34: ***It is a feeling that I don't want to feel but at the end of the day I must know my status so that I won't spread it to other people.***

Respondent no. 35: ***Assured, because one should know their status and testing will make me aware of my status***

Respondent no. 36: ***A bit nervous because by that time I don't know whether I'm affected or not.***

Respondent no. 37: ***I would feel scared and worried because I think it's actually intimidating and torture to live with such a disease. I would not like to get it.***

Respondent no. 38: ***Disappointed, if I was HIV positive because as an individual you must be cautious at all times and take care of your body.***

Respondent no. 39: ***I think it's a good thing to know your status, so it would make me feel good and encourage others to know theirs***

Respondent no. 40: ***It is always the right thing to do so as to know your status.***

Respondent no. 41: ***It would be a good feeling for I know my ways and how I have been behaving, so I'm confident***

Respondent no. 42: ***I would be nervous because you never know what could've happened.***

Respondent no. 43: ***Relieved because I would know that I'm safe, and that's where I would continue to protect myself***

Respondent no. 44: ***Nervous as I fear HIV.***

Respondent no. 45: ***I would panic but have to know my status.***

Respondent no. 47: ***Good, because I will know my status. Not having the virus means that I am HIV negative***

Respondent no. 48: ***Nervous, because if you found out that you are HIV positive your life will be different.***

Respondent no. 49: ***Happy because I will know my status***

Respondent no. 50: ***Happy because I know where I stand as a person, and thereafter start taking care of myself***

Respondent no.51: ***It's always one of the huge steps one takes in life, so nervous is a common feeling.***

Respondent no.52: ***At first I was nervous and scared while waiting for my result.***

Respondent no. 53: ***I have been tested before, I felt nervous when they were about to give me the results even though I knew that I didn't have it.***

Respondent no. 54: ***Truly speaking am afraid of testing for HIV, and I do not even know why.***

Respondent no. 55: ***Feel very good because I know my status***

Respondent no. 56: ***I will feel okay, because is good for a person to know his or her status***

Respondent no. 57: ***I'd feel okay because I will know my status and know what to do in a certain activity and what not to do***

Respondent no. 58: ***I never been tested and I don't want to because it will put my life under pressure living knowing that your HIV positive is a disadvantage.***

Respondent no. 59: ***Good because I will be aware of my healthy body***

Respondent no. 60: ***So excited coz I will know my status***

Disclosing HIV Test results

4. **Explain whether HIV positive athletes should inform their coach and other athletes of their status.**

Respondent no. 1: ***Nope! Positive or not, everybody's still entitled to their privacy.***

Respondent no. 2: ***They should inform the coach, then the coach should inform the players.***

Respondent no. 3: ***Yes so that people will learn to live positively and know that being positive doesn't mean you can't play sport again.***

Respondent no. 4: ***I don't think it is necessary. As long as they know their status and taking care of themselves, unless they want to disclose.***

Respondent no. 5: ***They should disclose if they are comfortable about it and know the high risk of infecting others.***

Respondent no. 6: ***They should so that precautions and positive living should be followed and also it encourages other athletes who are still in denial.***

Respondent no. 7: ***They should inform them because he or she might be injured, so that they can help him or her with care.***

Respondent no. 12: ***I don't think they should disclose their status if they are uncomfortable to tell anyone.***

Respondent no. 13: ***Medical assistance on the pitch and for the team is important so that anyone who has disclosed their status can be helped with blood injuries***

Respondent no. 14: ***I think it should be their choice***

Respondent no. 15: ***Yes they should; so that we know how to handle him/her in a safer manner in cases of injury.***

Respondent no. 16: ***Yes I think so, but if the person is comfortable with it. Because most of the time it is dangerous especially in a rugby field.***

Respondent no. 17: ***It should stay in individuals because it may cause discrimination amongst them. The infected players might be treated differently.***

Respondent no. 18: ***They should inform their coaches because other athletes may cast them out.***

Respondent no. 19: ***Yes they should so that we can know how to approach them let's say they have an open wound and they are bleeding.***

Respondent no. 20: ***Yes they should so that when they are bleeding injuries the coach or team doctor know what to do.***

Respondent no. 21: ***They should inform their coach so that they can be aware that they can still play sports and they can get support.***

Respondent no. 22: ***Not necessarily but for the sake of other players to know, especially when there's injury or any other incident that might happen to that specific player.***

Respondent no. 24: ***I think informing the coach is important as it would [help] in monitoring the HIV positive athlete and not over using the player….. but as for informing teammates that should be a personal choice***

Respondent no. 25: ***Yes there should so that precautions can be taken if need be.***

Respondent no. 26: ***Yes but it's going to make other teammates uncomfortable those that don't even know about the pandemic.***

Respondent no. 27: ***Maybe their coach and not to other athletes because by disclosing their status they might be opening a door for discrimination.***

Respondent no. 29: ***I think they should not because some might not take it well and start to alienate the infected ones.***

Respondent no. 31*: No it's their choice*

Respondent no. 32: *Well that's hard to say but if you as…. Care about others …. Is a good thing to do, might as well change the behaviour around you.*

Respondent no. 33: *No, it's personal.*

Respondent no. 34*: Because they easily bleed and it will be vulnerable for uninfected to become infected through injuries. We share bottles most of the tome, so it's important to inform team.*

Respondent no. 35: *A[n] HIV positive athlete can tell whoever they want, but I believe it's best to let your coach know, in case of emergencies, he will know what to do.*

Respondent no. 36: *It depends on what kind of coach he/she is in terms of personality, because he or she might expose an athlete and start treating that person in a different way.*

Respondent no. 37: *Yes, because it will help him with things such as moral support, physical training planning and it will then be a platform of being advised.*

Respondent no. 38: *I don't think so because I think other players will distance themselves from them.*

Respondent no. 39: *No, it's their decision whether they want to share it or not.*

Respondent no. 40: *No, they are not obliged to know.*

Respondent no. 41: *Best you inform people you are closer to in the team and also the people who are in charge not all the athletes.*

Respondent no. 42: *Yes they should so that the team can assist in terms of supplying the necessary medication and procedure while the players are on the field.*

Respondent no. 43: *Yes because there might be some point where he/she get[s] sick, coach must know what to do.*

Respondent no. 44: *Coaches need to be aware.*

Respondent no. 45: *So that as players we become aware and conscious.*

Respondent no. 46: *Yes they should, in order to equip teammates so they can be aware.*

Respondent no. 47: *The athletes should inform their coach and other athletes of their status because there are many cases of HIV transmission occurring during sporting activities.*

Respondent no. 48: *No, they have the right to remain silent.*

Respondent no. 49: *Yes, because if you don't tell them you gonna put their life in danger.*

Respondent no. 50: *No, that particular person who informed the team might feeling rejected because other members might tease him to a point which might lead to him leaving the team.*

Respondent no.51: *We always encourage them to come clean and tell public about status but I advise the coach be told before.*

Respondent no. 52: *It depends on a player's c[h]arisma on whether that person is ready to face people.*

Respondent no. 53: ***Only when they are negative, but if someone is positive, its their choice to tell the coach depending on how the coach would react/behave towards that individual. People have different behaviours.***

Respondent no. 54: ***Yes, just to be on the safe side as I have explained before.***

Respondent no. 55: ***They should inform them because they might experience discrimination.***

Respondent no. 56: ***He should speak out, about his or her status and feels normal because he can live so many years with HIV. And he must warn his teammates.***

Respondent no. 57: ***They should so that our first aid people must be aware of them when they get injured in the field and bleed.***

Respondent no. 58: ***No they should not inform them because soccer is a emotional game, so you might make the coach angry and may be telling you about your status in front of everyone.***

Respondent no. 59: ***No, because they will start avoiding of giving him/her support maybe coach yes.***

Respondent no. 60: ***No, status is [a] secret. If you are sick and off for a time then perhaps you can tell the coach but only if it is confidential and you can trust him. You can't tell other players it is a personal thing***

4. **If you became infected with HIV, how would you feel about disclosing your status? Explain**

Respondent no. 1: ***Hell at first, but maybe as time goes by I will be able to disclose.***
Respondent no. 2: ***I have met and been taught by individuals who are HIV and have accepted the fact. So I'd be free to disclose if I had to.***
Respondent no. 3: ***I feel scared of what other people will say, and how they are going to treat me after disclosing my status***
Respondent 4: ***I wouldn't want everyone to know but only those who are close to me. It will help emotionally because I'll need support***
Respondent no 5: ***I won't have a problem as I have knowledge about the pros and cons of HIV and how to deal with stressors and stigma.***
Respondent no. 6: ***I don't feel comfortable [revealing my status] as I don't know how others will take it and also I fear discrimination.***

Respondent no. 7: ***I will have to feel like everyone else because HIV is a lifetime thing. If I don't I will suffer for good, which will not be good for my health.***

Respondent no. 12: ***Bad, because I prefer to disclose my status if I am very committed with my relationship to my partner.***

Respondent no.14: ***Honestly I don't know how I would feel.***

Respondent no. 15: ***I would be nervous about it, but I would do so in order to secure the safety of my teammates.***

Respondent no. 16: ***I will think it is a bad idea. Because no matter how people were raised, they will still talk and exclude you.***

Respondent no. 17: ***Am still standing on the same point that my status is my secret.***

Respondent no. 18: ***I would tell my closest friends and family.***

Respondent no. 19: ***I would disclose it because I believe that the moer people know about your status the more they'll be aware about HIV.***

Respondent no. 20: ***I would 'cause the people I will be associated with will have to know and will help me not feel bad.***

Respondent no. 21: ***I would feel good because I would get support from people and people and people to talk to. This would make me positive.***

Respondent no. 22: ***I wouldn't be comfortable but for the benefit of me and other close people to me, I think they should know.***

Respondent no. 24: ***I don't think I could be confident about it but I would have to work around that. Me disclosing my status would also be affected by the nature of my teammates.***

Respondent no. 25: ***I would not want to disclose it because of the fear of being judged by others.***

Respondent no. 26: ***Bad but it will be for my benefit and if I need help they will be free to help.***

Respondent no. 27: ***It will be difficult for me to do so because because of fear of bad reception form the society.***

Respondent no. 29: ***I would feel good about it and I wouldn't do it anyway.***

Respondent no. 32: ***I will be open about it, actually I would start my own program …***

Respondent no. 33: ***I really don't know but I would have get counselling first.***

Respondent no. 34: ***I believe that I have to accept that I'm infected with pandemic disease, that's the only way to help me live longer.***

Respondent no. 35: ***Ill disclose it to people who I trust, because they should be aware, but not judge.***

Respondent no. 36: ***It wouldn't be easy for me to disclose my status, but I can't keep it as a secrete for the rest of my life.***

Respondent no. 37: ***I would feel devastated and ashamed because people in turn treat you differently in a way of pity or feeling insecure around you.***

Respondent no. 38: ***I would say ashamed because I expect much from myself.***

Respondent no. 40: ***I would keep it personal and share with my immediate family and close friends.***

Respondent no. 41: ***Well human beings nature involves several things before deciding whether to disclose or not, it will depend on the people around me.***

Respondent no. 42: ***I would keep it to myself because I am not a person that talks a lot.***

Respondent no. 43: ***I would be relieved because I would know that there are people who cares about me, I would also get support from them.***

Respondent no. 44: ***She I won't tell anyone.***

Respondent no. 45: ***I would feel discouraged and scared.***

Respondent no. 46: ***I would be hesitant, but ultimately tell them.***

Respondent no. 47: ***Not good because I don't want people to know my status.***

Respondent no. 48: ***I will feel happy because I have talk[ed].***

Respondent no. 49: ***Happy, because sharing is the best way to release stress.***

Respondent no. 50: ***I will not be willing to disclose my status at first.***

Respondent no. 51: ***Of course it takes guts to disclose but with professional help and support from friends and family I will be strong enough to.***

Respondent no. 52: ***Yes I would disclose since I would hate being victimized.***

Respondent no. 53: ***If I became infected I would feel ashamed but couldn't keep it to myself. I would disclose it to my partner or parent only to avoid being mistreated.***

Respondent no. 54: ***I will [feel] good because I know my status will be positive, so I will tell them.***

Respondent no. 55: ***It will be a sad story to me and wont be easy to disclose it.***

Respondent no. 56: ***I will feel normal because am still myself just that I will live with HIV.***

Respondent no. 57: ***I won't feel sad or angry or bad, because I know that HIV/AIDS is manageable, so I will just make sure I stay positive minded and focus managing it.***

Respondent no. 58: ***I will not tell anyone about it just my parents and girlfriend.***

Respondent no. 59: ***Good, but to those who want to know about HIV.***

Sport Participation of HIV Positive Athletes and Coaches

5. **Explain whether an athlete who becomes infected with HIV should be prevented from participating in sport.**

Respondent no. 1: ***They should not be prevented, provided team members are educated on how to prevent the risk of [contracting] HIV in sports.***

Respondent no. 2: ***No, they shouldn't, but rugby's a contact sport where people get seriously injured, so HIV participants will be of great threat.***

Respondent no. 3: ***No one should be prevented from participating in sports because having HIV does not mean you can't play sport if you are not sick.***

Respondent no. 4: ***No they shouldn't be prevented and being physically active will help boost their immune system.***

Respondent no. 5: ***They should not prevent people with HIV to participate in sports as it is good for their health and would keep them physically fit.***

Respondent no. 6: ***No they should not be prevented as even if you have HIV you are still a human being.***

Respondent no. 7: ***The athlete should be allowed to play but he or she should be informed about all the risk of transmission to other athletes.***

Respondent no. 12*: I think they should be encouraged to take part in sports so that they can keep their health in good shape.*

Respondent no. 14: *I think no one should be denied to participate in sports because of their health status.*

Respondent no. 15: ***No! There would be discrimination, at the end of the day we are all human.***

Respondent no. 16: ***I don't think so; I just think he should be careful with his wounds and injuries in a game.***

Respondent no. 17: *No, it's not like they are not people like everyone, they still have a right to participate and do what others do***.**

Respondent no. 18: ***I think they should because there will be a high risk of transmission especially in contact sports.***

Respondent no. 19: ***They should be prevented because in sports like rugby it's scary for two open wounds to be in contact since rugby is a contact sport.***

Respondent no. 20: ***I think they should be stopped from playing because if their blood comes in contact with other player's open wound…disaster.***

Respondent no. 21: ***No they shouldn't be stopped from playing sports because sports will help them to keep fit and boost their immune system.***

Respondent no. 22: ***No it would be discrimination towards that player.***

Respondent no. 24: *I don't think a person should be affected [by] their status especially when they are still healthy enough to play***.**

Respondent no. 25: *No they should not be prevented, at the end of the day we are all human and measures can be taken for protection and safety***.**

Respondent no. 26: *He/she should not as it will be discrimination among others, as our constitution of RSA is against that (discrimination).*

Respondent no. 27: *All people whether HIV positive or not should participate in any sport of any kind because it's their prerogative right to do so.*

Respondent no. 29: ***Depending with the sport but if there are physical sports like rugby it wouldn't be advisable.***

Respondent no. 31: ***They should be prevented as it might seem like it is discrimination but it is safer for the rest of us***

Respondent no. 32: *No, that will be discrimination that that will be high prosecuted, people should be left to do whatever no matter condition.*

Respondent no. 33: *No, he/she should continue playing.*

Respondent no. 34: ***Person who is involved with HIV should also participating in sport only if he/she let his/her teammate team mate that she/he is infected.***

Respondent no. 35: *No, everyone must be given a fair chance.*

Respondent no. 36: ***I don't think an athlete should be prevented from playing sports because it is a good thing to participate, it will him/her healthy and strong.***

Respondent no. 37: *No, because I think people should stay equal regardless of their medical status, I think everyone should not feel excluded in anyway.*

Respondent no. 38: *No he/she should not be denied that privilege of playing because we are all equal regardless of our status.*

Respondent no. 39: ***No, the more exercise the better and it will help deal with their worries/stress.***

Respondent no. 40: ***Can still participate in sport but all athletes should exercise extreme caution.***

Respondent no. 41: ***No[t] at all. They're not likely to put any athlete, and if it's in case of accidentally having a cut that is likely to put one in danger it needs urgent attention.***

Respondent no. 42: *No they should not be prevented because that would be discriminating against them.*

Respondent no. 43: ***Yes because he or she might infect other people for instance if he gets injured.***

Respondent no. 45: *They should not be prevented, no to discrimination.*

Respondent no. 46: ***No they should not, because sports will keep them healthier and strengthens the immune system.***

Respondent no. 47: ***Yes because sport like rugby and soccer are contact sport. So they should be prevented from playing.***

Respondent no. 48: ***By not selecting him/her in squad.***

Respondent no. 49: *No, because everyone has the rights not to be isolated because of his/her status.*

Respondent no. 50: *No, every person has the right to life no one should be discriminated because of his status*.

Respondent no.51: ***He shouldn't, as long as he discloses then we will know how to handle matters with him.***

Respondent no. 52: ***No the[y] shouldn't be prevented because sport can help the person not to be affected with AIDS.***

Respondent no. 53: ***If an individual is infected with HIV, they should be treated like anyone else for them to feel loved and not think of bad things only.***

Respondent no. 54: *No, not at all. This virus does not affect his abilities*.

Respondent no. 55: ***He or she must not be prevented because I believe an exercise will help him or her immune system to be stronger.***

Respondent no. 56: *He should not be prevented from participation in sport because his presence is highly appreciated and he will not infect athletes around him.*

Respondent no. 57: ***He shouldn't be prevented from participating in any of the sport since sport is one of the activities to keep someone healthy and fit; hence he won't infect others when playing/participating in any sport.***

Respondent no. 58: *No way should he/she be prevented he must be treated like everyone, not to isolate him from others.*

Respondent no. 59: *He must be able to participate whatever the cause.*

Respondent no. 60: *No, they should feel welcomed everywhere.*

6. **If you became infected with HIV, how would you feel about continuing to participate in sport? Explain**

Respondent no. 1: *I would take it as a form of exercise, which is good for my health.*

Respondent no. 2: *Sports such as netball, squash and other[s] yes.*

Respondent no. 3: *I will feel good because it reduces stress and depression as I can spend more time with friends and also I will be physically fit due to exercising every day.*

Respondent no. 4: *I will continue to participate because it helps my body to gain strength and not get other HIV related illness easily.*

Respondent no. 5: *I will continue playing and participating in sports, as health wise, sport is good for my health.*

Respondent no. 6: *I will feel good because that's where I will get my body to be physically fit due to exercises.*

Respondent no. 7: *Yes as long I will be knowing what to do and all the risk of transmission to other athletes.*

Respondent no. 12: *Disappointed, because I will know from then that playing contact sport will be more of a risk for me to other players to get infected.*

Respondent no. 14: *I would just carry on training and keeping healthy.*

Respondent no. 15: *I would continue, but would have the fear of infecting others by mistake*

Respondent no. 16: *I think I'll still participate, to keep myself healthy and maximise chances of me living healthy.*

Respondent no. 17: *Not bad, sport is the first thing that can keep me busy and make me forget about being infected.*

Respondent no. 18: *I would wear clothing that would cover my whole body.*

Respondent no. 19: *Obviously I would want to play again but for the safety of other people I would stop playing.*

Respondent no. 20: *I would withdraw myself cause I do not want to infect fellow players.*

Respondent no. 21: *I would feel good cause I wouldn't be alone and get to stress. Sports would help me to keep an open mind.*

Respondent no. 22: *I won't have a problem, and also it would be good for myself to keep active.*

Respondent no. 24: *I would be discouraged especially rugby because it's a contact sport and chances of bleeding are high.*

Respondent no. 26*:* ***I will feel like not participating, but as you infected ou must live a healthy life, so …participating in sports.***

Respondent no. 27: ***I'd be keener to participate in sport because research says sports actually build your health.***

Respondent no. 29: ***I wouldn't feel good to continue.***

Respondent no. 32: ***For me personally will be one of the most positive things to do for myself.***

Respondent no. 33: ***I love soccer so I don't think I would stop.***

Respondent no. 34: ***I'll feel neglected in most of the time even though other members will also treat me like other teammate, the fact that I have it will always makes me think negatively.***

Respondent no. 35: ***I'll carry on because it will help me stay fit.***

Respondent no. 36: ***I would feel in a good way because my body would be physically strong and it keeps my health in a positive way.***

Respondent no. 37: ***Yes, because sport is my passion and more significantly indulging as an affected HIV person it will place you [to] be fit enough to live with the disease and will earn more living days.***

Respondent no. 38: ***Free because I will be keeping my body healthy as I will be working on living longer.***

Respondent no. 40: ***Would continue participating to keep fit and healthy.***

Respondent no. 41: ***I would continue participating because my motive its, I should always keep fit.***

Respondent no. 42: ***I'd be more motivated to participate in sport because it will helpme remain healthy.***

Respondent no. 43: ***At first I would feel isolated and unwanted but when time goes I would feel better because of support I get from coach and other participants***

Respondent no. 45: ***I won't feel bad, I would just continue playing.***

Respondent no. 46: ***I will participate ever-more as I know it will help me leave longer and healthier.***

Respondent no. 47: ***I will not participate in sport.***

Respondent no. 48: ***Yes, to keep yourself healthier.***

Respondent no. 49: ***Good, because at the same time I will keep myself healthy.***

Respondent no. 50*:* ***I would just accept and keep participating because things like this do happen in life and as individuals we should be able to keep our head held high and move on.***

Respondent no.51: ***As long as my teammate gives me support I need as a victim, then I don't see any problem.***

Respondent no. 52: ***I would make it a point that I continue play so I can keep my body healthy.***

Respondent no. 53: ***I would like to continue because; the advice for people infected is to exercise to keep their bodies healthy. So I wouldn't stop [to] participate, because it would also keep my mind busy with sports.***

Respondent no. 54: ***I know at first it will be difficult knowing that your teammates know your status, but it will get there and I will continue to do my best.***

Respondent no. 55: ***I will continue to play with a home of improving my immune system and reliving stress.***

Respondent no. 56: ***I will feel like before I was infected because status has nothing to do with his participation in sports.***

Respondent no. 57: ***I wasn't going to feel sad because I know participating in sport keeps me fit and refreshes my mind also.***

Respondent no. 58: ***Participating in sport its healthy, so it will feel good to be in sport.***

Respondent no. 59: ***Good, because sport will keep the body healthy and that is what [is] needed.***

Respondent no. 60: ***Since I love and desire good health I will continue playing.***

7. **Explain whether you are concerned about contracting HIV during sport participation.**
8.

Respondent no. 1: ***I am concerned of course.***

Respondent no. 2: ***Up until this questionnaire, YES.***

Respondent no. 3: ***I am concerned that is why those who get injured are attended to by the first aid people who know and are trained to deal with injured people.***

Respondent no. 4: ***I'm not really concerned because if I do I'll stop playing altogether and I know that I should not touch open wounds with bare hands.***

Respondent no. 5: ***Sometimes, because we get to be injured most of the time in rugby and in contact with each other.***

Respondent no. 6: ***Yes, but it's rare during sport participation.***

Respondent no. 7: ***There is no need to be fearful to a person with HIV. I am worried about it as long as we can be given the information about how to deal with them when they are injured.***

Respondent no. 12: *I am not really concerned that much because during the time of a ply it's unlikely for a person to get contracted with the virus.*

Respondent no. 13: *No because medics are always around.*

Respondent no. 14: *Not really because the medics are always around to assist with injuries.*

Respondent no. 15: ***Yes! There is a lot of bleeding during games.***

Respondent no. 16: *Not really, actually I never even thought about until I started filling this questionnaire.*

Respondent no. 17: ***Yes I am concerned about it I think it's better for me to hunt it by myself rather than contracting it.***

Respondent no. 18: ***I am, but I am sure to report cuts that I see on other players or open wounds.***

Respondent no. 19: ***Yes I am concerned especially because you don't know the statuses of your teammates and opponents.***

Respondent no. 20: *Not really I like to concentrate on my game nothing less nothing more, nothing else*.

Respondent no. 21: *No I'm not because we don't usually stay contact during our play in the game, they are treated by special people not us in the fields*.

Respondent no. 22: *Not really, during the game I'm focused on playing not thinking about any other staff like injuries and HIV.*

Respondent no. 24: *I never really think of that, but no, most people are not that selfish and rules that are in place are there to protect the health of players.*

Respondent no. 25: *Have never really thought about it thus it has never been a concern.*

Respondent no. 26: ***Yes, as we tend to think that you contact HIV in another way, but not in sports, so it will be so affecting my life.***

Respondent no. 27: *No not at all because the chances are very minimal.*

Respondent no. 29: *I'm not concerned because my position allows less contact and I usually don't think about it.*

Respondent no. 31: *I'm not*

Respondent no. 32: *Not really, I would be cause if you doing what you love most …*

Respondent no. 33: *No. But I am always careful around teammates especially when he has a cut.*

Respondent no. 34: *I'll only be concerned if I don't know the statuses of my teammates.*

Respondent no. 36: ***Because the risk of catching HIV through sports activity is extremely small.***

Respondent no. 37: *No, because in soccer there are not many injuries that lead to blood interference and the equipment used is washed time after time.*

Respondent no. 38: *No I am not concerned because we cannot say those who are infected must not play with those who are not.*

Respondent no. 39: ***Yes we tend to be too physical and it is worrying.***

Respondent no. 40: *No, because I personally avoid contact.*

Respondent no. 41: *No not really since body contact or when one is sweating will [not] result in any infection.*

Respondent no. 42: *Not concerned because there are measures taken to alleviate*

Respondent no. 43: ***Yes I'm concerned because if one get infected, the high rate of HIV in our country will increase as a result of death.***

Respondent no. 44: ***I have a fear.***

Respondent no. 45: ***I am not concerned, it can hardly happen*****.**

Respondent no. 46: ***Yes I am, since soccer is a contact sport, so it is vital to take good care not to come in contact with a bleeding player.***

Respondent no. 48: ***I will not feel bad but accept because is a mistake, and everyone make a mistake.***

Respondent no. 49: ***I will feel bad, because my life will change and it will cause hatred between me and that person***

Respondent no.51: ***Yes, because everyone's safety for contracting HIV is important*****.**

Respondent no. 52: ***No[t] necessarily but I don't want to contact with blood or play with an open wound.***

Respondent no. 53: ***I am concerned about that when someone bleeds because if we come in contact with his or her blood and have cuts, there's a probability of getting infected with HIV.***

Respondent no. 54: ***No, because it's very rare.***

Respondent no. 55***: I am not at all but when someone gets injured and bleed I won't touch the wound.***

Respondent no. 56: ***I will feel disappointed about my teammates.***

Respondent no. 57: ***I am not concerned in catching HIV during any sport participation because is not easy, it is rare for someone to get HIV in sport participation.***

Respondent no. 58: ***I don't have any concern.***

Respondent no. 59: ***I am concerned but will treat people as usual.***

Respondent no. 60***: Yes I am concerned since its my responsibility tobe aware of my status.***

9. **How would you feel about a coach/manager with HIV or AIDS being involved with the sports team? Explain**
10.

Respondent no. 1: ***The truth is its risky, with rugby, injuries, whether minor or not, blood injury is likely to occur at any time*****.**

Respondent no. 2: ***That is no problem, since he/she [will] just be coaching only.***

Respondent no. 3***: I feel happy because it shows that he/she has a positive attitude about HIV/AIDS and also he/she may be a role model to the by telling them [about] HIV/AIDS is contracted.***

Respondent no. 4: ***I won't have a problem with him/her. He/ she is also a human being and being HIV positive doesn't mean that a person changes.***

Respondent no. 5: *Good, because they will be showing competency and showing positive side to life than feeling sorry for themselves. I would actually treat them with no difference to others.*

Respondent no. 6: *It's good to have someone like that everyone may know the truth about HIV or AIDS as they will be like role models.*

Respondent no. 7: *I won't even worry about it, as long as he or she can take care of him or herself.*

Respondent no. 12: *I would not mind, because I prefer not to judge other people*.

Respondent no. 13: *No different because he [is] not there to infect us but coach us.*

Respondent no. 14: *I would feel motivated because it shows that one can do what they set the[ir] mind on regardless of their health status.*

Respondent no. 16: *I won't change my feelings towards him until now. Because I think he will even be more to help about this*.

Respondent no. 17: *I don't see any problem about it because his still a person, besides we want the skill and the experience with knowledge in him. There is no way the team can be infected by him coaching it.*

Respondent no. 18: *I have no problem with that.*

Respondent no. 19: *I would accept him because HIV /AIDS transmission goes all above just talking so if the guy is my coach then I'm not at risk of getting HIV from him.*

Respondent no. 20: *It is fine because they are not infecting anyone else they just is providing a service of their knowledge of the sport.*

Respondent no. 21: *I would feel okay and comfortable because the coach does not usually get involved as us the players.*

Respondent no. 22: *There's no difference, I think it would be good as well for more advice to young players to be cautious and know more about HIV/AIDS.*

Respondent no. 24: *I would still value and respect them as I do now.*

Respondent no. 25: *As long as they are good and can get the job done*.

Respondent no. 26: *It's fine as long as he is open about it and he keeps himself safe.*

Respondent no. 27: *In fact I would not mind because being HIV positive does not really resemble disability.*

Respondent no. 29: *I wouldn't mind because his status has nothing to do with his or her ability to take the team to another level.*

Respondent no. 32: *No hard feelings, look is always good to have people who experiencing such things, knowing that tomorrow might be you.*

Respondent no. 33: *I would feel normal.*

Respondent no. 34: *I'll not have a problem with my manager with HIV or AIDS. If he told us about it so that we can all be aware of it*

Respondent no. 35: *I'd be okay with it. As long as he/she knows his status and treats it/doesn't infect anyone.*

Respondent no. 36: *I think it is a good advantage because the coach/manager will be able to guide players about their situation and they will encourage them to use contraceptives.*

Respondent no. 37: *I would not feel any way other than normal since he is not a big threat since we won't be doing anything that may lead to blood transmission or contact.*

Respondent no. 38: *Encouraging because he would be motivating us on that you must not be ashamed of who you are and your status.*

Respondent no. 39: *It is very good, he will show us that there is life beyond HIV or AIDS.*

Respondent no. 40: *Nothing wrong with that because it does not imply the coach's ability will be comprised.*

Respondent no. 41: *He doesn't hurt anybody and by being closer to a person who has HIV/AIDS and at the same time heading or coaching a team would make me learn a lot.*

Respondent no. 42: *I'll be fine with it because he is a normal human being.*

Respondent no. 43: *Quite honestly the fact that he/she is HIV/AIDS wont suit me well but I will try to cope with that because there are some things inlife that cannot be denied.*

Respondent no. 44: *Don't have a problem.*

Respondent no. 45: *I won't have any problem as long as he doesn't bleed.*

Respondent no. 46: *It would be good as it will motivate other infected people to take sports serious.*

Respondent no. 47: *I will not have a problem with that because they are not players.*

Respondent no. 48: *Happy, it's not like all of us in the team will be infected too.*

Respondent no. 49: *Good, because it will not affect my life or participating in sports.*

Respondent no. 50: *It's not like I would mind, but I will just encourage them to use protection at all times.*

Respondent no. 51: *Knowing his status will help us give him support in our team and encourage others to voice their status out.*

Respondent no. 52: *It will be good because we can learn after from him if he doesn't disclose.*

Respondent no. 53: *I don't see any problem even if it's a player or teammate. As long as they are concerned about our safety and do things the right way. We should not forget that they are still human. Who knows tomorrow it may be you…*

Respondent no. 54: *It's okay, because we are not going to have sex with him or share a toothbrush with him/her.*

Respondent no. 55: *To me it won't make any difference will still treat him like I used to before.*

Respondent no. 56: *Feels normal about that since is a human being and in sport we don't share blood.*

Respondent no. 57: ***Firstly I won't feel sorry for him to have the virus because it will make him/her weak, I will encourage him/her and support him/her and tell him/her not to think too much about what he/she has, because he/she can manage it.***

Respondent no. 58: ***HIV/AIDS it's not transferred by just being around people, so no hard feelings.***

Respondent no. 59: ***Good, because if he get support from team as well as respect he will be good.***

Attitude toward HIV Positive Athletes

11. **How would you react to an athlete, diagnosed as HIV positive, participating in your team? Explain**

Respondent no. 1: ***I will honestly not feel comfortable, but I will feel free and safe in a way since I will know precautionary measures.***

Respondent no. 2: ***They would be welcome. In our team once you are there you are family!***

Respondent no. 3: ***I react positively because I know that being positive does not mean that one cannot do any sporting activity.***

Respondent no. 4: ***I will try to give support to the person so that they continue to live a positive life.***

Respondent no. 5: ***Good because they will be doing something that will enhance their physical development. Being HIV does not mean you are not a human being, but you have to change certain lifestyle.***

Respondent no. 6: ***Positively because that athlete is still like me the difference is he/she is diagnosed with HIV.***

Respondent no. 7: ***I won't react; I will easily talk to the coach about it. If coach knows about it, I will just be careful when I have to tackle him or her because prevention is better than cure.***

Respondent no. 12: ***I would feel sorry for them, knowing that they are infected.***

Respondent no. 13: ***No different because being HIV positive does not make him less of a person.***

Respondent no. 14: ***I would support the person because being HIV positive is not the end of the world.***

Respondent no. 15: ***Would treat him/her the very same way I treat all my other teammates.***

Respondent no. 16: ***Same as I treat everyone. But come to think about it, the way he play(s) it is dangerous in a way.***

Respondent no. 17: ***As an individual I can give more support to the person in order for him to or her to deal with it. Discriminating them makes everything worse.***

Respondent no. 18: ***I would treat them the same and encourage him/her to protect herself with clothing during playing.***

Respondent no. 19: **I would react very normal but be careful around the person.**

Respondent no. 20: ***Would be supportive because a team is a family and you support family no matter what.***

Respondent no. 21: ***I would be okay with it but I would be a bit uncomfortable because I don't want to be infected with HIV.***

Respondent no. 22: ***Won't make any difference.***

Respondent no. 24: ***In my nature I would be too concerned because I would wonder if he is strong enough or taking their medication.***

Respondent no. 25: ***Probably would want to keep my distance just in case something happens.***

Respondent no. 26: ***I will not be fine at first but as long as I know about this pandemic, I will protect myself towards that.***

Respondent no. 27: ***I would actually stand out to support the particular player so as to emotionally strengthen him.***

Respondent no. 29: ***I would want to support him and be there for them because I know it's not easy to accept it.***

Respondent no. 32: ***Positive but avoiding any hard physical challenge which may cause sentences and blood may …***

Respondent no. 33: ***I would give them courage to keep going.***

Respondent no. 34: ***I'll treat him/her as I treat my other members who are not diagnosed as HIV positive.***

Respondent no. 35: ***I'd be okay with it. I would not treat the person differently, but I'll be aware.***

Respondent no. 36: ***I would react normal to my team mates because if he knows that we treat him in a bad way it won't be easy for him to be part of the team and he will feel neglected.***

Respondent no. 37: ***Normally, just like we used to interact or act with other people I would just be alert.***

Respondent no. 38: ***No I won't because he is a human being … he deserves to be treated like other people.***

Respondent no. 39: ***He must stop participating.***

Respondent no. 40: ***Treat him equally with the way I react towards other teammates.***

Respondent no. 41: ***Treat that person as a team mate and nothing different.***

Respondent no. 42: ***I'll be fine with it because at the end of the day they're just a normal person.***

Respondent no. 43: ***At first I will not treat him/her equally as others but as time goes on I will try to be understanding to this entire situation.***

Respondent no. 45: ***I will react in a supportive and positive way to such a player***

Respondent no. 46: ***I wouldn't discriminate against such a player as I know for a fact that he needs our support***

Respondent no. 47: ***I will fear the person who is HIV positive in my team, because there is a high risk of HIV infection when you play the contact sport with a person who is diagnosed with HIV***

Respondent no. 48: ***Good, I will accept his status as a human just like us.***

Respondent no. 49: ***Good, it keeps him/her away from stress and I will advise him/her to participate in other sports***

Respondent no. 50: ***I will not have any problem with him, because HIV is just a disease is not like I would get infected by sitting next to him.***

Respondent no.51: ***I will make him feel fully as part of the team irrespective of the HIV status.***

Respondent no. 53: ***If I know about their positive status of HIV, I would not change my attitude/behaviour towards them but I would always be alert and make sure they are treated well by their teammates.***

Respondent no. 54: ***As long as we don't have sex with him or her it's okay.***

Respondent no. 55: ***Treat him/her like I did before, won't discriminate him/her.***

Respondent no. 56: ***I won't react wrong with my teammate with HIV.***

Respondent no. 57: ***I will just react the normal way I was reacting before having the virus, since we mustn't change our behaviours or reactions to people with HIV/AIDS. We must just treat them the way we were treating them, make them feel free or welcome when we with them.***

Respondent no. 58: ***I will react normally and treat him like everyone else.***

Respondent no. 59: ***Give him/her support mainly in getting fresh food.***

Respondent no. 60: ***I will give him support and even encourage him to take medication accordingly and be sure he has a proper support group around him***

How would you feel about competing in contact sport against HIV positive athletes? Explain whether there would be a change in strategy towards the sport.

Respondent no. 1: ***It's going to be challenging considering the fact that my health is at risk, in a way.***

Respondent no. 2: ***It would be hard for me to compete against an HIV positive athlete since I know the risks of playing a contact sport, more especially against an HIV positive athlete.***

Respondent no. 3: ***I feel pity for them and I think the strategy of full contact should change and they should play touch rugby as not much contact is allowed.***

Respondent no. 4: ***I don't see the necessity for changing strategy if we do it means you don't accept the person.***

Respondent no. 5: ***There would be a slight change, especially in terms of contact when there is an injury. They would have to develop a strategy on how to handle open wounds and cuts among players.***

Respondent no. 6: ***Won't feel comfortable but we can change the strategy to play touch rugby without much contact.***

Respondent no. 7: ***I will just be afraid to, what I will do; I will just tackle him or her gently so that no bleeding will be created.***

Respondent no. 12: ***Scared, because they may be a possibility of our wounds contacting with each other.***

Respondent no. 13: ***No different because before we can even play medics have to be there.***

Respondent no. 14: ***I don't think anything should change because medics are always present.***

Respondent no. 15: ***Wouldn't mind at all and there wouldn't be a change in strategy.***

Respondent no. 16: ***I think there will definitely a change in strategy especially if you know.***

Respondent no. 17: ***Yes it does not really feel good but there is nothing you or me can change they have to participate for they still people and they deserve to do what they are best on.***

Respondent no. 18: ***There would definitely be a change in strategy. There will be less contact or no contact at all otherwise this would cause trouble***

Respondent no. 19: ***I don't wish to be in that kind of competition, a lot can happen and I wouldn't want to be in the receiving end of the bad that can come out.***

Respondent no. 20: ***No change of strategy cause if [I] have HIV I would just play as hard as I play usually.***

Respondent no. 21: ***I would be cautious because I do not want to contact the disease.***

Respondent no. 22: ***There will be no change, except the safety procedures need to be ff like closing open wounds.***

Respondent no. 24: ***I think there would be because the safety of players is put first so I believe new laws would be set.***

Respondent no. 25: ***There would be a change, stay away from the infected player/s, or approach with caution, do not want them bleeding on me.***

Respondent no. 27: ***I don't think it really matters since the chances of contracting HIV on the field of play are very small.***

Respondent no. 29: ***Uncomfortable to be honest because there is blood always involved so it's hard to ignore that and cause me to lose my concentration a lot.***

Respondent no. 32: ***Obviously the attitude … towards the player will contribute (unfair behaviour) it's my life dear you only live once (no offence).***

Respondent no. 34: ***Positively against one with HIV because I believe that he/she can do what's best for him and us as well.***

Respondent no. 35: ***I won't compete, because chances of getting the disease are there.***

Respondent no. 36: ***I wouldn't feel in a good way because in contact sports any danger can happen like bad injuries which involve blood.***

Respondent no. 37: ***No because having played for years I have never faced a situation where both players interfere with blood or contact with blood.***

Respondent no. 38: ***No they won't, as I said we are all equal no matter it will only depend on the behaviour of an individual.***

Respondent no. 39: ***No change is required, they must just stop playing.***

Respondent no. 41: ***I think it depends on the kind of sport. If it's a fighting or contact sport yes I can have a problem.***

Respondent no. 42: ***I would be fine with it but there would probably be a change in strategy from the manager because people don't think the same.***

Respondent no. 43: ***I would feel insecure because if it may happen that he or she get injured and our blood may contact and there's a possibility of me getting infected are high.***

Respondent no. 44: ***I will fear at times***

Respondent no. 45: ***I don't support the idea.***

Respondent no. 46: ***I will make sure and inspect if I am injured or not and take proper precautions not to contact such a player if he/she is injured.***

Respondent no. 47: ***I don't think I will play the contact sport against HIV positive athletes.***

Respondent no. 48: ***Good, my reaction to the game will be good as normal***

Respondent no. 49: ***Good, because it would not affect the way I play and I will score more goals.***

Respondent no. 50: ***There is nothing wrong with them, so I don't think it would be necessary to change the schedule/strategy***

Respondent no.51: ***Yes, there must be a change because it must be made certain that any contact does not lead to bloodshed and contact must be reduced with any other player***

Respondent no. 52: ***Scared, if no tactical change, because I can also be affected when we contact***

Respondent no. 53: ***It depends [on] how dangerous is that sport because if it's like blood shedding it wouldn't be safe for others who are HIV negative.***

Respondent no. 54: ***No, I will treat them as I treat others no need for changes***

Respondent no. 55: ***No problem, as long as the person doesn't have an open wound***

Respondent no. 56 ***(HIV)*****:** ***No, people who are HIV positive are the same as those who are uninfected. They are normal people just they have the disease***

Respondent no. 57: ***There won't be any, since soccer is one of the contact sport and you cannot get HIV from the sweat of an HIV infected person, so no change in strategy towards the game or sport. I will just play the normal way I used to play***

Respondent no. 58: ***HIV is transferred though blood so soccer it's not a fight it's a game, playing with an infected player will not change anything***

Respondent no. 59: ***I will just forget about his status and focus on sport***

Respondent no. 60: ***So sad***

12. **Explain whether you would use the same changing room or equipment with an athlete who is HIV-positive?**

Respondent no. 1: *I would because no one can contact HIV through sharing a changing room nor exposed to the risk thereof.*

Respondent no. 3: *Yes we can use the same changing room and other equipment like jerseys and short[s] but not socks as it is not hygienic.*

Respondent no. 4: *Yes I would because I will not contract HIV from sharing sports equipment or change room with the person infected.*

Respondent no. 5: *I don't have a problem as there won't be body fluid that carries the virus.*

Respondent no. 6: *Yes we can share the changing room and the kit because one cannot contract HIV through that.*

Respondent no. 7: *Yes I can use the same changing room, even some equipment except some like mouth guard, but a kit I can if it had been watched.*

Respondent no. 12: *I would not mind because the fact that we share room does not mean I could get infected.*

Respondent no. 13: *I would because hence it's for changing not infecting each other.*

Respondent no. 14: *I would because being in the same room does not mean he will infect me.*

Respondent no. 15: *Yes I would! You don't get HIV from sharing a change room.*

Respondent no. 16: *Yes I will use the same room and equipment because it doesn't involve blood.*

Respondent no. 17: *We are going to use same stuff including the changing rooms and equipment because I believe that doesn't affect anyone.*

Respondent no. 19: *Yes I would use the same changing room or equipment.*

Respondent no. 21: *Yes I would use the same equipment, but I would use it with caution.*

Respondent no. 22: *Yes that won't affect me.*

Respondent no. 24: *Yes I would be cause of the knowledge I have acquired about HIV and AIDS.*

Respondent no. 25: *Yes I do not see why not.*

Respondent no. 26: *Yes as long as there are blood or wounds on his body.*

Respondent no. 27: *Why not? We are all….the same regardless of him being HIV positive.*

Respondent no. 29: *I wouldn't because he might bleed on it.*

Respondent no. 32: *Yeah, I assume those athletes are being tested for such disease and equipment is being taken care of.*

Respondent no. 34: *I'll use same changing room as well as equipment with or her because I know what I must be aware of against infected person.*

Respondent no. 35: *Yes I would, as long as there is no blood, or the person takes well care of their self.*

Respondent no. 36: *I don't think there is a problem sharing the same changing room because that's where will be changing nothing more and equipment it depends.*

Respondent no. 37: *Yes as long as the equipment does not contact blood.*

Respondent no. 38: *Yes, as long as long as they are not affecting me in a bed way or as long as they won't disadvantage another person.*

Respondent no. 40: *I would not share the same equipment, it's too risky.*

Respondent no. 41: *Yes I would because they don't put me at any risk.*

Respondent no. 42: *Yes because I won't get infected by changing with someone who is infected.*

Respondent no. 43: *Yes I will because HIV won't affect me through changing in same room but through blood contracting.*

Respondent no. 45: *I would I don't discriminate.*
Respondent no. 47: *I don't have a problem with that because I don't think you can get diagnosed by changing room or equipment.*

Respondent no. 48: *Yes, because sharing the same room I will not be infected with HIV.*

Respondent no. 49: *Yes, because using the same room I will not get HIV.*

Respondent no. 50: *Yes I would.*

Respondent no. 51: *Yes I will continue sharing with them except needles and syringes.*

Respondent no. 52: *Yes there's nothing wrong in changing or using equipment with HIV/AIDS person.*

Respondent no. 53: *Yes I would use the same equipment or same changing room because those things are/would not be infected. As long as the equipment is cleaned regularly.*

Respondent no. 55: *I will definitely use the same changing room.*

Respondent no. 56: *Of course I will use the same changing room because HIV –AIDS don't just get transmitted by being around someone who is infected.*

Respondent no. 57: *I will use the same changing room with him/her since I won't be infected using the same bench, shoes and towels.*

Respondent no. 58: *It depends on what equipment it is, and how it is being used.*

Respondent no. 59: *Yes, because I already heard about HIV/AIDS.*

Respondent no. 60: ***Yes***

Prevention of HIV Transmission on the Sports Field

13. **What precautions (e.g. wearing gloves) do coaches and medical personnel take to prevent HIV transmission in your sport?**
Respondent no. 1: ***I only know of wearing gloves.***

Respondent no. 3: ***They wear gloves, avoid direct contact with blood.***

Respondent no. 4: ***They wear protective gloves.***

Respondent no. 5: ***They wear gloves, use of different unused instruments when in contact with different players.***

Respondent no. 6: ***Wearing gloves; blood substitute done when someone is injured and is bleeding then they substitute with another person.***

Respondent no. 7: ***If the skin is penetrated, they wash the area with water and soap. Clothes are blood stained; they change the clean ones once the wound has been treated. Blood gets on the skin irrespective of whether there are cuts, wash well with soap and water.***

Respondent no. 12: ***They could wear rubber gloves; they could not touch an open wound with bare hands.***

Respondent no. 13: ***There has to be medics to treat [those] with injuries or wounds before we play.***

Respondent no. 14: ***There are always medics before the game starts, the game will not start without their presence. This is good because they know how to take care of blood injuries***

Respondent no. 15: ***Wearing gloves; players who are bleeding are removed to clean themselves up before returning to the field.***

Respondent no. 16: ***Gloves, stiches, cloths and water.***

Respondent no. 17: ***The medics are using gloves to help players that are injured or with bleeding injuries so no one can get infected. We always have medics at games***

Respondent no. 18: ***So far I haven't seen or heard anything. They don't seem to give us enough medical attention.***

Respondent no. 19: ***Wearing gloves is the most applied precautionary measure that is usually applied.***

Respondent no. 20: ***The law of my game says that if a player starts to bleed the player has to be taken off the field till the blood stops.***
Respondent no. 21: ***Mostly they take gloves when they go to sports games because they won't touch them with their bare hands.***

Respondent no. 22: ***Player with cut is being removed from the field immediately and the jersey or pants must be changed if there are blood spots on it. He/she will come back when the blood is cleaned and the cut is being closed.***

Respondent no. 24: ***Covering of blood- players are not allowed on the field with open wounds or cuts, the medics are professional and don't re-use the same bandage on another player etc.***

Respondent no. 25: ***Always wear gloves when treating injured athlete.***

Respondent no. 26: ***They use valid material that was taught, when they were in medicine school or heard lesson about taking good care of athletes: gloves, bandages.***

Respondent no. 27: ***No player is allowed to resume play with any blood or open wound on him.***

Respondent no. 29: ***Have more AIDS discussions with players and always encourage players to wear skins when playing.***

Respondent no. 31: ***I don't think the paramedics that assist know enough. Players often return to the field and bleed through the bandage***

Respondent no. 32: ***Band-stitches; Blood sprayer.***

Respondent no. 33: ***They don't wear any, they don't take precautions but when one is injured they contact the medics so they do job.***

Respondent no. 34: ***Gloves works for us and them.***

Respondent no. 35: ***Wearing gloves; not using the same needle over and over; not using used bandages; need to have an HIV AIDS awareness programme.***

Respondent no. 36: ***Yes they do prevent HIV transmission for any danger if they will be one of us who will bleed so we must not touch his blood by our hands and we should be using gloves.***

Respondent no. 37: ***Gloves, not to touch other's blood and covering a bloody wound.***

Respondent no. 39: ***Use of Vaseline to clot blood.***

Respondent no. 40: ***Nothing, they don't do anything there is always blood***

Respondent no. 41: ***They wear gloves and their main aim is to treat an injury not much of the wounds.***

Respondent no. 42: ***If a player gets a cut on the field, the player stops and is escorted off the field by paramedics.***

Respondent no. 44: ***Wearing gloves***

Respondent no. 45: ***They use gloved to help an injured player whenever we play.***

Respondent no. 46: ***Injured/bleeding players are taken off the field to be attended by coaches or health professionals wearing gloves to avoid contact with the blood.***

Respondent no. 47: ***Have a proper stocked first aid kit for injuries especially bleeding wounds.***

Respondent no. 48: ***Make sure that everyone has his own uniform.***

Respondent no. 49: ***By not using the same needle as people with sugar diabetes.***

Respondent no. 50: ***They wear gloves; they use different needles for infections.***

Respondent no. 51: ***When they assist injured players, they always wore gloves and they don't use same needle to every one of us. Every player has one.***

Respondent no. 52: ***Yes when you're injured they use gloves for our first aids.***

Respondent no. 53: ***Eish! This one is criminal…they don't usually take any precautions because they assume anyone who is infected would tell them or play safe by making sure their blood doesn't become come into contact with someone else.***

Respondent no. 55: ***There are no gloves or any emergency kit to care [for] those who are injured.***

Respondent no. 56: ***They do wear gloves but if they are not there they carefully check whether they have wounds or not and if they have wounds then they let those who don't have wounds to help the injured athlete.***

Respondent no. 57: ***Gloves, bandages.***

Respondent no. 58: ***No need for gloves or any prevention in sport as there will be no blood from anyone, unless there is an open wound, that one the medical personnel should wear gloves.***

Respondent no. 59: ***For us now is only water because of poor sponsor.***

Respondent no. 60: ***Wearing gloves, making sure that they avoid contact, using ABC method.***

14. **Explain whether you think these precautions are adequate.**

Respondent no. 1: ***Yes they are adequate because as far as historical is concerned, they have never failed to prevent any human fluid contact when used appropriately.***

Respondent no. 3: ***They are adequate but I don't think they are 100% safe*****.**

Respondent no. 4: ***Yes they are because not using them means that they might get infected.***

Respondent no. 5: ***They are adequate, as they prevent the cycle of infection amongst players***

.

Respondent no. 6: ***Yes they are because you won't have contact with a bleeding wound.***

Respondent no. 7: ***I think they are adequate since there is no chance that blood of the opponent can stay long on the other player. The disease won't get a chance to spread.***

Respondent no. 12: ***They prevent the high risk of getting infected.***

Respondent no. 13: ***I think they are because [those] who need any medical help, e.g. wound or cuts medics will trap them*****.**

Respondent no. 14: ***They are because the medics are trained to deal with such case (HIV).***

Respondent no. 16: ***I think they are adequate.***

Respondent no. 17: ***Yes they are but the medics and coaches should make sure that they fully check whether the gloves are in good condition to be used or what.***

Respondent no. 18: ***Precautions are necessary but at the present moment there are not any in progress.***

Respondent no. 20: ***It is adequate because when the player starts to bleed they try to keep him/her away from making contact with other players.***

Respondent no. 21: ***They are, since no blood can get in contact with you during treatments.***

Respondent no. 22: ***Yes, for the safety of the particular player and for the rest of the players.***

Respondent no. 24: ***They are because of not only do they prevent transmission of HIV and AIDS but also another form of disease possible.***

Respondent no. 25: ***I think more measures can be put in place.***

Respondent no. 26: ***Yes as they won't be able to contact this pandemic.***

Respondent no. 27: ***They are adequate but to a certain extent they are not, but as I said earlier the chances for contracting HIV whilst playing rugby are very minimal.***

Respondent no. 29: ***They are not adequate because maybe the other team which they play against might not be doing the same.***

Respondent no. 34: ***I think they are adequate because they would also be conscious about their treatment.***

Respondent no. 35: ***Yes because HIV/AIDS awareness programme will disclose the disease in full and what should be done etc.***

Respondent no. 36: ***Universal precautions are intended to prevent parental mucous membrane and occupational transmission of HIV to health care.***

Respondent no. 37: ***No, because at most case equipment is not usually changed because of lack of capital and it may put players in an insecure situation.***

Respondent no. 38: ***Yes they are because they are evaluated before they can be used.***

Respondent no. 39: ***Not at all we to take off bleeding players.***

Respondent no. 41: ***Not really because they don't treat what you want them to treat.***

Respondent no. 42: ***Yes they are adequate; they lower the risk of other players getting infected.***

Respondent no. 43: ***No, they are not because those things are made of plastic, they can burst.***

Respondent no. 44: ***Because you prevent being infected***

Respondent no. 45: ***Yes because gloves protect a person from getting transmitted.***

Respondent no. 46: ***Yes they are adequate, as latex gloves are water proof.***

Respondent no. 47: ***Yes they are good enough to prevent HIV transmission in your sport.***

Respondent no. 48: ***I agree with the precautions, when you have your own uniform you can wash it at home, is your own dirty not someone.***

Respondent no. 49: ***Yes, because we prevent spreading HIV.***

Respondent no. 50: ***Yes they are adequate because the gloves will help one to not touch the blood of the infected person.***

Respondent no.51: ***So far in terms of measures to be taken for safety of contraction, yes.***

Respondent no. 52: ***Not enough because sometimes we lack bandages.***

Respondent no. 53: ***From what I see all the time, medical personnel always wear gloves to avoid being in contact with blood if someone bleeds. HIV is transmitted through blood if you have cuts besides sexually…***

Respondent no. 55: ***They are adequate only when one is injured because if the injured person is positive you won't get infected when you touch the wound and the gloves does not have holes.***

Respondent no. 56: ***Yes precautions are adequate since we don't know other people's status.***

Respondent no. 57: ***Yes, they are good and acceptable, since other players get injured and bleed. So they use them to prevent bleeding.***

Respondent no. 58: ***Yeah they are adequate as touching an open wound with bare hands its too dangerous and you can be infected.***

Respondent no. 59: ***Yes because most of the time there is no bleeding.***

Education about HIV/AIDS

15. **What effect will HIV/AIDS education programmes have on sport in general and on sexual habits in particular? Explain**
16.

Respondent no. 1: ***Such programmes help people realise the importance of taking care of themselves and other people around them.***

Respondent no. 2: ***People will be more aware of the risks they [are] in whilst playing sport.***

Respondent no. 3: ***These programmes help athletes to live positively if they are infected and if not to prevent contracting it and also people are taught how to use condoms consistently and correctly.***

Respondent no. 4: ***They will benefit athletes because they will know the dangers and risks involved. They will also know the precautionary measures to take.***

Respondent no. 5: ***I will improve the knowledge about HIV AIDS and how people perceive it. And people will understand and know what and what not to do when they are HIV positive or HIV negative and adopt a positive lifestyle.***

Respondent no. 6: ***To help people to understand about the disease and the precautions so that one won't get infected. If infected teach one to leave positively.***

Respondent no. 7: ***They can play an effective role in fighting against HIV/AIDS by providing a popular site for preventative education. Sports may help to slow down the disease in individuals.***

Respondent no. 12: ***A good one, because it can help more sports players to know the risk thereof, how to prevent it.***

Respondent no. 13: *It will help us to be careful when one is bleeding like we would wear gloves if medics are not available.*

Respondent no. 14: *A good one because sports people [tend] to have sexual intercourse with strangers when travelling.*

Respondent no. 15: *Would improve the safety of players.*

Respondent no. 16: *Programmes on sport in general will help in a way. But on sexual habits I don't think it will help because people hear about it every day but still choose to be ignorant. Especially when you have a stable partner you ignore condoms and choose to trust her*.

Respondent no. 17: *It will help people to understand the virus better and what they should do to prevent … from it. They will be taught about the risks … consequences or it.*

Respondent no. 18: *It can change the behaviour and safety of most athletes if they know what is expected of them on and off the field.*

Respondent no. 19: *The more people know about the dangers and general effects of HIV the better the attitudes towards HIV and the infected people, so it is good to have programmes*

Respondent no. 20: *I don't understand how it will work because I have not yet experienced it on the sports field…but with sexual habits you will learn to use protection cause you know the consequences of not using protection.*

Respondent no. 21: *To always protect yourself in every situation that you can find yourself, whether in accidents or is sexual habit in order to avoid transmissions.*

Respondent no. 22: *To educate players and be cautious when playing and in their social lives*.

Respondent no. 24: *Nothing will help really unless an individual is willing to change their ways.*

Respondent no. 25: *It will make players more aware and cautious of their actions*

Respondent no. 26: *It will bring about hatred amongst athletes.*

Respondent no. 27: *They do raise awareness amongst sport personnel on what HIV really is and ways to prevent it*

Respondent no. 29: *It reduces sexual activities amongst players and allows them to be more cautious.*

Respondent no. 32: *Avery good one people are not only educated about the diseases there's also need to be reminded of the diseases.*

Respondent no. 33: *It will encourage our staff team to take precautions e.g. and use gloves when helping an injured player*.

Respondent no. 34: *Some people might not have awareness about HIV and AIDS. How to prevent it, how do you become infected.*

Respondent no. 35: *It will help people to be aware of the disease.*

Respondent no. 36: *A number of sports programmes target other communicable diseases in addition to HIV, programmes in countries affected by malaria and tuberculosis. Using sport as a didactical tool to teach children about infectious disease prevention.*

Respondent no. 37: *It will reduce the chance of players being affected in terms of knowledge because the[y] will prevent before sexual intercourse and they will stay away from getting to touch other's blood.*

Respondent no. 38: *Good because they will be increasing the knowledge that people have towards HIV and AIDS.*

Respondent no. 39: *Change our attitude.*

Respondent no. 40: *Improves the perceptions towards HIV and AIDS and improves their reckless sexual habits.*

Respondent no. 41: *That if you have people around who are infected they still need to be treated normal and their ways of contracting HIV/AIDS which will make athletes feel free.*

Respondent no. 42: *They will have positive effects as they will make people have an understanding of HIV/AIDS.*

Respondent no. 44: *We will have more info and be educated.*

Respondent no. 45: *It will help us players to know more and also be precautious.*

Respondent no. 46: *It is very vital as it will eliminate stigma attached to the virus*.

Respondent no. 47: *It will help them to use the protection all the time.*

Respondent no. 48: *It will have no effect*

Respondent no. 49: *Change people's behaviour; and teach people to do safe sex; not to isolate people because of who they are.*

Respondent no. 50: *It would transform people because others still have that wrong mentality about HIV/AIDS*

Respondent no. 51: *This will reduce the behaviour of some athletes who like sleeping around with different partners and also educating society in general through sports*

Respondent no. 52: *It teaches people how to prevent HIV infection when having sexual intercourse and also help them understand how to live with the virus if affected*

Respondent no. 53: *It makes people aware of what is happening [in] HIV/AIDS world. But most people are ignorant, the more we talk about, the more they mess up. Perhaps education is not enough. Anyway, almost everyone knows about HIV/AIDS*

Respondent no. 54: *It will be useful.*

Respondent no. 55: *It will be more helpful because most do not have enough information some athletes just touch a wound of an injured person with bare hand*

Respondent no. 56: *Taking care is enough for sport participants*

Respondent no. 57: *It will make a good change to have programmes at the sports clubs because some of the sport participants do not have any idea of how one gets infected and how to prevent it and whether it's manageable or not*

Respondent no. 58: ***No idea about why it is necessary to talk about sport and HIV***

Respondent no. 59: ***An educator will talk about HIV but in sports not that much is needed***

Respondent no. 60: ***Enhance and even educate us about being safe and healthy***

SECTION 4: SPORT AND HIV PREVENTION

1. **How does participation in sport lead to the development of a healthy lifestyle?**

Explain Respondent no. 1: ***Not really sure but it in a way it has an effect when coming to what one consumes (food intake) being watchful and alert of healthy intake.***

Respondent no. 2: ***Helps stay fit and in shape.***

Respondent no. 3: ***In the sense that people would have enough exercise and they won't be vulnerable to diseases like obesity and heart diseases.***

Respondent no. 4: ***It helps boost your immune system and your body can easily get other infections. People who are physically active don't get sick easily.***

Respondent no. 5: ***When you participate in sport, you become more concerned about your health, what you eat drink and behave. Sport requires a person who is physically fit. So people become more concerned about their health.***

Respondent no. 6: ***Athletes don't have time to engage in risk behaviours which will result in contracting HIV.***

Respondent no. 7: ***Sport ha[s] long been used in the treatment and rehabilitation of communicable and non-communicable diseases. Is a strong means for the prevention of diseases and is a cost effective method to improve public health across populations.***

Respondent no. 12: ***The fact that a person participates in sports means that such person can stay in shape and away from drugs and other things which can pose a threat on his or her life.***

Respondent no. 14: ***It keeps one mentally and physically fit.***

Respondent no. 15: ***Healthy body and healthy diet are required in order to participate well in sports***

Respondent no. 16: ***In many ways. You never get lazy like most of the time. It even helps in bed, and studying wise. Even on diseases, you don't get sick a lot.***

Respondent no. 17: ***It helps your body to always be in a good condition and prevent stress. It helps people to be active and prevent the body from being attacked by diseases so easily and be always active.***

Respondent no. 18: ***The body gets exercise which helps in mobility and the heart rate working at normal and the use of other muscle groups so that you don't lose function of them.***

Respondent no. 19: ***Exercise is always the better way of being healthy, and participating in sports keeps you away from the bad influences in life***

Respondent no. 20: ***You will always be fit, and you want to seriously stay healthy.***

Respondent no. 21: ***To decrease many different diseases that comes forward, reduce illness and increase living days with healthy lifestyle.***

Respondent no. 22: ***When playing sport you look after your body, what you put in is important in order to improve your performance. For example, a player can't drink before the game because it will affect his or performance.***

Respondent no. 24: ***As one needs to be in good shape to be able to compete.***

Respondent no. 25: ***Well you are active and your body gets the workout it needs.***

Respondent no. 26: ***Because for one to be healthy must exercise and be able to burn the fats and calories.***

Respondent no. 27: ***Sport builds on your physical fitness which enhances the ability of your body to fight diseases.***

Respondent no. 29: ***It keeps the body fit and strong reducing the chances of catching diseases.***

Respondent no. 32: ***By keeping their body healthier during exercises …their immune system.***

Respondent no. 33: ***It keeps one healthy and fit.***

Respondent no. 34: ***Because your blood vessels are able to be open so that your blood will travel smoothly.***

Respondent no. 35: ***Because one exercises and stays fit.***

Respondent no. 36: ***Your body will be used to exercise and your body will be strong, you affect with other diseases easily.***

Respondent no. 37: ***Playing sports makes your immune system even strong and in that way it will be able to fight off disease and give you optimum mental ability***

Respondent no. 38: ***It keeps an individual flexible and refreshes the mind of a person.***

Respondent no. 39: ***Maintain physic and body health.***

Respondent no. 40: ***Keep physically fit.***

Respondent no. 41: ***The more you train you help your body not to be vulnerable to sicknesses and the body cells to happen to function well.***

Respondent no. 42: ***A person who exercises leads a healthy lifestyle.***

Respondent no. 43: ***The participation of sport in developing a healthy a healthy lifestyle serves as an encouragement to the youth of today because it reduces the risk of many things.***

Respondent no. 44: ***We interact and have fun.***

Respondent no. 45: ***Being physically fit also helps in mental strength, it helps in thinking.***

Respondent no. 46: ***Sports boosts the immune system, hence healthier individuals.***

Respondent no. 47: ***To exercise everyday help[s] to develop a healthy lifestyle.***

Respondent no. 48: ***Exercise is part of a healthy lifestyle. At the same time they are doing things and they are not aware of it.***

Respondent no. 49: ***To make your immune system to become even stronger and stronger.***

Respondent no. 50: ***Exercising is part of a healthy lifestyle so in sport you will [be] exercising on daily basis so it certainly leads to a healthy lifestyle.***

Respondent no.51: ***Exercise is the fundamental aspect of healthiness. In sports its about exercise which increase the cardiovascular activeness needed to keep one healthy.***

Respondent no. 52: ***It keep[s] people away from drugs and alcohol***

Respondent no. 53: ***It keeps the … of an individual healthy because it makes the person busy every day and not think about doing funny stuff. But many people do funny things even when they play sports every day.***

Respondent no. 55: ***It brings about strong immune system and***

Respondent no. 56: ***It keeps your body fit and strong.***

Respondent no. 57: ***Participation in sport makes one feel, keep his/her mind fresh, keep people from certain or weak diseases.***

Respondent no. 58: ***It makes your immune system to be resistant to disease and strong. It makes someone's body shape to be standard and in good condition.***

Respondent no. 59: ***Because as you train your body get[s] relaxed.***

Respondent no. 60: ***Since we always exercise it is always appropriate.***

2. **How does participation in sport prevent individuals adopting behaviours which lead them to contracting HIV? Explain**

Respondent no. 1: ***They keep them preoccupied for a long time that ideas of having sex or engaging on any sexual activities temporarily run out of their conscious.***

Respondent no. 2: ***It helps keeps individuals busy rather than doing nothing with their free time, which would lead them into indulging in sexual intercourse.***

Respondent no. ***3:*** ***They won't have time to abuse drugs and alcohol as they spend most of their time playing sports. Participating in sports teaches others about being disciplined so they won't adopt deviant behaviours.***

Respondent no. 4: ***When you play sport you don't get too much sleeping around because you are always busy.***

Respondent no. 5: ***People who play/participate in sport have no little time to be wasted; rather their time is managed to important things as sport require full time participation. Hence they don't have time indulging in many activities that waste time.***

Respondent no. 6: ***Individuals are taught manners and also hygienic ways when taking steroids and also taught about safe sexual activities.***

Respondent no. 7: ***In sport, most of the incidence can happen. Injuries which can come up have different consequences. Then if you participate in sport they are ways to treat each other when injured which are safe ways to prevent HIV. It educates athletes or individuals to learn about HIV.***

Respondent no. 12: ***By keeping themselves occupied with something progressive of their health.***

Respondent no. 13: ***It will have no effect participating in sport does not have anything to do with HIV***

Respondent no. 14: ***It keeps them busy most of the time, so they do not have time to date or have multiple partners.***

Respondent no. 15: ***Keeps them away from bad habits!***

Respondent no. 16: ***I don't think participating prevents or changes you in any way. I think it just takes a certain set of mind to be aware and have a healthy lifestyle***

Respondent no. 17: ***I believe if you involve in sport it says you don't really have time for other things and one thing for sure sport will open your mind and help you to see or oversee the truth about life. Remember with sport the mind is always active.***

Respondent no. 18: ***Most of your time will go to sports and work/school. You don't get time to think of silly stuff. For instance, we have practice from Monday to Thursday and Saturdays we have games.***

Respondent no. 19: ***The more you spend time in the field of play the lesser you would think of actually finding sex as a hobby and that may lead to you contracting HIV/AIDS.***

Respondent no. 20: ***When you play a sport you do not find time to do a lot of other things cause sport will be taking a lot of your time.***

Respondent no. 21: ***It keeps them away from being in danger of being [in] contact or affected because they mostly spend their time away from people who are affected.***

Respondent no. 22: ***In sport there are a lot of healthy lifestyle workshops that educate players about keeping fit and healthy. Athletes are more cautious about their bodies and want to excel on the playing field.***

Respondent no. 25: ***I do not think participation in sports changes behaviour that leads to contracting HIV***

Respondent no. 26: ***As it keeps them busy out of doing unwanted things.***

Respondent no. 27: ***The time you take doing sport keeps you fit and healthy and you can have good friendships without having to look for the girls around campus***

Respondent no. 29: ***You spend a lot of time participating and trying to improve which keeps you occupied taking your time of looking for too many sexual activities. It is then better to have one girlfriend and keep healthy***

Respondent no. 33: ***It does not prevent HIV or AIDS (Sport participation)***

Respondent no. 34: ***It takes your mind away from many things. Spirit, once you have spirit that you are taking part in a certain activity, you will not miss any of its time, e.g. practicing, online not taking part with any activities, all will be in your mind can mislead.***

Respondent no. 35: *Because they are always occupied with sports if the sport that particular person is playing has an HIV/AIDS awareness programme he or she can learn a lot about the disease*

Respondent no. 36: *The role of sports coaches as role models and mentors has a vital component of HIV/AIDS prevention programmes using sport. These coaches can also be peers to other young people of a similar age*

Respondent no. 37: *By keeping players busy and occupied, most soccer players who play in sport have sex less because of the hard training regime they encounter during sport participation. This is good as, in that way, sport participation can help reduce HIV infection*

Respondent no. 38: *It will help [sport participation] by keeping an individual emotionally and physically healthy because most of the time they will be spending their time training or playing games*

Respondent no. 40: *Spending more time in sport reduces risk of boredom and people indulging in sex for entertainment.*

Respondent no. 41: *I would say it doesn't really help because some people use sport as a way to attract girls/guys. I believe it depends on an individual.*

Respondent no. 42: *Usually through discipline, the players are told to refrain from anything that could hinder performance, which leads to athlete behaving.*

Respondent no. 46: *Less time roaming around and eliminates boredom.*

Respondent no. 47: *Participating in sport help[s] the player to be busy all the time. So they don't have time to be involved in things that can lead them to contracting HIV.*

Respondent no. 49: *To release stress and cope with life.*

Respondent no. 50: *People who are engaged in sport do not usually spend much of their time with females so there is low risk of them getting infected.*

Respondent no.51: *Sports is a hands on activity which require[s] time and discipline at all time. If an athlete becomes committed in sport, this will take much of his time to think of behaviours of that sort.*

Respondent no. 52: *They spend most of the time training and they mostly get lessons about these kind of disease so their aware.*

Respondent no. 53: *I don't think that works, because people have time to themselves, besides playing sports. Someone can go and have sexual intercourse for one day and become infected, so it's up to an individual lifestyle/behaviour when they are not on the sports field. It is risky if they have unprotected sex…that is why they need testing so we don't all have to take the risk."*

Respondent no. 55: *Sports keeps people away from the streets and it won't be easy to adopt bad behaviours which are in the streets.*

Respondent no. 56: *It keeps them busy by denying them time to engage into things like drugs, which can lead to unprotected sex with people who are HIV positive.*

Respondent no. 58: *It takes their time of doing bad things where they can get HIV, like doing drugs with needles and going to the street having a lot of girls and doing some sexual activities. So they take most of their time in sport and not doing all those bad stuffs.*

Respondent no. 59: ***Because if you are a student instead of thinking about to sleep with a girl you are going to play soccer.***

3. **What benefit does sport participation have for HIV-positive athletes or individuals? Explain**

Respondent 1: ***Contribute to physical well-being, furthermore it gives the white tissues cells an active breakthrough.***

Respondent no. 2: ***Helps them exercise and keep fit.***

Respondent no. 3: ***They have much interaction with friends and it reduces stress. They will be physically fit so they won't be sick all the time. They won't be depressed as they feel at home as they will be a team.***

Respondent no. 4: ***It benefits physically because your body gain[s] more strength.***

Respondent no. 5: ***Physical development which strengthens their immune system and cognitive development which enhances their ability to deal with stressors and frailty.***

Respondent no. 7: ***It keeps his or her body healthy all the times and make his or her body to be able to defend other diseases.***

Respondent no. 12: ***It keeps healthy and that the fact that they exercise means they can live longer.***

Respondent no. 14: ***Keeps them healthy and fit because if you're HIV you need to stay healthy and eat right.***

Respondent no. 16: ***I have never met anyone HIV –positive athletes participating in a rugby sport so I literally don't know.***

Respondent no. 17: ***Keep them strong with a healthy life and keep them up to date. At least they will be able to live longer since well they are healthy.***

Respondent no. 18: ***It slows down the effects of HIV by getting the immune system to be stronger thus increasing the white cell and which are cells that fight against infections.***

Respondent no. 19: ***The exercises keep their immune system strong and they'll also become fit.***

Respondent no. 20: ***They keep fit; their immune system is stronger so they won't be affected by HIV immediately.***

Respondent no. 21: ***They stay healthy and increase their days of life, and though their immune system stays strong rather weak when they don't participate in sports.***

Respondent no. 22: ***Keeping fit and healthy. When an athlete lives a healthy lifestyle, his or her body will be able to fight the virus and live longer.***

Respondent no. 24: ***It keeps them healthy and helps in blood circulation.***

Respondent no. 25: ***I assume it will help lead a healthy lifestyle.***

Respondent no. 26: ***It gives them a boost and improves their lives and let them stay healthy all the time.***

Respondent no. 27: ***Sports builds on physical fitness and it also yields one's emotional capacity.***

Respondent no. 29: ***It allows their bodies to get fit and build cells therefore adding chances for them to live more years.***

Respondent no. 34: ***Reduce their stress against their pandemic and get themselves as healthy as they can.***

Respondent no. 35: ***They maintain a healthy lifestyle by exercising and keeping fit.***

Respondent no. 36: ***It maintains good health for HIV positive athletes and it maintains the body to be strong so that other diseases cannot affect an athlete.***

Respondent no. 37: ***It strength their immune system and in that way it slows down the speed of the disease into destroying their body cells.***

Respondent no. 38: ***The benefit will be that the athletes will be healthy physically and mentally.***

Respondent no. 40: ***Get together and keep fit.***

Respondent no. 41: ***The benefits are they keep healthy and are healthy as they, also watch what they eat. So in general athletes take care of themselves physically and mentally.***

Respondent no. 42: **It enables them to have and live a healthy lifestyle which is what is needed.**

Respondent no. 45: ***It's important for people living with AIDS to exercise and be fit.***

Respondent no. 46: ***It will help them to be fitter and as such be in a good position to aid their body to fight the virus.***

Respondent no. 47: ***The knowledge and understanding the person who is HIV positive.***

Respondent no. 48: ***Keep them healthy and strong.***

Respondent no. 49: ***To keep them healthy and strong with everything they encounter in life.***

Respondent no. 50: ***It keep[s] the immune system/CD4 counts regularly at all time.***

Respondent no.51: ***An HIV positive person need exercise and support in dealing with the pandemic. All of those are found in sport participation.***
Respondent no. 54: ***They become healthy.***

Respondent no. 55: ***The improvement and a strong immune system which can fight against diseases in the body or virus which one can contact.***

Respondent no. 56: ***The HIV positive athlete can live longer with the disease when they are participating in sport.***

Respondent no. 57: ***It makes them not to always have that thought of them having HIV/AIDS. It refreshes their mind, and keep their mind positive and at the same time maintaining their fitness, because it is good for one to be fit.***

Respondent no. 58: ***They make their immune system to be strong and loose dirty water through sweating and being flexible.***

Respondent no. 59: ***Good health; they keep their body healthy.***

Respondent no. 60: ***In my situation none.***

Appendix 4: Request for Coaches/Manager's Permission to conduct research among players

To Coach/Manager

My name is Nonhlanhla Banyini, and I am currently doing my 1st year Master's degree in Clinical Psychology at the University of Limpopo (Turfloop Campus). I am conducting research as part of the requirements for the course. My focus area is on male athletes' attitudes, knowledge and relationship behaviour relating to HIV and AIDS. The aim of this study is to determine the attitudes and degree of knowledge of male athletes related to (HIV) and (AIDS); how these link together and how they influence relationship behaviour. This study may provide useful information for directing future HIV and AIDS prevention efforts in the sports arena. I would like to invite the athletes in your sports club to participate in this study.

A questionnaire will be given to willing participants in order to investigate this. All athletes will be assured that all information given will be confidential and no names are included on these questionnaires. Only my supervisors and I will have access to the questionnaires. With your permission, I would like to hand out the questionnaire to your athletes. Completing the questionnaire should take no longer than 45 minutes. Individual consent from the athletes will be requested and participation is voluntary. On completion of this study, each participant will receive written feedback. Once permission has been obtained, I will contact you to make arrangements to administer the questionnaires. Please do not hesitate to contact me if there are any questions regarding the process or purpose of this study.

Thanks,

Nonhlanhla Banyini
Nhlanhla.banyini@gmail.com
079 5566839

Appendix 5

The stages in Erikson's (1956) psychosocial development theory

Approximate Age	Psycho Social Crisis	Significant Relationship	Existential Question	Examples[1]
0–2 years	Basic Trust vs. Mistrust	Mother	Can I Trust the World?	Feeding, Abandonment
2–4 years	Autonomy vs. Shame and Doubt	Parents	Is It Okay To Be Me?	Toilet Training, Clothing Themselves
4–5 years	Initiative vs. Guilt	Family	Is It Okay For Me To Do, Move and Act?	Exploring, Using Tools or Making Art
5–12 years	Industry vs. Inferiority	Neighbours, School	Can I Make It In The World Of People And Things?	School, Sports
13–17 years	Identity vs. Role Confusion	Peers, Role Model	Who Am I? What Can I Be?	Social Relationships
18–24 years	**Intimacy vs. Isolation**	**Friends, Partners**	**Can I Love? Can I have relationships Competitiveness**	**Romantic Relationships Work and leisure relationships**
25–64 years	Generativity vs. Stagnation	Household, Workmates	Can I Make My Life Count?	Work, Parenthood
65-death	Ego Integrity vs. Despair	Mankind, My Kind	Is It Okay To Have Been Me?	Reflection on Life

Appendix 6 – TREC ethics forms

FORM B – PART I

PROJECT TITLE: Attitudes, knowledge and relationship behaviour relating to HIV and AIDS in the contact sports rugby and soccer at the University of Limpopo (Turfloop campus)

PROJECT LEADER: N Banyini

DECLARATION

I, the signatory, hereby apply for approval to conduct research described in the attached research proposal and declare that:

1. I am fully aware of the guidelines and regulations for ethical research and that I will abide by these guidelines and regulations as set out in documents (available from the Secretary of the Ethics Committee); and

2. I undertake to provide every person who participates in this research project with the relevant information in Part III. Every participant will be requested to sign Part IV.

Name of Researcher:……..

Signature:……

Date:……

For Official use by the Ethics Committee:

Approved/Not approved

Remarks:……...

……

……..

……..

Signature of Chairperson:……..

Date:……

FORM B - PART II

PROJECT TITLE: Attitudes, knowledge and relationship behaviour relating to HIV and AIDS in the contact sports rugby and soccer at the University of Limpopo (Turfloop campus)

PROJECT LEADER: N Banyini

Protocol for conducting research using human participants

1. Department: Psychology
2. Title of project: Attitudes, knowledge and relationship behaviour relating to HIV and AIDS in the contact sports rugby and soccer at the University of Limpopo (Turfloop campus)
3. Full name, surname and qualifications of project leader:
   Nonhlanhla Banyini M1 Clinical Psychology (BA Hons in Psychology)
4. List the name(s) of all persons (Researchers and Technical Staff) involved with the project and identify their role(s) in the conduct of the experiment:

Name:	Qualifications:	Responsible for:
Nonhlanhla Banyini	BA Honours M1 Clin Psych	Research

5. Name and address of principal researcher: Nonhlanhla Banyini P.O. Box 1990 Letaba, 0870
6. Procedures to be followed: Participants fill in self-report questionnaire
7. Nature of discomfort: The questionnaire may, by its nature cause discomfort.
8. Description of the advantages that may be expected from the results of the study: The study will help give a better picture on the attitude of contact sport players towards HIV/AIDS on the sport field. In this way, this will help to show if HIV/AIDS education from the government and other initiatives is making a difference among contact sport players. You may feel uncomfortable answering personal questions if you are and would like to talk to someone please contact the researcher who will put you in contact with an appropriate professional.

Signature of Project Leader:……

PART III - INFORMATION FOR PARTICIPANTS

PROJECT TITLE: Attitudes, knowledge and relationship behaviour relating to HIV and AIDS in the contact sports rugby and soccer at the University of Limpopo (Turfloop campus)

PROJECT LEADER: Ms N Banyini

1. You are invited to participate in the following research project: Attitudes, knowledge and relationship behaviour relating to HIV and AIDS in the contact sports rugby and soccer at the University of Limpopo (Turfloop campus)

2. Participation in the project is completely voluntary and you are free to withdraw from the project (without providing any reasons) at any time.

3. It is possible that you might not personally experience any advantages during the project, although the knowledge that may be accumulated through the project might prove advantageous to others.

4. You are encouraged to ask any questions that you might have in connection with this project at any stage. The project leader and her/his staff will gladly answer your question. They will also discuss the project in detail with you.

5. Presence of other participants in the group may inhibit honest responses from some participants. Some participants may feel uncomfortable after revealing their thoughts and feelings and may want to see an appropriate person to discuss these feelings.

6. Should you at any stage feel unhappy, uncomfortable or is concerned about the research, please contact **Ms Noko Shai-Ragoboya at the University of Limpopo, Private Bag X1106, Sovenga, 0727, tel: 015 268 2401**.

Part IV CONSENT FORM

PROJECT TITLE: Attitudes, knowledge and relationship behaviour relating to HIV and AIDS in the contact sports rugby and soccer at the University of Limpopo (Turfloop campus)

PROJECT LEADER: N Banyini

I, hereby voluntarily consent to participate in the following project: Attitudes, knowledge and relationship behaviour relating to HIV and AIDS in the contact sports rugby and soccer at the University of Limpopo (Turfloop campus)

I realise that:

1. The study deals with attitudes, knowledge and relationship behaviour relating to HIV and AIDS in contact sport at the University of Limpopo (Turfloop Campus).
2. The procedure or treatment envisaged may hold some risk for me that cannot be foreseen at this stage.
3. The Ethics Committee has approved that individuals may be approached to participate in the study.
4. The research project, i.e. the extent, aims and methods of the research, has been explained to me.
5. The project sets out the risks that can be reasonably expected as well as possible discomfort for persons participating in the research, an explanation of the anticipated advantages for myself or others that are reasonably expected from the research and alternative procedures that may be to my advantage.
6. I will be informed of any new information that may become available during the research that may influence my willingness to continue my participation.
7. Access to the records that pertain to my participation in the study will be restricted to persons directly involved in the research.
8. Any questions that I may have regarding the research, or related matters, will be answered by the researcher/s.
9. If I have any questions about, or problems regarding the study, or experience any undesirable effects, I may contact a member of the research team or Ms Noko Shai-Ragoboya
10. Participation in this research is voluntary and I can withdraw my participation at any stage.

11. If any medical problem is identified at any stage during the research, or when I am vetted for participation, such condition will be discussed with me in confidence by a qualified person and/or I will be referred to my doctor.
12. I indemnify the University of Limpopo and all persons involved with the above project from any liability that may arise from my participation in the above project or that may be related to it, for whatever reasons, including negligence on the part of the mentioned persons.

SIGNATURE OF RESEARCHED PERSON

SIGNATURE OF WITNESS

SIGNATURE OF PERSON THAT INFORMED

SIGNATURE OF PARENT/GUARDIAN
THE RESEARCHED PERSON

Signed at_____ this ____ day of _____20____