CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Harrison, Smit and Myer (2000) argue that it is unlikely that an effective vaccine against HIV infection will be widely available in this decade and even less likely that a cure will be found in this time. The fact that there is no cure or vaccine for AIDS makes it crucial to focus on HIV prevention programmes that promote low-risk sexual behaviour (Bandawe & Foster, 1996). Harrison et al. (2000) suggest that behaviour change remains at the present time the best possible way of limiting the spread of HIV infection. The World Bank (2002) argues that a general basic education and not merely instruction on prevention is amongst the strongest weapons against the HIV and AIDS epidemic.

AIDS knowledge is often plagued by misconceptions, for example, it was once believed to be a disease of homosexual men and drug users. Athletes, on the other hand, were seen as the picture of physical strength and fitness. This began to change as more and more famous athletes - like Earvin “Magic” Johnson (former basketball player), the late Arthur Ashe (former tennis player) and Greg Louganis (former Olympic gold medal diver) - announced their HIV status (Brown et al, 1994; Hamel, 1992; Umeh, 1997). Johnson attributed his HIV infection to heterosexual activity which shocked many members of the public who still, in the early nineties, perceived HIV and AIDS as a “gay disease”. Ashe acquired HIV from a blood transfusion before blood began to be screened for HIV antibodies. Louganis was the first famous athlete to reveal that he became infected through homosexual sex and also the first to have a well-documented incident in which he bled in public, at the 1988 Olympic Games in Seoul, South Korea (Gruenfeld, 2001). Such reports of famous athletes becoming infected with HIV highlighted the importance for HIV education among professional and amateur athletes (CDC, 1996).

This raised several serious issues; for example, determining the risk of HIV transmission through sport participation and, if a risk exists, discovering the amount of risk that would be tolerated by all involved in sport. Another important issue facing sport includes the

debate over mandatory HIV testing and whether players should be excluded from sport based on a positive HIV test (Brown et al., 1994; Hamel, 1992; Umeh, 1997). This has lead to some concern for athletes competing against those who are HIV-positive (Umeh, 1997).

2.2 Risk of HIV Transmission in Sport

The risk of infection in athletes is the same as that in the general population if there is a history of engaging in well-established high-risk behaviours of HIV transmission (Schwellnus & Derman, 2005). Epidemiological data calculating the risk of transmission during sport participation are not available. At best, a theoretical risk of transmission in sport can be calculated by considering the following estimated variables: a) the percentage of HIV-positive participants; b) the chance of an open bleeding wound in a sports participant; and c) the chance of transmission of the virus when infected blood makes contact with an open bleeding wound (estimated to be 0,3-0,5%). Based on this, medical experts on AIDS generally agree that this translates into a very low theoretical risk and potentially why there is no widespread documentation of HIV infection through sporting activity (Jakoet, 1999; Schwellnus & Derman, 2005).

Estimates will differ across various populations and sporting codes. Sport with the lowest risk of HIV transmission involves little physical contact and examples of these include tennis, cricket and gymnastics. Low contact sport such as basketball, soccer, hockey, and judo constitute moderate risk of HIV infection. Contact sport has the highest risk of HIV transmission and includes those that are considered ‘bloody’: boxing, rugby and taekwondo (Hamel, 1992). For example, in a boxing match of 12 rounds, the risk of an open bleeding wound has been documented as 47% (Schwellnus & Derman, 2005). The risk of contact between boxers during a fight is 100% and one South African study determined HIV infection in boxers at 9% (South African Agency for Science and Technology Advancement, 1995). The risk of seroconversion after contact between two professional boxers has been calculated as 1 in 4760 fights. This may be higher than that of needle-stick injuries because blood may be forced into the wound by the nature of the blow and if the

blows are repetitive (South African Agency for Science and Technology Advancement, 1995; Schwellnus & Derman, 2005).

However, this low risk of transmission during participation in the majority of sporting codes is maintained only if the universal precautions (e.g. avoidance of accidental punctures by used needles or scalpels, careful handling of blood, or wearing latex gloves) are adopted by all persons (American Academy of Pediatrics, 1991; Hamel, 1992; Leach, 2003; Smith, 2001; Umeh, 1997). Officials are required to stop play when an athlete is bleeding; the athlete then leaves the field of play for the treatment of bleeding wounds (Umeh, 1997). All medical personnel attending to open wounds should wear protective gloves and ensure that all open skin lesions sustained during sport participation are treated appropriately before allowing the injured player to return to the field (Jakoet, 1999; Schwellnus & Derman, 2005; Sharp, 1994).

Guidelines for individual athletes to reduce the risks of transmission include advising those who engage in high-risk behaviour and those with known HIV infection to seek medical attention and legal counselling before engaging in further sport participation. Sports administrators, coaches and managers have the opportunity to educate athletes with respect to the disease and ensure that adequate medical care is available (Schwellnus & Derman, 2005). Because of the extremely low probability of HIV transmission, HIV positive athletes could continue to participate in their sport activities provided that further participation does not compromise their condition. Accordingly, all involved should be appropriately informed about likely risks that sport presents. Also, HIV-positive athletes should be carefully managed (Leach, 2003), but also need to be informed about their rights to participate in sport (Umeh, 1997).

2.3 HIV Prevention

The best defence against HIV infection is that of prevention, a core concept in community psychology. Effective prevention requires accurate knowledge of how people behave in various situations and under what conditions they will be prepared to change their sexual

behaviour. Cultural differences, beliefs and customs need to be taken into account. Changing learned behaviour is extremely difficult and thus, HIV prevention programmes have focussed on empowering people with the knowledge, attitudes, values and life skills needed to prevent them from becoming infected (van Dyk, 2005). From a public health perspective, primary prevention involves a delay in the initiation of sexual activity until psychosocial maturity or marriage, a factor which is maintained by religion or culture. Secondary prevention involves the use of safer sex practices by those who do not plan to follow abstinence or who are already sexually active (Committee on Adolescence, 2001).

Black South Africans experienced much higher levels of poverty than white South Africans during the apartheid era. The Group Areas Act and Land Act led to the forced removals and relocation of different racial groups which resulted in the destruction of many black communities and families. Higher rates of physical and mental illness and mortality among black people emerged due to the unequal distribution of basic health services. Adequate access to educational services was not accorded to black people resulting in poorer academic performance and fewer prospects for social upliftment. Even though much is being done to rectify this, the legacy still remains (Stevens & Lockhat, 1997).

South Africa has been experiencing a period of transition that has impacted on social, political, cultural and economic life. This reform process filters through from the macro-level to the micro-level (Stevens & Lockhat, 1997). At the micro-social level, sexual behaviour has been associated with individual factors such as: cognitive processes, instincts, attitudes, sense of personal vulnerability, or perceived social norms. At the macro-social level, attention has been drawn to the way in which factors such as poverty, gender inequalities and global capitalism shape the context within which the HIV and AIDS epidemic flourishes. These are all key factors in the persistence of the disease, but it is also fundamental to understand the manner in which these micro and macro factors interact and ultimately operate at a local community level. Communities serve as mediators between the macro- and micro-social levels of analysis as they form the contexts within which people negotiate their social and sexual lives and identities (Campbell, 2003).

The community has a major influence on the behaviour of individuals. If the HIV and AIDS epidemic is perceived as a community problem, rather than a problem of specific individuals, it then becomes possible to discuss general issues that may lead to actual behavioural changes. Specific groups of individuals that have been associated with the disease include sex workers and homosexuals thus, making AIDS the problem of 'others' whereas all sexually active persons are at risk (Luhamba, Schapink & Msuya, 1997).

Deepening poverty, isolation and an inability to satisfy basic needs such as food and shelter, is the experience of many people living with HIV and AIDS in Southern Africa. People live in fear of rejection by their communities and formal health services, given the stigma, discrimination and terror surrounding the disease. As a result of this, people living with HIV and AIDS are often reluctant to access services, opting instead to live without treatment. Those who do disclose their status, frequently become victims of violence from partners, family members or communities where HIV is regarded with fear, denial and stigma (Campbell, 2003).

One frequent explanation for unsafe sexual behaviour among South African youth involves the pervasive effect of poverty. Poverty, unemployment, overcrowding and low levels of education have been linked to higher levels of adolescent sexual activity and inadequate knowledge about HIV and AIDS. Sex is used as entertainment by young people in areas where there is chronic unemployment, limited access to media and lack of recreational facilities. Sexual abuse and rape is a constant threat when living on the street, but voluntary sex is also a health risk. Prostitution is seen as a good way to earn money and clients often want unprotected sex (Eaton, Flisher & Aaro, 2003). Homeless and street youth demonstrate high knowledge levels which are relatively rarely translated into healthy sexual behaviour (MacPhail, 1998). Also, condom use during sexual intercourse is reduced while under the influence of alcohol, glue or marijuana (Eaton et al., 2003).

Higher unemployment rates in various black communities have been associated with many healthy adolescents resorting to self-destructive behaviour such as substance abuse (Stevens

& Lockhat, 1997). Letlaka-Rennert (1990, as cited in Stevens & Lockhat, 1997, p 252) claims that lack of material resources have to some extent resulted in reduced levels of emotional involvement between many black children and adults. Many have characterised black youth as victims of the socio-historical context, but that they also display resilience to such influences. They may be predisposed to the negative effects mentioned; however, this is not the logical outcome for all youth (Stevens & Lockhat, 1997).

The development of anti-retroviral drugs has been successful in prolonging the lives of thousands of people in wealthy countries and among wealthy minorities in the less affluent world. Yet, these drugs remain inaccessible to the bulk of those affected – people living in poverty. There is little hope that pharmaceutical solutions can be affordably and effectively implemented by many of the poorest countries where HIV flourishes. Even when HIV and AIDS drugs become more easily available for all who need them, considerable effort will need to be made in implementing and sustaining the complex treatment regimes. Some South African cities have relatively advanced health care facilities, particularly in comparison to others that lack the physical, human and organisational infrastructure needed to provide adequate treatment. With these difficulties as well as the high prevalence of drug-resistant HIV, prevention through encouraging safer sexual behaviour remains a vital weapon against the spread of HIV (Campbell, 2003).

Analysis of gender relations and differences indicates that there are various social pressures placed on both men and women. Men are often pressured to have many sexual partners and to start having sex early. Women often lack economic security and therefore, depend on their partners' material support for survival (Luhamba et al., 1997). Accordingly, protection from possible future illness may be a lower priority than meeting immediate economic needs (Eaton et al., 2003). Also, women frequently have little say in the decisions regarding condom use and thus, lack the ability to protect themselves. It is therefore essential to involve communities in addressing gender relations and economic security in order to increase ownership over health-seeking behaviour and mobilising available resources in this regard (Luhamba et al., 1997).

Various factors are necessary to promote healthy sexual behaviour including HIV knowledge, attitudes and motivational factors which influence tendencies to engage in risk behaviour, perceptions of personal vulnerability, behavioural intentions, ability to negotiate social institutions, and skills to implement prevention behaviour (MacPhail, 1998). The most widely used and researched model providing theoretical understanding about how people come to their choices that influence health is the Health Belief Model (HBM). This model states that an individual's actions toward the purpose of preventing disease is largely determined by: (a) how susceptible they feel to a disorder; (b) how seriously the disorder is perceived; (c) weighing up the advantages of prevention versus the human and financial cost of the proposed change; (d) the general health motivation of the individual; and (e) the trigger factor which tip the balance of the decision one way or the other (Rosenstock, 1974). Thus, it is proposed that people's health behaviours are a function of whether they perceive a threat to their own health and whether they think this action will reduce that threat (DiMatteo & Martin, 2002; Friedman, 2002).

The HBM forms part of the cognitive learning models of healthy behaviour. These models recognise that people are more likely to engage in healthier behaviours if they believe that such behaviour will be significant in their lives and that they have control over changing this behaviour (Friedman, 2002). This model appears to be more successful when the health behaviour is simple than when it is very complex (DiMatteo & Martin, 2002). It does not account for cultural factors, optimism, personal control or access to health care. The strongest predictive value of the HBM is established in an expanded version that includes perceived personal control, perceived risks, intentions to behave, perceived social norms and self-efficacy (Brannon & Feist, 2004).

Prevention programmes need to focus on reducing the overall positive attitude towards risky behaviour and increasing the prominence of HIV. In most instances, programmes assume that sexuality and sexual behaviour fall within rational decision making and that safe sex behaviour can be learnt. Their usefulness is limited by the way in which they

ignore the influence of complex social interactions and norms on sexuality and consequently the assimilation of behaviour change (MacPhail, 1998).

2.4 HIV and AIDS Knowledge

It appears that the majority of South Africans have heard about AIDS and have a fairly good level of knowledge of basic facts, i.e. disease is spread sexually and that the use of condoms during sexual intercourse reduces the risk (health24.com, 2003a). However, there are also many dangerous myths and misconceptions surrounding the disease; for example, believing that the virus can be contracted by sharing food, that infected people can be recognised by their symptoms and that sex with a virgin can cure the disease. These misconceptions contribute to the confusion about the transmission of HIV, leading to a false sense of the level of risk (health24.com, 2003a).

Knowledge of how the virus is transmitted and how to avoid contracting it will encourage some people to behave more safely, such as using condoms, reducing the number of sexual partners, avoiding needle sharing or sterilizing injecting equipment. But knowledge alone is unlikely to change individual behaviour sufficiently to prevent the spread of HIV infection (Ainsworth, 1998; Lance, 2001; Richter & Swart-Kruger, 1995). Individual personality styles will affect sexual behaviour, such as level of impulsivity or deciding to partake in increased risk-taking or delinquent behaviour. Sexual behaviour is also affected by cultural background, traditional values, religious orientation, socioeconomic status, education and family structure (Papalia & Olds, 1998). In South Africa and other developing countries, social and cultural factors are crucial in determining beliefs, attitudes and behaviours, especially in the personal sphere of sexual behaviour (Bernstein & van Rooyen, 1996).

While providing people with information regarding HIV and AIDS may increase knowledge concerning the disease, it does not ensure that such information will be put into practice. Some individuals are able to modify their own behaviour easily with little outside assistance, thereby reducing their risk of HIV infection (Kelly & St Lawrence, 1988). Individuals who engage in high risk behaviour are likely to make decisions based on

perceptions personal risk, while ignoring the risks to which their actions expose others. Nevertheless, people persist in risky behaviour because the costs of safer behaviour are clear and immediate, while the benefits are uncertain and distant (Ainsworth, 1998). People who do possess some knowledge often do not protect themselves because they lack the skills, support or incentives to adopt safe behaviours (health24.com, 2003a).

Lack of open discussion and guidance about sexuality and HIV and AIDS, misinformation from peers and embarrassment to talk about sex with partners create high risks for transmission of the disease (health24.com, 2003a). Sexual practices are maintained by past experiences, immediacy of gratification, fantasy reinforcement and often, interpersonal coercion. Taking this into account, it becomes apparent that changing ingrained sexual activities requires more than merely information-provision (Kelly & St Lawrence, 1988).

There appears to be a gap between knowledge and preventative measures as several studies (Campbell, 2003; Kirby, Short, Collins & Rugg, 1994) have argued that these programmes have not been effective in achieving a large scale reduction in HIV infection. Nonetheless, it is critical to ensure that people have as much information available to them as possible to enable them to make informed choices regarding their sexual behaviour (Simelela, 2002). HIV/AIDS awareness messages include: the promotion of positive and responsible sexual behaviour such as abstinence and delay of sexual activity, fidelity, reduction in the number of sexual partners and appropriate use of condoms (Campbell, 2003; Kirby et al., 1994). Umeh (1997) found that higher knowledge scores were associated with more tolerant views of sport participation by HIV-positive individuals; however, fears and anxieties about HIV infection in sport competition are still harboured. This study also suggested that a substantial number of athletes surveyed may base their attitudes toward HIV and AIDS and their fear of participation of HIV-positive athletes in sport, on misinformation, ignorance and hysteria (Umeh, 1997).

2.5 Attitudes toward Mandatory HIV Testing and Participation of HIV-Positive Athletes in Sport

The issue of mandatory HIV testing in sport remains pertinent. Due to the evidence of bloodshed in contact sport, mandatory HIV testing has been advocated as a measure to prevent the spread of HIV during sporting activities and thereby ensure the safety of other players. In contrast, the rights of HIV-positive athletes are also of critical concern as mandatory HIV testing is seen as an infringement of the players' 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 (Umeh, 1997).

The main question which arises concerns the consequences of a positive HIV test result. Such consequences include whether or not HIV-positive players should be excluded from sport participation based on their status. Many physicians say there is no documented risk-related reason to exclude an HIV-positive athlete from participation. Routine HIV testing is therefore, considered to be unjustified (Hamel, 1992; Umeh, 1997). Another related issue is whether the test results should be kept confidential or whether team mates and competitors have the right to be made aware of HIV-positive results. The conflict here surrounds the rights and responsibilities of HIV-positive athletes. One may argue that it is ethical to inform members of the sporting team (e.g. other athletes, coaches, doctors) about one's HIV status so that the correct preventive measures are adopted on the playing field. Though, all blood from sports field injuries is treated as though it were infected with the virus thus, this motivation is somewhat unconvincing (Umeh, 1997).

Disclosing one's HIV-status is regarded as an infringement on an individual's right to privacy and physicians should respect the HIV infected athlete's right to confidentiality. Becoming aware that an athlete is HIV-positive may result in discriminatory behaviours from coaches and other players towards that athlete (Umeh, 1997). Informing others of an athlete's HIV status may lead to their exclusion due to inappropriate fear and prejudice and for this reason, is often avoided. This would have to be reconsidered if HIV transmission was found to occur in sporting activities (American Academy of Pediatrics, 1991).

Most sporting codes state that there is no need to test individuals and exclude them from participating in sport – yet testing is often encouraged, but not required. The major exception has been professional boxing: boxers are tested annually and excluded if they are HIV-positive, rather than treating bleeding as it occurs (Hamel, 1992; Maugh, 1996). Also, boxers are also tested annually for Hepatitis-B. If they are found to have Hepatitis-B, a boxer's licence is withdrawn until they undergo medical treatment and are clear of the virus (Mguli, 2001). HIV though, is a serious issue facing the sport of boxing as a significant number of boxers have tested positive for HIV (Mguli, 2001; Van Der Berg, 2000). The policy of the South African Boxing Commission, like others worldwide, does not publish statistics on the number of boxers infected with HIV, due to the controversy created by such disclosure (Leach, 2003; Mguli, 2001; Van Der Berg, 2000).

South Africa's boxing commission has a policy of testing boxers for HIV only once a year when they apply for new licences. Thus, if a boxer tests negative for HIV and then becomes infected with the virus a month later, their status may remain unknown for eleven months before their next test takes place, increasing the risk of transmission during that time (Leach, 2003; Van Der Berg, 2000). Also, HIV infection can go undetected for a period of time as blood tests can detect HIV antibodies within a few weeks of infection, but the "window period" between infection and the body's production of HIV antibodies can extend from six months to a year in extreme cases (CDC, 1996).

Allowing HIV-positive boxers to continue participation in the sport could pose a serious risk for HIV transmission to participants that could otherwise be avoided (Leach, 2003). Those who test HIV-positive are denied new licences and banned from further competition, cutting short their careers (Leach, 2003; Van Der Berg, 2000). Alternatively, some boxers refrain from applying for their licences upon learning their status opting to quit the sport altogether (Leach, 2003; Mguli, 2001; Van Der Berg, 2000). HIV-infected boxers are encouraged to partake in an alternative, less robust activity with a lower risk of transmission. Therefore, policy makers believe that the policy acts in the best interests of the athlete and the sport (Leach, 2003). Despite this, most other sporting codes have a

policy of non-disclosure of HIV status, placing participants under no obligation to reveal their HIV status (health24.com, 2003b).

Many athletes participating in contact and non-contact sport would support a ban restricting HIV-infected players from competition (CDC, 1996; Umeh, 1997). Athletes participating in contact sport may be more resistant to playing with HIV-positive athletes, as these athletes have greater potential for direct contact with the blood of other athletes than athletes participating in non-contact sport (Umeh, 1997). Umeh (1997) conducted a study which focussed on knowledge and opinions of male and female college athletes, and this found that athletes were highly ambivalent about playing with HIV-positive players. Most athletes were found to be hesitant to allow HIV-positive players to participate in contact sport as they were fearful of infection (Umeh, 1997).

There is a school district in Colorado in the United States that prohibits HIV-positive students from participating in sports until special clearance is obtained from authorities. The aim of this policy is to protect the rights of those who are not HIV-positive. This throws into question, however, the rights of the HIV-positive student as this policy may be seen as discriminative. Also, there is no evidence to suggest that there has been any transmission of HIV in sporting events in amateur, school or professional sport. However, people are generally concerned with safety, a basic need. It is important to find a policy that does not discriminate and only considers exclusion if there is a medically sound recommendation (Angelico, 1999).

The South African Rugby Football Union (SARFU) provides counselling to HIV-positive players with the aim of discouraging them from participating in such a high intensity sport as they suggest that it poses a serious health risk to the player. High intensity activity can suppress the immune system of any athlete in broad generic terms; therefore it is believed that the problem is further compounded in HIV positive individuals that already have a depleted immune system. Also, counselling aims to help HIV-positive players deal with the potentially devastating psychological impact in instances where players who are

misinformed about HIV and AIDS refuse to play against HIV positive players. No routine HIV testing is performed by SARFU on any of its players. If players were to undergo routine HIV testing, this would have to be repeated at three monthly intervals so that players becoming infected between tests are not missed. A policy that included such testing would have psychological, social and financial implications that policy makers are not yet ready to confront (Jakoet, 1999).

Health-seeking behaviour is affected by negative attitudes, as well as stigmatisation, cultural taboos, limited knowledge and poor recognition of HIV and AIDS symptoms. The stigma attached to AIDS occurs as a result of fears surrounding infection and pre-existing prejudice against the social groups thought to be most seriously affected by the epidemic. Stigma is more likely to be attached to a disease whose cause is perceived to be the bearer's responsibility. The two most common routes of HIV transmission – sexual intercourse and sharing contaminated needles – are widely perceived as avoidable behaviours, thus placing responsibility on the individual to prevent infection (Cogan & Herek, 2001).

2.6 Relationship Behaviour

It may be assumed that individuals actively involved in sport activities are healthier and more attuned to their overall well-being (Nattiv & Puffer, 1991). The physical prowess of many athletes leads them to believe that they are invincible and as a result, they do not take precautions necessary to minimize risks (CDC, 1996). Also, sport participation often causes additional emotional, physical and mental stresses and these may result in maladaptive behaviours (Nattiv & Puffer, 1991).

Famous athletes have frequently been linked with numerous sexual exploits that leads to them being glorified and admired for exhibiting such manly, "superstud behaviour" (McKay, 1993). At times, the male athlete has also been portrayed as victims of female groupies that persist to be part of the athletes' lifestyle of fame and fortune. In this instance, the female is portrayed as the "femme fatale" or "gold digger" and seen as the virulent

agent. Some athletes ascribe to this thinking, but there are those who feel that they need to take responsibility for their own sexual behaviour (McKay, 1993).

The primary risks to athletes of contracting HIV infection are the same as those faced by non-athletes; that is, from having unprotected sex and from sharing needles for intravenous drug use for injecting steroids, hormones, vitamins, or illegal drugs (CDC, 1996; Hamel, 1992; Nattiv & Puffer, 1991; Umeh, 1997). In a study done by Nattiv and Puffer (1991), it was found that college athletes – as compared to college non-athletes – engaged in more high-risk behaviours, such as less frequent use of contraception, increased frequency of sexually transmitted diseases and increased number of sexual partners. Also, early adulthood is seen as a time of experimentation with alcohol, drug use and sexual experiences. Generally, athletes at this age are in prime health and rarely, if ever, encounter peers that are infected with HIV and they are likely not to view themselves as at risk for infection (Umeh, 1997). This low perceived susceptibility and vulnerability to HIV infection is often associated with high risk sexual behaviour (St. Lawrence, 1993).

Hamel's (1992) study suggests that due to the lifestyle of professional athletes, which includes extensive travel and demonstrative fans, they are presented with a unique opportunity for increased sexual exposure wherein many indulge. This may result in athletes not protecting themselves from the HI virus (Hamel, 1992). Athletes may boast their popularity 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 most often kept secret (Ainsworth, 1998).

Drug use puts some athletes at risk as well. Anabolic steroids are administered sometimes using needles, and if needles are shared with HIV positive athletes, the virus can be transmitted. Athletes try to conceal steroid or other illegal drug use and therefore, estimating how widespread this practice is remains difficult. Consequently, the possibility of HIV transmission, through these means, remains an unanswered question (Hamel, 1992).

Physical barriers (male and female condoms) and chemical barriers (spermicides and microbicides) are promoted to aid in preventing HIV transmission. Some contraceptives are combinations of physical and chemical barriers, i.e. diaphragms, spermicidally lubricated condoms (Lawson, Katzenstein & Vermund, 1999). One of the most widely used features in HIV and AIDS prevention campaigns has been condom promotion, as it is the low rate of condom use that contributes to high levels of HIV infection. Condoms (of male and female type) are worn during sexual intercourse – vaginal, anal or oral sex – for prevention of pregnancy and transmission of HIV and STDs (Latka, 2001).

Correct and consistent use of condoms during sexual intercourse is highly effective in preventing HIV transmission, but this involves costs, i.e. potential inconvenience, potential embarrassment and an implication of distrust between sexual partners (Ainsworth, 1998). Strong associations have been established between condoms and decreased perceptions of masculinity, unfaithfulness, lack of love and trust, and disease. An important barrier to condom use is the negative male attitudes toward condoms, including concerns about reduction in sexual pleasure (Ainsworth, 1998; Blecher, Steinberg, Pick, Hennink & Durcan, 1997). Negative attitudes and difficulties negotiating and following through with condom use contribute to the risk of HIV infection (health24.com, 2003a). Reducing these disadvantages may encourage people to use condoms and lead to decreased rates of HIV infection (Ainsworth, 1998).

Stigma, discrimination and denial are major constraints in HIV intervention programmes (United Nations Development Programme, 2002). Stigma imposes a culture of shame around the disease. Consequently, the disease remains hidden as people are reluctant to talk about it, get medical help or take an HIV test (Integrated Regional Information Networks News, 2003). This stigma deters people from seeking information and assistance for risk reduction. People who are infected with HIV may be reluctant to adopt behaviour that might signal their positive status to others and thus, those with the disease continue to engage in high-risk behaviour with multiple partners and inconsistent condom use. Low partner notification rates give rise to higher rates of HIV transmission. Stigma seriously

hampers prevention efforts as HIV-positive people are wary to seek care and support for fear of discrimination (CDC, 1996; health24.com, 2003a).

Discrimination is caused by the fear of transmission. There is still some denial of the existence of HIV and AIDS as some AIDS-related sicknesses are attributed to cultural taboos such as witchcraft and other ailments (Integrated Regional Information Networks News, 2003). Other barriers include the desire to have children, low perception of personal risk and the promotion of traditional remedies that claim to protect against HIV infection. Therefore, the disease spreads quickly because people in denial become reckless (Integrated Regional Information Networks News, 2003). In order to reduce the incidence of AIDS, these factors associated with it must be directly confronted (Cogan & Herek, 2001).

It has been found that people are more likely to use condoms consistently with a casual, secondary or new partner as compared to a steady one (Kordoutis, Loumakou & Sarafidou, 2000). Exclusiveness may produce a sense of invulnerability to HIV risk and decreased condom use. An ambience of trust and intimacy is created and thus, the proposal to use a condom appears offensive and threatening to the quality of the relationship as it may signify infidelity. Therefore, partners may be reluctant to take the initiative to suggest condom use and thereby, increase their vulnerability to infection (Kordoutis et al., 2000; MacPhail, 1998).

Partner selection is used by young people as a method of ensuring safe sex. Adolescents, particularly males, attempt to know their partners without any discussion of sexual histories. They feel that they can identify and avoid “risky types” by categorising females as “clean” or “unclean”. This is usually based on unsubstantiated evidence gathered from the observations of female behaviour in society. Condom use and limited social interaction helps distance those who are declared unclean (MacPhail, 1998).

Partner knowledge often substitutes actual protection against HIV and reduces condom use with “well known” partners. However, the degree to which the partner is well known is

highly subjective. Frequency of sexual intercourse is often higher between partners of long-term relationships and this enhances partners' sense of interpersonal familiarity, leading to judgements of lower HIV risk and the perception that the 'other' is safe. Accumulated personal investment in the relationship, owing to its long duration, may also lead to defensive denial that one's partner may be HIV-positive (Kordoutis et al., 2000).

Another explanation for unsafe sexual behaviour involves the social norms that perpetuate women's subordination within sexual relationships. Traditional African cultures are frequently patriarchal and oppressive toward women and it is the entrenched gender discrimination that increases the risk of HIV infection for African women. Research into the discourses that surround the subordination of women reveals two main themes relating to male sexuality: a biologically determined 'need' for sex and 'sexual rights' (Eaton et al., 2003). Men claim to need variety, that it is in a man's nature to want many partners and that staying with one woman goes against the essence of being a man. Many young men assert that they need sex in order to stay healthy, that sexual desire is a natural force that one should not attempt to control and feel justified in forcing their girlfriends to have sex. This behaviour is supported by the social norm that a man has a right to sexual intercourse within a romantic relationship and therefore, has the right to use force if necessary to obtain it. Not all young people accept these norms as a minority of young men openly challenge the idea of coercive sex. In addition, religious youth are more likely to postpone sexual activity and have fewer partners (Eaton et al., 2003).

A barrier to the adoption of safe sex behaviours exists in the pervasive view that females should prove their fertility before marriage. The extended family love and care for the children of unwed adolescents. Condoms' contraceptive value alone may be sufficient reason for their non-use (MacPhail, 1998). Young people who want to avoid pregnancy perceive condoms to be less reliable than hormonal contraceptives. Thus, condoms are rejected from two sides: they prevent conception but are not perceived to be contraceptive enough (Eaton et al., 2003).

The gender imbalance in society makes it difficult to negotiate safe sex. Men are expected to exercise power over women to achieve the recognition of society. A double standard of sexual behaviour encourages men to prove their masculinity by engaging in casual sex while disapproving of female sex as non-feminine. In conjunction with negative attitudes toward condom use, such behaviour places adolescent men at increased risk for HIV/STD infections (MacPhail, 1998).

2.7 Sport Interventions

2.7.1 Exercise and HIV and AIDS

Exercise can be beneficial for HIV-positive patients and it is strongly encouraged, as it may increase longevity (Schnirring, 1996). Exercise may be used to complement other forms of treatment. Regular moderate intensity exercise can play a role in the management of early, asymptomatic individuals with HIV infection as it has cardiovascular benefits for patients (Schwellnus & Derman, 2005). An increased level of physical fitness can translate into enhanced vitality and vigour, allowing for alternative recreational pursuits by HIV infected persons (Leach, 2003).

Exercise has been used to enhance perceptions of psychological well-being and life satisfaction, as perceived control over physical health is a primary concern for those suffering with HIV and AIDS (Lox, McAuley & Tucker, 1995; Weinberg & Gould, 2003). It can reduce depression and stress as it provides a focus on health instead of disease (Schnirring, 1996). One study found that aerobic and weight-training interventions enhanced physical self-efficacy and improved moods in those individuals with HIV (Lox et al., 1995). Many, however, still question whether intense exercise will have harmful effects in the long run (Leach, 2003). There are no definite guidelines, as yet, that determine exact exercise prescriptions and further research is needed to determine at which stage of the disease exercise may be most beneficial (Schnirring, 1996). At this time, each case is based on the individual's overall physical and mental health and the nature of the sport in which they are participating (CDC, 1996; Schnirring, 1996).

2.7.2 Sport and Life Skills

The qualities intrinsic to participation in sport make it a positive metaphor for teaching skills for successful living interventions. Due to this connection between sport skills and skills for successful living, coaches, athletes and sport administrators believe that sport participation can be beneficial in the psychosocial development of participants far beyond the immediacy of what is learned in the sporting arena. Principles that are learned in sport are considered to be directly transferable to other life situations. These transferable behaviours and attitudes are called life skills (Danish, Nellen & Owens, 1996).

The United Nations Children's Fund (2002), hereinafter abbreviated to UNICEF, suggests that sport is a key component in children's healthy development and an increasingly important tool for reaching out to young people. If it is possible to direct young children's attention to focus on academics and sport rather than on sexual relationships, this may aid in the prevention of HIV and AIDS. Many young children want to grow up to become famous athletes and will work hard to get there. Sport is a powerful and exciting way to develop young potential and provide incentives to adopt safer behaviour for those most likely to spread HIV (Ainsworth, 1998).

Life skills enable individuals to succeed in environments in which they live, i.e. 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 et al., 1996). Sport builds character, fellowship, and independence. It is useful in channelling frustrations and learning new ways to deal with anger. It is also a tool used in convening people, encouraging the values of dignity, respect, fair play, and peaceful conflict resolution and in breaking down barriers between people and reaching out to people (UNICEF, 2002). Thus, life skills programmes aim to promote positive values, attitudes and responsible behaviour

in order to reduce the incidence and prevalence of HIV and AIDS (Sport and Recreation Commission of Zimbabwe, 1998).

In a study conducted by Colon (2000), sexual self-efficacy predicted perceived certainty of condom use, and self-esteem and sexual self-efficacy together predicted intention to use condoms. Inconsistent use of condoms has been attributed to various factors including negative attitudes toward condoms, negative social influences, low self-esteem, and lack of personal efficacy. HIV prevention programmes need to include psychosocial components to enhance self-worth and sexual self-efficacy as these factors impact their sexual decision making (Colon, 2000; Eaton et al., 2003).

Adolescents place more emphasis on social virtues such as being friendly, considerate, kind and cooperative. They are also concerned about being viewed positively by others (Berk, 2004). The implications of suggesting condom use are seen to indicate concern with partner fidelity and disease and thus, the fear of being seen in a negative light by one's partner. This is an issue of self-esteem: individuals with higher self-esteem tend to be more adept at making such suggestions to their partners as the views of others tend to be less important than one's personal health (MacPhail, 1998).

Considering the limited success of behavioural and biomedical approaches in achieving large-scale reductions in HIV infection, increased recognition has been given to the potential contribution of community-level approaches. 'Hard-to-reach' communities are often the most vulnerable to infection and it is here that such approaches can induce changes (Campbell, 2003). The challenge of containing the HIV and AIDS epidemic requires innovation and change in relation to both frameworks of understanding and modes of action and intervention. Further consideration has been given to directing local people collectively to take ownership of the problem. It is critical to engage in collective action in order to increase the likelihood that people will act in health-enhancing ways and to mobilise for the creation of community contexts that enable improved sexual health (Campbell, 2003). Community interventions take place at the level of the behaviour-

determining context and are intended to generate action that will help to create a supportive environment for behaviour change among community members (Luhamba et al., 1997).

To provide a preventive effect, the community psychology approach involves elements of competence promotion and education in skills for healthy living (Dalton, Elias & Wandersman, 2001). It is important to provide youth with HIV and AIDS information and healthy lifestyle skills before they become sexually active. Sport is used to provide youth with tools to make healthy lifestyle decisions. Prevention programmes aim to provide accurate HIV and AIDS information; help develop leadership skills, independent thinking, confidence and acceptance of others with the disease. Sport provides a fun, non-threatening and inclusive vehicle for providing healthy lifestyles and HIV and AIDS education. This makes sport an effective tool in reaching the youth that are at risk (Mwaba, 2003).

2. 8 Erikson's Psychosocial Theory of Development

Erikson's theory focuses on psychosocial stages where internal psychological needs and drives are mediated by a variety of social influences. The theory places particular emphasis on adolescent identity development and the importance of socio-cultural factors, which are relevant to the South African context. However, the impact of prolonged structural oppression on black South African adolescents is inadequately addressed by the theory (Stevens & Lockhat, 1997).

The psychological conflict of middle childhood is that of industry vs inferiority. The purpose of this stage is to develop a sense of competence with regards to useful skills and tasks. Children become aware of their own and others' unique capacities, learn the value of division of labour, and develop a sense of moral commitment and responsibility. Children's self-esteem is affected as they evaluate themselves and make social comparisons. A sense of inadequacy or lack of confidence in one's ability to succeed is the risk at this stage. The sense of industry leads to the development of a positive but realistic self-concept. Successful resolution of this conflict paves the way for the positive resolution of stages to follow (Berk, 2004; Papalia & Olds, 1998).

One of the most important psychological tasks of adolescence is the discovery of sexual, ideological and occupational identities. Erikson termed this the stage of identity vs identity confusion. Aspects of earlier childhood identifications are combined with the adoption of certain socio-historically influenced systems of values, norms and standards, and integrated into the person's developing personality (Stevens & Lockhat, 1997). Identity is achieved through the individual's exploration of solutions to life's problems and development into a unique adult with a coherent sense of self and a valued societal role (Gallahue & Ozmun, 1998; Papalia & Olds, 1998). Identity formation is a crucial step toward becoming a happy, productive adult. Identity confusion occurs when the individual becomes stifled in their quest for self-discovery (Gallahue & Ozmun, 1998).

The adolescent may appear directionless and shallow if they experience identity confusion, and as a result, are unprepared for the psychological challenges of adulthood. For example, individuals find the intimacy involved in the young adult stage difficult to negotiate, if they do not have a firm sense of self or identity to which they can return (Berk, 2004). This identity crisis is seldom fully resolved in adolescence and some degree of identity confusion is expected during various stages of development (Papalia & Olds, 1998).

The primary tasks that the adolescent must negotiate is the development of congruence between the self-image and role expectations of the environment; preparation for occupational and family life; socially responsible behaviour; independent judgement; emotional independence; assurance of economic independence; and a value and ethical system. This process may have been hampered among black South African adolescents. Difficult family relations among black people may have contributed to increased emotional insecurity and consequently, difficulties related to emotional independence during and after adolescence (Stevens & Lockhat, 1997).

Despite the potentially negative impact of violence on black South Africans, it may be reduced by factors such as the degree of social support, family integration, extent of perceived trauma, various personal factors, and the particular meanings ascribed to these

events by survivors. Also, identification of common oppressive experiences may have led to the development of a common social identity. The current socio-historical context invites people to embrace the ideological shift from collectivism to individualism and thus, they are compelled to redefine their identities in order to function more optimally within this context (Stevens & Lockhat, 1997).

Adolescence is a period characterised by the development and formation of sexuality. Sexual attitudes have become more liberal over the last thirty years as premarital sex no longer carries the stigma that it did previously (Berk, 2004). Thus, this process is one which frequently involves a high turn-over of sexual partners and thus, increased risk of HIV infection. Teenage experimentation with drugs and alcohol recurrently leads to the adoption of high risk behaviours or engagement in unplanned episodes of casual sex. Adolescents are particularly vulnerable to normative social influences of their peers who tend to discourage the adoption of safe sexual behaviour by encouraging negative associations with condoms and their use (MacPhail, 1998). The emergence of HIV and AIDS has led to a slight swing back in the direction of conservative sexual beliefs; a number of sexual abstinence programmes promote these ideals with the aim of preventing the spread of the disease (Berk, 2004).

Much of the risk behaviour associated with adolescence has its roots in the way in which adolescents construct their identities within the context of heterosexual society. Teenagers may be readily influenced by HIV preventive behaviour if it were made to seem the norm. Phases of teenagers' lives are dominated by feelings of invulnerability allowing them to take the chances seen as developmentally important (MacPhail, 1998). Young men are encouraged by social norms to show sexual bravado, defiance of risk, and high levels of sexual activity. It is this attitude of bravado and denial of personal vulnerability to HIV that can be seen as personal risk factors (Eaton et al., 2003).

HIV prevention among adolescents has become a priority due to the increased infection rates among adolescents. In the midst of everyday social pressures, adolescents often

overlook the consequences of engaging in risky behaviours. Homeless, incarcerated and delinquent adolescents are generally more concerned with survival than the distantly perceived threat of HIV infection and in having greater life stresses than the general adolescent population (MacPhail, 1998).

Many of the athletes participating in this study are at the developmental stage of early adulthood where the psychological conflict is intimacy vs isolation. Thoughts and feelings about making a permanent commitment to an intimate partner are typical of this period. Most young adults are at the stage where they are attempting to gain economic independence and establish their identity. Intimacy requires giving up some of their newfound independence and redefining their identity to include the values and interests of a partner. This stage requires the balancing of these needs and this extends to romantic relationships, friendships and work relations. If intimacy is achieved, young adults are generally cooperative, tolerant, and accepting of differences in background and values (Berk, 2004). If the individual is unable to establish that one intimate relationship, then feelings of isolation and self-absorption form (Gallahue & Ozmun, 1998).

2.9 Conclusion

The literature suggests that while many individuals are generally knowledgeable about HIV and AIDS, a high incidence of unprotected sexual activity still persists (Lance, 2001). Physicians maintain that there is no justifiable reason to enforce mandatory HIV testing or the exclusion of HIV-positive athletes from sport. There are numerous variables which affect high-risk behaviour and these range from individual (e.g. personal vulnerability) to structural factors (e.g. poverty). Prevention remains the best weapon against the HIV epidemic. HIV prevention programmes have focussed on improving knowledge, encouraging empathic attitudes, decreasing the costs of safer behaviour and supporting the development of life skills (van Dyk, 2003). Innovative strategies to reduce risky behaviour within the youth population need to be developed and realised within a supportive community (Ainsworth, 1998). Sport may provide the avenue through which to acquire the life skills or values needed to strengthen health-seeking behaviour (Danish et al., 1996).