

The relationship between risky sexual behaviour practices and  
attachment styles in a university sample.

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# Abstract

A growing body of research has explored the relationship between attachment styles and sexual behaviour, although these two systems, along with care-giving, are theorized to constitute romantic love (Fraley & Shaver, 2000; Hazan & Shaver, 1987). The purpose of this study was to examine the relationship between attachment styles and risky sexual behaviour in young adults. A secondary aim was to explore the relationship between particularly risky sexual behaviours and participants' membership to an attachment dimension. In addition to this, the role of self-esteem as a moderating effect on risky sexual behaviour and attachment dimension was examined.

A questionnaire survey was administered to a convenience sample of 211 undergraduate university students with ages ranging from 17 to 24 years. The gender make up of this sample constituted 80 males (37.9%) and 131 Females (62.1%). The Past and Present Sexual History Questionnaire was used to measure risky sexual behaviour. Attachment dimensions were calculated by means of the Adult Attachment Scale (AAS) and the Rosenberg Self-Esteem Scale (RSE) was used to determined participants self-esteem.

It was found that an association was demonstrated between risky sexual behaviours and an individual attachment dimension. A negative relationship was indicated between risky sexual behaviour and participants on the close dimension of attachment. A positive relationship was found between risky sexual behaviour and participants on both the dependent and anxious dimensions of attachment. Furthermore, it was found that participants on the dependent and anxious dimensions of attachment were less likely to regularly use condoms. Participants that rated higher on the anxious attachment dimension were also likely to have more sexual

partners per year. It was also found that participants on the anxious and dependent attachment dimension were more likely to engage in one-night stands than participants who rated highly on the close dimension of attachment.

There is a significant relationship between self-esteem, attachment styles and risky sexual behaviours. The findings show that higher self-esteem improved the risk behaviours associated with an anxious attachment style.

This research supports previous findings between sexual behaviours and attachment dimensions. It also examines and adds to the growing body of research that looks at attachment theory and how it intersects with other theories.

# Declaration

I, Charlene Mc Intosh, declare that this dissertation is my own original work. All other sources of reference have been acknowledged.

This dissertation has not been submitted, by me, for a degree at this or any other university.

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# Chapter 1 - Introduction

In recent years, issues concerning sexual behaviour, with particular emphasis on sexual attitudes and behaviour that place individuals at risk for HIV and other sexually transmitted diseases, have been the focus of considerable research. Research into the sexual attitudes of adolescents and young adults has shown that, while most know about the transmission and prevention of HIV, they are less knowledgeable about other sexually transmitted diseases. Furthermore, research has found that the awareness of the risk of sex is not necessarily an indicator of safe sex practices (Killea-Jones, 2004; McCormack, 2002; Feeney, Peterson, Gallois & Terry, 2000; Hillier, Warr, & Haste, 1998). Feeney et al (2000) argue that researchers need to move beyond knowledge-based variables and focus on identifying factors that are able to predict patterns of sexual activity. Killea-Jones (2004) further argue that identifying predictive patterns of sexual activity is crucial to the appropriate classification of risk populations and development of intervention strategies. Research into risky sexual behaviour, while contributing much to our understanding, has been criticised for being mechanistic and ignoring the interpersonal and affective nature of sexual relations (Feeney & Raphael, 1992 as cited in Ciesla, Roberts & Hewitt, 2004). Recent studies support the emerging view that understanding patterns of communications and couple interactions is vital to an understanding of sexual activity (Metts & Fitzpatrick, 1992 as cited in Feeney et al, 2000). Studies conducted by Prieur (1990, as cited in Ciesla et al, 2004) found that the primary reasons given for engaging in unprotected sexual intercourse included a desire to communicate commitment, as well as to seek closeness and emotional attachment. Attachment theory provides a useful framework to explore the interpersonal nature of risky sexual behaviour and thus the focus of this research is to explore the previously little

investigated notion of adult attachment behaviour and its relationship to HIV risk behaviour. Since adult attachment behaviour performs a significant function in sexual expression, and since HIV is primarily transmitted through sex, it is likely that attachment difficulties exert an influence on an individual's risk for HIV infection (Witney, 1997).

Chapter two provides an overview and discussion of the relevant literature and research in an attempt to contextualise the aims, hypotheses and results of this study. It begins with a discussion on risky sexual behaviour, particularly within the South African context. Recent decades have seen an increasing interest in attachment theory and its application. An aim of this study is to explore the relationship between risky sexual behaviours and attachment dimensions in young adults. Thus the second part of the literature considers the theoretical perspectives of attachment. The process of attachment in adults and its link to romantic love and sexuality are presented. Finally, the role of self-esteem as a moderating factor is presented.

Notwithstanding a number of methodological and conceptual difficulties of this research, support is provided for the existence of a relationship between attachment dimensions and risky sexual behaviours. Given that very little research has been conducted in this area in South Africa, this study aims to explore this relationship in a local context. It must be acknowledged that the methodology employed in this research does not allow any inference regarding causality.

Chapter three will describe the methodology and hypotheses used in this study. Based on the literature it is broadly hypothesized that affectional needs play a vital and fundamental role in sexual behaviour (Feeney & Noller, 1990). More specifically, attachment theory provides a theoretical framework for understanding human sexual behaviour as it pertains to safe and

unsafe sexual conduct. The aim of the present research is to examine the relationship between attachment style, namely secure, dependent and anxious as it relates to sexual behaviour.

It is the hypothesis of this study that the differences among individuals with respect to the various forms of attachment, influences the individual's ability to negotiate safe-sex practices. Monogamous long-term relationships, decreased numbers of sexual partners and the use of condoms are all associated with safe sex practices in relationships. It is held that unsafe sexual practices are closely related to the dependent and anxious styles of attachment. In contrast, sexual practices that are engaged in by those characterized as having a secure attachment style, will be safer.

Chapter four will test the hypothesis that adult attachment behaviour is correlated with HIV risk behaviour and provide a summary of the data analysis results. In chapter five, a discussion of these results is presented within the context of the original aims and hypotheses of this study as outlined in chapter three. Finally, the limitations of this study and implications of the presented findings are discussed.

# Chapter 2 - Literature Review

This chapter will provide an overview of the relevant literature and research in an attempt to contextualise the aims, hypotheses and results of this study.

## 2.1 Risky Sexual behaviour

### 2.1.1 A definition

For the purpose of this study risky sexual behaviour can be considered any sexual act, which places an individual at risk for contracting HIV or other sexually transmitted disease or unwanted pregnancy. Risky sexual behaviour includes early sexual debut, unprotected sexual activity, inconsistent condom use, and or more than one partner at a time.

### 2.1.2 Etiology of Risky sexual behaviour

The etiological factors that contribute to adolescents' and young adults' risky sexual behaviour are varied. Some factors have an indirect impact upon sex behaviour, such as poverty and social isolation, while others have a direct effect. Ultimately, how these factors interact determines if and when risky sexual behaviour will occur (Taylor-Seehafer & Rew, 2000).

#### 2.1.2.1 Environmental Factors

There are a number of social and cultural factors that have been found to be associated with risky sexual behaviour. These include poverty, social isolation, gender roles and specific cultural beliefs (Brook, Morojele, Zhang & Brook, 2006; Mmari & Blum, 2005). Peterson, Richmond, & Leffert (1993, as cited in Taylor-Seehafer & Rew, 2000), argue that a lack of

social resources in poor communities increases the likelihood of young people engaging in risky sexual behaviour. Further it has been found that children who are socially isolated from the larger community are at a higher risk of being exposed to sexual abuse, which has been found to be a precursor of later risky sexual behaviour (Luster & Small, 1997, as cited in Taylor-Seehafer & Rew, 2000).

Cultural or social norms in regards to gender roles and sexuality are important in shaping sexual patterns. Over the last decade there has been an increase in ambivalent social attitudes towards sexuality, which have resulted in adolescents and young adults receiving conflicting messages (Taylor-Seehafer & Rew, 2000). This is largely due to the influence of multi-media, particularly American culture, in which sexual expression and experimentation is portrayed as acceptable activities. Persistent gender stereotypes mean that young women continue to experience their sexual behaviour differently from young men (Haffner, 1995, as cited in Taylor et al., 2000; Brook et al., 2006). Adolescent males commonly report pressuring a female partner into having sex by getting her drunk or high, by lying, or by physical threat. On the other hand, adolescent women report they are likely to give in to these threats and will just let sex happen. Without an equalization of power in their relationships with male partners, females will continue to have difficulty asking partners to use a condom, let alone saying no to sexual activity. This has been cited by many authors as being the main contribution for the high incidence of STD's amongst young female adults (MacPhail & Campbell, 2001; Brook et al., 2006; Taylor-Seehafer et al, 2000).

Family, peer and school contexts have been identified as the most critical of environmental factors that have an influence over the development of sexual patterns. Various family compositions and functional patterns have been associated with the development of risky sexual behaviours. For example, risky sexual behaviour is more likely to occur in a family

characterised by low cohesion, poor parental monitoring and support, poor communication, single parent and out of home teenagers (Taylor-Seehafer & Rew, 2000; Brook et al, 2006).

Within the school context, the following factors have been found to be predictors of early sexual debuts: low achievement, negative attitude towards school, and low educational aspirations (Taylor-Seehafer & Rew, 2000).

For adolescents and young adults, peers are considered to have positive value with regards to development, socialization and health-related behaviour. During this period of development, peers can have the most influence over the development of risky sexual behaviour. It has been argued that an adolescent's association with deviant peers may be the strongest and most proximal influence on sexual risk taking (Taylor-Seehafer & Rew, 2000). For some adolescents and young adults in South Africa, and males in particular, there exist fairly strong levels of peer disapproval of condom use and peer pressure to be sexually active (MacPhail & Campbell, 2001). The result of which is reduced levels of condom use and increased levels of sexual activity. Bachanas, Morris, Lewis-Gess, Sarett-Cuasay, Sirl, Ries, & Sawyer (2002) argued that adolescents and young adults who had little to no social support were at increased risk for engaging in risky sexual activity.

#### **2.1.2.2 Individual Developmental Factors**

Developmental factors such as biological changes, cognitive process, emotional and psychological growth contributes to the developmental of sexual pattern and risk. Early onset of puberty, reports of being physically older looking have been found to be associated with early sexual debut and early sexual experimentation (Taylor-Seehafer & Rew, 2000).

Cognitive processes change significantly during adolescence; this includes developing the ability to reason abstractly, to foresee consequences of actions, and to understand the social

context of behaviours (Haffner, 1995 as cited in Taylor- Seehafer et al., 2000). Cognitive capacity is an important factor in decision-making on the use of contraception and condoms, as these require the ability to anticipate future consequences. An adolescent's or young adult's degree of cognitive maturity may place limits on his/her ability to plan for sexual relationships, clearly articulate personal values, negotiate with a partner, and obtain contraception and condoms (Taylor-Seehafer & Rew, 2000; Knodel, Van Landingham, Saengtienchai & Pramualratana, 1996).

### **2.1.2.3 Personal Factors**

Personal factors that contribute to risky sexual behaviour in adolescent and young adults include self-efficacy, sexual knowledge, self-esteem, and communication skills.

Self-esteem is important to the development of a healthy sense of one's sexuality and may affect safer sex practices by adolescent and young adults. Adolescent women with higher levels of self-esteem may be better able to resist pressures to engage in risky sexual behaviour than those with lower self-esteem (Gillmore, Butler, Lohr, & Gilchrist, 1992, as cited in Taylor- Seehafer et al., 2000). Research cites that women with high levels of self-esteem had high and consistent condom use and were engaged in the lowest level of STI risk behaviour (Taylor-Sheehafer et al., 2000; Knodel et al., 1996). Furthermore, it has been found that youth with low self-esteem were more likely to have negative attitudes towards condoms, were more likely to engage in casual sex, have polygamous partners, and report higher frequency of coercive sexual experiences (Taylor-Sheehafer et al., 2000; Knodel et al., 1996; Brook et al., 2006).

### **2.1.2 Risky sexual behaviour and transmission of sexually transmitted diseases**

Concerns about adolescent and young adult risk taking behaviour in terms of contracting a sexually transmitted infection (STI), has lead to an increased interest in young people's sexual risk taking behaviours (Wright, 1992).

The World Health Organization (2006) estimates that there are more than one million new cases of curable sexually transmitted bacterial infections (STI) worldwide every day, with the majority of cases being in Sub-Saharan African. Research conducted with older adolescents and young adults indicates that 16% have contracted or been treated for an STI (World Health organisation (WHO); Kershaw, Ethier, Milan, Lewis, Niccolai, Meade & Ickovics, 2005).

Non-curable sexually transmitted infections, such as HIV, pose the greatest threat. While it is difficult to establish exact figures with complete certainty, it is estimated that 24% of adults between the ages of 15-49 are infected with HIV in South Africa (WHO, 2004).

According to the World Health Organization (2004), the onset of sexual behaviour for most South African adolescents is between the 9<sup>th</sup> and 11<sup>th</sup> grade. By the 12<sup>th</sup> grade the majority of students report having sexual intercourse. Studies indicate that this age group has the highest rate of new HIV infection from 2% in 1991 to 23% in 2002 (WHO, 2004).

Condom usage is seen as a protective measure against STI's and HIV infections, however, it is up to the individual and their partner, to decide whether to use this preventative measure.

Dallimore (2000) found that student were more likely to utilize condoms if they felt personally at risk for a STI or HIV. However Mickler's (1993) study revealed inconsistencies in the relationship between perceived risk and HIV prevention behaviour. It is suggested that this may be as a result of the belief that STI's and HIV is a problem of groups of which one is not a member (Brook, Morojele, Zhang & Brook, 2006, Mickler, 1993). Condom usage in



adolescents and young adults is reported to be around 46.2% (Taylor-Seehaffer & Rew, 2000). However this reported figure significantly drops when alcohol or drugs are ingested (Brook et al, 2006). Researchers found that 54% of individuals who had been diagnosed with an STI reported using alcohol before in engaging in sexual activities, compared with 40% of persons who did not have an STI (Simbayi,Mwaba,&Kalichiman, 2006).

### **2.1.3 Strategies for reducing sexually transmitted infections**

Numerous studies examining effective behaviour change strategies have been conducted for many years. The focus of most of these programmes, aimed at reducing STI and/or HIV transmission risk, has been similar to other interventions in the field of behavioural medicine (Witney, 1997). These interventions have been influenced by cognitively based theories, such as the health belief model, reasoned action and self-efficacy theories (Mashegoane, Moalusi, Ngoepe & Peltze, 2002). These theories focus on the effects of situational factors, beliefs and cognitive aspects of risky sexual behaviours on individual choice (Mashegoane et al, 2002). It was believed, and still is the underlying premise of most interventions, that in order to assist people reducing their vulnerability to STI and HIV infections, it was necessary only that they be provided with fundamental knowledge of the infections, how they are transmitted and what behaviours will reduce or eliminate all risk of infection (Witney, 1997). However numerous studies have demonstrated that increased knowledge of STI and/or HIV was not significantly related to safe sex practices (Mashegoane et al., 2002; Kershaw et al., 2005; Brook et al., 2006; Simbayi et al., 2006).

Other interventions have emphasised structural constraints to rational choice (Mashegoane et al., 2002). According to this approach, high-risk groups are identified and barriers to the practicing of safe sexual behaviours are identified and strategies are developed to combat these.

Some studies (Mashegoane, Moalusi, Ngoepe & Peltze, 2002) into the effectiveness of the above-mentioned interventions have shown a slight decrease in the annual incidence of STI and HIV in the targeted area or risk groups and have produced changes in the sexual behaviours of individuals with substantial behavioural risk reduction. Nonetheless, while there has been a decrease in the annual incidence, continued risk for HIV infection exists as evidenced by the increase in the prevalence of HIV infection. There was an overall increase of 8% in the incidence of HIV/AIDS between the years 2002 till 2004 (World Health organization, 2004) It would appear however, that increases in rates of incidence among different groups are influenced by factors such as region, race/ethnicity, age, sex and mode of exposure (Center for Disease Control, 1995b). Research has demonstrated that in populations that are well educated and are knowledgeable about HIV transmission and AIDS there hasn't been a substantial drop in incidence that would indicate clear success of such educational programmes (Baldwin & Baldwin, 1988; Hollar & Snitzek, 1996; Witney, 1997). Furthermore, it has been reported recently that those people who have made little change in their condom use and who are thus at increasing risk are "women, whites, people in their 20s and 30s, the tertiary educated" and those who have been married (Thomas & Snell, 2005; Wellings, Collumbien, Slaymaker, Singh, Hodges, Patel & Bajos, 2006). The same researchers report that the number of heterosexual adults who had multiple sex partners or high-risk partners remained constant between the 1990's and 2000s'. Further, there has been no significant increase in HIV test seeking among this population (Wellings et al., 2006).

## 2.2 Attachment theory

Attachment theory concerns itself with the bonds that develop between a child and its caregiver and the consequences that this has on the child's emerging self-concept and its developing view of its social world (Collins & Read, 1990). Research on adult attachment theory is guided by the assumptions that the same motivational system that gives rise to the emotional bonds between a child and caregiver are responsible for how adults respond to social or intimate relationships.

The origins of attachment theory can be traced back to two key figures. John Bowlby saw attachment as being crucial to a child's personality development and to the development of that child's social interactions. His basic framework draws from concepts in ethnology, psychoanalysis, systems theory and cognitive psychology. Mary Ainsworth's (1991) work is seminal in understanding the currently accepted distinctive patterns of different attachment relationships. Her contribution took the form of developing an empirically tested diagnostic procedure, to assess the attachment of individuals. This was achieved through her explanation of individual differences in attachment relations and the concept of the caregiver as a secure base. The work of both Bowlby and Ainsworth is reviewed below.

### 2.2.1 Bowlby's contribution

John Bowlby, a London based family psychiatrist, used data from his observations of young children who were hospitalised, institutionalised, or otherwise separated from their parents and his research primarily focused on the mother-child separation (Bretherton, 1992; Bowlby, 1969; Bretherton, 1992). Through the detailed examination of 44 cases, Bowlby (1969, as cited in Bretherton, 1992) was able to link their symptoms to histories of maternal deprivation and separation. He was the first to draw attention to a behavioural attachment

system as being primary responsible for regulating infant's safety and survival in their environment (Bowlby, 1969). In his now classic paper "*The nature of the child's tie to his mother*" (Bowlby, 1958, as cited in Brentherton, 1992) he proposed that this system is made up of a number of instinctual responses that have the function of stimulating the infant to seek out the proximity of the mother. It is through patterns of responsive behaviours such as suckling and clinging, as well as signalling behaviours of smiling and crying, and, with age more sophisticated goal-corrective patterns, that the child is able to maintain proximity to their mother (caregiver) (Bowlby, 1969; Brentherton, 1992). Attachment is not merely elicited by the infant, but requires adequate parental behaviour in order to terminate the infant's proximity seeking behaviour and to encourage healthy development.

First attachments are usually formed by the age of 7 months. This attachment formation is limited to only a few key figures in an infants' environment. In this way the infant continually monitors the accessibility of a few preferred protective, older attachment figures (Browne & Shlosberg, 2006). Bowlby (1969) claimed that this occurs in all infants, thus infants become attached to even neglectful and insensitive parents. Infants develop as a result of social interactions, which indicate a qualitative change in behavioural organization. An example is when an infant may cry when the attachment figure is absent and be consoled or show pleasure on their return. In familiar situations where no threat is perceived and the attachment figure is present, the infant is likely to feel confident to explore their present environment. During periods of stress or unfamiliarity, the infant is likely to manifest distress or anxiety. Attachment behaviours are then used to seek out the attachment figure in order to elicit emotional reassurance from their presence (Browne & Shlosberg, 2006; Main, 1996). Bowlby (1969) thus proposed that the attachment behaviour system is not constantly in operation but

is activated in times of danger, distress and novelty. After being consoled by the parental figure (caregiver), the infant is free to continue to play and explore (Main, 1996).

Bowlby (1951, as cited in Gullestad, 2001) was dissatisfied with the existing psychoanalytic explanation of the bond between mother and child, which emphasized that love derives from oral drive gratification. His theory combined that of psychoanalysis, systems theory and ethology. Drawing on psychoanalytic principles, Bowlby (1969) placed emphasis on the first five years of a child's development and its implications for later social and emotional functioning. Derived from systems theory, Bowlby (1969, as cited in Fraley & Brumbaugh, 2004) emphasised the importance of instinctual behaviours of the infant being mediated or responded to by goal corrective behavioural systems. As in system theory, Bowlby (1969 as cited in Fraley & Brumbaugh, 2004) stressed the importance of feedback from the caregiver as a means of maintaining a state of equilibrium in attachment behaviours. From an ethological perspective, attachment is proposed as a functional behaviour. Infants that were able to maintain a proximity to an attachment figure would be more likely to survive to a reproductive age (Fraley & Brumbaugh, 2004). According to Bowlby (1969, as cited in Franley & Brumbaugh, 2004), a motivational-control system, what he termed the attachment behavioural system, was gradually evolved to regulate proximity to an attachment figure. Bowlby (1969) made the distinction between animals and humans, where, in humans the goal is seen to be that of proximity to the caregiver for physical safety and survival, in animals the goal is that of protection from danger.

Bowlby (1969) argued that the accessibility of the parental figures is solely capable of sustaining the infants or child's feelings of security and he has used the term attachment to refer to the responsible relational bond. Bowlby and Robertson (1952, as cited in Bretherton, 1992) identified three phases of separation response: protest (related to separation anxiety),

despair (related to grief and mourning), and denial or detachment (related to defense mechanisms, especially repression)

It has been proposed by Bowlby (1969) that there are three characteristics that distinguish attachment from other relational bonds:

1. Proximity seeking: the child will attempt to remain within the protective range of their parents. This protective ring is reduced in strange or threatening situations
2. Secure base effect: The presence of an attachment figure encourages security in the child and further facilitates confidence, exploration and play
3. Separation protest: Threats to the continued accessibility of the attachment figure gives rise to protest and an active attempt to impede separation

### **2.2.2 Ainsworth's contribution**

Mary Ainsworth, a Canadian clinical Psychologist, made a major contribution to the field of attachment through her empirical studies of maternal responsiveness during the first year of life, and the development of a standard laboratory procedure to study attachment, known as the Strange Situation (Ainsworth, Blehar, Waters & Wall, 1978).

Ainsworth, 6 years younger than Bowlby, finished her graduate studies at the University of Toronto, where she was introduced to Security Theory proposed by Blatz (1940, as cited in Bretherton, 1992). One of the main tenants of security theory, which underpins Ainsworth writing on attachment, is that infants and young children need to develop a secure dependence on their parents before beginning to explore unfamiliar situations (Bretherton, 1992). In 1950, she began research, under Bowlby, into the effects on personality development of separation from the mother in early childhood. In late 1953 she left the clinic, familiar with Bowlby's

thinking, but not convinced of the value of understanding the infant-mother dyad. Ainsworth then headed for Uganda, where she embarked on an empirical observation study into the infant mother dyad (Ainsworth et al, 1978; Bretherton, 1992). She began to elaborate on Bowlby's view that affect and emotion are part of the infant or child's appraisal processes. She went on to broaden the set of goals of attachment behaviours to include the infant's subjective sense of security. The central idea being that familiar security (that is a secure dependence on the parents) provides a basis for exploring unfamiliar situations, and for depending confidently on oneself (Gullestad, 2001). Where familiar security is lacking, the infant or child is

handicapped by the lack of what can be called a secure base from which to explore freely (Bretherton, 1991, 1992; Gullestad, 2001) and to affiliate to others. Owing to Ainsworth's contribution, attachment is defined as the

*“affectional bond or tie an infant forms between himself and his mother-a bond that tends to be enduring and independent of specific situations”*  
(Ainsworth et al., 1978, p. 302).

Based on her work from two concurrent studies, the Strange Situation experiment and her year-long home observational study of 26 Baltimore infant-mother dyads, Ainsworth was able to identify three organised patterns of response to two brief separations from, and reunions with, parents in a laboratory environment.

Based on extensive observations of the patterns of behaviour shown by infants Ainsworth (et al., 1978) distinguished three patterns of attachment:

Secure (pattern B): infants in this group showed signs of separation protest and displayed stranger anxiety during their mother absence, and greeted her actively on her return. It was

further noted that they returned quickly to play and were found to treat their mother as a “secure base” for exploration. They exhibited little anger towards her and little anxiety regarding minor separation (Ainsworth & Bell, 1970).

This secure response pattern appeared in the majority of infants (about 60%) (Fraley & Brumbaugh, 2004). It was associated with mother’s tender holding and sensitivity to the infant’s signals in their first year (Tracy & Ainsworth, 1981).

Insecure-Avoidant (pattern A): Infants in this category, focused on the toys, failed to cry during separation, and actively avoided or ignored the mother on their reunion. These infants showed marked anger and anxiety regarding minor separations but not in stressful separation situations (Ainsworth & Bell, 1970).

This response pattern is shown in about 20% of infants (Fraley & Brumbaugh, 2004). Mothers of insecure-avoidant infants were shown to be rejecting of attachment behaviours and were less likely to sooth their infants through tactile contact (Brentherton, 1992).

Insecure-resistance/Insecure-ambivalent (pattern C): Tension characterised the behaviours of these infants showed toward their mothers (Bukatko & Daehler, 1998). Infants appeared to be preoccupied with their mothers throughout the procedures, and either displaying marked anger or passive behaviour and failed to settle and return to play on reunion with their mothers (Ainsworth & Bell, 1970).

Less than 20% of infants demonstrate this response pattern (Fraley & Brumbaugh, 2004). The mothers of these infants were shown not to be rejecting, but rather inept in holding and face-to-face contact, they were further shown to be unpredictable in their response to the infant’s attachment behaviours (Brentherton, 1992).



Many of Ainsworth's original findings have been replicated and have found to be universally applicable. Main (1996) argues that the greater variation in the distribution of the patterns A, B and C exists within, rather than between, countries.

Fraley and Brumbaugh (2004) argue that Ainsworth's work is important for another reason in that it allows for further investigation into the attachment of older children, adolescents and adults.

### **2.2.3 Attachment in adolescents and adults**

Bowlby (1979) maintained that:

*“Attachment behaviour is held to characterize human beings from cradle to the grave” (p. 129).*

Thus it was proposed by Bowlby (1969, 1973 & 1979) that early relational experiences with primary caregivers ultimately leads to generalised expectation about self, other and the world. Bowlby (1988) refers to these internally organised expectations as “working models”, and, although such representations emerge early in development, they continue to dictate how an individual anticipates and construes the self and other in interpersonal relationships. Bowlby (1973, as cited in Brenerton, 1991) further postulated that these representations continue to evolve as the child and adolescent experience other attachment related experiences. Thus working models can be understood to be dynamic and enduring representations of early relationships (Witney, 1997). For example, insecurely attached individuals form working models that can be presumed to be associated with emotional and behavioural difficulties exhibited by adolescents and adults (West & Sheldon, 1988 as cited in Witney, 1997).

Bowlby (1973,1979, 1980, as cited in Witney, 1997) following on from his work on infants claimed that those individuals that emerged from families that were warm, stable and close-knit were shown to have a secure presence in the world. This mode of attachment permits the development of individuals who can function autonomously and trusting in the context of close interpersonal relationships. Bowlby (1977, as cited in Witney, 1997) further described three patterns of insecure attachment that he observed amongst an adolescent and adult clinical population. He termed these anxious attachment, compulsive self-reliance, and compulsive care giving (Lyddon, Bradford & Nelson, 1993; Witney, 1997).

Adolescents or adults that showed anxious attachment, constantly worried about the availability of their attachment figures. Bowlby noted that these individuals were more dependent on others for decision making and problem solving, demonstrated urgent and repeated care seeking behaviours, and reacted strongly to anticipated or actual separation (Bowlby, 1977, as cited in Witney, 1997).

The second adult attachment pattern is compulsive self-reliance or avoidant attachment. Individuals with this pattern of attachment behaviour tend to demonstrate a high rate of self-sufficiency and reliance, are often distrustful of intimate relationships and will avoid requesting assistance from others (Biringen, 1994, as cited in Witney, 1997; Lyddon et al., 1993).

The last insecure pattern proposed by Bowlby is compulsive care giving. These individuals form close relationships and will place themselves in the role of caregiver, while disallowing themselves to receive care (Lyddon et al., 1993). Bowlby (1977, as cited in Witney) noted that these adults had childhood experiences of being prematurely placed in positions of great responsibility.

Ainsworth (1991) also noted that young persons or adolescents become increasingly concerned with the search for close relationships and it is in these relationships that the care giving and attachment systems are usually involved. In childhood this is often a search for a close relationship with a peer of the same sex and later in adolescence, usually of the opposite sex. Ainsworth (1989, as cited in Witney) stated that in adulthood these affectional bonds are characterized by a desire to maintain closeness with a partner who is believed not to be interchangeable with another person. Attachment relationships are seen as a particular type of affectional bond within which the individual seeks closeness and when attained, experiences feelings of comfort and security (Witney, 1997). Freeney and Raphael (1992, as cited in Witney, 1997) argue that adult friendships, particular those formed under stressful or highly emotionally charged situations may be considered attachment relationships.

Batholomew and Horowitz (1991) proposed four different adult attachment patterns based on an individual's level of avoidance and anxiety. While this model is similar to other models of adult attachment, its' difference lies in the further distinction made in the insecurely attached group. They conceptualise adult attachment styles as having two underlying dimensions: models of the self (positive-negative) and models of other (positive- negative) (see Figure 1). These dimensions define the four possible attachment styles; these being Secure (positive models of self and others), Insecure or Preoccupied (negative models of self and positive models of others), Dismissing (positive models of self and negative models of others) and Fearful (negative models of self and negative models of others) (Batholomew and Horowitz, 1991).

		<b>MODEL OF SELF (Dependence)</b>	
		<b>Positive (Low)</b>	<b>Negative (High)</b>
<b>MODEL OF OTHER (Avoidance)</b>	<b>Positive (Low)</b>	<b>Secure</b>	<b>Preoccupied</b>
	<b>Negative (High)</b>	<b>Dismissing</b>	<b>Fearful</b>

**Figure 1: Model of adult attachment (Bartholomew and Horowitz, 1991)**

Most of the research into adult patterns of attachment indicates that between one half of the population is securely attached. Using their model Bartholomew and Horowitz (1991, as cited in Ahern & LeBrocq, 2003) found that 50.7% of their sample were classified as having secure attachment styles, 25.3% classified themselves as dismissing, 15.8% as fearful and 8.2% as preoccupied. Bartholomew and Horowitz (1991) had similar findings in their sample of university students; 47% of their sample was securely attached, 18% were dismissing, 21% fearful, and 14% were classified as preoccupied.

Longitudinal Research conducted by Waters, Merrick, Treboux, Crowell and Albersheim (2000, as cited in Jorgensen, 2004) found that an overall 72% of infants demonstrated the same attachment classification in early adulthood. They concluded that their results support Bowlby's premise that individual difference in attachment security can be stable across the life span (Waters et al., 2000, as cited in Jorgensen, 2004). Similar conclusions were drawn from a longitudinal study conducted by Hamilton (2000, as cited in Jorgensen, 2004). She

reported that the stability of secure versus insecure classifications was 77% and that infant classifications were a significant predictor of adolescent's attachment classification (Jorgensen, 2004). These studies support the conclusions that attachment patterns can be relatively stable from infancy through to early adulthood.

#### **2.2.4 Attachment theory as applied to a South African cross-cultural population**

South Africa is a developing country, largely characterised by high levels of poverty and inequalities. As a result of the apartheid past, conditions of adversity disproportionately affect the White, Black and Indian populations. The effect of poverty, inequalities and the legacy of the South African past are evident across all aspects of children's development, and are apparent in high infant mortality rates, stunted growth, high rates of school drop outs, high rates of homelessness and criminality. Many children have lost either one or both parents to AIDS (Tomlinson, Cooper & Murry, 2005).

Van Ijzendoorn and Kroonenberg (1988) found that the effects of environmental stress appeared to be an implicating factor in the vast differences observed between both cross-cultural and intra-cultural studies. They highlighted that in studies conducted in developing countries or in contexts of high political instability, and/or low socio-economic status, children showed greater frequency of avoidant and anxious attachment (van Ijzendoorn & Kroonenberg, 1988).

Tomlinson et al. (2005) recently considered attachment within a South African township as compared to global patterns of attachment. They found that a 61.9% of children within this sample were classified as secure. They comment on the unexpectancy of this result given the extreme level of social adversity within the community. Nevertheless, they found that these results were consistent with other recent studies within developing populations (Tomlinson

et al., 2005). The authors noted that one possible explanation for the high rate of secure attachments in this community was the protective contribution of the social and cultural organization (even in the midst of extreme poverty) of this community. Despite the extreme levels of adversity and the legacy of the apartheid system that had the effect of destroying family structures and community cohesion, there still exists a humanity and compassion for neighbours and the wider community.

*“In African parlance, this notion of community spirit and compassion for others is known as ‘Ubuntu.’ Infants and young children are seen as belonging, to some extent, to the community, and responsibility for their safety and well being is seen as a collective responsibility” (Tomlinson et al., 2005 pg 1051).*

However, a quarter of attachments were found to be anxious. While this rate of anxious attachment is high, as compared to other international studies, the authors argue that this is appropriate for this community, where the prevalence of domestic violence, and HIV/AIDS is high (Tomlinson et al., 2005).

Minde, Minde and Vogel (2006) following up on the above research found that in other communities around South Africa there was a high concordance in attachment ratings of insecurely attached children (67%) and low rates (less than 30%) of securely attached children. They argued that this is a more accurate reflection of the rate of attachment as their study had a cross-section of different cultures (Minde et al., 2006).

In both studies there were low rates of avoidant attachments reported (Minde et al., 2006; Tomlinson et al., 2005). Care giving practices associated with infant avoidance, such as rejection of attachment bids and the lack of close physical contact or tender holding, infant

avoidance, were not found within 96% sample. Many of the homes in the sample consisted of one room, resulting in all the mothers' daily activities occurring in the presence of the infant. Together with demand feeding and close sleeping arrangements, most of the infants were still sharing a bed with their mother at 18 months, this contributes to high levels of maternal physical availability. This close proximity makes maternal rejection of infant attachment bids during distress less likely. An additional factor that may contribute to the low level of avoidant attachment is the practice of infant

carrying (Minde et al., 2006). Infants are frequently carried on their mothers' backs. Notably, Anisfield, Casper, Nozyce, and Cunningham (1990) found that increased physical contact between mother and infant (by way of a baby carrier) promoted secure attachment amongst infants of low income, and that the rate of avoidant infant attachment was significantly lower among those who used the baby carriers.

### **2.2.5 Attachment as romantic love**

In the mid-1980's, researchers began to investigate how attachment style and orientation might apply to people's cognitive-emotional attitudes toward romantic love and intimate relationships (Hazan & Shaver, 1987). A growing body of evidence has shown that attachment orientations significantly influence the way people think and feel about their romantic relationships (Feeney & Noller, 1996).

Hazan and Shaver (1987) were the first researchers to explore Bowlby's ideas in the context of romantic relationships. According to Hazan and Shaver (1987), the emotional bonds that develops in adult romantic attachment is partly a function of the same motivational system that gives rise to the emotional bonds between an infant and its caregiver. They further maintained that romantic love is an attachment process (a process of becoming attached),

which is experienced differently by different people because of the variation in their attachment histories (Hazan & Shaver, 1987, as cited in Jorgensen, 2004). These findings were derived from two studies, in which similar findings were shown. They concluded that: (1) the relative prevalence of the three attachment styles, namely secure, avoidant and anxious/ambivalent, is approximately the same in adulthood as in infancy; (2) the three kinds of adults differ predictably in the way that they experience romantic love; and (3) attachment styles are related in a theoretical meaningful way to mental models of self and social relationships and to the relationship experiences with their parents (Hazan & Shaver, 1987).

Hazan and Shaver (1987) found that securely attached adults described their love relationships as happy, friendly, and trusting, emphasizing their ability to support and accept their partners despite their faults, and had relationships that to last longer than either avoidant or anxious/ambivalent attached adults. Romantic relationship of avoidant/anxious respondents were characterized by a fear of intimacy and a discomfort with closeness, whereas the anxious/ambivalent respondents emphasize love as involving obsession, extreme sexual attraction and jealousy (Hazan & Shaver, 1987; Volling, Notaro & Larsen, 1998).

Attachment styles have been shown to relate to variations in emotionally intimate behaviours, such as self-disclosure within romantic relationships. Securely attached individuals have been found to have with higher levels of self-disclosure (Bartholomew & Horowitz, 1991; Gentzler & Kerns, 2004). Anxious/ambivalent individuals have also been linked to high disclosure and more intimate behaviours, however they tend to be inappropriate in their high levels of self-disclosures and are further characterised as demanding towards others to get their attachment needs met (Bartholomew & Horowitz, 1991; Gentzler & Kerns, 2004). Avoidant individuals in contrast report less intimacy and do comparatively less self-disclosing than others (Bartholomew & Horowitz, 1991;



Gentzler & Kerns, 2004). In comparison to securely attached individual, avoidantly attached individuals tend to lessen emotional intimacy and dependent/ambivalent individuals are needy of emotional intimacy (Gentzler & Kerns, 2004).

Hatfield and Rapson (1996, as cited in Bachman & Zakahi, 2000) argued that a more comprehensive model is needed to understand attachment as romantic love. They proposed a unified theory, which integrates typologies and principles of attachment theory and developmental stage theories, which consists of six attachment styles that they label love schemas. Hatfield and Rapson (1996, as cited in Bachman & Zakahi, 2000) suggested that love schemas are based on two factors: (1) the extent to which individuals are comfortable being emotionally close, and (2) their willingness to invest emotionally in romantic relationships. They found that secure types are equally comfortable being close to their partners and being independent; clingy types are comfortable with closeness but uncomfortable with independence, causing them to dependant on their partners; and the skittish type are uncomfortable with closeness but comfortable being independent, causing them to be overly self reliant. The fickle types tend to be uncomfortable with both closeness and independence, but tend to be ambivalent, that is they desire closeness but fear rejection. According to Hatfield and Rapson, (1996, as cited in Bachman & Zakahi, 2000) those who exhibit a casual love schema, may not have learnt to balance intimacy and independence, and thus are only interested in short term or causal problem free relationships. The last love schema proposed by Hatfield and Rapson (1996, as cited in Bachman & Zakahi, 2000) are individuals who are uninterested about being in close relationship.

The body of knowledge has continued to develop and show that attachment patterns deeply influence the way individuals think and feel about their romantic relationships (Freeney & Noller, 1996). Varying adult attachment orientations have been linked to patterns of romantic

relationship conflict and stress (Rholes, Simpson & Stevens, 1998), romantic satisfaction and harmony (Collins and Read, 1990), patterns of jealousy (Sharpsteen & Kirkpatrick, 1997), relationship trust (Mikulincer, 1998), support seeking and giving within intimate relationships (Simpson, Rholes, & Nelligan, 1992) and the temporal duration of romantic relationships (Hazan & Zeifman, 1999). In general, individuals that are securely attached tend to experience less conflict, more satisfaction, greater stability, and longer durations in their romantic relationships.

### **2.2.6 Attachment styles and sexuality**

Sexual behaviour is a defining feature of most romantic or intimate relationships and thus adult attachments can be used to understand the substantial variability in human sexual behaviour. Most attachment theorists argue that romantic love involves the integration of sexuality, caregiving, and the attachment process (Shaver, Hazan, & Bradshaw, 1988), specifically, that secure attachment is associated with healthy care giving and care seeking behaviours, mutual intimacy and pleasure in sexual relationships (Witney, 1997). Insecure or avoidant individuals have been found to be associated with an incapability or unwillingness to give or receive care. Therefore these individuals display a style of sexual behaviour that is characterised by emotional distance and/or promiscuity. Anxious or ambivalent attachment styles have been associated with compulsive care giving and care seeking behaviours (Witney, 1997). Sexual relationships or behaviours are used to satisfy their needs for love, care and security.

Findings for securely attached individuals correspond with patterns that secure individuals value emotional intimacy and are able to sustain romantic relationships. In particular, attachment security has been linked to the belief that sex should be restricted to committed romantic relationships (Gentzler & Kerns, 2004). Similarly, individuals who rate themselves

higher on attachment security, report fewer one-night stands, fewer sexual encounters with strangers or acquaintances, overall fewer intimate partners (Gentzler & Kerns, 2004) and are less likely to be involved in sexual encounters outside of the primary relationship (Feeney, Peterson, Gallois & Terry, 2000). Belskys (1999, as cited in Gentzler & Kerns, 2004) described secure individuals approach to sexual relationships as “quality versus quantity”(p. 250). In addition it was found that secure individuals reported more positive emotions than negative emotions about previous sexual encounters than did insecure individuals or avoidant individuals. These findings are consistent with Schachner and Shaver (2004) who highlighted that securely attached sexual relationships were devoid of game playing, they appeared more open to sexual exploration and enjoyed a variety of sexual activities, including mutual initiation of sexual activity and the enjoyment of physical contact.

Avoidant attachment has been linked to two approaches to limited intimacy in romantic relationships, being either avoiding sexual intercourse or engaging in casual sex. Studies indicate that individuals who rated themselves as avoidant were less likely to have engaged in sexual activity (Kalichmen, Sarwer, Johnson, Ali, Early & Tuten, 1993; Cooper & Shaver, 1998, as cited in Gentzler & Kerns, 2004). However, for those avoidant individuals who have engaged in sexual intercourse, studies have found that they have a greater acceptance of and engagement in casual sex with strangers (Gentzler & Kerns, 2004). For avoidant individuals, the preference for casual sex partners is consistent with the understanding that avoidant attachment has a relatively low desire for emotional intimacy and closeness in relationships. Avoidant individuals are less likely to have sexual intercourse to express love for one's partner but rather have reported that they engaged more frequently in having voluntary unwanted sexual intercourse as a result of feelings of obligation, and ease, when relative to refusal (Davis, Shaver, Vernon, Beitz & Follette, 2004).

Overall, studies are consistent in their findings that avoidant individuals have adopted a more casual attitude towards sex, they tend to have more one night stands and sexual encounters than secure or dependent individuals (Bogaert & Sadava, 2002; Freeny et al., 2000; Gentler & Kerns, 2004; Ridge & Feeney, 2001; Schacher and Shaver 2004). Tracy, Shaver, Albino and Cooper (2003) found that the sexual behaviour of avoidant individuals easily leads to the acquisition of sexually transmitted infections and they avoid talking about their or their partners sexual histories, and are less likely to seek medical treatment. However, Mikulincer (1998, as cited in Bogaert & Sadava, 2002) argued that due to the higher level of relationship distrust shown by avoidant individuals, they may increase condom usage and/or engage in less intimate sexual relationships, thus reducing sexually transmitted infections (STIs) and other health issues.

Dependent or ambivalent individuals report frequent and intense passionate relationships. Often they report believing in or reporting experiencing “love at first sight” rather than believing love grows slowly out of friendship (Witney, 1997). Individuals that report dependent attachment often report craving the emotional closeness that is experienced in intimate relationships, however they have difficulty in maintaining such relationships (Gentler & Kerns, 2004). Unlike avoidant or anxious individuals, they are less accepting of sexual relationships out of committed relationships (Simpson & Gangestad, 1991). However their need for intimacy and care makes them more likely to engage in risky sexual experiences. Highly dependent individuals report being less able to discuss contraception with their partners (Gentler & Kerns, 2004) and less resistant to being pressured into unwanted sexual experiences (Freeney et al., 2000). Freeney et al. (2000) reported that dependent individuals are more likely to engage in risky sexual behaviour practices than secure or avoidant individuals.

### **2.2.7 Attachment styles and motivations to engage in risky sexual behaviour.**

Attachment theory provides a framework for understanding how and why people might vary in the degree to which they need or rely on others to regulate their feelings about themselves. It has been established that applying adult attachment to adult romantic relationships, individual differences exist in the willingness to become intimate with one another. Secure individuals are more likely to engage in meaningful intimate relationships, while avoidant individual may have difficulty or no desire to form intimate relationships.

Research by Tracy, Shsaver, Albino and Cooper (2003), found that avoidant individuals initially engage in sexual intercourse to lose their virginity. They found avoidant individuals' motivation to engage in sexual activities to be concerned with self-enhancement and how they appear to others.

### **2.2.8 Attachment styles, sexual behaviour and self-esteem**

One possible correlate of risky sexual behaviour in university students has been identified as low self-esteem. Self-esteem is generally used to refer to an individual's evaluation of him or herself, including feelings of self worth (Bylsma, Cozzarelli & Sumer, 1997; Wild, Flisher, Bhana & Lombard, 2004). Theorists have argued that an individual with low self-esteem is predisposed to adopt risky sexual behaviours, although the reason for this differs. Empirical evidence for a relationship between an individual's self-esteem and risky sexual behaviour has been shown to be inconsistent (Hollar and Snizek, 1996). However methodological issues, such as the different operational definitions of self-esteem (Wild et al., 2004), are the probable reason for the inconsistencies in these findings. However, the majority of studies find that adolescents and young adults who have lower levels of self-esteem may be more willing to engage in risky sexual behaviours (Keeling, 1991). Keeling (1991) argues that with increased

levels of self-esteem, comes a heightened level of accountability and responsibility for one's actions. Hollar and Snizek (1996), in evaluating the influence of students levels of self esteem as they relate to the tendency to engage in risky sexual behaviour, found that students of both genders with high levels of self esteem did engage in conventional risky sexual behaviour, even when possessing knowledge of STI's and HIV. They attributed this participation in conventional risky sexual behaviours to be a status enhancer, with a university subculture and thus increasing those participants self-esteem (Hollar & Snizek, 1996).

However, the existing literature reveals that there are no studies that focus on attachment style, self-esteem and risky sexual behaviour. A number of researchers and theorists have advocated for the importance of attachment theory and how it intersects with other literature and perspectives (Bylsma, et al., 1997; Hazan & Shaver, 1994). Many of the mechanisms by which attachment styles develop and change are clearly related to the processes involved in the formation of self-concept and self-esteem (Ahern & LeBrocq, 2003; Cassidy, 1990).

Bowlby (1973, as cited in Bylsma, et al., 1997) and Bartholomew and Horowitz (1991, as cited in Bylsma, et al., 1997) characterised the self-model underlying attachment styles as reflecting a sense of lovability or being worthy of love. Several other studies have supported the claim that attachment styles and self-esteem are related (Alonso-Arbiol, Shaver & Yarnoz, 2002; Bylsma, et al., 1997; Collins & Read, 1990; Feeny & Noller, 1990). For example, Bartholomew and Horowitz, (1991) and Griffin and Bartholomew (1994) found that higher levels of self esteem were associated with respondents who described themselves as secure or dismissing (positive self-models) than those who described themselves as preoccupied or fearful (negative self-model).

### **2.2.9 Summary**

Research has shown that behaviour change of sexual practices has low efficacy rates and therefore research around individual factors that hamper or enhance behaviour change are pertinent to understanding and informing effective behavioural change interventions (UNAIDS). Attachment theory provides a useful framework to explore the interpersonal nature of risky sexual behaviour.

Attachment theory is a theoretical perspective that proposes that most young children form emotional attachment to their caregivers, on whom they are reliant for protection comfort and support (Bowlby, 1982 as cited in Davis, Shaver & Vernon, 2004). Adult attachment processes have been related to numerous relationship-oriented behaviours (Hazan & Shaver, 1987 as cited in Bogaert & Sadava, 2004). There is growing body of knowledge on the relationship between adult attachment and sexual behaviour. However few studies have exclusively studied the relationship between adult attachments and risky sexual behaviour. Furthermore little research has been done to determine whether additional variables need to be accounted for. Gentzel and Kerns (2004) argue that studies need to include variables such as self-esteem. Examining current research, it is evident that there is a need to examine the moderating effects on self-esteem on adult attachment and risky sexual behaviour.

# Chapter 3 - Methodology

This chapter outlines the proposed aims and hypotheses of the current study. In addition, the characteristics of the research design, sample and assessment instruments will be presented.

## 3.1 Rationale

Risky sexual behaviour is the major factor in the rising rate of sexually transmitted infections. Over the years there have been numerous studies, which have been largely devoted to understanding to aspects of HIV transmission. As more research has been conducted, numerous other variables have been associated with the risk for HIV infection (Lindegger, 1992, as cited in Witney, 1997). The focus of this research project is to explore the previously little investigated notion of adult attachment behaviour and its relationship to high-risk sexual behaviours. Since adult attachment behaviour performs a significant function in intimate relationships, and since STI's are primarily transmitted through sexual intercourse, it is likely that attachment difficulties exert an influence on an individual's risk behaviour (Witney, 1997).

## 3.2 Aims and hypotheses

The fundamental aim of this investigation was to explore the relationships between reported risky sexual behaviour practices and attachment styles and further to determine whether self-esteem moderates this relationship. Using a survey of university students, in South Africa, this research project, attempted to ascertain the relationship between an individual attachment style and their ability to negotiate and practice safe sexual behaviours.



The following hypotheses, generated from the literature review, were formulated to address the research aims outlined above:

## **Hypothesis 1**

Risky sexual behaviours are associated with distinct attachment styles (viz. Close, Dependent and Anxious) on the Adult Attachment Scale.

- 1a** Anxious and Dependant attachment style will be significantly positively associated with risky sexual behaviour. Close attachment style will be negatively associated with risky sexual behaviour.

## **Hypothesis 2**

There will be a significant correlation between attachment dimension and the subscales of the Past and Present Sexual Behaviour Questionnaire.

- 2a** Dependent attachment style will be associated with less regular use of condoms. Close and Anxious attachment styles will associated with regular use of condoms
- 2b** Anxious attachment style will be associated with more sexual partners and casual sexual encounters (one-night-stands). Close and Dependant attachment style will be associated with less casual sex (one-night stands) and less sexual partners.
- 2c** Anxious attachment style will be associated with more alcohol use before engaging in sexual activity. Close attachment style will be associated with less alcohol before engaging in sexual activity.

### **Hypothesis 3**

An individual's self-esteem will moderate the relationship between attachment styles and risky sexual behaviours as measured on the Past and Present Sexual Behaviour Scale..

## **3.3 Research Design**

This study used a quantitative, non-experimental, correlational design. The study focused on relationship between (or among) two or more variables, viz. attachment style and sexual risk behaviour.

## **3.4 Sample**

The sample consisted of 211 undergraduate students registered at the University of KwaZulu-Natal, Pietermaritzburg campus, including males and females. An undergraduate university sample was chosen as a number of studies in similar research areas have used a similar sample group (Witney, 1997).

Sexual activity rarely begins before puberty and most adolescents are sexually active by mid to late adolescence (age 14-18). Research indicates that 60% of university students are sexually active (Brook et al., 2006; Hollar & Snizek, 1996; Taylor- Seehafer et al., 2000). The age range for this current sample was postulated to fall between 17-25 years of age, and therefore considered to be suitable for research of this nature.

It must however, be acknowledge that the sample for this study is essentially a convenience sample as the students were accessed and approached via lectures known to the researcher. Students were not randomly sampled as this would have been beyond the time and resource constraints, and thus this research must be considered a pilot study.

## 3.5 Instruments

Self-administered questionnaires were used to collect the relevant data. Advantages include the provision of a relatively simple and straightforward approach to the study of attitudes, values, beliefs and motives and the fact that they may be adapted to collect generalisable information from almost any human population. However, it is important to be aware of a problem with regard to generalisability, which occurs when seeking to generalise from what people *report* in a questionnaires to what they actually *do* - there is a notoriously poor relationship between attitude and behaviour (Hanson 1980 as cited in Robson 2002).

The complete survey measure is a 45 item self-administered scale. Participants were asked to respond anonymously to the items, providing only general demographic details, such as age and gender. Some items are of a forced choice nature, while other items are to be rated on a Likert scale of one through five.

The variables assessed by the questionnaire include the following: demographics, self-esteem, past sexual history and attachment dimensions.

### 3.5.1 Measure of self-esteem

In order to measure risky sexual behaviour, a 10-item measure developed by Rosenberg (1989, as cited in Gentzel & Kerns, 2004) was included in the questionnaire.

The Rosenberg Self-Esteem Scale (RSE; Rosenberg 1989) is a uni-dimensional measure of global self-esteem. It was designed to be a Guttman scale, which means that the RSE items were to represent a continuum of self-worth statements ranging from statements that are endorsed even by individuals with low self-esteem to statements that are endorsed only by persons with high self-esteem (Rosenberg, 1989).

The original sample for which the scale was developed in the 1960s consisted of 5,024 high school juniors and seniors from 10 randomly selected schools in New York State and were scored as a Guttman scale. The scale generally has high reliability: test-retest correlations are typically in the range of .82 to .88, and Cronbach's alpha for various samples are in the range of .77 to .88 (Rosenberg 1989). Silbert and Tippet (1965), with a sample of university students, found the sample to have a reliability of .85 and this was further demonstrated in research done by Shahani, Dipboye, and Phillips (1990).

### **3.5.2 Past and present sexual Sexual Behaviour Questionnaire**

This study used the questionnaire developed by Snell (2001) to measure risky sexual behaviour. Participants were required to report on several aspects of current and previous sexual relationships, such as length of and sexual exclusivity and number of previous sexual partners. The 10 items on the questionnaire most succinctly capture an individual's risk status. It is highly likely that the measure would demonstrate predictive validity even though this measure has not been tested statistically. It is therefore not possible to discuss reliability data. However, given the simplicity of the measure and the specific behaviours it measures, it is likely to be reliable.

### **3.5.3 Adult Attachment Scale**

The Adult Attachment Scale (AAS) is a self-administered measure in which subjects are requested to read each of the 18 statements and then rate themselves on a 5 point Likert scale which indicates the extent to which the statements describe their feelings about romantic relationships. It was developed by Collins and Read (1990) as a dimensional measure of attachment, in an attempt to overcome inherent problems with the categorical approach as proposed by Hazan and Shaver's (1987), in the Close Relationship Questionnaire. The

paragraphs used in the Close relationship questionnaire were broken down into their core statements and used as a basis for Collins and Reads (1990) scale. As a result 15 items, five from each attachment style, were constructed. A further six statements were developed by Collins and Read (1990) to measure two important aspects of attachment that were not included in Hazan and Shaver's (1987) measure. These were beliefs held by the participants to determine firstly whether the attachment figure will be available and responsive when needed and secondly the reactions to separation from the caretaker.

Collins and Read's (1990) scale initially contained 21 items, seven for each of the attachment styles. After further analysis Collins and Read (1990) found that items relating to responses to separation had an eigen-value less than one and did not account for a substantial variance. They were thus deleted, and as a result an 18-scale item was retained.

The measure contains three subscales, each comprised of six items. The three subscales are named "Close", "Depend" and "Anxiety". The Close scale measures the extent to which a person is comfortable with emotional closeness. The Depend scale measures the extent to which a person feels they are able to rely on the availability of others when required. Finally, the Anxiety subscale assesses the extent of concern a person has about being abandoned or unloved (Collins & Read, 1990). Since Collins and Read (1990, cited in Witney 1996) make the case for the three dimensions of attachment in their measure underlying the three discrete styles described initially by Ainsworth, it is possible to assume that the three dimensions obtained in this study are equivalent to the styles described elsewhere.

Cronbach's alpha for the Depend, Anxiety and Close items of Collins and Read's (1990) Adult Attachment Scale were demonstrated to be .75, .72 and .69 respectively. Test-retest

correlations for Depend, Anxiety and Close were .71, .52 and .68 respectively (Collins & Read, 1990).

### 3.6 Procedure and Ethical Considerations

The researcher requested permission from undergraduate lecturers from different faculties to approach the students during their lecture periods. The lecturers agreed and indicated their willingness to provide the last twenty minutes of their lecture for data collection. The students were informed of the purpose of the study, and told of the intentions of the study was to consider the relationship between sexual behaviour and their attachment dimensions (Appendix A) The hypotheses of the study were not disclosed to prevent or limit any possible expectancy effect.

It was explained that participation was entirely voluntary and would not form any part of the course evaluation. It was indicated that the questionnaires were entirely confidential and thus they would not need to disclose their names or contact details. They were assured that access to the questionnaire would be limited to the research and supervisor of the study to maintain privacy. The informed consent forms were handed out preceded by the questionnaires (Appendix B).

The researcher was available during this time to answer any questions that arose. Most respondents completed and submitted the questionnaire during the scheduled time.

Participants who didn't complete the questionnaire in the allocated time were able to place their completed questionnaires within a box housed in the Psychology department.

Participants were encouraged to contact the campus Clinic or Student Counselling Centre, in the event that any concerns had been raised during the completion of the questionnaires. The

data collected from the questionnaires was entered in SPSS 15 (Statistical Programme for the Social Sciences, 2006) by the researcher for statistical analysis.

### **3.7. Analysis of Data**

Descriptive statistics were calculated to capture the demographic information, such as mean age, and gender make-up. Percentages were captured for regular sexual partners, number of one-night-stands, condom usages and treatment of a sexually transmitted infection.

Reliability coefficients (Cronbach's alpha) were calculated for Rosenberg self-esteem questionnaire, the Past and Present Sexual Behaviour Questionnaire and on the three sub-scales of the AAS to examine the level of internal consistency for this measure. Principal component factor analysis, with varimax rotation, was performed on the 18 items of the AAS to explore Collins & Read's (1990) rationale for reducing the 18 items into three dimensions and to examine whether this rationale is applicable to the current study's sample.

Correlation coefficients were computed between the sub-scales of the ASS and the Past and Present Sexual Behaviour Questionnaire sub-scales to observe the overall pattern of interrelationships between sexual behaviours, and attachment dimensions.

Multiple regression was used to determine if self-esteem mediated the relationship between attachment dimension and risky sexual behaviour.

# Chapter 4 - Results

This chapter reports on the results of the data analysis as outlined in chapter three.

## 4.1 Descriptive Statistics

Two hundred and eighty-one respondents returned the questionnaires. Sixty-two participants failed to complete the questionnaire and thus were omitted from the study. A further 8 participants were older than twenty-six and were also omitted from the study. The final sample comprised of 211 undergraduate students, registered at the University of KwaZulu-Natal, Pietermaritzburg campus. The participants ranged in age between 17 and 24 years, with a mean age of 20.03 (standard deviation = 1.5). The gender make up of this sample constituted 80 males (37.9%) and 131 Females (62.1%).

Forty four percent of the sample reported having had one regular sexual partner in the last year, 28% reported having between two and five regular sexual partners, and 4% reported having more than five regular sexual partners over the years. 19% of the sample reported to have never had sexual intercourse. Respondents were asked how many one-night stands they had encountered in the last 6 months, 62% had not had a one-night stand in the last 6 months. 28% of the sample had between one and five, and 10% had more than six such encounters.

Of those respondents that had sexual intercourse over the last six months, 40,5% reported always using condoms, while 52% reported infrequent use and 7,5% reported never using a condom. 13,5% of the sample reported being treated for a sexually transmitted infection in the past year.



## 4.2 Reliability

### 4.2.1 Rosenberg Self-Esteem Questionnaire

The 10 items on the Rosenberg self-esteem questionnaire produced a Cronbach Alpha of 0.779, which indicates that the Rosenberg self-esteem questionnaire is a reliable instrument and that all the items are correlated. Item 8 produced a negative item-total correlation, which could indicate poor wording of the question and might require revising, as it does not complement the other 9 items. When removing item 8, the total Alpha increases to .831. Thus, a more conservative approach was taken and item 8 was not included in any further analysis.

**Table 1: Chronbachs alpha calculated for The Rosenberg Self-esteem**

Items Self-Esteem	Item Total Correlation	Alpha if Item Deleted
1	0.66	0.73
2	0.56	0.74
3	0.34	0.77
4	0.48	0.75
5	0.43	0.75
6	0.35	0.76
7	0.36	0.75
8	0.20	0.83
9	0.56	0.74
10	0.54	0.74
<b>Total Cronbach's Alpha</b>		<b>0.77</b>

### 4.2.2. Past and Present Sexual Behaviour Questionnaire

The 10 items on the Past and Present sexual behaviour questionnaire produced a Cronbach Alpha of 0.601, which indicates this questionnaire is a moderately reliable instrument.

### 4.2.3 Adult Attachment Scale (AAS)

There is a reasonable internal consistency across the AAS subscales of Close, Dependant, and Anxious with Cronbach Alpha of 0.65 for each respectively. This can be considered fair given

that each sub-scale comprises of only six items. Collins and Read (1990) report higher internal consistency for Close, Dependant and Anxiety of 0.69, 0.75 and 0.72 respectively.

**Table 2 : Cronbach's alpha for six items of Close sub-scale of the AAS, N=211**

Items Close	Item Total Correlation	Alpha if Item Deleted
1	0.54	0.66
6	0.38	0.54
8	0.52	0.62
12	0.63	0.51
13	0.05	0.68
17	0.25	0.62
<b>Total Cronbach's Alpha</b>		<b>0.65</b>

**Table 3 : Cronbach's alpha for six items of Depend sub-scale of the AAS, N=211**

Items Depend	Item Total Correlation	Alpha if Item Deleted
2	0.38	0.61
5	0.42	0.60
7	0.40	0.60
14	0.31	0.63
16	0.34	0.63
18	0.44	0.59
<b>Total Cronbach's Alpha</b>		<b>0.65</b>

**Table 4 : Cronbach's alpha for six items of Anxious sub-scale of the AAS, N=211**

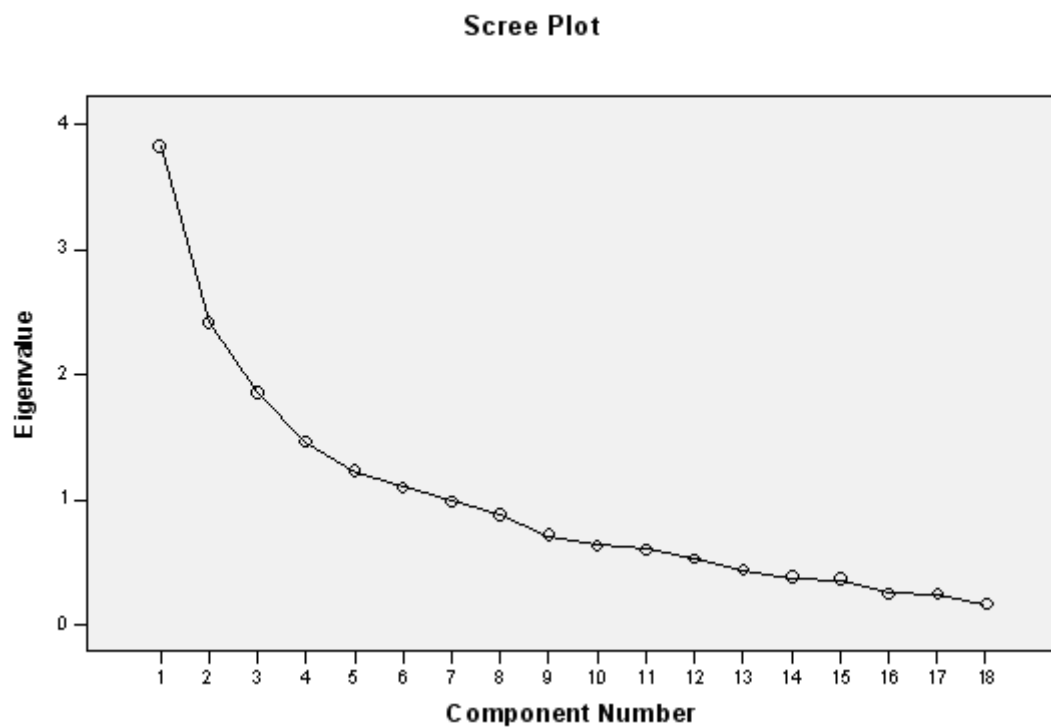
Items Anxiety	Item Total Correlation	Alpha if Item Deleted
3	0.27	0.66
4	0.55	0.54
9	0.36	0.62
10	0.62	0.51
11	0.18	0.68
15	0.38	0.62
<b>Total Cronbach's Alpha</b>		<b>0.65</b>

#### **4.2.3.1 Factor Analysis**

A factor analysis was conducted to explore the extent to which the items correspond with the three factors identified by Collins and Read (1990). Collins and Read (1990) claimed that

factor 1 contains items concerning the extent to which participants could trust and depend on others to be available when needed (Dependant). Factor 2 consists of items that reflect anxiety in a relationship, such as fear of being abandoned and not being loved (Anxiety). Factor 3 contains items regarding the extent to which participants were comfortable with closeness and intimacy (Close).

Principal component analysis with varimax rotation and Kaiser normalization was performed on the data. In Figure 2, the scree plot suggests a finding similar to that of Collins and Read (1990). It can be concluded that Collins and Read (1990) were justified in their inclusions of three factors, as there is a slight dip in the curve after three factors.



**Figure 2: Scree Plot of principal component analysis with varimax rotation and Kaiser normalization of the eigenvalues. Components reflect the 18 attachment variables**

**Table 5 : Rotated Component Matrix for AAS scale items and factor loadings. Comparison of current study with Collins and Read's (1990) study**

Sub-Scale	Items	Factor 1		Factor 2		Factor 3	
		Depend		Anxious		Close	
		Current Study	Collins & Read (1990)	Current Study	Collins & Read (1990)	Current Study	Collins & Read (1990)
<b>Depend</b>	1	0.72	0.54	-0.06	-0.18	-0.06	0.06
	2	0.46	0.48	0.41	0.26	-0.21	0.09
	3	-0.57	-0.58	-0.10	0.24	0.01	-0.09
	4	-0.26	0.66	-0.21	-0.18	0.61	0.03
	5	0.55	0.38	0.12	0.13	-0.10	0.12
	6	0.75	0.71	-0.03	0.14	-0.02	-0.10
<b>Anxious</b>	7	-0.11	0.03	-0.38	-0.48	0.12	-0.19
	8	0.17	0.09	0.78	0.64	-0.03	0.21
	9	-0.18	0.11	0.54	0.47	-0.19	-0.13
	10	0.14	0.11	0.82	0.62	0.00	0.15
	11	0.15	-0.11	0.40	0.49	0.49	-0.14
	12	-0.14	0.05	0.61	0.55	-0.12	-0.14
<b>Close</b>	13	0.09	-0.16	0.09	0.02	-0.74	-0.45
	14	0.01	0.07	0.11	0.01	-0.63	-0.46
	15	-0.03	0.05	-0.12	0.04	0.72	0.71
	16	-0.12	-0.02	-0.24	0.20	0.76	0.77
	17	0.20	-0.03	-0.15	0.08	-0.18	-0.40
	18	-0.08	0.07	-0.35	-0.03	0.31	0.29

In Table 5 It can be seen that Collins and Read (1990) interpreted factor loading of .30 or larger as defining a factor, with the exception of item 18 (whose highest loading was .29). In the current study a similar pattern was observed, indicating an overall correspondence with the three factors highlighted by Collins and Read (1990). However, some differences were noted with certain items. Item 4 corresponded weakly with the depend factor (-.26) but corresponded strongly with the Close factor (.61). Item 4 reads “I know that others will be there when I need them” and requires reverse scoring of the participants’ responses. This suggests that this item might have been more appropriate to include in the Close items, and that the mere reversal of the score does not adequately distinguish it as an item relating to the Depend attachment dimension. Item 11 (“I want to merge completely with another person”) correlates slightly closer with factor 3, Close, (.49) than with factor 2, Anxious, (.40). Item

18, does not appear to correlate to any of the factors and could possibly be omitted from this study.

## 4.3 Hypothesis 1

### 4.3.1 Relationship between total risk behaviour and AAS scales

It is hypothesised that risky sexual behaviours, as measured on the Past and Present Sexual Behaviour Questionnaire are associated with distinct attachment styles (viz. Close, dependent and Anxious), as measured on the Adult Attachment Scale. In particular Anxious and Dependent attachment style will be significantly positively associated with risky sexual behaviour. Close attachment style will be negatively associated with risky sexual behaviour.

**Table 6 : Classification of participants on Adult Attachment Scale (N = 211)**

		Frequency	Percent	Valid Percent	Cumulative Percent
<b>Valid</b>	<b>Close</b>	110	52.1	52.1	52.1
	<b>Depend</b>	34	16.1	16.1	68.2
	<b>Anxious</b>	67	31.8	31.8	100.0
	<b>Total</b>	211	100.0	100.0	

Table 6 indicates that the highest percentages of participants for the sample were assigned to the Close attachment dimension (52.1%). A reasonable proportion of the samples were assigned to the Anxious attachment dimension (31.8%), while few participants were assigned to the Dependent attachment dimension (16.1%).

**Table 7 : Correlations between the dimensions on the AAS and the Past and Present Behaviours Questionnaire**

	<b>Close</b>	<b>Depend</b>	<b>Anxious</b>
<b>Risk Score</b>	- 0.247**	0.575**	0.653**
<b>Sig. (2-tailed)</b>	0.001	0.001	0.000

\*\* Correlation is significant at the 0.01 level

The findings indicate a significant relationship for all of the three attachment dimensions and total sexual risk behaviour. A moderate negative relationship (Table 7) was found between the scores on the Past and Present Sexual Behaviour Questionnaire and the Close attachment dimension (0.247,  $p < .01$ ). A positive relationship was found between the Past and Present Sexual Behaviour Questionnaire and the Dependent attachment dimension (0.575,  $p < .01$ ). Furthermore, the results indicate a significant positive relationship between the Past and Present Sexual Behaviour Questionnaire and the Anxious attachment dimension (0.653,  $p < .01$ ).

### **4.3.2 Summary of Findings**

The above results confirm hypothesis 1, as an association was demonstrated between total risky sexual behaviours and attachment dimension. Hypothesis (1a) was partially confirmed in that high-risk sexual behaviours are positively correlated with Dependent and Anxious attachment style. Overall, these results suggest that students with Anxious and Dependent attachment style are more likely to indulge in high-risk sexual behaviour, and students with a Close attachment style are less likely to indulge in high risk sexual behaviour.

## **4.4 Hypothesis 2**

### **4.4.1 Relationship between Past and Present Sexual Behaviour subscales and AAS Dimensions**

It is hypothesized that there will be a significant correlation between attachment dimension and the subscales of Past and Present Sexual Behaviour Questionnaire.

1. Dependent attached styles will be associated with less regular use of condoms. Close and Anxious attachment styles will be associated with regular use of condoms.

2. Anxious attachment style will be associated with more sexual partners and casual sexual encounters (one-night-stands). Close and Dependant attachment style will be associated with less casual sex (one-night stands) and less sexual partners.
3. Anxious attachment style will be associated with more alcohol use before engaging in sexual activity. Close attachment style will be associated with less alcohol before engaging in sexual activity.

**Table 8 : Correlations between the dimension on the AAS and the Past and Present Sexual Behaviour Questionnaire**

	<b>Close</b>	<b>Depend</b>	<b>Anxious</b>
<b>Sexual Partners / Year</b>	- 0.098	0.088	0.416**
<b>One-Night Stands (Casual Relationships)</b>	- 0.213**	0.270**	0.459*
<b>Alcohol</b>	0.147	0.231*	0.304*
<b>Condoms</b>	- 0.236*	0.626**	0.732**

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

Table 8 shows that Close attachment style is negatively correlated with condom use, which reveals that they more likely to use condoms, because of the direction of scoring of the condom use sub-scale, and less likely to engage in one night-stands.

The results show that Dependent attachment dimension are more likely to have one-night stands per year, ingest alcohol before engaging in sexual activity and are further more likely to engage in unprotected sexual intercourse.

A positive relationship was found between the number of sexual partners per year and the Anxious attachment dimension indicating that anxiously attached participants are more likely to have more sexual partners per year. It is further indicated from the results that they are likely to engage in casual sexual intercourse. The findings reflect a positive relationship between alcohol usage and the Anxious attachment dimension, indicating that they more

likely to use alcohol before engaging in sexual activity. Anxiously attached participants are more likely to engage in unprotected sexual intercourse.

#### **4.4.2 Summary of Findings**

The above results confirm that there is a correlation between the subscales of the Past and Present Sexual Behavioural Questionnaire and the AAS dimensions. Hypothesis (2a) was confirmed as there is a positive relationship found between non-use of condoms and Dependent attachment dimension. Therefore the stronger the Dependent attachment dimension the less likely these participants are to use condom regularly. It was further found that Anxiously attached students were less likely to use condoms and those that rated higher on the Close attachment dimensions were more likely to regularly use condoms.

Hypothesis (2b) was found to be partially correct. Participants that rated higher on the Anxious attachment dimension were also likely to have more sexual partners per year. Further, participants on the Anxious and Dependent attachment dimension were found to be more likely to engage in casual sex (one night stands) than participants who rated highly on the Close dimension of attachment.

Regarding alcohol use before sex, the findings show that participants with an Anxious attachment are likely to consume alcohol before engaging in sexual relationship, whereas participants high on the Close dimension of attachment are less likely to use alcohol before sex, thus confirming the hypothesis (2c). In addition a positive relationship was shown between alcohol use and Dependent dimension of attachment.



## 4.5 Hypothesis 3

It was hypothesised that an individual's self-esteem will moderate the relationship between attachment styles and risky sexual behaviours.

**Table 9: Multiple Regression solution for moderated relationship between self-esteem, attachment styles and risky sexual behaviours**

Model	R	R Square	Adjusted Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.231 <sup>a</sup>	0.053	0.049	6.230	0.053	11.741	1	209	0.001
2	0.309 <sup>b</sup>	0.095	0.087	6.104	0.042	9.705	1	208	0.002
3	0.321 <sup>c</sup>	0.103	0.090	6.093	0.008	1.766	1	207	0.185
4	0.381 <sup>d</sup>	0.145	0.129	5.962	0.042	10.138	1	206	0.002
5	0.438 <sup>e</sup>	0.192	0.173	5.810	0.047	11.958	1	205	0.001
6	0.450 <sup>f</sup>	0.202	0.179	5.788	0.010	2.558	1	204	0.111
7	0.459 <sup>g</sup>	0.210	0.183	5.772	0.008	2.090	1	203	0.150
Predictors: (Constant), Gender Predictors: (Constant), Gender, Close Predictors: (Constant), Gender, Close, Depend Predictors: (Constant), Gender, Close, Depend, Anxious Predictors: (Constant), Gender, Close, Depend, Anxious, Self-esteem & Close Predictors: (Constant), Gender, Close, Depend, Anxious, Self-esteem & Close, Self-esteem & Depend Predictors: (Constant), Gender, Close, Depend, Anxious, Self-esteem & Close, SE Self-esteem & Depend, Self-esteem & Anxious									

**Table 10: Multiple Regression Coefficients for the moderated relationship between self-esteem, attachment styles and risky sexual behaviours**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	58.096	22.154		2.622	0.009
	Gender	- 2.633	0.851	- 0.200	- 3.093	0.002
	Self-esteem Score	- 1.596	1.029	- 1.314	- 1.551	0.123
	Close	- 0.223	0.511	- 0.111	- 0.436	0.664
	Depend	0.192	0.598	0.091	0.321	0.748
	Anxious	- 2.003	0.751	- 0.790	- 2.668	0.008
	Self-esteem & Anxious	0.072	0.034	1.338	2.112	0.036
	Self-esteem & Depend	- 0.009	0.028	- 0.141	- 0.320	0.749
	Self-esteem & Close	0.006	0.024	0.124	0.236	0.814

Dependant Variable: Risk Score

There is a significant relationship between self-esteem, attachment styles and risky sexual behaviours ( $R^2 = 0.220$ ) Examination of the coefficient table indicates that the only variable that will be moderated by self-esteem is the Anxious attachment dimension ( $B = .072$ ,  $t = 2.112$ ,  $p = .036$ ). The findings show that self-esteem measures slightly positively ameliorate the reduction in risk behaviour associated with an anxious attachment style.

# Chapter 5 - Discussion

In this chapter the results presented in chapter four will be discussed in terms of the original aims and hypotheses of this study and the literature review in chapter two. The limitations of this research will be presented with the implications of these findings for future research explored.

The aim of this investigation was to explore the relationship between reported risky sexual behaviour practices and attachment styles and to determine the moderating effect of self-esteem on this relationship.

The classification of the total sample into the three dimensions of attachment resembles Ainsworth's distribution of approximately 60% Secure, 20% Insecure and 20% Anxious. In the current sample a slightly lower percentage of the sample was classified as Close or Secure (52.1%) and as Depend (16.1%), a comparatively higher level of participants was classified as Anxious (31.8 %). However, these findings are similar to those found by Tomlinson et al. (2005).

The research did not account for possible cultural differences. It is possible that the distribution of attachment styles, and the difference from Ainsworth, could be due to culture variations. However, previous studies have suggested that there is often more intra-cultural differences within a population such as South Africa than between culturally divergent populations (van Ijzendoorn & Kroonenberg, 1988). Simbayi et al (2006) and Berg (2003) argue that in communities where unemployment is high, where there is high family discontent and where basic needs are not being met, the emotional life of infants is not a priority. There is a sense of privacy and possible shame and thus problems are often born silently. These

factors impact upon a study such as this, as it affects the eagerness of people to share intimate problems with strangers. They further highlight that often mothers who are the main caregivers are depressed. Simbayi et al (2006) and Berg (2003) both comment on the effect that this has on the mother child relationship and further highlight that majority of these infants show anxious attachment styles.

As discussed in section 2.2.6 of the literature review, many studies found a relationship between sexual risk behaviours and attachment patterns (Davis, et al. 2004; Gentzler & Kerns, 2004; Freeny et al., 2000; Schacher and Shaver 2004; Bogaert & Sadava, 2002; Ridge & Feeney, 2001, Witney 1997). More specifically, it was reported that the different attachment styles would affect the way in which people respond and behave in intimate sexual situations. This study set out to examine this relationship more closely.

It was hypothesized that risky sexual behaviour was correlated with attachment dimensions. Based on the literature it was proposed that Anxious and Dependant attached adults are more likely to engage in risky sexual practice than securely attached adults (Davis, et al. 2004; Gentzler & Kerns, 2004; Freeny et al., 2000; Schacher and Shaver 2004; Bogaert & Sadava, 2002; Ridge & Feeney, 2001).

Overall, the findings of this study support the claim that there is a relationship between risky sexual behaviour and attachment.

## **5.1. Relationship between risk behaviour and attachment dimension**

Hypothesis (1a), which stated Anxious and Dependent attached adults are more likely to engage in risky sexual practice than securely attached adults, was confirmed. The findings from this study are consistent with those of prior research (Davis, et al. 2004; Gentzler &

Kerns, 2004; Freeny et al., 2000; Schacher and Shaver 2004; Bogaert & Sadava, 2002; Ridge & Feeney, 2001). It was found that participants rating higher on the Close or Secure attachment dimension were less likely to engage in risky sexual behaviours. This is consistent with the findings reported by Gentzler and Kerns (2004).

The hypothesis that Anxious attachment would be linked to risky sexual behaviour was confirmed by this study. This finding is consistent with many other studies (Gentzler & Kerns, 2004; Schachner & Shaver, 2004). It has been suggested that people with Anxious attachment either avoided sexual intercourse or engaged in casual sexual encounters because of their attachment style (Schachner & Shaver, 2004). Individuals high on the Dependent attachment were reported more likely to engage in risky sexual behaviours. This confirms claims by Feeney et al. (2000) that, due to their heightened need for closeness and intimacy, these people will often engage in high-risk sexual behaviours out of fear that if they express the need for safe sex practices their partner might reject them.

## 5.2 Comparison of Adult Attachment Style Dimensions on Past and Present Sexual Behaviour Sub-scales.

It is hypothesized that there will be a significant correlation between attachment dimension and the subscales of Past and Present sexual behaviour questionnaire.

More specifically it was hypothesized (2a) that Dependent attached styles will be associated with less regular use of condoms. Close and Anxious attachment styles will be associated with regular use of condoms. The findings show that there is a positive relationship found between poor condom usage and participants on the dependent attachment dimension. (0.626,  $p < .01$ ). It was further found that participants on the anxious dimensions of attachment were

less likely to use condoms (0.723,  $p < .01$ ). Those that rated higher on the close attachment dimensions were more likely to regularly use condoms (-0.236,  $p < .05$ ).

Hypothesis (2a) was partially confirmed in that a significant number of participant on the dependent attachment dimension were less likely to use condoms during sexual intercourse than participants on the Close attachment dimension. However, it was hypothesized that participants on the Anxious attachment dimension were more likely to use condoms; this hypothesis was not confirmed.

This finding is similar to Feeney et al. (2000) who argued that dependent individuals who rated higher on sexual risk behaviour risk, not because of multiple partners but rather because of inconsistency condom usage. This could be due to their inability to discuss or negotiate condom usage as suggested by Gentler and Kerns (2004). Feeney et al, (2000) further argued that dependent participants do not engage in discussions of risky sexual behaviours with their partners for fear that they will alienate them. Another explanation can be that individuals high on Dependent attachment often depend on others to make decisions for them and thus rely on their sexual partner to decide whether they should use condoms (Bowlby, 1979).

The finding that participants on the Anxious attachment dimension of attachment were less likely to use condoms is inconsistent with other studies and claims. Mikulincer (1998, as cited in Bogaert & Sadava, 2002) argued that individuals high on Anxious attachment were more likely to use condoms due to the high levels of distrust that they exhibit. An explanation as to why Anxiously attached participants were less likely to use condom could be that the goal of these participants is to keep their intimacy level to a minimum and thus not engage in conversation around condom negotiation (Gentzler & Kerns, 2004). This is consistent with Impett and Peplau's (2002) study in which anxious participants, particularly women, reported

engaging in unprotected sexual intercourse with their current dating partners because it was easier than saying no or engaging in intimate conversations around establishing sexual norms.

It was found that participants on the close dimension of attachment are more likely to use condoms. This is consistent with other findings of Bogaert & Sadava, (2002) and Gentzler & Kerns, (2004). Moore and Parker-Halford, (1999, as cited in Bogaert & Sadava, 2002) who argued that Close attachment may be related to regular condom use in part because this dimension is associated with good partner communication, which has been shown to increase safe sex behaviours.

Hypothesis (2b), which states that participants on the Anxious dimensions will be highly correlated with engaging in one-night stands and more sexual partners than individuals on the Close and Dependent dimensions. This hypothesis was found to be partially confirmed in that high scores on the Anxious dimension of attachment were found to be highly correlated with having more sexual partners ( $r = .416, p < .01$ ) and more casual sexual encounters ( $r = .459, p < 0.05$ ). Participants on the Close dimensions showed no significant correlation to the number of sexual partners and were negatively correlated to casual sexual encounters ( $r = -0.213, p < .01$ ). Participants on the dependent dimension were found to be highly correlated to engaging in casual sexual encounters ( $r = .270, p < .01$ ). Therefore the hypothesis for Dependent attached participants is rejected.

Participants that scored high on the Anxious dimension of attachment were found to have more sexual partners and more casual sexual encounters. This finding is consistent with other research (Bogaert & Sadava, 2002; Freeny et al., 2000; Gentzler & Kerns, 2004; Ridge & Feeney, 2001; Schacher and Shaver, 2004). Although the literature does suggest that anxious attachment can be linked to both not engaging in sexual activity as well as engaging in casual

(unsafe) sex (Gentzler & Kerns, 2004). Either strategy would be consistent with the goal of limiting intimacy in sexual relationships (Bowlby, 1977). The former strategy would minimize physical intimacy, whereas the latter, which is of particular interest to this study, minimizes emotional intimacy. Thus anxious participants tend to have more sexual experiences outside of a long-term committed relationship, because they do not perceive emotional intimacy a prerequisite for physical intimacy (Gentzler and Kerns, 2004) or because they avoid the possibility of emotional intimacy. Taylor-Seehafer & Rew, (2000) argued that anxious individuals, particular the age group of this research, engage in casual sexual relationships for reasons other than intimacy or as an expression of love. It is likely they engage in sexual activity to fit in with their social group, or as a result of peer pressure or to be able to brag about it.

An interesting finding which is somewhat different from other studies is that on the Dependent dimension of attachment there is a high correlation with engaging with casual sexual encounters (one-night-stands). In contrast, Simpson and Gangestad (1991) found that Dependent individuals are less likely to engage in sexual relationships out of a committed relationship. An explanation for this finding in the present study could be that dependent individuals are using sexual encounters to attain proximity and receive care giving. This is somewhat supported by Schachner and Shaver (2004) who argued that dependent individuals use sex to feel emotionally valued.

Hypothesis (2c) which states that participants on the Anxious (.304,  $p < 0.05$ ) and Dependent (.231,  $p < .05$ ) dimensions will be highly correlated with ingesting alcohol before engaging in sexual activity compared to participants on the close dimension, was confirmed.



Research has found that risky sexual behaviour is more likely to occur when alcohol has been ingested (Temple & Leigh, 1992). These researchers (Temple & Leigh, 1992) suggest that alcohol may have more of an influence on sexual-decision making for adolescents and young adults, because they are not developmentally equipped to make safe sex decisions. Drinking before engaging in sexual activity may result in the avoidance of responsibility and the loss of personal control. The use of alcohol reported by insecure participants is consistent with other studies conducted with in a university population (Brennan, Clark Shaver, 1998), which found that dependent and anxious/ambivalent attachments were related to drinking in order to cope with negative worries and negative moods. Insofar as insecure individuals use alcohol to deal with anxiety and tension, there is a strong likelihood that alcohol use before sex may be a way of coping with the anxiety associated with anticipated sexual contact.

### **5.3 Self-Esteem, attachment dimensions and risk behaviour**

It is the hypothesis that an individual's self-esteem will moderate the relationship between attachment styles and risky sexual behaviours. In this study it was found that self-esteem did indeed have a moderating affect on the risk behaviours of individuals, however only those with an anxious attachment style. It did not find that self-esteem had a significant moderating effect on the attachment dimensions of close or dependant.

59.2% of the study fell into the high levels of self-esteem. When compared to other studies on the self-esteem of university students, this tends to be rather low. Hollar and Snizek (1996) found that 77% of their sample rated themselves as having good self-esteem. Keeling (1991) argued that with respect to self-esteem in a university population, one could expect a high proportion of students to report good self-esteem. For a university population, academic competence is especially emphasized as a basis of self-worth, and thus heightens ones

assessment of their global self-esteem (Bylsma, Cozzarelli & Sumer, 1997). It is unclear why this sample would have a lower self-esteem rating. A possible explanation for this could be found when taking into account the unique socio-economic situation many South African university students experience. However the explanation for this would be a topic for another study as it lies outside the scope of this research.

Individuals on the Close dimension of attachment are likely to have good secure attachment leading to a good self-evaluation (Bartholomew & Horowitz, 1991). They are also characterized by a general comfort with closeness and trust in others and tend to have a high self-esteem (Bartholomew & Horowitz, 1991). In this research most participants with a close attachment style had a high self-esteem (matching what other research has suggested) and thus it cannot be conclusively determined whether self-esteem has a moderating factor in this case.

The dependant dimension of attachment is characterized by a negative representation of self and a sense of unlovability and unworthiness with a belief that others are generally trustworthy and available (Bartholomew & Horowitz, 1991). Bartholomew & Horowitz (1991) also found that individuals in the dependant dimension were more likely to engage in risky sexual behaviour. Other research has shown that individuals with a high self-esteem tend to be less likely to engage risky sexual behaviour (Hollar & Snizek, 1996). So the assumption would be that self-esteem would have a moderating factor. However, it is somewhat surprising that in this study it was found that self-esteem did not have a moderating affect on participants in the dependant dimension of attachment and their sexual risk behaviours. This finding indicates that the characteristics of dependant attachments seems to override the moderating factor that self-esteem may have and thus appears irrelevant to these individuals risk. Campbell et al (1996) found that individuals on the dependant dimensions of

attachment were shown to be more sensitive and concerned as to how they were viewed by others and therefore would intentionally distort information given, even if anonymous. This suggests that getting accurate data for this attachment style can be exceedingly difficult to attain and this could be considered as a possible reason the finding.

The anxious attachment is characterized by a belief that one is worthy but that others cannot be trusted or the expectation that others will be unreliable and rejecting (Bartholomew & Horowitz, 1991). Bogaert & Sadava (2002) found that anxiously attached individuals are more likely to engage in risky sexual behaviour. In this study, it was found that self-esteem was indeed a moderating factor in the relationship between the anxious attachment style and risky sexual behaviour. Many of the anxiously attached participants that had high self-esteem were less likely to engage in risky sexual behaviour. This suggests that while anxiously attached individuals are generally likely to fall under the higher sexual risk category, those with high self-esteem may break this trend and be in a lower risk category. Hollar and Snizek (1996) found that with higher levels of self-esteem, comes a heightened level of accountability and responsibility for one's actions. Therefore it is no surprise that students with higher self-esteem are generally more likely to practice health promoting behaviours.

## 5.4 Limitations of this study

The first limitation of this study is in the sampling. The use of a convenience sample does not always accurately reflect the demographics of a South African population, and therefore the generalisability of these findings is severely limited.

Another aspect that limited the generalisability of this study is that the sample was restricted in age, which means that the results reflect mainly the sexual behaviours of young adults, and these could change with age and experience.

The limitations of the measure used for the collection of data may also affect the study. A standard paper-and-pencil measure of self-esteem and sexual risk and attachment was employed. Such methods have been described as having numerous psychometric drawbacks. This is particularly the case for the assessment of sexual behaviours, where social desirability and purposeful distortion can play a role. Zimmerman and Langer (1995) found that when using a self-report instrument to gather sensitive information, such as sexual behaviour, individuals would often distort information and thus compromise the validity and reliability of the data.

A methodological limitation of this study is the correlation design, which prevents conclusions being drawn about the direction of causation. For example, it could be that individuals' attachment styles are influenced by the sexual relationships and experiences. However the theory leads us to conclude that the reverse is generally the case.

The conceptual understanding of attachment as used in this study is informed by the work of Bowlby (1969) and Ainsworth et al. (1978). Attachment is conceptualized by both of these authors as an enduring affective bond, which potentially serves as a secure base in providing emotional support and fostering autonomy. Within this conceptualization of attachment, self-report measures such as the AAS are thought to limit the validity of the findings by eliciting subjective interpretation from participant.

There could be questions about the stability of attachment styles or the assumption that attachment styles are effectively a personality trait. Many studies (Bowlby 1969, 1973 & 1979; Ainsworth et al, 1978; Bartholomew and Horowitz, 1991) have supported the assumption that attachment is stable across the life span. However, findings of Waters et al. (2000, as cited in Jorgensen, 2004) and Hamilton (2000, as cited in Jorgensen, 2004) indicate

that negative life events (such as the loss of a parent, parental divorce, life-threatening illness, parental psychiatric disorder and any form of abuse) can result in changes of attachment classification. This factor was not considered in the current study and therefore these findings might not accurately reflect the attachment classification.

There is substantial research on the validity of Ainsworth's attachment style classification across cultures. However, its application to a population as diverse and complex as South Africa's requires further exploration. For example, amongst the black population in South Africa, child rearing is often considered to be the responsibility of the whole family or surrounding community (Berg, 2003). This implies a far more complex mechanism of attachment in these cultures. Problems with the cultural application of attachment styles, and measures of attachment may limit the accuracy of findings of this study. Caution should be taken in applying these Western standards and definitions across all cultures.

Throughout this study the assumption is made that attachment style will impact on sexual and other risk taking in general. Some studies have argued that attachment processes may only be relevant under certain circumstances and that is when the attachment system is activated (Bogart & Sadava, 2002). For example, when a real or imaginary event or stressor threatens a person's sense of security in the relationship. Although participants were asked to respond to the questionnaires with respect to their sexual behaviour and experiences in general, Schachner and Shaver (2004) argue that their present state of their current relationship will influence their responses.

## 5.5 Implications of study and recommendations for future research

In general this research has both a theoretical and a clinical implication. Theoretically the results are compatible with the three behavioural systems proposed by Shaver et al. (1988) namely attachment, care giving and sex. Shaver et al. (1988) proposed that the sexual system is affected by and shaped by the motives associated with the other two systems. The attachment and care giving systems are well developed and entrenched by the time overtly sexual behaviours emerge. However this has yet to be tested through longitudinal research. Feeney et al. (1990, 1996) have assessed individuals' sexual behaviour across a time period of six to eight weeks and they argue that longer time periods are needed between assessment and the onset of sexual experiences in order to determine how stable attachment and sexuality is over time. Future research should be done to determine if attachment styles measured before adolescence predicts the latter development of particular sexual behaviours.

A surprising result was finding that dependently attached participants with high self-esteem were still more likely to engage in risky sexual behaviour. Theory suggests that self-esteem plays an important part in an individual's likelihood to engage in healthier behaviour (Hollar & Snizek 1996) with individuals having a higher self-esteem being more likely to be healthier. It was thus expected that self-esteem would be a moderating factor in all cases of attachment style but it was found not be the case. There is definitely some scope to explore this finding further.

The findings of this study also have implications for various theoretical models of HIV risk behaviour. None of the existing theoretical models of risk behaviour, such as the Health Belief Model or the Theory of Reasoned Action, include personality traits such as attachment style in the variables making up these predictive models. The findings of this study suggest

that it is necessary to give further attention to the role of such personality variables in the construction of such models.

An applied implication of this study has to do with HIV risk prevention. It can be seen from this study that Dependent and Anxious attachment participants are at risk for practicing unsafe sexual behaviours. Clinicians and counselors can expect that an individual's attachment style might increase risk behaviours and have an effect their ability to change their risk behaviour. It might, therefore, be useful to administer attachment measures in a clinical setting.

Knowledge of client's attachment styles can provide useful information, which the clinician and/or counselor can use on in order to help the patient reduce their risk of HIV infection.

This study highlights that a number of participants have multiple, concurrent sexual partnerships and casual sexual relationships often without consistent condom use. Although a variety of programmatic approaches have been developed to address partner reduction, there are few that address concurrent partnerships. An approach that takes into account the above factors in addition to the studies' population of young adults in university, attachment styles and self-esteem could be developed as follows. Small groups based on the principles of participatory education that aim to improve sexual health through building, more equal relationships with communication between partners. It can use participatory learning approaches to build knowledge of ones self, communication styles, sexual health, awareness of risk and the consequences of risk taking. The approach will allow for facilitated self-reflection on sexual behaviour, so that participant comes to understand why they behave they way they do.

# Chapter 6 – Conclusion

The HIV/AIDS pandemic has highlighted the need for researchers and clinicians to understand how individuals construe their sexual relationships and how their need for affection and attachment affect their sexual behaviour. An antecedent of risky sexual behaviour in university students has been identified as low self-esteem. Within the literature there are no studies that focus on the possible relationship between attachment style, self-esteem and risky sexual behaviour.

This exploratory study attempts to understand the relationship between attachment dimensions, risky sexual behaviour and self-esteem with in a university population. A questionnaire was used that measured sexual behaviour, self-esteem and attachment dimension.

A number of significant correlations between attachment dimensions and risky sexual behaviours were observed. In general dependent and anxious attachments were more likely to engage in risky sexual behaviour. Furthermore it was found that self-esteem only had a moderating effect on the anxious attachment dimension.

In the quest to reduce risk behaviours for HIV infection, many different perspectives have been used. Overall, this study offers insight into how attachment is linked to sexual behaviour and sexual risk of young adults, giving a particular perspective on HIV risk behaviours.

Attachment theory provides a useful framework for understanding sexual behaviours and sexual risk. The results of this study suggest that sexual and other risk behaviours may well be a function of attachment styles, and that this may need to be considered in developing a range of HIV prevention interventions.



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# Appendix A.

## Study Information Sheet

### Research project:

The Relationship between risky sexual behaviour practices and attachment styles in a University sample.

### Dear Sir or Madam:

I am a Psychology master student at the university of Kwa-Zulu Natal. In partial fulfilment for my degree I am conducting a study into whether variations in attachment have a significant implication on sexual relationships.

### What is the purpose?

The purpose of this study is to gain a deeper understanding into human sexual behaviour as it pertains to safe and unsafe sexual practices.

### Who is being asked to take part and what will they do?

University students who are currently registered.

Participants will be asked to fill in a confidential structured questionnaire. The total estimated time to complete the questionnaire is 15 minutes.

### What are the risks and benefits of the study?

The study has minimal risks.

Participation is voluntary; participants are not required to answer any questions they do not want to. Whether participants participate or not will in no way affect their current academic status.

Participants will not directly or immediately receive any benefits from this study

### Is the study confidential?

The decision to participate or not is voluntary and will be kept completely confidential.

Participants can withdraw from the study at any time. All the information collected will be kept strictly confidential. No names of participants and identifying information will be

collected. No information will be released or printed that would disclose any personal identity.

Your opinions are important to the study. We hope you will agree to take part. If you have any further questions please feel free to contact me.

Yours sincerely,

Charlene Geleijnse

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033-260

I ..... (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdrawal from the project at any time, should I so desire.

Signature of Participant

Date

.....

# Appendix B

**Thank you for your Participation.**

**Please note that this is TOTALLY CONFIDENTIAL.**

Age: \_\_\_\_\_

Gender:

Male ☐ Female ☐

If you strongly agree. circle **SA**.

If you agree with the statement. circle **A**.

If you disagree. circle **D**.

If you strongly disagree. circle **SD**.

1.	On the whole, I am satisfied with myself.	SA	A	D	SD
2.	At times, I think I am no good at all.	SA	A	D	SD
3.	I feel that I have a number of good qualities.	SA	A	D	SD
4.	I am able to do things as well as most other people.	SA	A	D	SD
5.	I feel I do not have much to be proud of.	SA	A	D	SD
6.	I certainly feel useless at times.	SA	A	D	SD
7.	I feel that I'm a person of worth, at least on an equal plane with others.	SA	A	D	SD
8.	I wish I could have more respect for myself.	SA	A	D	SD
9.	All in all, I am inclined to feel that I am a failure.	SA	A	D	SD
10.	I take a positive attitude toward myself.	SA	A	D	SD

## Circle your Answer:

Please indicate the nature of your **present** sexual relationship/s:

- a) One regular sexual partner only.
- b) More than one regular partner.
- c) No regular partner but sexually active.
- d) Have had sex before but celibate at present
- e) No sexual experience.

How many times would you estimate that you have had sex in the last six months

- a) None   b) Less than 5   c) 5 - 15   d) 15 - 30   e) More than 30

How many times would you estimate that you have had sex in the last twelve months

- a) None   b) Less than 5   c) 5 - 15   d) 15 - 30   e) More than 30

Have you ever had sex with someone of the same sex as you?

- a) Yes   b) No

Have you ever engaged in unprotected vaginal sex

Yes ☐   No ☐

Have you ever engaged in unprotected anal sex

Yes ☐   No ☐

Have you been treated for an Sexually Transmitted Infection (STI) Yes ☐   No ☐

Did you use alcohol before engaging in sex?

a) Always b) Almost Always c) Sometimes d) Almost never e) Never

How often do you use condoms when engaging in sexual activities?

a) Always b) Almost Always c) Sometimes d) Almost never e) Never

**If you have not engaged in sexual activity over the last Six months please tick as many reasons that apply to you**

I don't approve of sex ☐

I haven't met the right person ☐

I am still recovering from my last relationship ☐

I prefer other sexual activities (eg. non-penetrative sex) ☐

Worry about pregnancy ☐

Worry about AIDS ☐

Worry about sexually transmitted Infections ☐

I have a religious objection to pre-marital sex ☐

My parents would object ☐

My partner doesn't approve of our having sex ☐

I have no privacy/opportunity for sex ☐

Other reasons: Please specify

***For each statement please circle the extent to which it is characteristic or typical of your feelings.***

**1. I find it difficult to allow myself to depend on others.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me

**2. People are never there when you need them.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.

**3. I am comfortable depending on others.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.

**4. I know that others will be there when I need them.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.

**5. I find it difficult to trust others completely.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.

**6. I am not sure I can always depend on others to be there when I need them.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me

**7. I do not often worry about being abandoned.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.

**8. I often worry that my partner does not really love me.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.

**9. I find others are reluctant to get as close as I would like.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.

**10. I often worry my partner will not want to stay with me.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.

**11. I like to feel completely united with friends/partners, as though we are one person.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.

**12. My desire to feel completely united with close friends/partners sometimes scares them away.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.

**13. I find it relatively easy to get close to others.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.

**14. I do not often worry about someone getting close to me.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.



**15. I am somewhat uncomfortable being close to others.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me

**16. I am nervous when anyone gets too close.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.

**17. I am comfortable having others depend on me.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.

**18. Often love partners want me to be more intimate than I feel comfortable being.**

(a) Nothing like me (b) Not really like me (c) Neutral (d) Like me (e) Very much like me.