

Investigation of transactional sex among tertiary level students: A  
comparison of self-report data collection methodologies.

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**Abstract**

Transactional sex is associated with high-risk HIV transmission behaviours. Published prevalence rates of this behaviour are varying and the sensitive nature of this behaviour may inhibit self-report disclosure. A two-phase study, involving qualitative analysis of focus group discussions on transactional sex, and a subsequent survey employing different self-report methods amongst a population of female tertiary education level students (N=305) was undertaken. The Unmatched Count Technique (UCT) and the Self-Administered Questionnaire (SAQ) in both computer and paper modes were compared in terms of disclosure levels yielded and socially desirable response scores. Base rates of transactional sex as yielded by the UCT were comparable to those of published research. No statistically significant results were obtained for differences in disclosure levels of transactional sex between the UCT and the SAQ. Performance of the UCT was mixed, demonstrating that the reliability and validity of findings obtained by the UCT are contingent on many factors, and further research regarding this is required.

Keywords: transactional sex; unmatched count technique; self-report methods; social desirability

**Abbreviations used in this document**

ACASI	Audio Computer Assisted Self Interview
AIDS	Acquired Immune Deficiency Syndrome
CAPRISA	Centre for the AIDS Programme of Research in South Africa
CASI	Computer Assisted Self Interview
FG	Focus Group
FFG	Female Focus Group
FTFI	Face-to-Face Interview
HEAIDS	Higher Education HIV and AIDS Program
HIV	Human Immunodeficiency Virus
ICVI	Informal Confidential Voting Interview
KZN	KwaZulu-Natal
MFG	Male Focus Group
PMB	Pietermaritzburg
RRT	Randomised Response Technique
SAQ	Self-Administered Questionnaire
SRC	Students' Representative Council
TS	Transactional Sex
UCT	Unmatched Count Technique
UKZN	University of KwaZulu-Natal
UNAIDS	Joint United Nations Programme on HIV/AIDS

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## 1. INTRODUCTION

HIV is a critical health care issue in South Africa, and the disease is the focus of a National strategic plan to guide government's response to the epidemic (South African National AIDS Council, 2007). Whilst there are suggestions of the incidence rate stabilising, South Africa's epidemic remains the largest worldwide (UNAIDS, 2010). Within South Africa, the province of KwaZulu-Natal is home to the country's highest prevalence rate of HIV infection: 39.1% (Lawn & Kinney, 2009). Furthermore, nationally it is young women who are particularly vulnerable to the disease (Abdool Karim *et al.*, 2011). For example the HIV prevalence rate for 20-24 year old women is 21% (a sharp increase from the prevalence rate of 6.5% for 15-19 year old females) (UNAIDS, 2010). These figures also warrant attention given the contrast in corresponding prevalence rates for young males of 5% (20-24 year olds) and 2.5% (15-19 year olds) (UNAIDS, 2010).

The main mode of HIV transmission in South Africa is unprotected heterosexual intercourse (UNAIDS, 2010). Transmission is linked to a number of high risk behaviours, particularly the sexual behaviours of multiple concurrent partners (Epstein & Morris, 2011; Shelton, 2009), low condom use, early sexual debut and low levels of male circumcision (Kharsany & Abdool Karim, 2011). Transactional sex is one phenomenon that has gained attention in HIV behavioural research, particularly so as it is associated with the high risk practices of multiple concurrent partners and unprotected sexual intercourse (Dunkle *et al.*, 2004; Dunkle *et al.*, 2007; Hunter, 2010).



Dunkle *et al.* (2004) define transactional sex as the exchange of sex for material benefits in the general population. It is characterised by the exchange of material benefits and economic support from the (typically) male to the female partner as part of a sexual relationship (Shelton, 2009). This is distinct from commercial sex work where a predetermined monetary amount for sexual intercourse is contracted, and the payment thereof discharges the temporary link between those involved (Leclerc-Madlala, 2003). In transactional sex the exchange of material benefits occurs informally, within a partnership constructed as a relationship between ‘boyfriends and girlfriends’, and often involves the building of ties of obligations and expectations between partners (Leclerc-Madlala, 2009). Motivations to engage in transactional sex are cited as economic need, desire for status and luxury goods, and the obtaining of social connections and security (Leclerc-Madlala, 2009; Masvawure, 2010).

The risk of transactional sex relationships regarding HIV transmission is two-fold. Firstly, in regular or longer-term sexual relationships where social, economic and emotional ties are formed, inconsistent condom use resulting in unprotected sex is more likely (Halperin & Epstein, 2007). Secondly, motivated by material reward, multiple partnerships may be established (by the female) to maximise material benefits whilst additionally, in the interests of maintaining a relationship with its associated economic benefits, the unfaithfulness of (male) partners may be tolerated (Leclerc-Madlala, 2009).

Hunter (2010) describes how such individual level motivations are better understood against broader South African societal factors of declining marriage rates and chronic unemployment. Thus broader structural factors, like foreclosed opportunities of

employment, can impact on individual decision making, such as engaging in risky sexual relationships where material benefits are obtained (Krishnan *et al.*, 2009).

In conjunction with this, it is increasingly recognised that interventions to address sexual risk behaviours must be targeted beyond the individual level, taking into account that sexual behaviours are shaped by elements beyond individuals, including broader cultural, economic and historical factors (Eaton, Flisher & Aarø, 2003; Kippax, 2008). Yet, despite this, social science research still remains yoked to individual self-report methods for capturing data on some behaviours, especially those of a private or sensitive nature.

In the South African context, transactional sex as an HIV risk behaviour remains a topic of current concern (Hunter, 2010; Mills, De Paoli & Grønningsæter, 2009; Shelton, 2009). It is particularly hypothesised to fuel the high HIV prevalence rates in young women (Epstein & Morris, 2011; Kharsany & Abdool Karim, 2011; Leclerc-Madlala, 2009). However, the extent to which transactional sex contributes to HIV transmission cannot be ascertained without accurate figures on the actual prevalence of this behaviour. Social science research mainly relies on self-report methods for sensitive behaviour research, however such self-report may be inaccurate or unreliable (Catania, McDermott & Pollack, 1986; Catania, 1999; Fenton, Johnson, McManus & Erens, 2001; Johnson & Richter, 2004). Nevertheless, self-report methods remain a key research approach. Furthermore, these methods are the basis from which many conclusions are drawn, policies shaped, and the monitoring and tracking of behaviours, pivotal in the planning and evaluation of interventions, occurs.

Various self-report methods exist, with associated advantages and disadvantages. The Face-To-Face Interview (FTFI), with the advantages of establishing rapport and enabling reciprocal checks, is an established method of obtaining self-report data (Gregson *et al.*, 2004; Gribble, Miller, Rogers & Turner, 1999). However, self-report of sensitive sexual behaviours can be inhibited in the FTFI, due to implicit social conventions and socially desirable responding (Meston, Heiman, Trapnell & Paulhus, 1998). The Self-Administered Questionnaire (SAQ), by allowing the respondent to independently complete a questionnaire, reduces the impact of the researcher's presence, and has been shown to enhance disclosure of sensitive behaviours (Meston *et al.*, 1998). Other techniques in self-report research such as the Randomised Response Technique and the Unmatched Count Technique (UCT) have been developed to further facilitate disclosure by reducing the sense of jeopardy or risk experienced by respondents in disclosing sensitive information (Droitcour *et al.*, 1991; Van der Heijden, Gils, Bouts & Hox, 2000). Thus many different self-report methodologies exist, the overarching objective being to facilitate self-disclosure and maximise reliability such that accurate reports are obtained. Innovations regarding self-report methods continually pursue the aim of optimising self-disclosure and attaining accuracy, particularly concerning sensitive behaviours like human sexuality.

Given the significant leap in HIV infections in South African females in the age group 20-24 years, and concern regarding the contribution of transactional sex to these figures, this research aimed to investigate the prevalence of transactional sex as reported by tertiary education level female students. Concern regarding accuracy of disclosure levels yielded by a 'traditional' self-report survey prompted this project to employ two different

self-report methodologies (SAQ and UCT), administered in paper and computer modes. This was to compare the rates of disclosure yielded by the different conditions, such that recommendations could be made regarding optimal methods to employ in the investigation of sensitive behaviours in the South African context. Performance of the different methodologies was evaluated in terms of levels of disclosure yielded and socially desirable response scores. The conclusions reached may contribute to the enhanced accuracy of future behavioural research, particularly where this involves topics of a sensitive nature.

## **2. LITERATURE REVIEW**

### 2.1. Introduction

This research concerns the investigation of transactional sex in female students of a tertiary level educational institution in KwaZulu-Natal. The following literature overview aims to place this project within the contemporary context of related research. Section 2.2 addresses the definition and nature of ‘transactional sex’ using current considerations such as HIV and global consumerism to inform understanding. Section 2.3 addresses the concern that many of social science research conclusions are based on self-reports of behavioural phenomena, whilst the accuracy of such self-reports remains uncertain. This is particularly so with regards to the complexity of studying private, sensitive phenomena such as sexual behaviour.

In section 2.3.1 an exploration of the nature of ‘sensitive behaviour’ is undertaken, and reference is made to the impact of social desirability on the veracity of sensitive

behaviour self-reports (section 2.3.2). Doubt regarding the accuracy of sensitive behaviour self-reports has fuelled ongoing innovation in methodological approaches adopted by researchers for self-report data collection. Section 2.3.3 examines and critiques traditional self-report data collection methods and modulations thereof, including those to be investigated in the research phase.

## 2.2. Transactional sex

### 2.2.1 Definition

Dunkle *et al.* (2004) define transactional sex as the exchange of sex for material benefits undertaken in the general population. This is similar to Chatterji, Murray, London and Anglewicz's (2005) definition as the exchange of sex for gifts or money. This is distinct from commercial sex work where a predetermined, prescribed monetary exchange on an event-by-event basis is contracted (Leclerc-Madlala, 2003; Wamoyi, Fenwick, Urassa, Zaba & Stones, 2011). Those involved in transactional sex relationships characterise the nature of the relationship differently and do not identify themselves as sex workers (Wojcicki, 2002) and this differentiation is critical when shaping interventions to target particular groups.

Essentially the distinction of transactional sex is the more informal nature of the exchange as well as the exchanges being disguised or delayed as related to sexual activity, and not occurring in a prearranged, monetary, directly one-for-one manner (Hoefinger, 2010; Luke, 2003; Wamoyi, Wight, Plummer, Mshana & Ross, 2010). However, the giving and receiving of gifts and material goods occurs in many

relationships, therefore an understanding of transactional sex needs to include considerations of cultural context.

### 2.2.2 Gift giving – symbolism in sexual relationships

Cross culturally it is acknowledged that gift giving and material exchange are aspects of dating, courting and other relationships of ongoing commitment (Kaufman & Stavrou, 2004). In this context gifts can be reciprocal and used to affirm, extend, seal and signify the importance of the relationship (Luke, 2003). But there are shifting implications regarding the exchange of gifts and Kaufman and Stavrou (2004) highlight how the acceptance of a gift may require acquiescence, however risky, to the benefactor's terms of the sexual relationship.

Amongst Ugandan adolescents, Nyazi, Pool and Kinsman (2001) found that gifts were a means not only to secure the granting of sexual favours but also to strengthen relationships. It was argued in this context that gifts given are primarily of symbolic value as adolescent male youth have limited resources to spend, and their female counterparts have most essential needs met. Nobelius *et al.* (2010) found in adolescent discussion groups that the exchange of gifts in adolescents' sexual relationships was seen as a token of appreciation and fondness, not underpinned by survival and poverty, nor seen as shameful.

It was theorised that such exchanges are modeled after the cultural tradition of paying a bride price for a woman as a sign of her worth, the gifting constructed by cultural understandings that exchange and provision of support are part of maintaining good

relationships and prove commitment to the maintenance of the relationship (Nobelius *et al.*, 2010). Furthermore, in these relationships it was argued that young women use the motive of their material 'needs' to justify engaging in sex thereby preventing being judged as 'loose woman' (engaging in a sexual relationship motivated by desire alone).

Thus through material demands female partners create the (culturally sanctioned) impression of disinterest in sex and also serve to increase their bargaining power in sexual relationships (Nobelius *et al.*, 2010). Wamoyi *et al.* (2010) however dismiss that exchanges are purely symbolic; their research demonstrating the overarching motivation for young women to engage in sexual relationships was material benefit (spanning food, clothes, cosmetics and money).

Overall, what is defining in transactional sexual relationships is that the relationship is often initiated and sustained on the basis of the material exchange (Dunkle, Wingood, Camp & DiClemente, 2010). At the risk of judging and pathologising transactional sexual relationships, it may be worthwhile to acknowledge that in many socially endorsed and sanctioned relationships the exchange of money and material goods also occurs. However, in these socially validated contexts, the exchange is interpreted and understood as a demonstration and consequence of the interconnectedness of individuals' lives, and an integral part of how relational ties are sustained and negotiated (Hoefinger, 2010).

According to Mauss (1969, cited in Carrier, 1991), exchange in relationships can be framed by two different understandings. On the one hand, exchange may be understood as an abstract commercial, instrumental transaction where the material exchange is

independent of the involved individuals' identities, equivalence of value is paramount, and the exchange signifies that the temporary link between the parties has been fulfilled and thereby dissolved. This is characteristic of industrial societies.

However, in societies where kinship ties are primary, material exchange is defined by the individual involved in the exchange. Thus the gift is a demonstration of the obligation and link between the giver and recipient, and the giving and receiving of the gift does not discharge any formed obligation, but rather reaffirms the existing relationship between the parties (Carrier, 1991). Therefore it is argued that the transaction is not a consequence and discharge of a relationship, but rather it serves to create and maintain the relationship such that the parties are kept in relationship and mutually obligated (Carrier, 1991). This demonstrates the complexity surrounding the construction of interdependence in relationships characterised as transactional sex. Furthermore, Moore, Biddlecom and Zulu (2007) describe how this interdependence serves to form a network of social security and a system of assumed mutual obligations. This suggests that transactions go beyond the rational value of the object exchanged, to the connotation embodied in the relationship.

### 2.2.3 Transactional sex in context: South Africa

In Dunkle *et al.*'s (2004) survey of women in antenatal clinics in South Africa, respondents who reported exchange of sex for material benefit with someone apart from their primary partner, also reported higher incidents of violence and substance misuse. Furthermore, when number of sexual partners and time span of being sexually active were controlled for, transactional sex was also associated with a higher likelihood of a



sero-positive HIV status. Thus Dunkle *et al.* (2004) warn that transactional sex is an HIV risk behaviour and surmise that when material gain is a key factor in sexual relationships, and associated gender and economic power imbalances may be at play, condom use is less likely. Furthermore, transactional sexual relationships, constructed as being between boyfriends and girlfriends and with the formation of mutual obligations (Hunter, 2010) can create the perception of a steady relationship. It is established that condom use is less likely where emotional, social and economic ties are formed in a sexual relationship (Halperin & Epstein, 2007).

In addition, as women's bargaining power decreases after the establishment of a sexual relationship and gifts as inducements de-escalate, women may be motivated to seek more economically beneficial relationships (Wamoyi *et al.*, 2010). Thus, where economic rewards are pivotal in a relationship, this may motivate the seeking of additional partners for increased material gain. Furthermore, it may also explain the tolerance of a partner's concurrency, as to challenge this may jeopardise the relationship and its associated economic support (Epstein & Morris, 2011; Leclerc-Madlala, 2009). Therefore concurrent sexual partnerships are characteristic of transactional sex (Harrison, Cleland & Frohlich, 2008; Hunter, 2002; Wamoyi *et al.*, 2011). This is of concern as, with the established HIV epidemic in South Africa, concurrency, by linking individuals to a wide sexual network, is pivotal in the spread of HIV (Epstein, 2007).

The Higher Education HIV and AIDS Program (HEAIDS, 2010) found that 2% of South African students self-report to have engaged in transactional sex. This was attributed to factors such as vulnerability and poverty, western consumerism and social aspirations,

inequalities in economic status between men and women, and breakdown of traditional bride wealth customs (HEAIDS, 2010). Another South African study found 2-3% of youth reported to have engaged in transactional sex (Pettifor *et al.*, 2005). In sub-Saharan Africa, with HIV infection rates approximately eight times higher in female youth (15-24 years) than counterpart male youth (UNAIDS, 2010), transactional sex is one behaviour that is thought to drive the HIV epidemic, with the aforementioned concurrent partners and power imbalances as contributing factors.

#### 2.2.4 Motivations

Hunter (2002) acknowledges that material benefits obtained through transactional sex are part of a continuum of subsistence to consumption goods, thereby ranging from the securing of food, accommodation and education fees to cell phones, fashionable clothing and holidays. Moore *et al.* (2007) and Wamoyi *et al.* (2010) point out the subjective and interrelated nature of ‘subsistence and consumption’ goods, arguing that seemingly luxury consumer goods (like body oils and fashionable clothes), in enhancing attractiveness, may be prerequisites to the securing of subsistence goods.

Chatterji *et al.* (2005) found that youths’ current school attendance and economic status did not influence the probability that they would engage in transactional sex. This suggests that poverty may be less of a determining issue than other factors such as peer pressure and the wish to gain social standing and obtain gifts. This is demonstrated in Masvawure’s (2010) ethnographic study of Zimbabwean tertiary students where, through transactional sex relationships, female students, beyond obtaining material benefits, sought prestige and enviable status.

The use of transactional sex as a means to material benefits is closely linked to it being a way of establishing social connections (Hunter, 2002; Swidler & Watkins, 2007). Swidler and Watkins (2007) suggest it models a type of patron-client relationship, involving asymmetric interdependence. Exploiting this interdependence serves the patron as a means of status and ‘having people’ and the client as a form of support, insurance and opportunism. Ultimately, this is seen as an adaptive mechanism in economically imbalanced societies as it brings a degree of re-distribution of resources, although reinforcing inequity (Hoefinger, 2010; Swidler & Watkins, 2007).

Against a backdrop of material inequalities based on gender, Hunter (2002) deduces that transactional sex will continue to be a means for women to access resources and social connections. This links to Madise, Zulu and Ciera’s (2007) argument that in developing countries, where women may be more dependent on men’s economic resources, women’s personal resources, including sexual, become economically valuable. This highlights the ways sexual practice is shaped by contextual and societal factors. Jones (2006) demonstrates how various factors, including economic and cultural, impact on sexual decision making. Furthermore, Kippax (2008) warns that intervention efforts regarding HIV risk behaviours, often targeted at the individual level, fail to consider how individual motivations and choices are a function of broader socioeconomic, gender, political and historical factors.

#### 2.2.5 Agents or exploited?

Transactional sex relationships are constructed around concepts of ‘boyfriend’ and ‘girlfriend’, selection of partners, and descriptions of love, affection, desire and physical

attraction (Hunter, 2007, 2010). Within these discourses is the repetitive theme of men's sexual desires and women's material desires (Longfield, Glick, Waithaka & Berman, 2004; Wamoyi *et al.*, 2011), where the reciprocal nature of the relationship is emphasised in that men are constructed in the male provider role and women are enabled to make claims on their partner's resources (Hunter, 2007). The commodification of sex against a backdrop of global consumerist ideology and economic pressures and inequities is viewed as justifiable: Where sex is a reciprocal act, this includes economic exchange as an element of reciprocity (Wamoyi *et al.*, 2011). However, power differentials in economic and age asymmetries between partners may belie the apparent reciprocity (Luke, 2006; Weissman *et al.*, 2006).

Hoefinger (2010) and Hampshire, Porter, Mashiri, Maponya and Dube (2011) argue that transactional sexual relationships are a means of agency and resistance adopted by women whose opportunities are foreclosed within gender, sociocultural and structural constraints. Financial security and provision are obtained through the purposeful formation of sexual relationship networks (Robinson & Yeh, 2011). Hoefinger (2010) describes the almost celebrity-like status afforded women in Cambodia who secure materially well-endowed (foreign) boyfriends. The transactional nature of the relationship, shielded behind performances of affection and intimacy, arguably protects the woman from moral judgments, whilst simultaneously granting her consumer power and an element of elitism (Hoefinger, 2010). Ironically, though, women in transactional sexual relationships, whilst escaping the stigma of commercial sex workers and obtaining advantages of more established, 'legitimate' relationships, may be at greater risk of HIV infection (Epstein, 2007). This is because the relationship, engineered as genuine and

reciprocal, may, through the 'performance' of intimacy, preclude the use of condoms (Hoefinger, 2010).

Moore *et al.* (2007) propose that women demonstrate agency in transactional relationships by employing different means to delay sexual involvement whilst maximising gifts received, or refusing suitors whose gifts are deemed not valuable enough. Likewise, that female partners indicate their intention to discontinue relationships where they no longer benefit materially is argued by Moore *et al.* (2007) as an indication of voluntary participation in the relationship, and agency on the woman's behalf. However, it could also be argued that this demonstrates the women's dependence on the relationship for primarily economic reasons, and thus the association is dissolved where economic rewards are no longer obtained.

In essence material transactions are a tool and strategy to manage relationships and are used in the initiation, maintenance and termination of relationships (Maganja, Maman, Groves & Mbwambo, 2007; Poulin, 2007). Poulin (2007) argues that women have bargaining power in contexts of economic scarcity because the female partner may seek another partner for provision but the male partner may have to expend great effort in (informal) employment and may also ultimately give large proportions of earnings to female partners. Conversely, in Wojcicki's (2002) research into forms of transactional sex occurring in South African taverns she proposes that ultimately, the only agency the women in her study had was the development of strategies to evade sexual brutality, in an environment where acceptance of such a minimal material benefit as a beer was taken as an implication of consent to sex.

Thus, whilst women can be constructed as agents using their sexuality as a resource to obtain required and desired material benefits, the risks involved demand recognition. It is argued that the transaction of material goods compromises a woman's ability to negotiate safe sex (Maganja *et al.*, 2007). However Moore *et al.* (2007) found that the exchange of material goods and money in sexual relationships was not associated with less condom use. Luke suggests that in the era of HIV education and safe sexual practices, a "market for unsafe sexual activity" has emerged (Luke, 2006, p. 325). This suggests that, given increasingly wide-spread knowledge and education on the risks of unsafe sexual activity, where unprotected sex is sought by a sexual partner, a 'premium' or extra material inducements are required.

Whilst Luke (2006) describes women as agents actively engaged in utilising and trading off the costs and benefits of risky sexual practices within this emerging market, it is clear this strategy maximises short-term outcomes and goals (Harrison *et al.*, 2008), with untold longer-term consequences. This approach is arguably more fatalism than agency, as mirrored in the attitudes of some South African township women who, resigned to the probability of their partner's unfaithfulness and the seeming inevitability of HIV infection, may seek to maximise material gains from multiple sexual relationships (Leclerc-Madlala, 2003).

Outlined above, transactional sex as an HIV risk behaviour in the South African context has been shown to be a topic of current concern. The extent to which this contributes to driving the HIV epidemic cannot, however, be evaluated without an accurate assessment of its prevalence in the sexually active population. The following section will explore

how the accurate reporting of sexual behaviour can be confounded by various factors such as social desirability (Meston *et al.*, 1998). This raises the issue of obtaining accurate self-reports of sexual behaviour. Thus a discussion about the challenges of research into sensitive behaviours and methodological techniques employed to enhance disclosure follows.

### 2.3. Methodological enquiry

#### 2.3.1 Sensitive behaviours

Sensitive behaviours are defined as those activities which are private and personal; perceived as socially unacceptable or disapproved of; which may cause discomfort, guilt or embarrassment to articulate (Catania, 1999; Wellings, Branigan & Mitchell, 2000); or which are 'sacred', culturally taboo or illegal (Tourangeau & Smith, 1996). Einarsen and Våland (2010) indicate three components of sensitivity: intrusiveness, the risk of disclosure, and social norms and desirability which admission to the behaviour may contravene. Topics including sexual behaviour, substance abuse and illegal activities are typically regarded as 'sensitive' (Rasinski, Willis, Baldwin, Yeh & Lee, 1999).

Such behaviour is by nature hidden from observation and therefore social science research relies on self-reports when investigating these behaviours. However, when research is conducted into such topics, respondents may experience questioning as threatening, with potential costs such as embarrassment, shame or even legal consequences (Lee & Renzetti, 1990). Thus Graham, Catania, Brand, Duong and Canchola (2003) warn that self-report measures risk inaccuracy due to deliberately adjusted representation of behaviours, and other factors such as recall errors.

Catania (1999) acknowledges the factor of unintentional inaccurate reporting due to recall difficulties and unconscious psychological mechanisms and defenses. Strategies to overcome these in research have included the use of diaries and ensuring questions about behaviour refer to a delimited recent time period, usually of the past month (Ferguson, Morris & Kariuki, 2006; Graham *et al.*, 2003).

More challenging are deliberate inaccuracies in self-report because independent verification or criterion validity is seldom possible (Ong & Weiss, 2000). Such inaccuracies may be particularly heightened where the behaviour enquired about is deemed as sensitive and private, or where the participant would be in jeopardy should their truthful answer be divulged (Graham *et al.*, 2003).

#### *2.3.1.1 Provision of confidentiality and anonymity*

In order to mitigate for the fear of disclosure, anonymity and confidentiality assurances have become *de rigueur* in social science research. Tourangeau and Yan (2007) note, though, that regardless of assurances of confidentiality, self-report accuracy may be contaminated by respondents factoring in concerns regarding repercussions of their disclosure potentially being divulged to a third party. Furthermore, Ong and Weiss (2000) highlight the different effects assurances of confidentiality (the respondent's data will not be divulged to anyone but the researcher) and anonymity (the respondent's identity is unknown to the researcher) can have in the disclosure of sensitive behaviour, such that anonymity facilitates higher disclosure rates.



This different effect may be understood by the social context in which research occurs, with anonymity serving to better shield the respondent from social conventions. The interaction between researcher and respondent, as a social exchange, involves implicitly expected and established societal norms (Tourangeau & Yan, 2007). Respondents may therefore be placed in a quandary when an honest answer would contravene established norms. Thus respondents' answers may be shaped by 'tailoring' – adjusting responses to the researchers' characteristics (Tourangeau & Yan, 2007), and by elements of social presentation and how they wish to be regarded (Hays, Hayashi & Stewart, 1989). These pressures are alleviated by the 'identity-less' condition of anonymity. Self-presentation and 'impression management' (Catania, 1999) are aspects of the concept 'social desirability' and this concept as a key factor in sensitive behaviour research is discussed in section 2.3.2.

Finally, a cautionary note regarding the provision of confidentiality and anonymity is necessary: The perception of the trustworthiness of assurances of confidentiality or anonymity may influence the respondent's responses more than the 'objective' existence of the condition. Thus Whelan and Meade (2009) highlight that confidentiality and anonymity are not objectively existing conditions, but subjectively experienced perceptions.

#### *2.3.1.2 Transactional sex as a sensitive behaviour*

Transactional sex as a topic falls within the sphere of human sexuality and sexual relationships. As such, human sexual behaviour is normally a behaviour that is kept private and viewed as personal (Wellings *et al.*, 2000). Cultural taboos and censure may

make aspects of human sexuality unacceptable or difficult to speak about (Nobelius *et al.*, 2010). In addition, association of transactional sex with behaviour such as commercial sex work may heighten the sense of stigmatisation or social proscription of the behaviour, further hindering willingness to disclose.

Accuracy in the monitoring of sexual behaviours, particularly risk behaviours which enable the spread of HIV, is critical in formulating public health policy and interventions. Precision is necessary both for assessing the extent of the behavioural phenomena, and for being able to track and monitor behavioural change (Gregson *et al.*, 2004). Gregson *et al.* (2004) caution, however, that as education regarding the risks of certain sexual behaviours becomes more widespread, admission of the behaviour by those who nevertheless continue such high-risk behaviours may become increasingly self-censored.

### *2.3.1.3 Wording of transactional sex items*

Moore *et al.* (2007) warn that inaccuracies in levels of sensitive behaviour disclosure in surveys may be attributable to the impact of question wording. A risk of underreporting of the phenomenon occurs if respondents do not recognise their behaviour as represented in the description stated (Ong & Weiss, 2000). This is pivotal for researching sexual behaviours that may involve particular terminologies or euphemisms. In addition, ensuring wording does not offend or stigmatise is also critical in facilitating disclosure, as demonstrated in Mavhu, Langhaug, Manyonga, Power and Cowan's (2008) research regarding culturally appropriate wording of sexual behaviour surveys in Zimbabwe. Thus attempts to find wording that characterises the nature of the exchange relationship are

ongoing and the wording of questions regarding transactional sex in surveys requires attention.

Questions typically used are: “Have you ever exchanged money or gifts for sex?” (Luke, 2006, p. 330); “Have you ever given or received a gift or money in exchange for sexual intercourse?” (Imrie *et al.*, 2011, p.1); “Have you ever given or received money, gifts, or favours for sexual relations in the past 12 months?” (Luke, 2005, p.110). Luke (2006), however, argues that such wording may be taken to imply commercial sex work and may not be recognisable as the type of exchange that occurs in relationships where the link between gift giving and the sexual aspect of the relationship is not so explicit.

Einarsen and Våland (2010) claim that normalisation of the sensitive question can increase disclosure, although this was not found to impact on disclosure rates in Ong and Weiss’ (2000) study. An example, however, of the use of normalisation is the following question, deliberately worded to norm exchange behaviour in order to facilitate more accurate reporting amongst male respondents: “It is common for men to give women gifts or other assistance when they are in a relationship. What have you given your partner(s) in the last month?” (Luke, 2006, p. 330).

Sensitive behaviour research is based on the premise that the researcher can discern which questions the participant would experience as sensitive or intrusive. Alongside this is the assumption that higher yielded levels of report of the sensitive behaviour are indicative of increased veracity and methodological facilitation of disclosure (Ong & Weiss, 2000). Clearly both the above assumptions are open to error, but are premises on

which most sensitive behaviour research is based. Thus it is expected that the more effective method of enquiry brings higher disclosure rates of the sensitive behaviour, but reported levels of non-sensitive behaviours remain equal and unaffected. However, where sensitive behaviour is rare, even methodological improvements may not yield markedly different prevalence rates to existing measures (Ong & Weiss, 2000).

Researchers are dependent on data from self-report surveys, and inaccuracies have implications, for example in prioritising interventions (Gribble *et al.*, 1999). Thus the challenge in self-report data collection is to facilitate the conditions for accurate reporting. Where measurement of the topic is inhibited due to its sensitive nature, innovations regarding the methodological approaches to data collection are necessary (Lee & Renzetti, 1990).

### 2.3.2 Social desirability

Social desirability is the extent to which a person is driven to appear to display socially acceptable behaviours (Hays *et al.*, 1989). In social science research this manifests as the respondent answering in socially approved of, but not necessarily truthful, ways (Beretvas, Meyers & Leite, 2002). Therefore, social desirability scales can be included alongside self-report measures to assess the impact of socially desirable responding as a confounding variable (Beretvas *et al.*, 2002; Meston *et al.*, 1998; Reynolds, 1982). Whether such scales measure a stable personality trait, or a varying sensitivity and response to the social context in which respondents are questioned, remains at issue (Paulhus, Harms, Bruce & Lysy, 2003).

The construct social desirability includes the elements of a self-enhancement trait and a response to a situational demand for self-presentation (Paulhus *et al.*, 2003). Meston *et al.* (1998) further subdivide aspects of socially desirable responding into impression management (other deception) and self-deceptive enhancement (self-deception). Whereas self-deceptive elements are linked to more stable personality factors, impression management is highly determined by the situation, particularly where positive self-presentation is salient (Meston *et al.*, 1998). Accordingly in the research context, social desirability may be present as an individual's inherent trait, or as an adaptive strategy in an unfamiliar context. Meston *et al.* (1998) accede that the Marlowe-Crowne Social Desirability Scale covers both these factors, as it has been found to load statistically both on self-deceptive enhancement and impression management factors.

The Marlowe-Crowne scale of social desirability (Crowne & Marlowe, 1960) gives an overall score, taken to represent the measurement of an individual's propensity to shape answers to conform to socially acceptable norms and expectations (Johnson & Fendrich, 2004). This is assessed in the scale by the degree to which respondents claim socially approved of, but unlikely behaviours, and conversely the degree to which culturally disapproved of, but likely, behaviours are denied (Crowne and Marlowe, 1960; Marlowe and Crowne, 1961).

Varying critiques have been leveled at this measurement, for example that the underlying latent construct of the scale is not fully understood (Leite & Beretvas, 2005) and that those who score highly may be individuals who actually do behave more diligently regarding the factors assessed in the scale (Johnson & Fendrich, 2004). Nevertheless the

scale remains commonly used and shorter forms, developed to reduce administration time and respondent burden without compromising validity, exist (Hays *et al.*, 1989; Loo & Thorpe, 2000; Ray, 1984; Reynolds, 1982; Strahan & Gerbasi, 1972).

Social desirability as a confounding factor in sexuality reports is demonstrated by Meston *et al.* (1998). They concluded that the condition of anonymity, assumed to reduce or remove the situational demands for individuals to appear favourably, may not be sufficient to dispel this tendency. This was particularly so for female subjects. Thus it was recommended that the bias of socially desirable responding in self-reports of sexuality should be acknowledged and assessed (Meston *et al.*, 1998).

### 2.3.3 Self-report data collection methods

#### *2.3.3.1 The Face-To-Face-Interview (FTFI)*

The Face-To-Face Interview (FTFI) involves many of the social interaction factors described above which hinder accurate reporting of behaviour by respondents. The FTFI is an orchestrated form of social interaction and the element of reciprocity typical of situations where private information is divulged is absent (Catania, 1999). However, where the building of rapport is emphasised such that disclosure is facilitated and time during the interview is made for checking consistency of reported information (Gregson *et al.*, 2004; Gribble *et al.*, 1999), it can be a useful method. In some circumstances a present, interactive interviewer may facilitate the reporting of sensitive information (Rasinski *et al.*, 1999), particularly where their approach is non-condemnatory (Wellings *et al.*, 2000). A non-condemnatory approach is exemplified where questions are posed in a forgiving or supportive manner (Tourangeau & Yan, 2007), questions gradually build in

sensitivity (Catania, 1999), and are specific and precise, as opposed to broad questioning on sexual behaviour (Cleland, Boerma, Carael & Weir, 2004).

Cleland *et al.* (2004) acknowledge limitations of the FTFI in obtaining information on sensitive behaviours but conclude that in contexts where poor literacy hampers other data collection methods, and linguistic nuances may require reciprocal explanations between interviewer and interviewee, at present there are no suitable alternatives for sexual behaviour research. However, Gregson *et al.* (2004) have pioneered an innovation in the FTFI: The Informal Confidential Voting Interview (ICVI). This method preserves the benefits of the FTFI, in terms of reaching populations where literacy is limited and enabling explanation and reciprocal understandings, but is without the ‘threat’ of the interviewer coming to know the respondent’s answer. This is achieved through the respondent voting their response into a ballot box, without their vote carrying any personal identifying information. The ICVI therefore preserves anonymity and spares the participant from embarrassment and other cultural prohibitions to discussing sexual behaviours. Gregson *et al.* (2004) and Pienaar (2007) found that, when the ICVI method was used, respondents were more likely to report sexual risk behaviours than in Face-To-Face Interviews.

#### *2.3.3.2 Self-Administered Questionnaire (SAQ)*

The Self-Administered Questionnaire involves the independent and private completion of a written questionnaire by the respondent. Tourangeau and Yan (2007) argue that techniques to reduce socially desirable responses require a reduced impact of the researcher’s presence and an increased motivation on behalf of the respondent to be

honest. In SAQ's this is achieved through minimal interaction with the researcher, thereby removing situational demands (Meston *et al.*, 1998).

Additionally, assurances of anonymity or confidentiality are more credible when no identifying factors or codes are assigned to respondents' questionnaires. Nevertheless, these conditions may not be sufficient to elicit truthful responses. Respondents asked to admit to socially proscribed behaviour may still experience levels of jeopardy, and potential consequences of breaches in confidentiality may still inhibit respondents' veracity (Gregson *et al.*, 2004). Rasinski *et al.* (1999) further caution that emphasising confidentiality possibly heightens respondents' suspicion and may create the impression that questions are more sensitive than they actually are.

#### *2.3.3.3 Randomised Response Technique (RRT)*

The Randomised Response Technique employs a random factor (e.g. the outcome of a flip of a coin) to determine whether a respondent answers a sensitive or non-sensitive question. Other variations, like the forced-response procedure, exist (Van der Heijden, Gils, Bouts & Hox, 2000). Respondents are guaranteed anonymity and protection since it is impossible for the researcher to link responses with individual respondents. Furthermore, the RRT acts to lessen response bias when respondents understand that, given randomisation, their individual response is meaningless. However, through aggregation of responses and knowing the randomisation probability, researchers can calculate the systematic element of report of the sensitive behaviour for the sample.



Limitations to this technique include potential mistrust on the respondents' behalf as to whether the randomisation device has been 'loaded' in a particular way. In addition, respondents may be distracted by the gambling element of the process, or feel that it trivialises the actual sensitive issue being studied (Corstange, 2009). Lensvelt-Mulders, Hox, Van der Heijden and Maas (2004) advise that this method requires a careful demonstration and explanation to respondents, adding cost and time considerations.

Overall, the procedure may involve irritation or increased cognitive load for respondents given the randomisation process, thereby increasing scope for error (for example not following the procedure's instructions correctly). Furthermore, a limitation of the RRT is its large measurement variances and therefore larger samples than direct questioning methods are required in order to ensure sufficient statistical power (Droitcour *et al.*, 1991).

#### *2.3.3.4 Unmatched Count Technique (UCT)*

This technique of indirect questioning (also known as the List Experiment and Item Count Technique) comprises 'target key' (the sensitive behaviour) and 'non-key' (non-sensitive) items (Tsuchiya, Hirai & Ono, 2007). Items are grouped together in sets of statements and respondents count and state the number of statements in each item grouping that are true for them. Respondents are not required to directly mark the individually applicable statements. Two forms of questionnaires exist, one with sets of statements including the sensitive behaviour, the alternate having sets without the sensitive statement.

Random allocation of respondents to the questionnaire forms is required and base rates of the sensitive behaviour can be approximated by comparing the sample response averages of question sets which had the additional sensitive item, to those without (LaBrie & Earleywine, 2000; Tsuchiya *et al.*, 2007). This technique has the benefit of total anonymity as the respondent never indicates the actual sensitive behaviour directly, and Ahart and Sackett (2004) argue that this heightened assurance of confidentiality and anonymity preservation should enable respondents to be honest in their reporting of sensitive behaviours.

The UCT has been found to obtain greater disclosure rates for sensitive behaviour than in direct Self-Administered Questionnaires (Ahart & Sackett, 2004). Studies reporting higher disclosure levels by UCT than SAQ include those investigating sensitive behaviours such as auctioneer's violations of professional standards (Dalton, Wimbush & Daily, 1994), employee theft (Wimbush & Dalton, 1997), shoplifting (Tsuchiya *et al.*, 2007) and sexual risk behaviours (LaBrie & Earleywine, 2000).

However, this method does not allow for individual-level inferences regarding predictors and behaviours (De Jong, Pieters & Fox, 2010). Thus, loss of information regarding associations between respondent's characteristics and their likelihood to answer the sensitive item affirmatively is a limitation (Imai, 2011), although there are statistical procedures to model this (Imai, 2011; Holbrook & Krosnick, 2009). Moreover, Tsuchiya *et al.* (2007) warn that the UCT is not appropriate in identifying rare behaviours occurring in less than 10% of the population, and they advise that not all investigations into stigmatised behaviours using this technique have yielded higher disclosure levels

than those obtained through direct questioning. The UCT's utility is argued to be where those questioned are motivated to give socially desirable answers and would otherwise conceal an association with the sensitive behaviour. Through the respondents' realisation that the technique protects them from direct association with the sensitive behaviour, more accurate disclosure levels are facilitated (Tsuchiya *et al.*, 2007).

#### *2.3.3.5 Computer-Assisted Self-Interview (CASI) and Audio Computer-Assisted Self-Interview (ACASI)*

Computer-Assisted Self-Interview (CASI) and Audio Computer-Assisted Self-Interview (ACASI) involve the delivery of an interview via computer, removing the necessity of a 'live' interviewer to be present. This provides confidentiality and privacy, thereby facilitating conditions conducive to the disclosure of sensitive, stigmatised or socially sanctioned behaviour (Van der Elst *et al.*, 2009), and freeing the respondent from the usual interviewer-interviewee interaction that may solicit socially desirable responses (Waruru, Nduati & Tylleskar, 2005). Other advantages are that these methods standardise interviews, nullify cross-interviewer effects, are appropriate in low education level populations as they involve easy response tasks, and they prevent non-responses or invalid answers through built-in checks (Waruru *et al.*, 2005). Additionally, ACASI is suitable to use with populations that are not literate (Mensch, Hewett & Erulkar, 2003), and the audio and text can be multilingually programmed (Gribble *et al.*, 1999).

The ACASI has been found to yield more sensitive information disclosure than pen-and-paper administered questionnaires (Kim, Dubowitz, Hudson-Martin & Lane, 2008). It has also been rated by respondents as experienced as offering more privacy than the FTFI

(Waruru *et al.*, 2005) and as believed to result in more honest answers than the FTFI (Van der Elst *et al.*, 2009). Waruru *et al.* (2005) found that mothers in FTFI's gave answers that corresponded to the education given by local health workers regarding infant feeding practices, however the same mothers gave answers divergent or contrary to the taught practices when answering by ACASI. This may suggest ACASI removes the propensity for socially desirable answers from respondents. Thus ACASI is potentially a blend of the benefits of the SAQ, with the added 'familiarity' of a social actor who is nevertheless guaranteed to be neutral.

Despite these advantages, Mensch *et al.* (2008) warn that the enhanced reporting of sensitive behaviours via ACASI is not consistently demonstrated in populations in the developing world, and this is partially attributed to respondents' unfamiliarity with technology. In their study, Mensch *et al.* (2008) found Face-To-Face Interviews were better in facilitating the reconciliation of response discrepancies and ensuring that all questions were answered by respondents. Thus the effectiveness of ACASI may be influenced by the setting in which it is used and characteristics of the sample population.

#### *2.3.3.6. Paper and computer administration of questionnaires*

With the growth of internet and computer services, it has become more frequent for questionnaires and surveys to be emailed and disseminated via web sites. Nathan (2001) describes a move towards making the mode of questionnaire (paper or emailed web survey) a choice for the recruit. Clearly it is of interest as to whether these different modes of questionnaire administration would influence levels of veracity of self-report, impacting on resultant research inferences. Whilst online, electronic or computer based

surveys have the benefits of being fast, efficient and more cost effective than their paper equivalent, Dayan, Schofield and Johnson (2009) argue that, regarding optimising rates of disclosure, self-administration (versus interview) remains the key determinant, not the mode of delivery (paper versus computer).

Joinson, Paine, Buchanan and Reips (2007), citing previous research, demonstrate however, how computer survey research, compared to paper administered research, has been associated with lower levels of socially desirable responding, greater levels of self-disclosure and more willingness to answer sensitive questions. Likewise, Hancock and Flowers (2001), reviewing previous research, cite that computer administrated questionnaires have been found to yield more honest answers than paper administrated. In their study comparing socially desirable responding between internet-based and paper questionnaires, however, Hancock and Flowers (2001) found no significant difference in socially desirable responding between the two modes of administration.

In Holbrook and Krosnick's (2009) study of comparison of voter turnout reports, Unmatched Count Technique and direct response questionnaires yielded similar reported levels when administered via the internet. But, when administered via telephonic interview, direct reports of voting turnout yielded higher levels than the UCT, suggesting a socially desirable response bias present only in the telephonic direct self-report method (Holbrook & Krosnick, 2009). Thus it was concluded that direct self-reporting via computer alleviates the propensity for socially desirable responding.

Computerisation is argued to facilitate disclosure through enhancing the perceived privacy of administration. However, Joinson *et al.*'s (2007) study demonstrated that privacy is both a situational perception, as well as a personal disposition that is mediated by trust. Thus mode of administration may not be the main factor, but rather participants' dispositions and perceptions of the research. In Kreuter, Presser and Tourangeau's (2008) study, they found web administered surveys yielded increased reports of sensitive information in comparison to computer assisted telephone interviews, however web surveys were handicapped by high non-response rates. This suggests choice of mode of administration should be guided by the researcher's priorities regarding which source of bias to minimise.

#### 2.4. Summary

With the hyper-endemic nature of HIV in sub-Saharan Africa, sexual behaviour among young people warrants elucidation. Specifically, transactional sex as a risk behaviour requires investigation. The complexity of social science research where such investigations rely on self-report data is evident and this is particularly heightened regarding behaviours usually hidden from public view. Therefore, taking transactional sex as the sensitive behaviour investigated, this research aimed to compare a number of self-report techniques to determine which best facilitates disclosure.

### 3. METHODOLOGY

#### 3.1 Rationale

As discussed above, transactional sex is an established phenomenon in South Africa (Dunkle *et al.*, 2004; Dunkle *et al.*, 2007; Hunter, 2002; Leclerc-Madlala, 2003). It is identified as a sexual risk behaviour for HIV as it is a major motivator for concurrent sexual partnerships (Hunter, 2002) and involves power imbalances (between those who have resources and those who wish to obtain resources) which make negotiation of condom use difficult (Dunkle *et al.*, 2004; Pettifor *et al.*, 2004). Cleland *et al.* (2004) advise focusing on the age group 15-29 years in investigating sexual risk behaviours as cost effective, and Gregson *et al.* (2004) state that it is of particular priority to develop reliable data collection methods for the assessment and monitoring of young peoples' sexual behaviour. In the South African context this is especially so in light of a recent report that documents "devastatingly high" incidence rates of HIV infections among young women in KwaZulu-Natal (Abdool Karim *et al.*, 2011, p. 922).

Furthermore, many studies on transactional sex have examined rural and township communities (Hunter, 2002; Leclerc-Madlala, 2003; Maganja *et al.*, 2007; Nyanzi *et al.*, 2001), but not tertiary education level students in an urban setting. Where young people were researched in a township setting it was found that there was a fatalistic attitude regarding the inevitability of being infected by HIV and a perception of limited self-advancement opportunities, which made transactional sex an expedient way of obtaining consumer goods and social connections (Hunter, 2002; Leclerc-Madlala, 2003). The question of whether and to what extent, tertiary education level students, who have the

opportunity of self-advancement and ultimately professional and financial progression and autonomy, engage in transactional sex is investigated in this study.

Existing studies have found the level of transactional sex as disclosed by youth in Self-Administered Questionnaires and Face-To-Face Interviews at 2-3% (HEAIDS, 2010; Pettifor *et al.*, 2004). In contrast to this, a recent unpublished research project using the Unmatched Count Technique found 32% of female respondents of the University of KwaZulu-Natal, Pietermaritzburg campus, reported having sex in exchange for items like toiletries and food (Schiever, 2010). The inconsistency of these figures highlights the variability and inherent uncertainty of the accuracy of self-report data obtained regarding sensitive behaviours (Catania, 1999; Hays *et al.*, 1989; Tourangeau & Yan, 2007).

### 3.2 Aim

Given the high levels of transactional sex reported by female students in Schiever's (2010) study, this research focused on female university students. The prevalence of transactional sex as reported by this population was assessed by comparing disclosure rates of this sensitive behaviour between two self-report methods (Self-Administered Questionnaire and the Unmatched Count Technique). Equivalent questionnaire formats of both the SAQ and UCT were administered by paper or computer mode to investigate whether mode of delivery impacts on disclosure rates. In addition, socially desirable response bias (Crowne & Marlowe, 1960) as a contributing factor to self-disclosure variations was also assessed.



The methodology undertaken in this research involved a mixed methods approach (Silverman, 2010). Qualitative and quantitative methods were used sequentially, with qualitative findings informing the wording of sensitive behaviour statements in the questionnaires. Hesse-Biber and Leavy (2011) critique the use of mixed methods arguing that the quantitative element of the research is usually privileged at the expense of the qualitative. Morgan (1996) also highlights conflict in using methods from differing paradigms to undertake research. However, given the research question, it is proposed that this project employed a coherent, practical way of combining qualitative and quantitative methodologies. The two stages are fully described below.

### 3.3 Focus groups

#### 3.3.1 Aim and rationale

The preliminary phase of the research was qualitative, taking the form of focus group discussions. The use of an exploratory, qualitative approach was to avoid merely using normative assumptions (Silverman, 2010) and externally imposed labels (Parker & Easton, 1998) regarding the definition and understanding of 'transactional sex'. In addition, it was hypothesised that question wording in Schiever's (2010) study may have affected respondents' understanding of survey questions, thereby impacting on disclosure levels. Since focus groups are useful in the preliminary stages of a study, to design and inform the content of survey questionnaires and assess the primary research tool (Morgan, 1996), this approach was adopted.

The research questions investigated were:

1. What are the words/terminologies used by students regarding transactional sex (including names for the male and female partners involved and any words for the exchange itself)?
2. Are there distinguishing features of transactional sexual relationships, as different to other relationships, which would inform wording of survey items regarding this relationship?

Focus group discussions were oriented to clarifying students' understandings and definitions of transactional sex, as well as probing for any particular terminologies and colloquialisms used in reference to this behaviour. Frith (2000) highlights the particular utility of focus groups in eliciting language terms and ways of talking about sexual activities as used by participants.

Furthermore, based on their research, Överlien, Aronsson and Hydén (2005) propose that for high-involvement topics the focus group provides an option to engage, or not, without having to justify oneself and enables the use of "impersonal constructions" (p.337). This facilitates dialogue about sensitive topics yet with distance and without risking personal exposure. Thus the focus group discussion was appropriate according to the research purpose and goals (Morgan & Bottorff, 2010). In addition, it was crucial in informing the formulation of appropriate statements so that the survey instrument would elicit accurate responses (Frith, 2000).

### 3.3.2 Design and procedure

Two focus groups comprising all males (8 students) and the other all females (6 students) were held. These numbers are within the bounds recommended for focus group sizes (+- 8-12) (Fern, 2001). Exclusive gender groups were held due to the potential effect of gender on disclosure, particularly regarding topics involving sexual behaviour (Fern, 2001). Standardisation between the two groups (male and female) was established through a planned discussion schedule, with the opening scenario to orient the group to the issue of material exchange in relationships (refer Appendix A). Both focus group discussions were held in the English language with the researcher as moderator of the discussions. Question sequencing varied depending on the spontaneous flow of discussion as shaped by the group. Morgan (1996) proposes that a strength of focus groups is that participants can naturally query and challenge each other so ideas are explored and clarified spontaneously in the group. This provides a basis by which to determine the extent of common or divergent ideas (Kidd & Parshall, 2000).

Morgan (1996) further advises that the degree of control of the moderator over the group be informed by the research goals. In this case, the exploration of the topic and relating of 'typical' experiences by the participants flowed spontaneously without excessive direct questioning. This is in accordance with Kidd and Parshall's (2000) recommendation that in exploratory research the best approach is non-directive, to facilitate freedom of discussion. The moderator's questioning is then not an invasion of personal space or privacy, and this allows group members to direct the flow of discussion as they deem important in relation to the topic at hand (Fern, 2001).

### 3.3.3 Sampling

Convenience sampling occurred amongst the research population in whom the researcher was interested, namely students of the University of KwaZulu-Natal, Pietermaritzburg campus. The researcher approached students around campus and invited them, if they were interested, to join an all male or all female discussion group on the topic of ‘material exchange in relationships’ (refer Appendix B for recruitment information sheet). As per Hesse-Biber and Leavy’s (2011) recommendations to ensure appropriate numbers, over-recruitment and reminders were sent to students via cellular phone texts, and incentives of refreshments were offered.

The male focus group comprised 8 black African participants, all Zulu mother tongue. Ages were 21-24 years, and the students’ range of studies included commerce and humanities degrees. The female group comprised 6 black African females, Zulu mother tongue, one Afrikaans mother tongue individual and a black Zimbabwean. Ages ranged between 19-29 years and the students’ range of studies included commerce, humanities and agricultural degrees. Recruitment involved approaching students of all racial groupings, however no Indian or coloured students attended, and only one white student attended. This may be because the topic is not an issue in these communities, or because the focus groups approximated the demographic spread of students.

To facilitate reciprocity and disclosure, participants should be matched according to relevant characteristics (e.g. gender and age) (Frith, 2000), hence the exclusive gender groups. Hesse-Biber and Leavy (2011) argue that a homogenous group has a level of comfort in discussion which facilitates disclosure and conversation. This may have been

evident in the difference in flow between the two focus group discussions held. The male group discussion flowed more easily, with less prompting from the moderator, whereas the female focus group's discussion appeared more stilted, piecemeal and arguably more cautious. This is attributed to the fact that half the male group was comprised of friends who knew each other from campus. Fern (2001) suggests that prior acquaintanceship between group members provides a degree of established rapport, thereby facilitating ease of discussion. It is acknowledged, however, that this prior acquaintanceship may have limited the variety of opinions gained from the discussion.

Focus group discussions were transcribed, using the Jefferson transcription system (refer Appendix C). Thematic analysis was used to analyse focus group data (Boyatzis, 1998; Braun & Clarke, 2006). Repeated reading of the transcripts was undertaken. Repetitive content was identified and similar extracts grouped together. Emergent patterns were coded and mapped (Braun & Clarke, 2006). Reference back to the research questions was continually made in order to facilitate focus. Inter-coder reliability measurement was not done, but re-coding of the data after a break of three weeks was undertaken by the researcher. This was to ensure consistency of coding of themes, and as no large discrepancies between the two coding processes were found, the overarching themes initially obtained were confirmed.

Silverman (2010) cautions against merely identifying themes of participants' talk and reducing this to a simple list, as opposed to analysing more complex laminations of discourses and shifting positions to which participants attend. However, in this case Thematic analysis was chosen as it separates out key issues, recurring qualities and

themes (Kidd & Parshall, 2000; Teddlie & Tashakkori, 2009). This approach thereby pinpointed aspects that participants highlighted as being relevant to and defining of transactional sex relationships.

#### 3.3.4 Limitations

A general critique of the use of focus groups is that they involve the artificial creation of data, to the exclusion of investigating more naturally occurring data accessible through observation and without the orchestration of the researcher (Silverman, 2010). Within the time and resource limits of this study, and given the specific use of the focus group to inform the formulation of survey statements, this critique is ungrounded.

The heterogeneity of the general student population is acknowledged. Therefore, whether two focus groups were adequate to accurately reflect these variations in the way transactional sex is spoken about, is open to critique. Data checking with an additional group may have been beneficial to confirm the researcher's conclusions (Teddlie & Tashakkori, 2009), and could have been combined with a pilot of the questionnaire.

Mohanty (1990), affiliating her writing with Freire's (1993) educational philosophy, points out that sites of education are not mere sites of instruction, but rather where beliefs and ideas are produced and reproduced. Arguably this could also be the case with focus groups, where participants produce versions of the world as 'data', but where it is also potentially a responsibility of the researcher to conscientise and empower participants to engage with the circumstances and issues they recount.

This may have been of significance in this research where issues of identity and agency were highlighted by students in their discussions of transactional sex. Circumstances were narrated by students but no critique, resistance or transformation of understanding ensued nor was facilitated (Mayo, 2004). Mohanty (1990) describes how resistance occurs when there is a self-conscious, critical questioning of typical norms, narratives and representations and a conscious attempt to reformulate and imagine different conceptualisations and understandings. This links to Campbell's (2003) experiences regarding community engagement around sexual behaviour and education: She proposes that collective debate and engagement are key precursors to changing and developing new behavioural norms. Thus focus groups can serve not just as data-generating tools, but also forums where empowerment, emancipation, learning and more participatory research can be engaged (Morgan, 1996).

However, it is conceded that the researcher at the time only used the focus groups for their utilitarian purpose to answer the research questions. Thus these focus groups were used instrumentally to obtain information from participants, without engaging them in exploring options of change or a more critical understanding of the topic.

### 3.3.5 Ethical considerations

Ethical clearance for the study was obtained as per institutional requirements. Protocol number: HSS/0447/011M (Appendix D). Informed consent was obtained from participants through the aforementioned information sheet and a consent form (Appendix E) explaining the aims and topic of the group discussion. Thus participants could make an informed decision about choosing to engage in the research and deception was avoided.

Participation was voluntary and there was freedom to withdraw participation at any stage. This is related to ‘process consent’ that provides an ongoing safeguard for participants to withdraw consent at any time, rather than a ‘once off’ informed consent (Silverman, 2010).

A degree of protection of identity in the focus groups was achieved by participants appointing themselves pseudonyms. The pseudonyms were displayed in front of participants on cards, and were used by members of the group to address one another. The principle of nonmaleficence, that no harm is done to participants (Wassenaar, 2006), is particularly significant regarding research into sensitive behaviours: Divulged information could compromise the participant or the discussion of sensitive issues without adequate support could be psychologically harmful. Furthermore, Frith (2000) warns that in focus groups there may be a risk of ‘over disclosure’ where discussion of sensitive information escalates. This is related to the reciprocity norm that can influence disclosure (Fern, 2001). Thus participants were advised not to disclose anything directly personal or private. This was also advised as no guarantee of confidentiality from fellow participants could be provided. Further recommendations such as debriefing of participants after the focus group and provision of follow up telephone contact numbers were followed.

Overall, ethical clearance involved a two-stage process. Initial ethical clearance was obtained for the focus group discussion and provisional proposed survey statements. After the focus groups’ findings were finalised, ethical approval of amendments was sought as the study’s protocol changed in two ways (Appendix F). The proposed wording



of some survey statements was changed, informed by the focus group results. Additionally, the intended use of ACASI as a third comparative methodology was ruled out due to funding and accessibility issues. Thus the study protocol resorted to its secondary planned approach, which was to render the SAQ and UCT questionnaires in two modes of delivery, computer and paper.

### 3.4 Survey

#### 3.4.1 Aim and rationale

In determining the prevalence of behaviours, surveys are the most effective (Morgan, 1996). The mainstay of quantitative survey research is Self-Administered Questionnaires, particularly in sensitive behaviour research where SAQ's, in providing privacy and confidentiality, are thought to facilitate disclosure. However, the researcher remains dependent on the respondent in terms of their willingness to disclose and the veracity of the disclosure. The two self-report methods, SAQ and UCT (version A and B) and two delivery modes (paper and computer) were chosen in order to compare the levels of self-disclosure elicited across the methods and modes. This aimed to clarify previous inconsistencies regarding prevalence rates of transactional sex and enable recommendations to be made regarding optimal self-report methods.

#### 3.4.2 Design

A quantitative experimental survey, comprising a six-group post-test only design, was used. Participants' group allocations were randomly determined. This was achieved through the generation of a random series of numbers (1-6) through 'Research Randomizer' ([www.randomizer.org](http://www.randomizer.org)). The numbers 1-6 represented which conditions

successive participants were allocated (1: paper SAQ, 2: paper UCT A, 3: paper UCT B, 4: computer SAQ, 5: computer UCT A, 6: computer UCT B). The independent variable was the self-report method (SAQ or UCT form A/B) and delivery mode (computer or paper) and the dependent variable the level of disclosure and the measurement of socially desirable responding.

### 3.4.3 Sampling and participants

Eligible participants were female students, eighteen years or older, who attended the University of KwaZulu-Natal, Pietermaritzburg campus. Convenience sampling occurred. A minimum of 50 participants per condition was aimed for (LaBrie & Earleywine, 2000). Announcements about the study, including the distribution of information sheets explaining the study, occurred in lecture venues campus-wide. In addition, students were approached around campus and recruited to attend the psychology department computer room and answer a questionnaire (refer Appendix G for information sheet). Those who attended were given the information sheet and consent form (Appendix H). On consenting to participate, participants were randomly assigned to the 6 different conditions. The total sample size achieved was 305 participants. Participants who completed the questionnaire were eligible to enter for an incentive if they wished.

#### *3.4.3.1 Incentive*

An incentive took the form of a lottery of cash prizes. Five hundred Rand was divided into six prizes of R50 each and ten prizes of R20 each. Participants who wished to enter wrote their first name and contact telephone number or email on a piece of paper kept separately from the completed questionnaires. At the end of the study an individual

independent of the data collection drew 16 names from those entered. Participants were informed of their win, and collected and signed for their prize money from the researcher.

#### 3.4.4 Limitations

Teddlie and Tashakkori (2009) warn that a convenience sample is at risk of bias since the sample includes only those who are accessible and amenable to participating, and thereby may exclude a significant aspect of the community. In this study only those students who either self-selected to respond to the request for participants from general announcements in lectures, and those who consented to fill in questionnaires or attend the computer venue when approached around campus, constituted the sample. The study may have excluded students who don't attend lectures or those who do not spend time between and after lectures on campus. In addition, data quality can be impacted upon by how participants see both the researcher and the legitimacy of the research (Teddlie & Tashakkori, 2009).

With regard to this, community participation, like dialoguing with the university Students' Representative Council before embarking on the study, was overlooked. Furthermore, important aspects of gaining access to the field were not thoroughly considered. These aspects include providing an explanation as to why the particular group chosen was targeted as subjects for the research, and attending to issues of reciprocity (beyond token incentives) (Teddlie & Tashakkori, 2009). The researcher may have assumed, being a student too, that access was automatic. However this assumption may have been flawed as, being a mature student, other students may not have identified with myself (the researcher), and thus not wished to participate.

### 3.4.5 Research instrument: Questionnaire

Three questionnaire forms were used: Self-Administered, and Unmatched Count Technique form A and B. Questionnaires were produced in paper (Appendix I) and computer (Appendix J) mode. The computer mode was compiled and administered on the LimeSurvey® program as available through the UKZN web site (<http://surveys.ukzn.ac.za/admin/admin.php>). All questionnaires involved an initial demographic section, a section of questions containing the sensitive behaviour statements, and the social desirability scale. Additional UCT instructions were provided on a separate piece of paper (Appendix K).

The questionnaire layout and non-sensitive statements were sourced and adapted from previous studies (Dalton *et al.*, 1994; LaBrie & Earleywine, 2000; Schiever, 2010). Since Teddlie and Tashakkori (2009) warn against de-contextualised instruments, non-sensitive statements were worded according to the contemporary South African situation. Sensitive items were used as derived from the focus group findings and previous studies, as documented in Section 4.1.2.

The five-item Socially Desirable Response Set (SDRS-5) scale (Hays *et al.*, 1989) was used as the measure for socially desirable responding. This short scale has the benefit of reducing the burden on participants' responding and has a reported internal reliability of 0.66 – 0.68 (Hays *et al.*, 1989).

### 3.4.6 Hypotheses

1. *Null hypothesis:* There is no significant difference in base rate estimates of sensitive behaviour disclosure between self-administered and UCT questionnaires for each of the sensitive items.

*Alternate hypotheses:* Significantly higher base rate levels of sensitive behaviour disclosure are yielded by the UCT method in comparison to the self-administered questionnaire for each of the sensitive items.

2. *Null hypothesis:* There is no significant difference in base rate estimates of sensitive behaviour disclosure between the modes of questionnaire delivery (paper versus computer) for each of the sensitive items.

*Alternate hypothesis:* Significantly higher base rate levels of sensitive behaviour disclosure are yielded by computer delivered questionnaires compared to the equivalent questionnaire in paper mode.

3. *Null hypothesis:* There is no significant difference in social desirability scores between the SAQ and UCT methods.

*Alternate hypothesis:* There are significantly higher social desirability scores in the SAQ compared to the UCT.

4. *Null hypothesis:* There is no significant difference in social desirability scores between the two modes of questionnaire delivery (paper and computer).

*Alternate hypothesis:* There are significantly higher social desirability scores in the paper mode questionnaires compared to the computer mode.

## 4. RESULTS

### 4.1 Focus group

#### 4.1.1 Thematic analysis findings

##### *4.1.1.1 Terminology*

Common to both focus groups, males in transactional sex relationships were referred to as ‘sugar daddies’, ‘odaddi’ or ‘minister(s) of... finance, transport, communication’ *etcetera* depending on what they provided the female in the relationship (successively referring to provision of money, transport and cell phones/airtime). Females were referred to as ‘gold diggers’, ‘queen bees’ or ‘bee stings’, although the latter two terms were not known nor understood by all participants. Derogatory terms for females were cited by the male focus group (e.g. *izinja* - dogs), however this terminology is not uniquely particular to the phenomenon under study and thus was neither useful nor appropriate. The provision of benefits and money to the female in the relationship was called ‘*ukuphaka*’ (dishing up). Other than this, no specific colloquialisms or terminology were provided or identified which referred to the exchange itself.

##### *4.1.1.2 Themes*

Two overarching themes, each comprising opposing tensions, were found. The first was a theme of ‘powerlessness versus agency’. This theme emerged from the attributions and motivations cited for engaging in transactional sex. Powerlessness was mainly voiced through reference to broader social issues such as poverty and disadvantaged backgrounds, foreclosed opportunities, and general societal moral decay and materialistic trends as causing women to resort to transactional sexual relationships. Elements of

individual factors such as peer pressure and a search for affection also fell under this theme. Agency emerged through the relationships being used as a means for self-transformation, the gaining of social connections, and accessing status.

The second overarching theme ‘mutuality versus expendability’ again encompassed a dichotomy. This involved the relationship being described, in one sense, as one of mutuality and obligations, where the exchanges served to maintain the relationship. However this was contrasted with an opposite pole of expendability and utility, whereby, were one partner unable to fulfill his/her expected role, the relationship was dissolved. Linked to this, characteristics of the relationship were its instrumental nature, centered around exchanges of material things (food, rent, holidays and transport) for sexual involvement. Mutuality and obligations inherent in the relationship were contrasted with this being conditional, and the relationship dissolvable if either party couldn’t fulfill their part. Encompassed in this theme of tensions between mutuality and expendability were power imbalances. Tensions between the relational and functional aspect of the relationship were evident by the contested area of differentiating whether such relationships resembled more conventional boyfriend and girlfriend relationships, or reflected qualities of commercial sex exchanges.

Both the male and female focus groups reported that transactional sex relationships were common around campus. In the male group this was more explicitly linked to the ‘sugar daddy’ phenomena, also known as intergenerational relationships (Kharsany & Abdool Karim, 2011), where economically established, older men are involved with younger university students. The male students also recounted the use of gift-giving and material

provision in their own relationships as strategic, with allusion to the fact that sexual reciprocation was expected. However they indicated that economic constraints hindered this to times when they had money (e.g. days of the month when financial aid was paid out).

The range of material things provided was reported as: airtime and cell phones, fast food (Nando's, McDonalds) and groceries, clothes (including brands such as Levi's and Gucci), transport, accommodation, weekends away and grooming (e.g. hairstyles, manicures and pedicures).

The female focus group highlighted powerlessness through economic disadvantage as a major issue underlying transactional sex relationships:

L: Ja I think it is especially in varsity cos you see like most of the girls like come from disadvantaged families so you know like lets say when you go to the mall and maybe they meet a guy maybe going with a fancy car you know and (.2) maybe they get to know them (.2) and then when the guy finds out maybe that the girl is poor or something and then they try by all means like to provide things like clothes cell phone you know food

FFG, lines 13-17.

L: Ja cos like its you know the girl is usually unemployed or something and then the only means to have money and all those materialistic things is to engage in a relationship like that ja so I guess its the only way they get to have an income or something ja

FFG, lines 84-86.



Thus economic disadvantage was a recurrent theme. This was juxtaposed against societal materialistic trends:

H: Ok fine the way I see it generally if you look at it it's a trend ok not to say it isn't a varsity thing but for a start generally if you look at the trends its nothing it's a huge thing nothing to do with being a varsity issue on a general world scale people have just been so materialistic so even outside of college out there in the real world you know everyone wants to have something good

FFG, lines 32-36.

These broader factors of economic lack (real or perceived) and societal consumerism were found to conflate influentially for the individual in friendship circles:

G: peer pressure when they tell each other now you need this and this and this my friend you are not looking good when you are wearing this so you need to find this so if their parents they don't if their parents don't u:h give them money at the end of the month maybe they will find someone who (.) will provide

FFG, lines 203-207.

G: some of the students come from disadvantaged families so you only find that the children don't want to accept their status that where do they come from others they want to look good in terms of clothes and stuff

FFG, lines 54-57.

Given the above factors, whether of necessity or a desire for things, transactional sex relationships were described as the means to attain material desires:

St: and and they accept him just because they want his money

Others: the provider

St: the provider and what they call daddy

C: heh heh thank you

DI: Its odaddi (.2) the provider the guy who pitches with the groceries with the clothes who takes the girl out, the phones

MFG, lines 34-39.

Informed by the above, the statement ‘I have been/am in a sexual relationship mainly for material benefits (e.g. gifts, cell phones, clothes)’ was included in the survey. This statement encompasses both the aspect of material need and the instrumental aspect of the relationship, in that the relationship is the means to obtain the need. This statement therefore included a key defining element of transactional sex: That for the female partner the relationship is motivated mainly, though not solely, by economic benefits.

The instrumentality of the relationship was an element of the second overarching theme ‘mutuality and expendability’. This emerged from talk around the exchange expectations and roles within the relationship:

I: Especially because um usually these men are married ja (.4) its give me- give me sex  
I’ll give you cell phone

FFG, lines 72-73.

L: if the guy comes to me and I’m like no I don’t want to know you and whatsoever and like he wouldn’t like buy me things but then like when I agree to have a relationship with him and all that then that’s only the time he’ll provide things for me

FFG, lines 18-21.

Furthermore, were these roles not fulfilled, the relationship was described as pointless and expendable:

MP: its also have to do with the age for example if the daddy is 10 years older (.) then chances are the girl isn't expecting a serious relationship=

C: mm

MP:= so she'll try to (.) to benefit in in whatever way she can while the relation- while the relationship is still active

MFG, lines 219-223.

C: ok ok (1) u:m and in that kind of relationship i:f the gifts (.) stop coming (.) from the minister of transport (laugh) does that mean that the relation[nship ends]

H: [His car breaks] down

C: laughs ja

Others : ((talk inaudible))

G: J:a the girls use to dump that guy and find another one as she said ja to to get more benefit because the the main purpose is to get more benefits

C: right

G: Ja mone:y ja if they don- and if they don't give you some more money you just dump them

C: Sure Ok ok

G: cos there's no use of keeping them if they can't provide any more cos that is the main reason that you've got

I: you can't be minister of transport without a car

FFG, lines 146-159.

The aspect of the male partner's provision as being an essential factor in maintaining the relationship was therefore identified as a key characteristic of transactional sex. Thus the following statement, incorporating the word 'provision' which was often used in the focus groups, was formulated: 'I have been/am in a sexual relationship mainly because that partner provides me with things I want (e.g. airtime, food, clothes, transport)'.

The potential of multiple concurrent partners was spontaneously mentioned by the male group as demonstrated by one individual recounting the many names stored on a female student's cellular telephone:

Tr: some of them we even know them by names like you know you'd be surprised like you might have a girl on her cell phone she's got like Absa Nedbank Capital bank

C: wow

Tr: airtime, Nando's McD McDonalds you've got all kinds of people she's got Guess she's got Levi's when you ask why is this person's name listed as Levi's she's gonna say cos whatever I want in the Levi's brand I get from him

MFG, lines 322-327.

Sam: that's what I wanted to say when you spoke about the two different types of relationships (.6) knowing girls and living with girls there's gonna be some of them that are gonna tell you that ok let's say T is the guy that gives me love L's the guy that gives me money T has no money T is living day by day

Others: hustler

Sam: He's hustling to get somewhere is life then there's L he's already successful +-38 lets say something like that and he's giving me everything I need so there's T there for the love and L is just there for the money

MFG, lines 155-162.

Concurrency was characteristic of transactional sex relationships. Typically descriptions were of a ‘main’ boyfriend (primarily a ‘love’ relationship) and additional partner(s) who provide. Thus a sensitive statement incorporating this aspect was included: ‘I’ve had sex with someone who isn’t a regular partner because I’ve needed material things (e.g. rent, food, cosmetics)’.

#### 4.1.2 Statement formulation

The final sensitive statements for the survey were:

1. *I am sexually active.*

This was to determine the proportion of respondents who are sexually active. As the initial sensitive item, it was also deemed not ‘too’ sensitive, and thus a means for assessing disclosure.

2. *I have received money, gifts or favours in return for sex in the last 12 months.*

This was modeled on other typical survey questions used to obtain rates of transactional sex in general sexual behaviour surveys. The statement was particularly informed by the following questions used in current sexual behaviour research:

“Have you ever received a gift or money in exchange for sexual intercourse?” used in the Africa Centre’s survey on sexual behaviours (Imrie *et al.*, 2011, p. 1).

“Have you ever given or received money, gifts or favours for sexual relations in the past 12 months?” as used in various Demographic and Health Surveys (Luke, 2005, p. 111).

3. *I have been/am in a sexual relationship mainly for material benefits (e.g. gifts, cell phones, clothes).*

As discussed above, this statement aimed to capture the instrumental nature of transactional sex relationships, used as a means to obtain benefits.

4. *I've had sex with someone who isn't a regular partner because I've needed material things (e.g. rent, food, cosmetics).*

This encompassed the utility aspect of transactional sex as providing essential items, and also incorporated the characteristic that transactional sex involves partners beyond the regular ('true love/straight' partner), as emerged from focus groups. This statement was also informed by a question from Dunkle *et al.*'s (2010) survey on transactional sexual relationships.

5. *I have been/am in a sexual relationship mainly because that partner provides me with things I want (e.g. airtime, food, clothes, transport).*

This statement aimed to capture the theme and expectation of mutuality and instrumentality of transactional sex relationships. This was particularly reflected in the focus groups through the frequent use of the word 'provision'.

## 4.2 Survey questionnaire

### 4.2.1 Sample

#### *4.2.1.1 Participant demographics*

All participants were female (N=305). Ages of participants ranged from 18–32 years, with a mean of 19.8 years. The majority of students were in the 18–20 year old range

(78.8%; n=238). Prior to analysis two questionnaires were discarded as participants recorded their age as 17 years. The majority of participants were first year (53.4%; n=163) and second year (35.7%; n=109) university students.

According to race categories, 78.7% (n=240) of participants were black, 4.9% (n=15) coloured, 11.5% (n=35) Indian, 4.9% (n=15) white and no other/unidentified were categorised. In comparison to current university demographics, this meant that black and coloured students were overrepresented in the sample and Indian and white students underrepresented (refer Table 1).

*Table 1.* Race demographics: Participants in comparison to UKZN PMB (females) numbers

Race	Demographics				Percentage	
	Participant numbers	Participant percentage	UKZN PMB numbers	UKZN PMB Percentage	over/under represented	
African (black)	240	78.7%	5030	74.9%	+3.8%	
Coloured	15	4.9%	159	2.4%	+2.5%	
Indian	35	11.5%	884	13.2%	-1.7%	
Other	0	0%	30	0.4%	-0.4%	
White	15	4.9%	614	9.1%	-4.2%	
Total	305		6717			

Regarding financing of studies, 44.7% (n=134) of participants reported parents/relatives to be their main source of financing, with financial aid (34%; n=102) as the other main source of funding. Thirty seven percent (n=113) of participants reported their accommodation to be university residence, 31.5% (n=96) reported staying with parents/relatives and 23.3% (n= 71) reported living in communes.

#### *4.2.1.2 Questionnaire completion*

For each of the conditions UCT A (paper), and UCT A (computer), UCT B (computer) and SAQ (computer mode) 50 questionnaires were completed. For the UCT B (paper) 52 questionnaires and for the SAQ (paper) 53 questionnaires were obtained.

### 4.2.2 Questionnaire results

#### *4.2.2.1. UCT base rates of sensitive behaviours*

As per Wimbush and Dalton (1997), calculation of the base rate of the sensitive behaviour is obtained by:  $\text{estimate (p)} = \text{mean}_b - \text{mean}_a$ . Estimate (p) is the proportion of participants calculated to engage in the sensitive behaviour,  $\text{mean}_b$  is the mean number of statements reported by participants for the set with the sensitive statement and  $\text{mean}_a$  is the mean number of statements reported by participants on the corresponding set without the sensitive statement. Thus the difference in means represents the proportion of participants engaging in the sensitive behaviour (refer Table 2). Multiplying these figures by 100 gives the estimate for the percentage of participants who engage in the sensitive behaviour.



*Table 2.* Differences in means between UCT form A and UCT form B

Questionnaire mode	Differences in means				
	Statement 1	Statement 2	Statement 3	Statement 4	Statement 5
Paper (n=100)	0.73	-0.06	0.05	-0.24	-0.13
Computer (n=102)	0.42	-0.22	-0.38	0.02	0.06

According to these calculations, for the paper mode UCT format questionnaire:

73% of participants endorsed the statement ‘I am sexually active’

5% of participants endorsed the statement ‘I have been/am in a sexual relationship for material benefits (e.g. gifts, cell phones, clothes)’.

Base rates as yielded by the computer mode UCT format questionnaire were:

42% of participants endorsed the statement ‘I am sexually active’

2% of participants endorsed the statement ‘I’ve had sex with someone who isn’t a regular partner because I’ve needed material things (e.g. rent, food, cosmetics)’

6% of participants endorsed the statement ‘I have been/am in a sexual relationship mainly because that partner provides me with things I want (e.g. airtime, food, clothes, transport)’.

No conclusions could be reached about base rate behaviour levels for those statements where negative proportions were obtained, therefore those statements are not commented upon above.

#### 4.2.2.2 SAQ base rates of sensitive behaviours

For the paper mode SAQ only disclosure on the item 'I am sexually active' occurred, with 53% of participants endorsing this item. No other directly questioned sensitive items were endorsed.

The computer mode SAQ resulted in 46% of participants endorsing the 'I am sexually active' statement.

4% of participants endorsed 'I have received money, gifts or favours in return for sex in the last 12 months'.

2% endorsed 'I have been/am in a sexual relationship for material benefits (e.g. gifts, cell phones, clothes)'.

2% endorsed 'I have been/am in a sexual relationship mainly because that partner provides me with things I want (e.g. airtime, food, clothes, transport)'.

For ease of reference, the prevalence rates as yielded by all the conditions are summarised in Table 3.

#### 4.2.2.3 Comparative performance of the SAQ and UCT

Assessment of the UCT as an effective method for obtaining more accurate levels of the sensitive behaviour is determined by it eliciting higher levels of admission to the sensitive behaviour in comparison to the other method used (Dalton *et al.*, 1994). The statistical analysis of this comparison was carried out through the Winks test of statistical proportions (Winks 6.0.93 Professional edition).

Disclosure rate for the statement 'I am sexually active' was significantly higher on the UCT (paper mode) in comparison to the SAQ (paper mode),  $z = -2.496$ ,  $p = 0.013$  (refer

Table 4). No statistically significant differences were found in disclosure rates between the SAQ and UCT for the sensitive statements pertaining to transactional sex. There were no statistically significant differences between the SAQ and UCT (computer mode) for disclosure on any of the sensitive items (refer Table 5).

*Table 3. Sensitive item prevalence rates as yielded by self-report conditions*

Sensitive statement	Self-report method and mode			
	UCT paper (n=100)	UCT computer (n=102)	SAQ paper (n=53)	SAQ computer (n=50)
1.I am sexually active	73%	42%	53%	46%
2.I have received money, gifts or favours in return for sex in the last 12 months	Negative proportion	Negative proportion	0	4%
3.I have been/am in a sexual relationship mainly for material benefits (e.g. gifts, cell phones, clothes)	5%	Negative proportion	0	2%
4.I've had sex with someone who isn't a regular partner because I've needed material things (e.g. rent, food, cosmetics)	Negative proportion	2%	0	0
5.I have been/am in a sexual relationship mainly because that partner provides me with things I want (e.g. airtime, food, clothes, transport)	Negative proportion	6%	0	2%

#### *4.2.2.4 Comparative performance of paper and computer modes*

The base rate estimate for the statement 'I am sexually active' was significantly higher for the paper mode UCT in comparison to the computer mode UCT,  $z = 4.458$ ,  $p < 0.001$  (refer Table 6). No statistically significant differences were found for transactional sex sensitive item disclosure rates on the UCT between the paper and computer delivery

modes. No statistically significant differences were found in any sensitive item disclosure rates on the SAQ between the paper and computer delivery modes (refer Table 7).

Table 4. SAQ and UCT (paper mode) comparison of sensitive behaviour proportions

Statement	Self-report method		Difference in proportions	Z value	P value	Significance	Confidence interval (95%)
	SAQ (n= 53)	UCT (n=102)					
1.I am sexually active	0.53	0.73	0.2	-2.496	P=0.013	* two tail	(0.043,0.357)
2.I have received money, gifts or favours in return for sex in the last 12 months	0	-0.06	Not calculable due to negative proportion				
3.I have been/am in a sexual relationship mainly for material benefits (e.g. gifts, cell phones, clothes)	0	0.05	0.05	-1.655	P=0.098	Non significant	
4.I've had sex with someone who isn't a regular partner because I've needed material things (e.g. rent, food, cosmetics)	0	-0.24	Not calculable due to negative proportion				
5.I have been/am in a sexual relationship mainly because that partner provides me with things I want (e.g. airtime, food, clothes, transport)	0	-0.13	Not calculable due to negative proportion				

$\alpha = 0.05$

Table 5. SAQ and UCT (computer mode) comparison of sensitive behaviour proportions

Statement	Self-report method		Difference in proportions	Z value	P value	Significance	Confidence interval
	SAQ (n= 50)	UCT (n=100)					
1.I am sexually active	0.46	0.42	0.04	0.466	P=0.641	Non significant	
2.I have received money, gifts or favours in return for sex in the last 12 months	0.04	-0.22	Not calculable due to negative proportion				
3.I have been/am in a sexual relationship mainly for material benefits (e.g. gifts, cell phones, clothes)	0.02	-0.38	Not calculable due to negative proportion				
4.I've had sex with someone who isn't a regular partner because I've needed material things (e.g. rent, food, cosmetics)	0	0.02	0.02	-1.007	P=0.314	Non significant	
5.I have been/am in a sexual relationship mainly because that partner provides me with things I want (e.g. airtime, food, clothes, transport)	0.02	0.06	0.04	-1.095	P=0.273	Non significant	

$\alpha = 0.05$

*Table 6.* UCT sensitive behaviour proportions, comparison between paper and computer modes

Statement	Questionnaire mode		Difference in proportions	Z value	P value	Significance	Confidence interval (95%)
	Paper (n= 102)	Computer (n=100)					
1.I am sexually active	0.73	0.42	0.31	4.458	P< 0.001	*** two tail	(0.174,0.446)
2.I have received money, gifts or favours in return for sex in the last 12 months	-0.06	0.22	Not calculable due to negative proportion				
3.I have been/am in a sexual relationship mainly for material benefits (e.g. gifts, cell phones, clothes)	0.03	-0.38	Not calculable due to negative proportion				
4.I've had sex with someone who isn't a regular partner because I've needed material things (e.g. rent, food, cosmetics)	-0.24	0.02	Not calculable due to negative proportion				
5.I have been/am in a sexual relationship mainly because that partner provides me with things I want (e.g. airtime, food, clothes, transport)	-0.13	0.06	Not calculable due to negative proportion				

$\alpha = 0.05$

Table 7. SAQ sensitive behaviour proportions, comparison between paper and computer modes

Statement	Questionnaire mode		Difference in proportions	Z value	P value	Significance	Confidence interval
	Paper (n= 50)	Computer (n=50)					
1.I am sexually active	0.53	0.46	0.07	0.71	P=0.477	Non significant	
2.I have received money, gifts or favours in return for sex in the last 12 months	0	0.04	0.04	-1.47	P=0.141	Non significant	
3.I have been/am in a sexual relationship mainly for material benefits (e.g. gifts, cell phones, clothes)	0	0.02	0.02	-1.035	P=0.301	Non significant	
4.I've had sex with someone who isn't a regular partner because I've needed material things (e.g. rent, food, cosmetics)	0	0					
5.I have been/am in a sexual relationship mainly because that partner provides me with things I want (e.g. airtime, food, clothes, transport)	0	0.02	0.02	-1.035	P=0.301	Non significant	

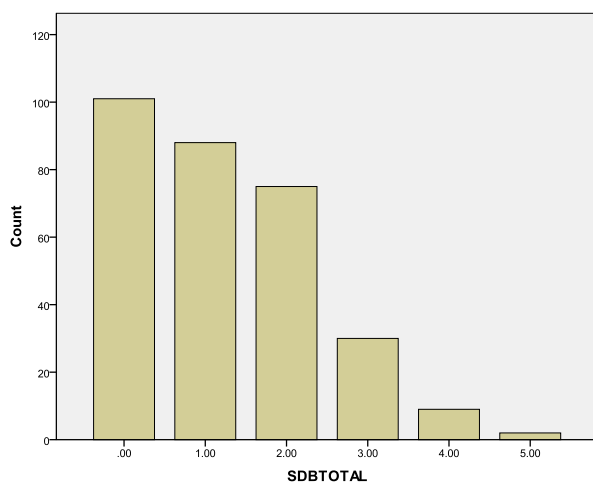
$\alpha = 0.05$



### 4.2.3 Socially desirable responding

#### *4.2.3.1 Scale reliability*

Social desirability scores were measured by the 5-item Socially Desirable Response Set (SDRS-5) (Hays *et al.*, 1989). Negatively scored items were re-coded and the total number of answers signifying a socially desirable response added together. Possible scores for the scale range from a minimum of 0 to a maximum of 5, with a score of 0 representing low socially desirable responding and a score of 5 representing high socially desirable responding. The sample's score results were positively skewed (refer Figure 1), with a mean of 1.23 and a median of 1. Reliability analysis via SPSS returned a Cronbach's alpha of 0.415. This is lower than the values obtained in the Hays *et al.* (1989) study.



*Figure 1.* Sample's distribution of socially desirable responding scores

#### 4.2.3.2 Association of self-report method (SAQ and UCT) and mode with socially desirable responding

Socially desirable responding was similarly distributed across all conditions (refer Figure 2).

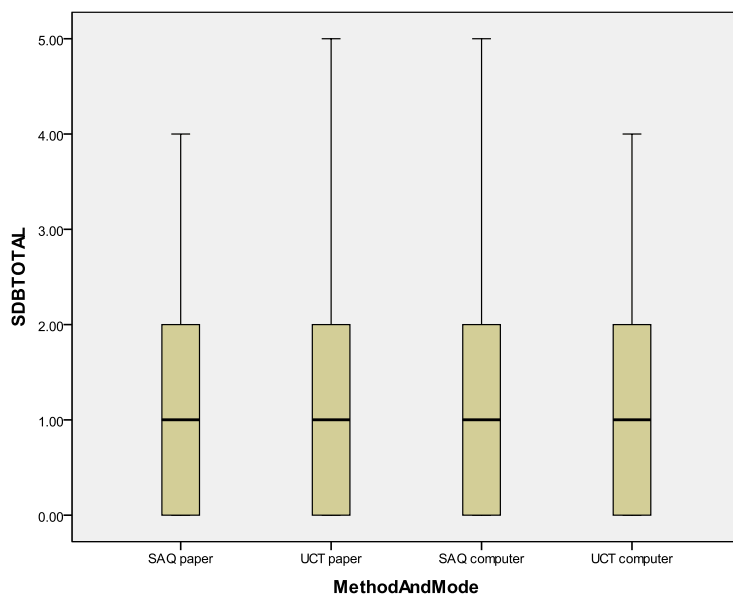


Figure 2. Socially desirable responding score per self-report method and mode

Chi squared tests were run using SPSS to determine if there was an association between socially desirable responding (as measured by the SDRS-5 scale) and self-report method (SAQ and UCT) or mode of delivery (paper and computer). SDRS-5 scores were dichotomised at the median split to yield a 'low social desirability' scoring group and a 'high social desirability' scoring group. No statistically significant associations between SDRS-5 scores and the method and mode of questionnaire were found (refer Table 8).

*Table 8.* Cross tabulation of self-report method and mode with socially desirable responding

Self-report method and mode	Socially desirable responding score		Total	$\chi^2$	Phi
	Low	High			
UCT paper mode	59 (-1.1)	43 (1.1)	102	1.258	.064
UCT computer mode	64 (.5)	36 (.5)	100		
SAQ paper mode	33 (.0)	20 (.0)	53		
SAQ computer mode	33 (.6)	17 (-.6)	50		

#### 4.2.4 Summary

Statistically significantly higher disclosure rates of being sexually active were yielded by the UCT (paper mode) compared to SAQ (paper mode), and by the UCT (paper mode) compared to the UCT (computer mode). For transactional sex behaviours, the UCT paper and computer modes yielded 2-6% of participants disclosing behaviours. In the paper SAQ no participants endorsed transactional sex items, whilst 2-4% of participants completing computer mode SAQ's endorsed these sensitive items. For transactional sex items the differences in disclosure between method and mode were not statistically significant. As measured by the SDRS-5, no statistically significant differences were found across all methods and modes for socially desirable responding.

## 5. DISCUSSION AND LIMITATIONS

### 5.1 General

Overall the UCT performed well in estimating base rate levels of transactional sex, obtaining levels similar to national survey figures (HEAIDS, 2010; Pettifor *et al.*, 2004). Some inconsistencies did occur, however. Of particular concern were a large number of negative proportions obtained from the difference in means calculations. This is not frequently reported in the literature, and part of this discussion section is dedicated to a more detailed attempt to make sense of these results. Disclosure levels of sensitive behaviour were not statistically significant between the methods of SAQ and UCT except for one item. This was a disappointing finding as typically the UCT is reported to yield significantly higher disclosure levels than other self-report methods.

### 5.2 Base rates of sensitive behaviours as estimated by the UCT

According to the UCT results, 2-6% of participants reported having engaged in transactional sex. Five per cent reported having been in a relationship to secure material benefits, 6% reported that they were in a sexual relationship mainly for material provision and 2% indicated that they were involved with someone other than a regular partner to obtain material things. These figures are within, and slightly above, the bounds of various published reports (HEAIDS, 2010; Pettifor *et al.*, 2004). They also partly correspond to previous findings conducted amongst a similar population: Schiever's (2010) research found a base rate of 5% of female students endorsed the statement 'I have had sex in exchange for luxury items such as cell phones'.

This indicates that transactional sex is a means used by some female students to secure material goods. Economic factors as motivating transactional sex were highlighted in the focus group discussions. Given this, interventions involving cash payments, 'behavioural economics', to deter transactional sex relationships have been trialed (Clark, 2011) and are currently being implemented amongst an adolescent population in KwaZulu-Natal (J. Frohlich of CAPRISA, personal communication, August, 2011).

What adds to the complexity of transactional sex, however, is that, combined with the more calculating element of economic instrumentality, is the legitimacy of a relationship. This mix of relational intimacy (often precluding the use of condoms) coupled with concurrent and successive partners (which serves to optimise benefits obtained) combines two essential risk behaviours for HIV transmission: Low condom use and concurrency (Leclerc-Madlala, 2009; Shelton, 2009). Thus, any level of transactional sex is of concern. This is especially so among young women in South Africa who, in the midst of a disease epidemic showing signs of stabilising, have particularly high incidence rates (6.4-17.2/100 person years) of HIV infection (Abdool Karim *et al.*, 2011). As highlighted by Global HIV Prevention (2008) any HIV intervention programme needs to take into account the particular target population's characteristics, motivations and thinking in order to be effective. Therefore, any interventions targeted at this high-risk group may face the challenge that those involved in transactional sex perceive such relationships as legitimate and established or necessary, and thereby fail to recognise their heightened risk or are not willing or able to address the associated risk behaviours.

The finding by Schiever (2010) that 32% of female students reported having sex in exchange for essential items such as food or toiletries was not replicated. Furthermore, the potential for inconsistency of results yielded by the UCT technique is evident in that Schiever's (2010) research obtained a base rate of 5% for the statement 'I have had sex in exchange for luxury items such as cell phones', yet in the same study negative proportions were yielded for the statement 'I have had sex in exchange for gifts such as clothes and jewellery'. Arguably these two statements encompass a similar concept of sexual exchange for material benefits, yet yielded different disclosure responses. Thus the reliability and stability of base rates yielded by the UCT appears uncertain.

Furthermore, Tsuchiya *et al.* (2007) warn that the UCT does not perform optimally in detecting sensitive behaviours engaged by 10% or less of the population. Thus, the UCT base rate results obtained in this study (2-6%), whilst corresponding to other research findings, need to be interpreted with caution.

### 5.3 Comparative performance of the UCT and SAQ

The UCT did not obtain higher levels of disclosure of transactional sex in comparison to the SAQ. This result was unexpected, disappointing and contrary to literature that consistently reports higher disclosure rates of sensitive behaviours by the UCT than the SAQ (Dalton *et al.*, 1994; LaBrie & Earleywine, 2000; Wimbush & Dalton, 1997). A possible explanation for this poor performance is, as stated above, in cases where the studied behaviour has a low prevalence rate, the UCT does not perform optimally.

The statistically significant difference between the base rate of disclosure of sexual activity between the UCT (paper mode) and the SAQ (paper mode) was unexpected. Research shows that sexual activity among youth is common, making this behaviour an accepted norm (Eaton *et al.*, 2003; Maharaj & Cleland, 2008; Selikow, Ahmed, Flisher, Mathews & Mukoma, 2009). Thus it was not anticipated that participants would view divulging this as greatly sensitive and therefore results across all methods and modes were expected to be comparable.

As Tschuriya (2005) explains, where social desirability is not an issue (disclosure would not contravene norms nor incur risk), the UCT would not yield increased estimates of prevalence levels in comparison to other methods. In other words, the 'protective' nature of disclosure through the UCT only facilitates disclosure where the respondent would otherwise hide their unapproved, highly stigmatised or illegal behaviour.

Whilst this would apply to disclosure of transactional sex, it was not expected to apply to university students admitting to (normative) sexual activity. Thus the significantly higher base rate of 72% of participants being sexually active obtained by the UCT (paper mode) appears questionable, and is possibly a spurious finding. This is particularly so as rates yielded by the other conditions appear more comparable: 42% (UCT computer mode), 46% (SAQ computer mode) and 53% (SAQ paper mode). Furthermore, these latter three rates correspond to the published figure of 50% of South African youth being sexually active by the age of 16 (Eaton *et al.*, 2003).

Another possible explanation, however, is that the UCT is effective in facilitating disclosure of sensitive behaviours, and in this case participants experienced disclosure of sexual activity as potentially risky or socially undesirable, yet the condition of the UCT (paper mode) facilitated disclosure. This is possible as the level of sexual activity obtained (73%) in this condition is aligned with the figure from a meta-analysis of sexual surveys in South Africa that by the age of 20 ‘probably 80%’ of youth are sexually active (Eaton *et al.*, 2003). This explanation would indicate that, contrary to sexual activity being a normative practice amongst university students, there is still reluctance in disclosing this in Self-Administered Questionnaires, yet the conditions provided by the UCT (paper mode) facilitated disclosure.

The statistically significant difference in results between the UCT in one mode and the other conditions could be interpreted as it performing effectively as published in previous studies. However, given that this performance was on a relatively ‘low’ sensitivity question, and was not replicated by UCT performance in the alternate (computer) mode, another explanation should be considered. It is proposed that, in some cases, where the UCT yields significantly higher base rates than other methods this is potentially due to inaccuracies in the technique, and such results would need to be further corroborated.

### 5.3.1 Negative proportions

The many negative proportions obtained in this study’s results called into question the effective performance of the UCT. Negative proportion UCT results are not commonly reported in the literature, and interpretation and understanding of such outcomes have not been widely addressed. Thus this issue is given further attention.



It is acknowledged that critical to the optimal performance of the UCT is strict randomisation and large sample sizes. This research may have been compromised in both these aspects. Randomisation was compromised in part due to a poor response in recruitment to the computer venue. Thus some participants were diverted to different conditions than initially allocated to equalise participant numbers in different groups. As the computer delivered SAQ and UCT were located at the psychology building on campus, this required students to expend extra effort to participate. Johnson and DeLamater (1976, in Catania *et al.*, 1986) caution that asking participants to attend a research site may bias the sample in that those more interested in the research topic would be more likely to attend. Thus a sub-sample of a particular type of student who attended the computer venue may have been created. Furthermore, sample sizes just met the recommended limits: 40–50 per UCT condition (LaBrie & Earleywine, 2000).

The aforementioned factors aside, it would still be expected that (even were the paper and computer modes two ‘sub-samples’), within each mode there would have been a higher disclosure rate elicited by the UCT than the SAQ formats. This statistically significant difference, beyond participants’ reports of being sexually active, was not found.

Questionable performance of the UCT has been found in previous research. In a national drug survey Biemer and Brown (2005) reported the UCT yielded lower estimates of drug use than those obtained by direct questioning. Furthermore, estimates of “less than 0” (Biemer & Brown, 2005, p. 304) were yielded by the UCT. This corresponds to the negative estimates found in this research project. Glynn (2010) attributes negative estimates to poor comparability between the control and sensitive item groups,

insufficient sample sizes, and misrepresentation by or misunderstanding of respondents. Glynn (2010) further moots the possibility that some respondents so react against appearing to possibly endorse the sensitive item that they report zero for that response set, regardless of their non-sensitive item counts.

The apparent simplicity of the logic of the UCT is affected by a number of factors. This means that limiting the analysis of UCT results to the difference in means calculation is unsatisfactory (Biemer & Brown, 2005). Biemer and Brown (2005) caution that base rate estimates are labile in response to measurement error and where reliability of the non-sensitive item counts is low this impacts on measurement error. Reliability of the non-sensitive items is an issue as it has been found that comparisons of the reported count of identical non-sensitive items delivered in UCT and direct questioning format yielded lower levels for the UCT, suggesting different cognitive reactions for UCT versus direct questioning in respondents (Biemer & Brown, 2005; Tsuchiya *et al.*, 2007; Tsuchiya & Hirai, 2010).

### 5.3.2 Non-sensitive items

To facilitate accuracy, Tsuchiya and Hirai (2010) suggest that participants are asked to record both the count for the number of applicable statements, and the count of non-applicable statements. A further recommendation to address reliability, is, in addition to the UCT set responses, participants would be required to answer an identical corresponding list of the non-sensitive items, each item, however, directly answered (Biemer & Brown, 2005; Corstange, 2009). This would enable a calculation of reliability, each participant acting as their own control, which could be used as a means to assess the

validity of the simple base rate calculation. Without such a comparison, validity cannot be claimed, and a statistical modeling approach, correcting for measurement error, is then required for accurate estimations of base rates (Biemer & Brown, 2005).

Further aspects regarding the non-sensitive items should be considered. The UCT protocol in this research was modeled on studies where the non-sensitive items were innocuous (Dalton *et al.*, 1994; LaBrie & Earleywine, 2000; Schiever, 2010). However, Glynn (2010) advises the non-sensitive items should be credible in terms of the sensitive item. This reduction of conspicuousness of the sensitive item on the list is argued to reduce response defensiveness (Choudhuri & Christofides, 2007; Krebs *et al.*, 2011; Tsuchiya *et al.*, 2007). This project, using innocuous non-sensitive items modeled on those used by Dalton *et al.* (1994), and LaBrie and Earleywine (2000) may have heightened the conspicuousness of the sensitive item in the questionnaire, thereby eliciting response defensiveness. Thus an overlooked but critical factor in the performance of the UCT is the selection and testing of the non-sensitive items. In addition Imai (2011) cautions that the non-sensitive items require careful choice to avoid ambiguity and to prevent skewing of data. This is best achieved and checked through piloting the questionnaire, which would be advised in future research.

### 5.3.3 Additional factors impacting UCT performance

Whilst an advantage of the UCT is claimed to be its ease of understanding and administration, there are cognitive complexities involved, including comprehension and counting ability factors, which may compromise the reliability of its performance. Given this, Tsuchiya *et al.* (2007) advise that the UCT is only optimally effective with “highly

educated respondents” (p. 269) who grasp the anonymity afforded by the technique, and are able to manage the cognitive requirements. Furthermore, research by Lelkes, Krosnick, Marx, Judd and Park (2011) led them to conclude that complete anonymity can remove accountability for careful answering, resulting in inaccuracies. So, where reduced accountability results in less cognitive effort being expended, inaccuracies may be increased. In this research project the combination of providing complete anonymity yet also requiring a degree of cognitive application may have compounded reporting inaccuracies in the UCT questionnaire. This is particularly so among a student population potentially over-fatigued by academic exercises and recruitment to research participation. Thus the UCT’s combination of providing complete anonymity, yet also requiring a degree of cognitively complex effort, may compound inaccuracies in obtained responses.

Tsuchiya *et al.* (2007) warn that UCT base rate estimate calculations, when based on the simple mean difference are “usually rather unstable” (p. 257). This instability is particularly exacerbated by larger variances associated with smaller sample sizes. Furthermore, even where UCT sample sizes are larger than direct questioning samples (e.g. SAQ’s), the UCT has larger standard errors on estimate (prevalence) levels (Tsuchiya *et al.*, 2007). Accordingly, sample size is a fundamental issue and Corstange (2009) recommends sample sizes of 1000–2000. This greatly contradicts the recommended minimum sample sizes of LaBrie and Earleywine (2000) that guided this project. In view of Corstange’s (2009) recommendations, the sample size aimed for and obtained per condition in this project may have been inadequate. Given these conflicting recommendations regarding sample sizes, Ahart and Sackett’s (2004) caution that further

research is required in order to examine the role of sample size in gaining stable estimates of sensitive behaviours is noteworthy.

Noteworthy, too, is the critique leveled at the UCT that, through the aggregation process, it is not possible to link predictor and criterion variables. Thus it has been challenged as an inefficient technique that loses information (Imai & Blair, 2011; Verkuilen & Siefert, 2008). This limitation is particularly crucial in social science research where the link between risk behaviours and determinants thereof is of interest to researchers in understanding the multiple determinants of behaviours and thereby informing interventions.

Related to this, included in the demographic section of the questionnaire was an item pertaining to students' source of finance for university fees. This was included as low socio-economic status may be a vulnerability factor for transactional sex (HEAIDS, 2010). However, given the aggregation method of the UCT, disclosure of the sensitive behaviour could not be associated with individual demographic details. Statistical approaches, including multiple regression (Imai & Blair, 2011), have been proposed in to model predictor and criterion relationships in the UCT. Other examples of applicable statistical approaches are latent structural modeling (Biemer & Brown, 2005) and multivariate analysis with the use of maximum likelihood estimators, where answers to the sensitive items are dealt with as missing data (Imai, 2011). However, this statistical modeling was beyond the scope of this project and, given the small sample sizes and negative proportions, was not attempted.

The abovementioned indicate that the UCT, as a technique to facilitate disclosure and more accurate base rates of sensitive behaviours, has a number of limitations. Furthermore, specific conditions, such as large sample sizes and carefully selected non-sensitive items, need to be fulfilled in order for it to perform optimally.

#### 5.4 Comparative performance of paper and computer modes

It was hypothesised that the questionnaires delivered by computer mode would elicit higher levels of disclosure, based on the computer mode creating a greater sense of anonymity and privacy. Whilst there was a tendency towards this (no SAQ paper mode transactional sex items were endorsed, whilst 2–4% of participants endorsed these statements on the SAQ computer mode), no statistically significant difference between computer and paper mode disclosure rates was found. Whereas some literature reviewed suggested computer mode questionnaires yield higher disclosure rates than equivalent pen and paper questionnaires (Hancock & Flowers, 2001; Joinson *et al.*, 2007), existing research is not conclusive.

Thus the finding that there was no significant difference in disclosure levels between paper and computer mode delivered questionnaires is in line with literature that indicates that the primary determinant of disclosure is the degree of anonymity and privacy afforded the participant, and this can be provided equally both through paper or computer administered modes (Hancock & Flowers, 2001). This confirms Dayan *et al.*'s (2009) claim that, concerning the optimising of rates of disclosure, self-administration (versus interview) remains the key determinant, not mode of delivery (paper versus computer).

The increasing use of computer administered questionnaires is inevitable in a technologically advancing world. The results from this project suggest that this mode is at least equivalent to paper administered questionnaires. Given the other advantages of computer administered questionnaires (e.g. cost effectiveness and simultaneous data capture), this mode appears to be the preferable option. The only hindrance regarding computer administered questionnaires experienced in this study was the fixed location, requiring recruits to attend a particular venue. This is easily overcome by the use of mobile, laptop computers. Related to this mobility aspect is the Africa Centre for Health and Population Studies' innovative use of cellular phones as data entry interfaces instead of computer or paper questionnaires in deep rural areas (Imrie *et al.*, 2011).

## 5.5 Social desirability

### 5.5.1 Scale

Cronbach's alpha obtained for the SDRS-5 scale was 0.415. This is a low reliability value (Raykov & Marcolides, 2011). Cronbach's alpha is a function of the length of the test instrument and since the SDRS-5 scale only comprises 5 items this would have been a contributing factor to the low value. Whilst the SDRS-5 was chosen to reduce the response burden on the participant, a longer social desirability response scale may have optimised reliability and possibly more clearly distinguished gradations of social desirability, thereby facilitating more accurate analysis.

Furthermore, the positive skewing of scores to 'low socially desirable' responding suggests the scale may not be sensitive in discriminating levels of socially desirable responding. Providing a 7-point Likert format, instead of the published 5-point options,

may have better discriminated the levels of social desirability. Even so, Johnson and Richter (2004) critique social desirability scales as being “appallingly transparent” (p. 964), and the positive skewing of the data may be a reflection of participants’ reactions to this.

The reliability score of the SDRS-5 obtained for this sample was lower than that reported by Hays *et al.* (1989). This may be attributed to the different populations within which the scale was applied, as reliability is a function of both the measurement instrument and the population sample on which the instrument was developed (Raykov & Marcolides, 2011). Thus aspects of culture and changing times may explain this difference and this points to the need for current and locally tested and developed instruments.

#### 5.5.2 Social desirability and self-report method and mode

Social desirability scores were not significantly associated with either self-report method or mode. Whilst this result should be accepted with caution due to the low reliability of the SDRS-5 scale, this suggests that the different formats and modes of questionnaires do not elicit a socially desirable response as measured by the SDRS-5. This may indicate that socially desirable responding is a constant individual trait, as opposed to a situational, evoked response. This finding also suggests that across all the conditions investigated in this study, no particular method evoked or alleviated socially desirable responding bias more than any other.

This is in contrast with Pienaar’s (2007) finding that mean social desirability scores on the Marlowe-Crowne scale were significantly different between three self-report



methods: Face-to-Face Interview (FTFI), SAQ and the Informal Confidential Voting Inventory (ICVI). In her study significantly higher socially desirable responding was elicited on the Marlowe-Crowne scale for the FTFI and SAQ, compared to the ICVI. Pienaar (2007) concluded that such higher social desirability scores were indicative of respondents' heightened concerns for anonymity and a need to be seen favourably as evoked by the self-report methods of the FTFI and the SAQ. In comparison to this, the lower score on the ICVI was evidence that this method alleviated the need for respondents to provide answers that would meet social approval.

To further assess social desirability bias it would be ideal to analyse whether a correlation between social desirability scores and self-disclosure exists. Since disclosure in the UCT format is aggregated, however, it is not possible to analyse individual sensitive behaviour disclosure levels with individual scores of socially desirable responding.

This research aimed to examine whether selected self-report methods and modes differentially facilitated disclosure of sensitive behaviours. The theory of social desirability was included as a contributing factor to disclosure. Thus it was hypothesised that different methods and modes reduce socially desirable responding, as evidenced by higher disclosure levels. A possible critique, however, is that reduction in socially desirable responses is not only evidenced by the increased reporting of socially undesirable behaviours, but also by the decreased reporting of socially desirable behaviours (Langhaug, Sherr & Cowan, 2010). Future questionnaires, as a control measure, should incorporate questions assessing both these aspects, as a means of assessing reliability of responses.

### 5.6 Survey sensitive items

Formulation of the survey sensitive statements was informed by analysis of focus group discussions and related research survey questions sourced from literature. The colloquial terms that arose from the focus groups with students were not incorporated into the survey out of the researcher's concern that these terms may not be universally understood and might be inappropriate in a survey research instrument. At the time this was justified by the need to standardise question wording to facilitate a wide reach of the survey instrument. However, Krebs *et al.* (2011) warn that this standardisation can result in clouding of the phenomena studied or failure to accurately represent the phenomena to different groupings.

Thus, on administration, statements may not have been clearly recognised by participants as referring to transactional sex relationships specifically. This is particularly so with statement 4 regarding 'sex with someone who isn't a regular partner', which may have been taken to imply commercial sex work. Mavhu *et al.* (2008) describe the process and tensions involved in ascertaining sexual terms that are culturally appropriate and recognisable in surveys. They acknowledge that the use of either culturally recognisable colloquial and 'euphemistic' terms or more formal technical terms can yield differential disclosure rates. Mavhu *et al.* (2008) used cognitive interviewing to elicit clarity and consensus regarding sexual terms and colloquialisms used in their sexual behaviour survey. Alternately in this study, focus groups were undertaken to inform sensitive behaviour statement formulation. However, a secondary process of re-checking and refining of statements based on the intended sample population's feedback did not occur. Thus future piloting of the sensitive statement items is advised.

### 5.7 Sample

As reported in the results section, in comparison to current university demographics, black and coloured students were overrepresented, and Indian and white students underrepresented in the sample. During recruitment, efforts were made to recruit a broad variety of students, through making announcements in lectures (science, commerce, arts and social science venues), approaching individual students and those in groups on campus, and putting up notices around campus, including at university halls of residences. Those underrepresented in the sample and non-participants may have differed in the behaviour of interest, therefore risk of selection bias is acknowledged. Consequently, where there are poor response rates and reliance on volunteers, the representativeness of the sample and the generalisability of the results to the population studied are questionable (Blair & Zinkhan, 2006).

Generally, declining response rates are an issue in survey methods (Baruch & Holtum, 2008; Porter & Whitcomb, 2003). Declining interest among students to participate may be attributable to 'over surveying', and the use of a lottery incentive was intended to encourage participation and maximise recruit numbers. However, whilst students are presumed to be more price-sensitive and responsive to incentives, Porter and Whitcomb (2003) found only a minimal increase in student response rates based on incentives. In fact, lottery incentives may not be effective as recruits may judge the likelihood of benefiting too diffuse or the integrity of administration suspect. Thus the lottery incentive may have been ineffective, and other approaches, such as engaging with the SRC in order to gain credibility and campus-wide exposure are possible alternative future strategies.

## 6. RECOMMENDATIONS

The UCT is a promising technique for obtaining prevalence rates of sensitive, highly stigmatised behaviours that respondents would otherwise not divulge. The similarity of prevalence levels attained in this study with established findings is promising. However, without an independent means of measuring the sensitive behaviour enquired about, verification and validity of results remain uncertain. A possible strategy could be to have one sensitive item pertaining to a behaviour on which clinical data is known. For example, where prevalence levels of sexually transmitted diseases amongst those attending a clinic are known, the base rate levels obtained from UCT questionnaires could be compared, providing a form of criterion validity.

Were the UCT proved effective in providing reliable rates of self-report of stigmatised and sensitive behaviours, the application of this “statistical truth serum” (Glynn, 2010, p. 1) would be vast. By providing a way for respondents to furnish honest answers without fear of identification or consequence, it could, for example, replace costly laboratory testing in verifying participants’ compliance with clinical trial instructions. Thus it would be of value for further research to develop a heightened grasp of the factors affecting effective performance of the UCT.

## 7. CONCLUSION

Mixed performance of the UCT characterised this study. In the literature, the UCT has been shown to yield higher prevalence rates of sensitive behaviours than direct questioning (Ahart & Sackett, 2004; Dalton, Wimbush & Daily, 1994; LaBrie & Earleywine, 2000; Tsuchiya *et al.*, 2007). This has been taken to mean that the technique facilitates greater disclosure of sensitive behaviours. In practice, however, the UCT requires ongoing research regarding its reliability and accuracy. Whilst the concept of the UCT appears simple, the elements that comprise its working are complex. Thus future research should include further innovation and modulations of this technique. Suggestions regarding this include further attention to the wording and selection of sensitive and non-sensitive items, added measurements to establish criterion validity, and the use of more sophisticated statistical modeling to accurately factor in measurement errors and assess predictor variable factors.

Overall, this study highlighted the complexity and challenge of quantifying sensitive (and in this case) sexual behaviours. Such behavioural data are not free from contextual influences and individual interpretation. Focus group data was intended to fine-tune the questionnaire in order to make questionnaire items recognisable as pertaining to the behaviour of transactional sex. As the focus group discussions elicited, however, the understanding of this behaviour, and relationships involving material exchange, is a contested realm, with a blurring between culturally accepted courtship behaviours, established gift-giving functions in order to maintain relationships and, to the other extent, the exchange of money in commercial sex transactions.

Nevertheless, transactional sex was found to be an established phenomenon among female tertiary level students. With the high prevalence and incidence rates of HIV in South Africa, especially among young women and in the province of KwaZulu-Natal (Abdool Karim *et al.*, 2011; Lawn & Kinney, 2009), this finding is of concern. This is particularly so as transactional sex is linked to positive HIV status (Dunkle *et al.*, 2004). In addressing the HIV epidemic in South Africa, interventions on the individual and broader societal levels are necessary. Regarding transactional sex, this would require a tailoring of interventions to the unique characteristics, vulnerabilities, motivations and risk patterns of this behaviour. Attaining accurate measures of transactional sex, and other sensitive behaviours, is critical in order to advocate for and justify interventions focused at particular risk-groups. Thus ongoing research and innovations regarding methodological techniques to obtain accurate measures of sensitive behaviours remains topical and justified.

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## 9. APPENDICES

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## Appendix A:

### Focus Group Discussion Schedule

Start with scenario “ I heard on the radio for a call-in program about relationships a guy (about 20 years old) phoned in to say his girlfriend had broken up with him, he was really upset and said he couldn’t understand it – he had bought her school uniform for her, paid her school fees etc”. This sounds like material exchange going on in a relationship and sometimes its called ‘transactional sex’, have any of you heard about this, do you and your friends know about this and talk about it? What do you think of this type of relationship?

Questions to be explored in the focus group, as classified by different themes:

#### **Defining/clarifying ‘transactional sex’**

How is this ‘gift-giving’ distinguished from; compared to in an affectionate/love relationship (‘true loves’) – what’s the difference? E.g. Valentines day gifts vs. being in a sexual relationship because your partner provided you/you expected him to provide you with food, cosmetics etc.

What is a gift? A lift/meal/cell phone/accommodation / fees payment

Is this an indication of the woman’s worth/ an economic transaction?

Would gifts be exchanged at every encounter? Implicit expectations/agreements?

If the gifts/exchanges end does that mean the end of the relationship?

Do you see this type of relationship as being different to ‘commercial sex/prostitution’? --

-What’s the difference in your understanding?

Gifts received as a bonus vs. obtaining gifts the motivation for the relationship?

#### **Terminology**

What do you call this type of relationship or if a girl is given things after being sexually involved with a guy?

(‘being gifted’; ‘minister of education’ paying fees, ‘makwapheni’ – roll on - secret sexual relationship)

Are they ‘boyfriends’ and ‘girlfriends’? Or are there other words for the male and female involved?

#### **Understanding the motivation**

What do people get out of such relationships?

-Material support for necessities, or more ‘luxury’ goods?

-Is it about survival or getting the nicer things in life?

-Is there emotional support, affection or exploitation?

Is there peer pressure to obtain luxury goods/ look a particular way/ have things, and this is a way to address that?

Is this a type of relationship only for those whose educational/employment opportunities are limited, have no other option?

What do you think would cause people to go for this kind of relationship/partnership?

Is this a means of gaining financial control/ security which one couldn't otherwise have – means of empowerment/self-determination?

**Ascertaining sensitivity**

Is this disapproved of in your groups of friends/ the kind of thing that's kept secret or is it accepted / matter of fact as what needs to be done to make it and get what you want/ the way relationships are these days?



Appendix B:  
**Focus Group Discussion: Information sheet**

Hello! I'm Carmen Alledahn a masters student in research psychology. I'm interested in the different types of relationships people have. Women have romantic and sexual relationships for different reasons. Sometimes women are mainly in sexual relationships with men because they are provided with material things like gifts and clothing. I wonder what students know about this, how you describe this type of relationship and any opinions/ attitudes you have about this type of relationship.

If you are interested in this topic, I would like you to join our discussion group of about 10 students and myself. It would take about an hour and be held in the psychology recording lab. Your participation would be helpful and appreciated but of course your participation is totally voluntary, and you can withdraw your participation at any time.

If you agree, the discussion will be audio recorded for transcription purposes, but no names will be recorded, to ensure confidentiality and anonymity. Pseudonyms (code names) will be used. The group will consist of only males or only females, and will agree to mutual respect. **Please note that although I will treat all your information confidentially, I cannot guarantee that other members in the group will do the same. For this reason you are advised not to make any sensitive personal disclosures. The purpose of the group is to discuss your views in general. You will not be asked to talk about any personal experiences, only about the way this type of relationship is described and discussed with your friends, within your peer circles.**

If you find the discussion distressing, please speak to myself, or the Student Counselling Centre, who are aware of the research.

The study has been approved by the higher degrees committee of the UKZN school of psychology.

Would you like to participate? Please contact me on the number below. To thank you for your time and participation refreshments will be provided after the group discussion.

If you have any questions regarding this research please contact myself or the research supervisor.

Research student: Carmen Alledahn    **Cell no: 0836616415**  
a\_carmen2000@yahoo.com

Research supervisor: Vernon Solomon 033 260 5680 or [solomon@ukzn.ac.za](mailto:solomon@ukzn.ac.za)  
Student Counselling Centre: 033 260 5233

(Research student and supervisor based at the Psychology faculty, UKZN, Pietermaritzburg Campus).

Appendix C: Jefferson transcription system  
(Retrieved November 28, 2011, from <http://www-staff.lboro.ac.uk/~ssjap/transcription/transcription.htm>)

[ ]	Square brackets mark the start and end of overlapping speech. They are aligned to mark the precise position of overlap as in the example below.
<u>Underlining</u>	indicates emphasis; the extent of underlining within individual words locates emphasis and also indicates how heavy it is.
°↑I know it,°	‘degree’ signs enclose hearably quieter speech.
(0.4)	Numbers in round brackets measure pauses in seconds (in this case, 4 tenths of a second). If they are not part of a particular speaker’s talk they should be on a new line. If in doubt use a new line.
(.)	A micropause, hearable but too short to measure.
((stoccato))	Additional comments from the transcriber, e.g. about features of context or delivery.
she wa::nted	Colons show degrees of elongation of the prior sound; the more colons, the more elongation.
Yeh,	‘Continuation’ marker, speaker has not finished; marked by fall-rise or weak rising intonation, as when delivering a list.
y’know?	Question marks signal stronger, ‘questioning’ intonation, irrespective of grammar.
bu-u-	hyphens mark a cut-off of the preceding sound.
>he said<	‘greater than’ and ‘lesser than’ signs enclose speeded-up talk. Occasionally they are used the other way round for slower talk.
solid.= =We had	‘Equals’ signs mark the immediate ‘latching’ of successive talk, whether of one or more speakers, with no interval.
heh heh	Voiced laughter. Can have other symbols added, such as underlinings, pitch movement, extra aspiration, etc.



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Westville Campus  
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Tel No: +27 31 260 3587  
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4 July 2011

Miss C Alledahn (932411473)  
School of Psychology  
Faculty of Humanities, Development &  
Social Sciences  
Pietermaritzburg Campus

Dear Miss Alledahn

**PROTOCOL REFERENCE NUMBER: HSS/0447/011M**

**PROJECT TITLE: Investigation of transactional sex among tertiary level students: A comparison of self-report data collection methodologies**

In response to your application dated 29 June 2011, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

**PLEASE NOTE:** Research data should be securely stored in the school/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Professor Steven Collings (Chair)  
HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE

cc. Supervisor: Mr V Solomon

cc. Mrs B Jacobsen, Higher Degrees Office, Pietermaritzburg Campus



Founding Campuses: ■ Edgewood ■ Howard College ○ Medical School ■ Pietermaritzburg ■ Westville

## Appendix E:

### Focus Group Discussion: Information sheet

Hello! I'm Carmen Alledahn a masters student in research psychology. I'm interested in the different types of relationships people have. Women have romantic and sexual relationships for different reasons. Sometimes women are mainly in sexual relationships with men because they are provided with material things like gifts and clothing. I wonder what students know about this, how you describe this type of relationship and any opinions/ attitudes you have about this type of relationship.

If you are interested in this topic, I would like you to join our discussion group of about 10 students and myself. It would take about an hour and be held in the psychology recording lab. Your participation would be helpful and appreciated but of course your participation is totally voluntary, and you can withdraw your participation at any time.

If you agree, the discussion will be audio recorded for transcription purposes, but no names will be recorded, to ensure confidentiality and anonymity. Pseudonyms (code names) will be used. The group will consist of only males or only females, and will agree to mutual respect. **Please note that although I will treat all your information confidentially, I cannot guarantee that other members in the group will do the same. For this reason you are advised not to make any sensitive personal disclosures. The purpose of the group is to discuss your views in general. You will not be asked to talk about any personal experiences, only about the way this type of relationship is described and discussed with your friends, within your peer circles.**

If you find the discussion distressing, please speak to myself, or the Student Counselling Centre, who are aware of the research.

The study has been approved by the higher degrees committee of the UKZN school of psychology.

Would you like to participate? Please contact me on the number below. To thank you for your time and participation refreshments will be provided after the group discussion.

If you have any questions regarding this research please contact myself or the research supervisor.

Research student: Carmen Alledahn    **Cell no: 0836616415**  
a\_carmen2000@yahoo.com

Research supervisor: Vernon Solomon 033 260 5680 or [solomon@ukzn.ac.za](mailto:solomon@ukzn.ac.za)

Student Counselling Centre: 033 260 5233

(Research student and supervisor based at the Psychology faculty, UKZN, Pietermaritzburg Campus).

**CONSENT**

I hereby agree to participate in the group discussion on the meanings of and terminology used regarding material exchange in relationships. I will not be asked to discuss or disclose any personal experiences regarding the topic. I will not be asked to answer any questions or contribute to any discussions unwillingly. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop participating at any point should I feel uncomfortable with the topic and not want to continue, and this decision will not affect me negatively. If I wish to withdraw any contributions I have made I am free to do so.

I understand that this is a research project whose purpose is not necessarily to benefit me personally in the immediate or short term.

I understand that my participation will remain confidential in that the researcher will keep data collected as confidential and every step will be taken to ensure my identity is kept anonymous. Only pseudonyms (code names) will be used in the group discussion. The discussion group will agree to mutual respect, however this agreement between participants cannot be guaranteed by the researcher. **Since the researcher cannot guarantee that other members of the discussion group will maintain confidentiality, please be advised not to make any sensitive personal disclosures. The purpose of the group is to discuss your views in general.**

Date signature	Participant name	Participant

I hereby agree to the tape-recording of my participation in the study. I understand the purpose of this is to accurately record the information given so that it can be transcribed and used in the research report, and potentially any publications of the research.

Date signature	Participant name	Participant



RESEARCH OFFICE (GOVAN MBEKI CENTRE)  
WESTVILLE CAMPUS  
TELEPHONE: 031 260 3587  
EMAIL: [Ximbap@ukzn.ac.za](mailto:Ximbap@ukzn.ac.za)

3 August 2011

Ms. C Alledahn (932411473)  
School of Psychology

Dear Ms. Alledahn

PROTOCOL REFERENCE NUMBER: HSS/0447/011M

PROJECT TITLE: Investigation of transactional sex among tertiary level students: A comparison of self-report data collection methodologies.

**FULL APPROVAL NOTIFICATION– AMENDMENT**

This letter serves to notify you that your application for an amendment dated 28 July 2011, has been granted full approval. The changes are:

- Wording to allow for 'I have ever' as opposed to being limited to the current 'I am'.
- Paper questionnaire replicated in an online survey format.
- Table with previous questions and new questions.
- SRQ, UCT A, questionnaires.

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years

Best wishes for the successful completion of your research protocol.

Yours faithfully

.....  
**PROFESSOR STEVEN COLLINGS (CHAIR)**  
**HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE**

cc. Supervisor –Mr. Vernon Solomon  
cc. Mrs. B Jacobsen



Founding Campuses: ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

Appendix G:

### **Research Information sheet for students- Questionnaires**

Hello! I'm Carmen Alledahn a psychology research masters student at UKZN, Pietermaritzburg Campus. As part of the research course, I'm carrying out some research into which questionnaires and ways of collecting information are the best to gather information. Some of the questions I'm asking are about sexual relationships among university students.

Please note: your participation is fully voluntary and your anonymity and confidentiality are guaranteed – no names are requested and all the answers go into a sealed box/saved on a computer only I and the research supervisor will access. You are only asked to participate if you are completely comfortable and you don't feel pressured/obliged to participate. No harm or disadvantage will come from participation/not. If you wish to withdraw at any time, you are free to do so! Should you feel upset or distressed by any questions in the questionnaire please approach myself, contact the project supervisor, or contact the Student Counseling center for assistance.

If you would like to participate you will be given one of 3 different paper questionnaires, or be asked to answer questions on a computer at the psychology department computer room. To answer the questions should take about 10 – 15 minutes. By agreeing to fill in the questionnaire you are indicating you understand the above, and consent to participate.

To thank you for your participation there is a lottery/lucky draw of names for small monetary prizes (R50's & R20's). If you'd like to be in it to win it, give your name and cell phone number on a separate piece of paper. These names are kept totally separate and can't be linked to your questionnaire. You will be texted and informed if you've won anything -+ at the end of August.

Thanks!

Any questions:

Carmen Alledahn (Research student) 0836616415 or [a\\_carmen2000@yahoo.com](mailto:a_carmen2000@yahoo.com)

Vernon Solomon (Research supervisor) 033 260 5680 or [solomon@ukzn.ac.za](mailto:solomon@ukzn.ac.za)

Student Counseling Centre (033) 260 5233

Social Science Research Ethics Committee Protocol no: HSS/0447/011M

Appendix H:

### **Questionnaire Informed Consent**

I hereby confirm that I understand the nature and purpose of this study conducted by the psychology masters research student. I understand that by completing the questionnaire I give my consent to participate in the study.

I understand my participation in this study is totally voluntary, complete anonymity is ensured as I don't write my name on the questionnaire/enter my name on the computer. I understand I can withdraw from the study/completing the questions if I wish. My agreement to participate is just for this questionnaire. If I feel distressed by the questions regarding sexual relationships I can contact the researchers and approach the Student Counseling center for assistance (033 260 2533).

I understand that there are some small incentives offered to participants to thank them for their time, and this is based on a lucky dip system. If I wish to have a chance to win the prize, which is not guaranteed, I can give my name and contact number on a separate piece of paper. These names are in no way linked to the questionnaires and on the lucky dip being administered, they will be destroyed

Any queries or concerns please contact:

Carmen Alledahn (Research student): 0836616415 or [a\\_carmen2000@yahoo.com](mailto:a_carmen2000@yahoo.com)

Vernon Solomon (Research supervisor): 033 260 5680 or [solomon@ukzn.ac.za](mailto:solomon@ukzn.ac.za)

Student Counseling Centre (033) 260 5233

Social Science Research Ethics Committee Protocol no: HSS/0447/011M



### Self Administered Questionnaire

Please tick the applicable block:

Age (please write): \_\_\_\_\_

Gender: Male  Female

Year of study at university: 1<sup>st</sup>  2<sup>nd</sup>  3<sup>rd</sup>  4<sup>th</sup> +

What population group/race would you describe yourself as:

Black  Coloured  Indian  White  Other

Where is your place of residence whilst at university?:

- University residence
- Digs (accommodation off campus with friends)
- Live on my own
- Live at home with family/relatives
- Other: \_\_\_\_\_

How are your studies being paid for? (tick more than one if applicable)

Self funded (savings/am working)  ; Parents/relatives  ; Bursary/Scholarship  ;  
Loan  ; Financial aid  ; Other: \_\_\_\_\_

**Please mark the following questions with your answer: Tick “Y” yes or “N” No**

- |   |                            |                            |
|---|----------------------------|----------------------------|
| I know the name of a Maritzburg United soccer team player.....                          | <input type="checkbox"/> Y | <input type="checkbox"/> N |
| I have been to London.....  | <input type="checkbox"/> Y | <input type="checkbox"/> N |
| I have a brother.....   | <input type="checkbox"/> Y | <input type="checkbox"/> N |
| I am sexually active .....  | <input type="checkbox"/> Y | <input type="checkbox"/> N |
| I own a laptop computer .....   | <input type="checkbox"/> Y | <input type="checkbox"/> N |
| I don't normally eat breakfast .....  | <input type="checkbox"/> Y | <input type="checkbox"/> N |
| I can speak more than 2 languages reasonably well.....                                  | <input type="checkbox"/> Y | <input type="checkbox"/> N |
| I have received money, gifts or favours in return<br>for sex in the last 12 months..... | <input type="checkbox"/> Y | <input type="checkbox"/> N |

I've lived in a country other than South Africa.....	<input type="checkbox"/> Y	<input type="checkbox"/> N
I usually take vitamins everyday .....	<input type="checkbox"/> Y	<input type="checkbox"/> N
I have been/am in a sexual relationship mainly for material benefits (e.g. gifts, cellphones, clothes) .....	<input type="checkbox"/> Y	<input type="checkbox"/> N
When I have a soft drink/mineral I usually have diet/sugar free.....	<input type="checkbox"/> Y	<input type="checkbox"/> N
I read the local paper almost daily.....	<input type="checkbox"/> Y	<input type="checkbox"/> N
I've had sex with someone who isn't a regular partner because I've needed material things (e.g. rent, food, cosmetics).....	<input type="checkbox"/> Y	<input type="checkbox"/> N
I know the name of KwaZulu-Natal's premier.....	<input type="checkbox"/> Y	<input type="checkbox"/> N
I like to listen to the radio late at night.....	<input type="checkbox"/> Y	<input type="checkbox"/> N
I have my drivers license .....	<input type="checkbox"/> Y	<input type="checkbox"/> N
I have visited at least 3 of South Africa's provinces.....	<input type="checkbox"/> Y	<input type="checkbox"/> N
I have been/am in a sexual relationship mainly because that partner provides me with things I want (e.g. airtime, food, clothes, transport)	<input type="checkbox"/> Y	<input type="checkbox"/> N
I use the internet daily .....	<input type="checkbox"/> Y	<input type="checkbox"/> N

Listed below are a few statements about your relationships with others.

**How much is the statement true or false for you?** (circle the relevant number)

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
1. I am always polite, even to people who are difficult	1	2	3	4	5
2. There have been times when I took advantage of someone	1	2	3	4	5
3. I sometimes try to get even with people rather than forgive and forget	1	2	3	4	5
4. I sometimes feel resentful when I don't get my own way	1	2	3	4	5
5. No matter who I'm talking to, I'm always a good listener	1	2	3	4	5

## Questionnaire Form A

Please tick the applicable block:

Age (please write): \_\_\_\_\_

Gender: Male  Female

Year of study at university: 1<sup>st</sup>  2<sup>nd</sup>  3<sup>rd</sup>  4<sup>th</sup> +

What population group/race would you describe yourself as:

Black  Coloured  Indian  White  Other

Where is your place of residence whilst at university?:

- University residence
- Digs (accommodation off campus with friends)
- Live on my own
- Live at home with family/relatives
- Other: \_\_\_\_\_

How are your studies being paid for? (tick more than one if applicable)

Self funded (savings/am working)  ; Parents/relatives  ; Bursary/Scholarship  ;  
Loan  ; Financial aid  ; Other: \_\_\_\_\_

**Please answer the following groups of questions.** For each group-set state the number of the applicable statements that are TRUE for you. (For example if 4 out of the 5 or 6 statements are TRUE for you, write '4' in the space provided for that group set.

Set 1 \_\_\_\_\_

I know the name of a Maritzburg United soccer team player  
I have been to London  
I have a brother  
I own a laptop computer  
I don't normally eat breakfast

Set 2 \_\_\_\_\_

I have watched the movie '2012'  
I have a pet dog  
My shoe size is over 7  
I am sexually active  
I've read "Long Walk to freedom"  
I do not currently smoke cigarettes

Set 3 \_\_\_\_\_

I can explain the 'offside' rule in soccer

I can type reasonably well

I prefer drinking tea to coffee

I have more than one sister

I normally wear a wristwatch

Set 4 \_\_\_\_\_

I can speak more than 2 languages reasonably well

I've lived in a country other than South Africa

I usually take vitamins everyday

When I have a coke/soft drink/mineral I usually have diet/sugar free

I have been/am in a sexual relationship mainly for material benefits (e.g. gifts, cellphones, clothes)

I read the local paper almost daily

Set 5 \_\_\_\_\_

I know the name of KwaZulu-Natal's premier

I like to listen to the radio late at night

I have my drivers license

I have visited at least 3 of South Africa's provinces

I use the internet daily

Listed below are a few statements about your relationships with others.

**How much is the statement true or false for you?** (circle the relevant number)

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
1. I am always polite, even to people who are difficult	1	2	3	4	5
2. There have been times when I took advantage of someone	1	2	3	4	5
3. I sometimes try to get even with people rather than forgive and forget	1	2	3	4	5
4. I sometimes feel resentful when I don't get my own way	1	2	3	4	5
5. No matter who I'm talking to, I'm always a good listener	1	2	3	4	5

**Questionnaire Form B**

Please tick the applicable block

Age (please write): \_\_\_\_\_

Gender: Male  Female

Year of study at university: 1<sup>st</sup>  2<sup>nd</sup>  3<sup>rd</sup>  4<sup>th</sup> +

What population group/race would you describe yourself as:

Black  Coloured  Indian  White  Other

Where is your place of residence whilst at university?:

- University residence
- Digs (accommodation off campus with friends)
- Live on my own
- Live at home with family/relatives
- Other: \_\_\_\_\_

How are your studies being paid for? (tick more than one if applicable)

Self funded (savings/am working)  ; Parents/relatives  ; Bursary/Scholarship  ;  
Loan  ; Financial aid  ; Other: \_\_\_\_\_

**Please answer the following groups of questions.** For each group-set state the number of the applicable statements that are TRUE for you. (For example, if four out of the 5 or 6 statements are TRUE for you, write '4' in the space provided for that group set.)

Set 1 \_\_\_\_\_

I know the name of a Maritzburg United soccer team player

I have been to London

I have a brother

I have received money, gifts or favours in return for sex in the last 12 months

I own a laptop computer

I don't normally eat breakfast

Set 2 \_\_\_\_\_

I have watched the movie '2012'

I have a pet dog

My shoe size is over 7

I've read "Long Walk to Freedom"

I do not currently smoke cigarettes

Set 3 \_\_\_\_\_

I can explain the 'offside' rule in soccer

I can type reasonably well

I prefer drinking tea to coffee

I have more than one sister

I've had sex with someone who isn't a regular partner because I've needed material things (e.g. rent, food, cosmetics)

I normally wear a wristwatch

Set 4 \_\_\_\_\_

I can speak more than 2 languages reasonably well

I've lived in a country other than South Africa

I usually take vitamins everyday

When I have a coke/soft drink/mineral I usually have diet/sugar free

I read the local paper almost daily

Set 5 \_\_\_\_\_

I know the name of KwaZulu-Natal's premier

I like to listen to the radio late at night

I have been/am in a sexual relationship mainly because that partner provides me with things I want (e.g. airtime, food, clothes, transport)

I have my drivers license

I have visited at least 3 of South Africa's provinces

I use the internet daily

Listed below are a few statements about your relationships with others.

**How much is the statement true or false for you?** (circle the relevant number)

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
1. I am always polite, even to people who are difficult	1	2	3	4	5
2. There have been times when I took advantage of someone	1	2	3	4	5
3. I sometimes try to get even with people rather than forgive and forget	1	2	3	4	5
4. I sometimes feel resentful when I don't get my own way	1	2	3	4	5
5. No matter who I'm talking to, I'm always a good listener	1	2	3	4	5

### Survey of PMB campus students - relationships SRQ

Thank you for taking the time to fill in this survey. Please complete all questions, otherwise you cannot move on to the next section. Thank you!

There are 28 questions in this survey

#### Consent

Please read through the following before you continue.

##### 1 (00)

Research Information sheet for students- Questionnaires  
 Hello! I'm Carmen Alledahn a psychology research masters student at UKZN, Pietermaritzburg Campus. As part of the research course, I'm carrying out some research into which questionnaires and ways of collecting information are the best to gather information. Some of the questions I'm asking are about sexual relationships among university students. Please note: your participation is fully voluntary and your anonymity and confidentiality are guaranteed - no names are requested and all the answers go into a sealed box/saved on a computer only I and the research supervisor will access. You are only asked to participate if you are completely comfortable and you don't feel pressured/obliged to participate. No harm or disadvantage will come from participation/not. If you wish to withdraw at any time, you are free to do so! Should you feel upset or distressed by any questions in the questionnaire please approach myself, contact the project supervisor, or contact the Student Counseling center for assistance.  
 If you would like to participate you will be given one of 3 different paper questionnaires, or be asked to answer questions on a computer at the psychology department computer room. To answer the questions should take about 10 - 15 minutes. By agreeing to fill in the questionnaire you are indicating you understand the above, and consent to participate.  
 To thank you for your participation there is a lottery/lucky

draw of names for small monetary prizes (R50's & R20's). If you'd like to be in it to win it, give your name and cell phone number on a separate piece of paper. These names are kept totally separate and can't be linked to your questionnaire. You will be texted and informed if you've won anything -> at the end of August.  
 Thanks!

Any questions:  
 Carmen Alledahn (Research student) 0836616415 or a\_carmen2000@yahoo.com  
 Vernon Solomon (Research supervisor) 033 260 5680 or solomon@ukzn.ac.za  
 Student Counseling Centre (033) 260 5233  
 Social Science Research Ethics Committee Protocol no: HSS/0447/011M

Questionnaire Informed Consent  
 I hereby confirm that I understand the nature and purpose of this study conducted by the psychology masters research student. I understand that by completing the questionnaire I give my consent to participate in the study. I understand my participation in this study is totally voluntary, complete anonymity is ensured as I don't write my name on the questionnaire/enter my name on the computer. I understand I can withdraw from the study/completing the questions if I wish. My agreement to participate is just for this questionnaire. If I feel distressed by the questions and approach the Student Counseling center for assistance (033 260 2533).

I understand that there are some small incentives offered to participants to thank them for their time, and this is based on a lucky dip system. If I wish to have a chance to win the prize, which is not guaranteed, I can give my name and contact number on a separate piece of paper. These names are in no way linked to the questionnaires and on the lucky dip being administered, they will be destroyed.  
 Any queries or concerns please contact:  
 Carmen Alledahn (Research student): 0836616415 or a\_carmen2000@yahoo.com  
 Vernon Solomon (Research supervisor): 033 260 5680 or solomon@ukzn.ac.za

**Student Counseling Centre (033) 260 5233**  
**Social Science Research Ethics Committee Protocol no:**  
**HSS/0447/011M**

**Please mark 'yes' if you understand the above and consent and agree to continue to the survey.**

Please choose only one of the following:

- Yes
- No

**Please answer the following questions about yourself**

**2 [1] \***

Please choose only one of the following:

- Female
- Male

**3 [2.]What is your age? \***

Please write your answer here:

**4 [3]What year of study are you in at university? \***

Please choose the appropriate response for each item:

- 1st year
- 2nd year
- 3rd year
- 4th year+

**5 [4.]What population group/race would you describe yourself as? \***

Please choose all that apply:

- Black
- Coloured
- Indian
- White
- Other:

**6 [5]Where is your place of residence while at university? \***

Please choose all that apply:



University residence  
Digs (accommodation off campus with friends)  
Live on my own  
Live at home with family/relatives  
Other:

**7 [6]How are your studies being paid for? \***

Please choose all that apply:

Self funded (savings/ am working)  
Parents/relatives are funding me  
Bursary/Scholarship  
Loan  
Financial aid  
Other:

**Please answer yes or no to the following questions**

**8 [1]I know the name of a Maritzburg United soccer team player \***

Please choose only one of the following:

Yes  
No

**9 [2]I have been to London \***

Please choose only one of the following:

Yes  
No

**10 [3]I have a brother \***

Please choose only one of the following:

Yes  
No

**11 [4]I am sexually active \***

Please choose only one of the following:

Yes  
No

**12 [5]I own a laptop computer \***

Please choose only one of the following:

Yes

No

**13 [6]I don't normally eat breakfast \***

Please choose only one of the following:

Yes  
No**14 [7]I can speak more than 2 languages reasonably well \***

Please choose only one of the following:

Yes  
No**15 [8]I have received money, gifts or favours in return for sex in the last 12 months \***

Please choose only one of the following:

Yes  
No**16 [9]I've lived in a country other than South Africa \***

Please choose only one of the following:

Yes  
No**17 [10]I usually take vitamins every day \***

Please choose only one of the following:

Yes  
No**18 [11]I have been/am in a sexual relationship mainly for material benefits (e.g. gifts, cellphones, clothes) \***

Please choose only one of the following:

Yes  
No**19 [12]When I have a coke/soft drink/mineral I usually have diet/sugar free \***

Please choose only one of the following:

Yes  
No**20 [13]I read the local paper almost daily \***

Please choose only one of the following:

Yes  
No**21 [14]I've had sex with someone who isn't a regular partner because I've needed material things (e.g. rent, food, cosmetics) \***

Please choose only one of the following:

Yes  
No**22 [15]I know the name of KwaZulu-Natal's premier \***

Please choose only one of the following:

Yes  
No

**23 [16] I like to listen to the radio late at night \***

Please choose only one of the following:

- Yes
- No

**24 [17] I have my drivers license \***

Please choose only one of the following:

- Yes
- No

**25 [18] I have visited at least 3 of South Africa's provinces \***

Please choose only one of the following:

- Yes
- No

**26 [19] I have been/am in a sexual relationship mainly because that partner provides me with things I want (e.g. airtime, food, clothes, transport) \***

Please choose only one of the following:

- Yes
- No

**27 [20] I use the internet daily \***

Please choose only one of the following:

- Yes
- No

**Relationships with others**

**28 [1] Listed below are a few statements about your relationships with others. How much is the statement true or false for you? (click on the relevant circle) \***

Please choose the appropriate response for each item:

definitely true   
  mostly true   
  don't know   
  mostly false   
  definitely false

I am always polite, even to people who are difficult

There have been times when I took advantage of someone

I sometimes try to get even with people rather than to forgive and forget

I sometimes feel resentful when I don't get my own way

No matter who I'm talking to, I'm always a good listener

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Submit your survey.  
Thank you for completing this survey.

## Survey of PMB students relationships UCT A

Thank you for taking the time to fill in this survey. Please complete all the questions, otherwise you cannot move on to the next section. Thank you!

There are 13 questions in this survey

### Consent

Please read through the following before you continue.

1 [00]

Research Information sheet for students- Questionnaires

Hello! I'm Carmen Alledahn a psychology research masters student at UKZN, Pietermaritzburg Campus. As part of the research course, I'm carrying out some research into which questionnaires and ways of collecting information are the best to gather information. Some of the questions I'm asking are about sexual relationships among university students.

Please note: your participation is fully voluntary and your anonymity and confidentiality are guaranteed – no names are requested and all the answers go into a sealed box/saved on a computer only I and the research supervisor will access.

You are only asked to participate if you are completely comfortable and you don't feel pressured/obliged to participate. No harm or disadvantage will come from participation/not. If you wish to withdraw at any time, you are free to do so! Should you feel upset or distressed by any questions in the questionnaire please approach myself, contact the project supervisor, or contact the Student Counseling center for assistance.

If you would like to participate you will be given one of 3 different paper questionnaires, or be asked to answer questions on a computer at the psychology department computer room. To answer the questions should take about 10 – 15 minutes. By agreeing to fill in the questionnaire you are indicating you understand the above, and consent to participate.

To thank you for your participation there is a lottery/lucky

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draw of names for small monetary prizes (R50's & R20's). If you'd like to be in it to win it, give your name and cell phone number on a separate piece of paper. These names are kept totally separate and can't be linked to your questionnaire. You will be texted and informed if you've won anything +- at the end of August.

Thanks!

Any questions:

Carmen Alledahn (Research student) 0836616415 or a\_carmen2000@yahoo.com

Vernon Solomon (Research supervisor) 033 260 5680 or solomon@ukzn.ac.za

Student Counseling Centre (033) 260 5233

Social Science Research Ethics Committee Protocol no: HSS/0447/011M

Questionnaire Informed Consent

I hereby confirm that I understand the nature and purpose of this study conducted by the psychology masters research student. I understand that by completing the questionnaire I give my consent to participate in the study.

I understand my participation in this study is totally voluntary, complete anonymity is ensured as I don't write my name on the questionnaire/enter my name on the computer. I understand I can withdraw from the study/completing the questions if I wish. My agreement to participate is just for this questionnaire. If I feel distressed by the questions regarding sexual relationships I can contact the researchers and approach the Student Counseling center for assistance (033 260 2533).

I understand that there are some small incentives offered to participants to thank them for their time, and this is based on a lucky dip system. If I wish to have a chance to win the prize, which is not guaranteed, I can give my name and contact number on a separate piece of paper. These names are in no way linked to the questionnaires and on the lucky dip being administered, they will be destroyed

Any queries or concerns please contact:

Carmen Alledahn (Research student): 0836616415 or a\_carmen2000@yahoo.com

Vernon Solomon (Research supervisor): 033 260 5680 or solomon@ukzn.ac.za

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**Student Counseling Centre (033) 260 5233**  
**Social Science Research Ethics Committee Protocol no:**  
**HSS/0447/011M**

**Please mark 'yes' if you understand the above and consent and agree to continue to the survey.**

\*

Please choose only one of the following:

Yes  
 No

### Please answer the following questions

**2 [1] \***

Please choose only one of the following:

Female  
 Male

**3 [2]What is your age? \***

Please write your answer here:

**4 [3]What year of study are you in at university? \***

Please choose the appropriate response for each item:

1st  2nd  3rd  4th +

**5 [4]What population group/race would you describe yourself as? \***

Please choose all that apply:

Black  
 Coloured  
 Indian  
 White

Other:

**6 [5]Where is your place of residence while at university? \***

Please choose all that apply:

University residence

Digs (accommodation off campus with friends)  
 Live on my own  
 Live at home with family/relatives  
 Other:

### 7 [6]How are your studies being paid for? \*

Please choose all that apply:

Self funded (savings/am working)  
 Parents/relatives are funding me  
 Bursary/Scholarship  
 Loan  
 Financial aid  
 Other:

## Please answer the following groups of questions.

For each group-set state the number of the applicable statements that are TRUE for you. For example if 4 out of the 5 or 6 statements are TRUE for you, enter 4 in the space provided for that group set.

### 8 [1]Set 1:

I know the name of a Maritzburg United soccer team player  
 I have been to London  
 I have a brother  
 I own a laptop computer  
 I don't normally eat breakfast \*

Please write your answer here:

### 9 [2]Set 2:

I have watched the movie '2012'  
 I have a pet dog  
 My shoe size is over 7  
 I am sexually active  
 I've read "Long Walk to Freedom"  
 I do not currently smoke cigarettes \*

Please write your answer here:

### 10 [3]Set 3:

I can explain the 'offside' rule in soccer  
 I can type reasonably well  
 I prefer drinking tea to coffee  
 I have more than one sister  
 I normally wear a wristwatch \*

Please write your answer here:

### 11 [4]Set 4:

**I can speak more than 2 languages reasonably well**  
**I've lived in a country other than South Africa**  
**I usually take vitamins everyday**  
**When I have a coke/soft drink/mineral I usually have diet/sugar free**  
**I have been/am in a sexual relationship mainly for material benefits (e.g. gifts, cellphones, clothes)**  
**I read the local paper almost daily \***

Please write your answer here:

**12 [5]Set 5:**  
**I know the name of KwaZulu-Natal's premier**  
**I like to listen to the radio late at night**  
**I have my drivers license**  
**I have visited at least 3 of South Africa's provinces**  
**I use the internet daily \***

Please write your answer here:

### Relationships with others

**13 [1]Listed below are a few statements about your relationships with others. How much is the statement true or false for you? (click on the relevant circle) \***

Please choose the appropriate response for each item:

definitely true    mostly true    don't know    mostly false    definitely false

I am always polite, even to people who are difficult

There have been times when I took advantage of someone

I sometimes try to get even with people rather than to forgive and forget

I sometimes feel resentful when I don't get my own way

No matter who I'm talking to, I'm always a good listener



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Submit your survey.  
Thank you for completing this survey.

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## Survey of relationships UCT B

Thank you for taking the time to fill in this survey. Please complete all questions, otherwise you cannot move on to the next section. Thank you!

There are 13 questions in this survey

### Consent

Please read through the following before you continue.

1 [00]

Research Information sheet for students- Questionnaires

Hello! I'm Carmen Alledahn a psychology research masters student at UKZN, Pietermaritzburg Campus. As part of the research course, I'm carrying out some research into which questionnaires and ways of collecting information are the best to gather information. Some of the questions I'm asking are about sexual relationships among university students. Please note: your participation is fully voluntary and your anonymity and confidentiality are guaranteed – no names are requested and all the answers go into a sealed box/saved on a computer only I and the research supervisor will access. You are only asked to participate if you are completely comfortable and you don't feel pressured/obliged to participate. No harm or disadvantage will come from participation/not. If you wish to withdraw at any time, you are free to do so! Should you feel upset or distressed by any questions in the questionnaire please approach myself, contact the project supervisor, or contact the Student Counseling center for assistance.

If you would like to participate you will be given one of 3 different paper questionnaires, or be asked to answer questions on a computer at the psychology department computer room. To answer the questions should take about 10 – 15 minutes. By agreeing to fill in the questionnaire you are indicating you understand the above, and consent to participate.

To thank you for your participation there is a lottery/lucky draw of names for small monetary prizes (R50's & R20's). If you'd like to be in it to win it, give your name and cell phone

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number on a separate piece of paper. These names are kept totally separate and can't be linked to your questionnaire. You will be texted and informed if you've won anything --+ at the end of August.

Thanks!

Any questions:

Carmen Alledahn (Research student) 0836616415 or a\_carmen2000@yahoo.com  
Vernon Solomon (Research supervisor) 033 260 5680 or solomon@ukzn.ac.za

Student Counseling Centre (033) 260 5233  
Social Science Research Ethics Committee Protocol no: HSS/0447/011M

Questionnaire Informed Consent

I hereby confirm that I understand the nature and purpose of this study conducted by the psychology masters research student. I understand that by completing the questionnaire I give my consent to participate in the study.

I understand my participation in this study is totally voluntary, complete anonymity is ensured as I don't write my name on the questionnaire/enter my name on the computer. I understand I can withdraw from the study/completing the questions if I wish. My agreement to participate is just for this questionnaire. If I feel distressed by the questions regarding sexual relationships I can contact the researchers and approach the Student Counseling center for assistance (033 260 2533).

I understand that there are some small incentives offered to participants to thank them for their time, and this is based on a lucky dip system. If I wish to have a chance to win the prize, which is not guaranteed, I can give my name and contact number on a separate piece of paper. These names are in no way linked to the questionnaires and on the lucky dip being administered, they will be destroyed

Any queries or concerns please contact:

Carmen Alledahn (Research student): 0836616415 or a\_carmen2000@yahoo.com

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**HSS/0447/011M**

Please mark 'yes' if you understand the above and consent and agree to continue to the survey.  
\*

Please choose only one of the following:

Yes  
No

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Please answer the following questions about yourself

**2 [1] \***

Please choose only one of the following:

Female  
Male

**3 [2]What is your age? \***

Please write your answer here:

**4 [3]What year of study are you in at university? \***

Please choose the appropriate response for each item:

1st 2nd 3rd 4th+

**5 [4]What population group/race would you describe yourself as? \***

Please choose all that apply:

Black  
Coloured  
Indian  
White  
Other:

**6 [5]Where is your place of residence while at university? \***

Please choose all that apply:

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University residence  
 Digs (accommodation off campus with friends)  
 Live on my own  
 Live at home with family/relatives  
 Other:

**7 [6]How are your studies being paid for? \***

Please choose all that apply:

Self funded (savings/am working)  
 Parents/relatives are funding me  
 Bursary/Scholarship  
 Loan  
 Financial aid  
 Other:

**Please answer the following groups of questions.**

For each group-set state the number of the applicable statements that are TRUE for you. For example if 4 out of the 5 or 6 statements are TRUE for you, enter 4 in the space provided for that group set.

**8 [1]Set 1:**  
**I know the name of a Maritzburg United soccer team player**  
**I have been to London**  
**I have a brother**  
**I have received money, gifts or favours in return for sex in the last 12 months**  
**I own a laptop computer**  
**I don't normally eat breakfast \***

Please write your answer here:

**9 [2]Set 2:**  
**I have watched the movie '2012'**  
**I have a pet dog**  
**My shoe size is over 7**  
**I've read "Long Walk to Freedom"**  
**I do not currently smoke cigarettes \***

Please write your answer here:

**10 [3]Set 3:**  
**I can explain the 'offside' rule in soccer**  
**I can type reasonably well**  
**I prefer drinking tea to coffee**  
**I have more than one sister**  
**I've had sex with someone who isn't a regular partner because I've needed material things (e.g. rent, food, cosmetics)**  
**I normally wear a wristwatch \***

Please write your answer here:

**11 [4]Set 4:**  
**I can speak more than 2 languages reasonably well**  
**I've lived in a country other than South Africa**  
**I usually take vitamins everyday**  
**When I have a coke/soft drink/mineral I usually have diet/sugar free**  
**I read the local paper almost daily \***

Please write your answer here:

**12 [5]Set 5:**  
**I know the name of KwaZulu-Natal's premier**  
**I like to listen to the radio late at night**  
**I have been/am in a sexual relationship mainly because that partner provides me with things I want (e.g. airtime, food, clothes, transport)**  
**I have my drivers license**  
**I have visited at least 3 of South Africa's provinces**  
**I use the internet daily \***

Please write your answer here:

### Relationships with others

**13 [1]Listed below are a few statements about your relationships with others. How much is the statement true or false for you? (click on the relevant circle) \***

Please choose the appropriate response for each item:

definitely true      mostly true      don't know      mostly false      definitely false

I am always polite, even to people who are difficult

These have been times when I took advantage of someone

I sometimes try to get even with people rather than to forgive and forget

I sometimes feel resentful when I don't get my own way

No matter who I'm talking to, I'm always a good listener

01.01.1970 - 02:00

Submit your survey.  
Thank you for completing this survey.

**Appendix K:****INSTRUCTIONS FOR QUESTIONNAIRE FORM A & B**

**Please answer the following groups of questions.** For each group-set state the number of the applicable statements that are TRUE for you. (For example, if four out of the 5/6 statements are TRUE for you, write '4' in the space provided for that group set.)

## Explanation:

Please note you don't have to mark any particular question that is true for you – only the *total* number of true statements out of the set of 5/6 statements – this way your responses really are kept private – we don't know which of the 4 you stated were true, but we use it to work out an average of everyone's answers.

-----  
**So for example if below the first and third statements are true, then you just write "2" in the space provided indicating that 2 out of the 5 statements are true for you, but we don't actually know which ones they specifically are.**

Set 4 \_\_\_\_\_

I can speak more than 2 languages reasonably well

I've lived in a country other than South Africa

I usually take vitamins everyday

When I have a coke/soft drink/mineral I usually have diet/sugar free

I read the local paper almost daily