

KISS AND TELL: EXPLORING THE ASSOCIATION BETWEEN  
ATTACHMENT REPRESENTATION AND THE SEXUAL ENCOUNTER

A Thesis Submitted to the Committee on Graduate Studies in Partial Fulfillment of the  
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## ABSTRACT

Kiss and tell: Exploring the associations between attachment representations  
and the sexual encounter

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It has been proposed that individuals often form a romantic attachment to their sexual partners. However, there is little understanding of the role of sexual behaviours in an attachment relationship. This study aims to explore the effect of attachment representations on sexual behaviours during foreplay, intercourse, and afterplay. In two studies, individuals ( $N = 478$ ) and couples ( $N = 50$ ) completed self-reported measures of attachment, sexual behaviours, and sexual satisfaction. As expected, security predicted various behaviours during each part of a sexual encounter and greater sexual satisfaction. Insecurity (preoccupied, dismissing, and fearful attachment) predicted engagement in post-coital behaviours – bonding efforts as well as seeking extrinsic rewards and experiencing body worries. Fearful attachment predicted less sexual satisfaction, while preoccupied attachment unexpectedly predicted greater sexual satisfaction. These findings provide support for the associations between individual attachment styles and sexual behaviours and suggest the implications of sexual behaviours on intimate needs within relationships.

Keywords: Attachment, sexuality, foreplay, afterplay, behaviour, relationships, sexual  
satisfaction

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## **Introduction**

For some adults, sex can mark a milestone in a romantic relationship signifying commitment to a partner. Attachment researchers have claimed that when a person has sex with the same partner over a long period of time, an attachment to that partner can develop (Hazan & Zeifman, 1994; Zeifman & Hazan, 2008). Research has supported that the perception of a sexual relationship as well as an adult's sexual tendencies can be influenced by his/her romantic attachment (Stefanou & McCabe, 2012). For instance, an adult with an insecure attachment is often concerned with performance in sexual situations and these concerns can impact his/her sexual experiences and satisfaction (e.g., Birnbaum, Reis, Mikulincer, Gillath, & Orpaz, 2006; Davis et al., 2006). While it has been empirically established that attachment security can impinge on the expression of sexual intimacy, researchers have not examined the effects of adult attachment on the acts of affection occurring during sex. There is no clear evidence suggesting that an individual's attachment can determine actual sexual behaviours in sexual interactions. This study is intended to examine the association between attachment representations and specific sexual behaviours and satisfaction before, during, and after sex.

### **Bartholomew's Four-Category Model of Adult Attachment**

In adulthood, the way an individual thinks, feels, and acts in romantic relationships can be influenced by attachment style. An individual's attachment style is typically shaped by parent-child relationships and continues to guide one's behaviours in adult relationships (e.g., between romantic partners). Bartholomew (1990) proposed that four attachment styles could be formed from different combinations of working models of the self and of others. The self-model can be conceptualized as an anxiety dimension,

which individuals perceive themselves as either low in anxiety (and high in self-esteem) or high in anxiety (and low in self-esteem). The other-model can be conceptualized as an avoidance dimension, which individuals perceive others as either trustworthy (and have a low avoidance for intimacy) or untrustworthy (and have a high avoidance for intimacy). Bartholomew's (1990) model of attachment includes secure attachment as well as three insecure attachment styles: preoccupied, dismissing, and fearful (see Figure 1).

		<b>MODEL OF SELF (ANXIETY)</b>	
		<b>Positive (Low anxiety)</b>	<b>Negative (High anxiety)</b>
<b>MODEL OF OTHER (AVOIDANCE)</b>	<b>Positive (Low avoidance)</b>	<p><b>Secure</b> Self-competent Comfortable with intimacy</p>	<p><b>Preoccupied</b> Excessive need for approval Preoccupied with relationships</p>
	<b>Negative (High avoidance)</b>	<p><b>Dismissing</b> Highly self-sufficient (Counter-dependent) Denial of intimate needs</p>	<p><b>Fearful</b> Fear of intimacy Highly sensitive to rejection Socially withdrawn</p>

*Figure 1.* Model of adult attachment. Adapted from "Avoidance of intimacy: An attachment perspective." Bartholomew, K. (1990). *Journal of Social and Personal Psychology*, 7, p. 163.

Based on Bartholomew's model, a positive view of the self and of others characterize a secure attachment, which the self is viewed as competent and others as dependable (Bartholomew & Horowitz, 1991; Brennan & Morris, 1997; Brennan & Bosson, 1998; Bylsma, Cozzarelli, & Sumer, 1997; Park, Crocker, & Mickelson, 2004). Security is often associated with greater individual capacity to forge intimacy in romantic relationships and greater intimacy between partners (Mayseless & Scharf, 2007; Pielage, Luteijn, & Arrindell, 2005). There is a strong sense of couple identity with a romantic

partner (Pistole & Vocaturo, 1999) and a greater reliance on the partner for emotional support (Lynch, 2013). Positive relationship outcomes such as greater partner consideration and interdependence can be attributed to secure attachment.

Another attachment style that is exemplified by a positive other-model is the preoccupied attachment. Preoccupied attachment involves a negative appraisal of the self, poor self-esteem (Brennan & Morris, 1997; Guerrero, 1996; Guerrero & Burgoon, 1996; Wearden, Lambertson, Crook, & Walsh, 2005), and a positive appraisal of others. As a result, others become a source of external validation (Bartholomew & Horowitz, 1991; Onishi, Gjerde, & Block, 2001; Park et al., 2004), and attempts to seek others' approval can manifest as excessive efforts to acquire their attention (Bartholomew & Horowitz, 1991; Schwartz, Lindley, & Buboltz Jr., 2007). There is a high level of personal dedication to romantic relationships by giving greater priority to the relationship over other close relationships (Pistole & Vocaturo, 1999). Although a relational partner is highly regarded, this attachment style is closely linked to greater anxieties and hypersensitivities regarding the partner's love and abandonment (Guerrero, 1996, 1998; Guerrero & Burgoon, 1996; Marazziti et al., 2010). The need for approval and closeness in relationships distinguishes the preoccupied attachment style from the dismissing attachment style, which is defined by avoidance of intimacy.

A positive view of the self combined with a negative view of others results in a dismissing attachment (Bartholomew, 1990). This attachment style is associated with high self-esteem (Brennan & Bosson, 1998; Bylsma et al., 1997; Pietromonaco & Barrett, 1997; Park et al., 2004) and confidence that is not contingent on others' opinions or liking (Park et al., 2004). Independence is greatly valued and others are presumed to

have low credibility, and the thought of depending on others or being depended on can cause discomfort (Brennan & Bosson, 1998; Onishi et al., 2001). It is important to distance oneself from others as intimate relationships threaten the maintenance of autonomy (Bartholomew & Horowitz, 1991; Horowitz, Rosenberg, & Bartholomew, 1993; Onishi et al., 2001); thus, the development of these relationships are perceived to be secondary (Guerrero, 1996; Guerrero & Burgoon, 1996). This need for distance in relationships is common to both the dismissing and fearful attachment styles. However, the source of relationship avoidance in the dismissing style appears to be the loss of self-sufficiency which is contrasted by a fear of abandonment in the fearful style.

The fearful attachment style involves negative conceptions of the self and of others and has traits resembling both the preoccupied and dismissing styles (high anxiety and high avoidance; Bartholomew, 1990). As compared to other attachment styles, fearfulness is associated with a high level of rejection sensitivity (Erozkan, 2009a). Due to negative views of others (high mistrust of others; Bartholomew & Horowitz, 1991; Onishi et al., 2001), there is an urge to protect oneself from the pain of loss or rejection – particularly from a romantic partner which is perceived to be unbearable (Marazziti et al., 2010). Furthermore, the self is deemed undeserving of the affections of others (low self-worth; Arslan, Arslan, & Ari, 2012; Bartholomew & Horowitz, 1991; Guerrero, 1996; Guerrero & Burgoon, 1996; Wearden et al., 2005). Despite this negative self-image, there is a yearning for others' liking or approval (Pietromonaco & Barrett, 2006) as well as intimacy. As this style is marked by high anxiety and high avoidance, there is a greater tendency to be socially withdrawn (Diehl, Elnick, Bourbeau, & Labouvie-Vief, 1998; Duggan & Brennan, 1994) and to assume a passive role in relationships

(Bartholomew & Horowitz, 1991; Horowitz et al., 1993; Onishi et al., 2001). The underlying anxieties and avoidance of the fearful attachment can lead to the dilemma of whether to pursue or avoid romantic relationships.

### **Attachment and Behaviours in Romantic Relationships**

Currently, there are few studies that focus on attachment representations and specific sexual behaviours so the knowledge on the relationship between these variables is limited. However, researchers have conducted studies to examine the extent to which attachment influences social behaviours and nonverbal communication within romantic relationships (e.g., Edenfield, Adams, & Briehl, 2012; Guerrero & Jones, 2005).

Attachment-related patterns of social behaviours in partner interactions may offer insight into the sexual interactions between two individuals. Several researchers who examined attachment and relationship maintenance have found that secure and preoccupied attachment styles are related to the use of emotionally expressive behaviours/strategies such as assurance and positivity to sustain a relationship (e.g., Edenfield et al., 2012; Pistole, Roberts, & Chapman, 2010). In comparison to dismissing and fearful attachment, secure and preoccupied attachment are associated with a greater display of these relational strategies (Edenfield et al., 2012; Guerrero & Bachman, 2006; Pistole et al., 2010; Simon & Baxter, 1993).

It has been suggested that individuals who use more expressive relational strategies are likely to characterize their romantic relationships as high-quality. High relational quality is defined by greater liking and love for a partner, greater certainty about the future with the partner, and greater relationship satisfaction (e.g., Dainton, 2003; Edenfield et al., 2012; Stafford & Canary, 2006). A high level of involvement in

romantic relationships and a greater desire for relationship longevity are associated with secure and preoccupied attachment (Bartholomew & Horowitz, 1991; Pistole & Vocaturo, 1999) so it can be expected that these two attachment styles are associated with a frequent use of relational strategies. Specifically, secure and preoccupied attachment are associated with more strategies to emphasize commitment to a partner by displaying physical affection (e.g., hugs and kisses), romantic gestures (e.g., celebrations and giving sentimental gifts), and giving assurance of one's love (e.g., saying "I love you"; Dainton, 2007; Edenfield et al., 2012; Guerrero & Bachman, 2006; Pistole et al., 2010; Simon & Baxter, 1993). These two styles are also related to greater openness strategies to facilitate honest communication with the partner by divulging private information, starting frequent conversations about the relationship, and encouraging the partner to share his/her thoughts and feelings (Dainton, 2007; Edenfield et al., 2012; Guerrero & Bachman, 2006). The positive associations between these relational strategies and secure and preoccupied attachment imply that attachment style has an influence on behaviours that promote physical and emotional intimacy.

In regular interactions with a romantic partner, secure and preoccupied attachment are linked to greater use of positivity and expressiveness. Positivity is distinguished by a readiness to create pleasant interactions with a partner by presenting oneself as cheerful, optimistic and courteous (Dainton, 2007; Edenfield et al., 2012; Guerrero & Bachman, 2006; Pistole et al., 2010). The partner is given greater attention and interest as well as encouragement to talk through the use of humour and conversational receptivity (the willingness to listen to the partner; Guerrero, 1996; Guerrero & Jones, 2005). A variety of nonverbal behaviours are often displayed to maintain closeness or to show positive

affect, which include constant eye contact, smiling, laughter, vocal pleasantness, head nodding, and leaning closer to the partner (Guerrero, 1996; Guerrero & Jones, 2005; Tucker & Anders, 1998). Greater positive, verbal and nonverbal, expressions for secure and preoccupied attachment indicate efforts to become more intimate with a partner in social settings.

The social and conversational behaviours of the avoidant attachment styles (dismissing and fearful) contrast with those of secure and preoccupied styles, conveying the lack of involvement and focus on the partner. In partner interactions, dismissing attachment is related to limited depth of conversations (i.e., the inability to move the conversation to a deeper level; Guerrero, 1996). A high level of avoidance can contribute to a lack of enthusiasm or responsiveness in interacting with a partner. In a study of couples and their interactions, Shallcross, Howland, Bemis, Simpson, and Frazier (2011) reported that when a partner disclosed a positive event (e.g., receiving a job offer), avoidance was associated with more passive, destructive responses. Less engagement or availability towards a romantic partner in social interactions can be common with attachment avoidance and may be more observable with a dismissing attachment.

Fearful attachment has an interesting influence on verbal and nonverbal behaviours in social interactions. Guerrero and Burgoon (1996) compared the level of social reciprocity among the four attachment styles and found that fearfulness was associated with the most inconsistent pattern of reciprocity. They learned that in situations which a partner was either inviting and flirtatious or distant and cold, verbal and nonverbal reciprocating behaviours were unpredictable (e.g., facial and vocal pleasantness and verbal responses in the conversation). A partner's initiation or lack

thereof prompted neither an increase nor decrease in reactions (Guerrero & Burgoon, 1996). Guerrero (1996) has found supporting evidence that fearful attachment is related to greater difficulties in responding to a romantic partner. While interacting with a partner, there is a greater physical distance from a partner (e.g., sitting further from him/her), less social fluency, and longer response latency during conversations. Other researchers have revealed that fearfulness is associated with inhibition and concerns about one's social performance as a consequence of high levels of shyness (Duggan & Brennan, 1994), introversion (Bartholomew & Horowitz, 1991), and social/interpersonal anxiety (Erozkan, 2009b; Van Buren & Cooley, 2002). Actively interacting with a romantic partner can be challenging when fearfulness can trigger hesitation to socially reciprocate. From these findings, dismissing and fearful attachment may be predictive of less interest and affection in sexual interactions. However, the effect of the four styles on specific intimate behaviours during sex has yet to be examined and tested to see whether sexual behaviours can similarly be signs of seeking intimacy.

### **Attachment and Sex**

Within romantic relationships, social behaviours can be regulated by the attachment system. However, partner interactions and behaviours may not be solely governed by attachment. Adult romantic relationships integrate the functions of attachment, caregiving, and sexual behavioural systems (e.g., Hazan & Shaver, 1987; Mikulincer & Shaver, 2007; Shaver, Hazan, & Bradshaw, 1988). These functionally distinct systems can operate separately but can also reciprocally influence one another (e.g., Birnbaum, 2010; Hazan & Zeifman, 1994; Mikulincer & Shaver, 2007). The activation of the sexual system may be especially important at the beginning of a

relationship, where sexual attraction drives the search for and selection of a romantic partner (Hazan, Campa, & Gur-Yaish, 2006). A spark of attraction can incite flirtation and infatuation (Hazan et al., 2006; Zeifman & Hazan, 2008), thereby prompting an individual to desire and seek sexual intimacy. Hazan and Zeifman (1994) stated that the sexual system facilitates the development of the *psychological tether* to a lover, which sex keeps a couple together long enough for an emotional bond to form. The bond between lovers can be further matured through repeated sexual contact and intimate behaviours such as mutual gazing, cuddling, kissing, prolonged skin-to-skin contact, and touching of body parts (Birnbaum, 2010; Hazan & Zeifman, 1994; Hazan et al., 2006; Zeifman & Hazan, 2008).

Existing research on attachment and sex have supported that an individual's sexual well-being and sexual experiences can be heavily affected by his/her attachment to a romantic partner. In a recent meta-analysis, Stefanou and McCabe (2012) reviewed 15 studies (between 1990 and 2011) and found that attachment security significantly impacted an individual's overall sexual functioning – consisting of sexual attitudes, motivations, tendencies, satisfaction, and dysfunction. Stefanou and McCabe (2012) also reported that the three-category model of adult attachment (secure, anxious, and avoidant) was the predominant theoretical framework in these studies. Most researchers used either Hazan and Shaver's (1987) prototypical descriptions of attachment to assess the three categories or Brennan, Clark, and Shaver's (1998) Experiences in Close Relationships questionnaire to assess dimensions of anxiety and avoidance for the measure of adult attachment. Finally, Stefanou and McCabe (2012) concluded from

study findings that anxious and avoidant individuals reported more negative sexual experiences and less sexual satisfaction.

**Secure attachment and sexual behaviours.** Individuals with a secure attachment identify themselves as being comfortable with intimacy and having positive perceptions of their sexual selves. The work of Cyranowski and Andersen (1998) on female university students and sexual schemas has demonstrated that secure women maintain a positive sexual self-schema. Schemas are formed from past sexual experiences which are internalized and subsequently guide future thoughts and behaviours in sexual situations. Women with positive sexual schemas, as categorized by Cyranowski and Andersen (1998), are more passionate about their sexual partners, more open to exploring their sexuality, and have more active sex lives. Moreover Tracy, Shaver, Albino and Cooper (2003) conducted a study to investigate the feelings about sexual topics, need for sex, and sexual competence of adolescents and young adults. Secure individuals were noted to be erotophilic (having a positive attitude about sex) and that being and feeling sexual was fairly important. These individuals felt confident in satisfying their own sexual needs and considered themselves to be responsive and caring lovers (Tracy et al., 2003). Secure adults are likely to have a positive approach to and appraisal of their sexual experiences given the positive sexual attitudes they endorse.

Sex is an experience often characterized by love and commitment with secure adults being more willing to engage in sex with individuals who they are emotionally close to (Feeney, Noller, & Patty, 1993; Stephan & Bachman, 1999). Secure individuals tend to express an increased sexual interest and attraction to another who they either like or love and even regard as a potential spouse (Gillath & Schachner, 2006; Stephan &

Bachman, 1999). To engage in sexual intercourse with a significant other symbolizes commitment to that partner and to the relationship (Feeney et al., 1993). Hence, secure individuals refrain from having sex with individuals whom they are not exclusively committed to (Brennan & Shaver, 1995) and instead prefer sexual relations in long-term relationships.

For most secure individuals, the experience of sex is an emotional one as they are able to show their feelings of closeness to their partners. Using measures of sexual motives and emotions during intercourse, Tracy et al. (2003) examined the sexual experiences of adolescents and young adults. Of the two main reasons to have sex (i.e., to express love and the fear of losing a partner), secure individuals wanted to feel or express love for a romantic partner. The overall sexual experiences of securely attached individuals were more pleasant than those of insecurely attached individuals (anxious and avoidant individuals; Tracy et al., 2003). Secure individuals, in comparison to insecure individuals, were more likely to experience higher levels of passion, love, arousal, and other positive emotions (e.g., feeling excited, affectionate, and content) during intercourse. They also reported fewer negative emotions during sex such as feelings of nervousness, boredom, and vulnerability. While secure individuals generally enjoy sex, individuals with high levels of insecurity may struggle to find sex as enjoyable or as arousing.

**Anxious attachment and sexual behaviours.** An anxious individual is constantly plagued by worries of intimacy in his/her relationships (e.g., Hazan & Shaver, 1987). Sex can be a means to alleviate these insecurities, as the anxious individual can quantify a partner's love by using sex as a barometer of relationship status (Davis et al.,

2006). Feeling loved or esteemed by a romantic partner, making the partner love them more, and enhancing intimacy in the relationship are main incentives for anxious individuals to engage in sex (Davis, Shaver, & Vernon, 2004; Impett, Gordon, & Strachman, 2008; Schachner & Shaver, 2004; Snapp, Lento, Ryu, & Rosen, 2014). Anxious individuals tend to have intense feelings of sexual passion for their romantic partners (Davis et al., 2004) and are motivated to pursue their partners for sex to show their affection for them (Impett et al., 2008; Pélouquin, Brassard, Delisle, & Bédard, 2013; Tracy et al., 2003). They anticipate passionate and loving sexual encounters in hopes of preserving or procuring their partners' love.

Although anxious individuals have sex for emotional reassurance, they may be unable to relax and get in the “right” mood to enjoy sex. Birnbaum et al. (2006) assessed the thoughts and feelings of insecure adults concerning their partners, sexual aversion, and sexual pleasure. They discovered that anxious individuals were conflicted during intercourse, expressing feelings of ecstasy but also strong aversive thoughts and feelings. Anxious individuals were burdened with worries of being unloved and questioned their partners' level of sexual involvement. In addition, they described feelings of detachment and other negative feelings (e.g., disappointment and self-hatred) that interfered with their sexual enjoyment (Birnbaum et al., 2006). For anxious individuals, pervasive and intrusive thoughts and feelings during intercourse can lead to disappointment in sexual experiences.

Anxious individuals often give priority and defer to their partners' sexual preferences at the cost of satisfying their own needs (Davis et al., 2006). A number of studies on the influence of attachment on sexual satisfaction have indicated that anxious

individuals are sexually dissatisfied (e.g., Birnbaum, 2007; Burri, Schweitzer, & O'Brien, 2014; Butzer & Campbell, 2008; Davis et al., 2006; Khoury & Findlay, 2014; Stephenson & Meston, 2011). They are particularly dissatisfied with their sexual control (e.g., their control over when and how to have sex) and the emotional aspect of sex (e.g., how their partner is not sufficiently affectionate; Davis et al., 2006). Sexual dissatisfaction is not limited to sexual intercourse as Kruger and Hughes (2010) have found that anxious women are unsatisfied with the bonding experience after sex. These women are dissatisfied with the length of time spent with the partners after intercourse, citing difficulty in having heart-to-heart talks, and desire for their partners to be more romantic and loving. Anxious individuals perceive their partners as uncaring lovers (Birnbaum, 2007), having more control over sexual situations, and directing the sexual encounters (Feeney, Peterson, Gallois, & Terry, 2000). Furthermore, they are sexually inhibited which leads to difficulties in discussing their sexual needs and concerns with their partners as well as the necessary changes to improve their sex lives (Davis et al., 2006; Khoury & Findlay, 2014). Consequently, sexual problems are allowed to accumulate for a long time before being addressed with their partners (Davis et al., 2006). Anxious individuals are often reserved about vocalizing their sexual needs and preferences, which can perpetuate dissatisfying sexual experiences.

**Avoidant attachment and sexual behaviours.** Avoidant individuals need to maintain distance from others and are less likely to seek sex to escalate intimacy in their relationships. Highly avoidant individuals doubt that sex can strengthen commitment (Birnbaum, 2007) and are less inclined to engage in sex to foster emotional closeness, to feel or show love, or to please a partner (Davis et al., 2004; Impett et al., 2008; Péloquin

et al., 2013; Schachner & Shaver, 2004; Snapp et al., 2014; Tracy et al., 2003). Rather, they are motivated by personal benefits from the act of sex which include self-enhancement and physical release (Davis et al., 2004; Impett et al., 2008; Schachner & Shaver, 2004; Snapp et al., 2014). Avoidant individuals look to the strategic value of sex to justify engaging in physical intimacy, and are likely to avoid sex in the absence of personal gains.

With a dislike of sexual intimacy, avoidant individuals are not very receptive towards their partners' sexual advances. As compared to secure and anxious individuals, avoidant individuals do not find sex to be overly important and are generally erotophobic (Tracy et al., 2003). Some researchers have reported that these individuals engage in less sexual intercourse with their romantic partners (Brassard, Shaver, & Lussier, 2007; Little, McNulty, & Russell, 2010; Russell, Baker, & McNulty, 2013). Brassard et al. (2007) have found that avoidant individuals make attempts to avoid intercourse with their romantic partners who they either cohabitate with or are married to. Sexual avoidance may reflect the desires of these individuals to restrict intimacy in their romantic relationships.

Avoidant individuals tend to have a history of negative sexual experiences, with more negative thoughts and feelings during sexual intercourse. Their past sexual experiences are described as a sense of estrangement and vulnerability, accompanied by disappointment with their sexual partners' ability to arouse them (Birnbaum et al., 2006; Tracy et al., 2003) and a view that their partners are insensitive to their sexual needs (Birnbaum, 2007). Avoidant individuals do not readily discuss sexual matters with their partners (Davis et al., 2006; Khoury & Findlay, 2014). They believe that sexual activities

are controlled by their partners and to be sexually compatible with another is perceived to be due to luck (Feeney et al., 2000). Avoidant individuals largely focus on their own sexual needs and the ability to receive satisfaction of their needs during intercourse (Birnbaum et al., 2006), and individuals specifically with poor communication of their needs are likely to report low sexual satisfaction (Khoury & Findlay, 2014). Similar to anxious individuals, avoidant individuals report more aversive sexual experiences but are inhibited in communicating their dissatisfaction to their partners.

Research has supported that a high level of avoidance is associated with greater sexual dissatisfaction (e.g., Beaulieu-Pelletier, Philippe, Lecours, & Couture, 2011; Brassard, Pélouquin, Dupuy, Wright, & Shaver, 2012; Khoury & Findlay, 2014; Pélouquin, Brassard, Lafontaine, & Shaver, 2014). Davis et al. (2006) explored different aspects of sexual satisfaction – physical, emotional, and control – and realized that the influence of avoidance on satisfaction varied depending on relationship status. Both single and committed avoidant individuals were unsatisfied with their control over their sex lives as well as the physical quality of sex. However, only committed individuals were unsatisfied with the emotional aspect of sex, such as with their partners' level of affection during sex. Davis et al. (2006) also found that committed avoidant individuals who used sex as a barometer of relationship status reported less emotional satisfaction from sex. This unexpected finding raises questions as to why avoidant individuals would be emotionally unsatisfied when they typically do not engage in sex for intimacy. It may be possible that these avoidant individuals experience anxiety over their relationships. Surprisingly, researchers such as Davis et al. (2004), Impett et al. (2008) and Schachner and Shaver (2004) have documented that avoidant individuals want to have sex because

they feel unsure of their partners' feelings and fear losing their love or interest. These findings may imply that some avoidant individuals with a fear of intimacy/a high level of anxiety may have sexual motivations that are usually expected from anxious individuals.

It can be inferred from Davis et al.'s (2006) findings that dismissing and fearful individuals may be concerned with different aspects of sexual satisfaction in relationships. The overlap of findings on sexual satisfaction between avoidant and anxious individuals suggests that fearful individuals in a relationship may use sex to gauge a partner's approval and may be more concerned with emotional satisfaction gained from sex. Also, it may be possible that dismissing individuals are specifically focused on their sexual control and the physical experience of sex. This speculation can be somewhat supported by Allen and Baucom (2004) who investigated the relationship between the four attachment styles and motivations for extradyadic sex. They found that dismissing individuals sought extradyadic sex for freedom and space, while fearful individuals desired to feel cared about and to boost self-esteem. It was more likely for fearful individuals to be involved in extradyadic relationships that were of an obsessive nature (characterized by neediness and craving for attention and reassurance) and/or ambivalent nature (characterized by the desire for closeness and fears of rejection; Allen & Baucom, 2004).

In summary, secure individuals are better able to enjoy sex in comparison to insecure individuals. Securely attached individuals place great importance on sex, for it is often a representation of their respect and commitment to their partners and relationships. Anxious individuals instinctively equate their romantic partners' sexual interest as an indication of their partners' love, but their emotional neediness interferes

with the opportunity to achieve ideal intimacy. Uncertainty as to their partners' love and sexual affections can create unpleasant sexual experiences and intensify their sexual dissatisfaction. Conversely, avoidant individuals have a greater ability to separate sex from romantic love. They have an expectation for satisfying their own sexual needs but still tend to have unsatisfactory sexual interactions. They seemingly attribute their dissatisfaction to their partners' sexual ineptness.

### **The Current Study**

A romantic relationship can be established through a wide range of maintenance behaviours, but the development of that relationship through various sexual behaviours has not been clearly explored. Little research has been done on whether specific sexual activities or practices in a sexual relationship are influenced by adult attachment. The exact behaviours secure and insecure adults perform during sexual intercourse with a partner and how they sexually interact with their partner can have implications on the development of attachment. This study was designed to measure specific sexual behaviours or activities throughout the sexual encounter, in particular foreplay, sexual intercourse and afterplay. A few empirical studies have explored sexual activities prior to, during, and/or post intercourse (e.g., Guo, Ng, & Chan, 2004; Hughes & Kruger, 2011; Owen, Fincham, & Moore, 2011; von Sadvoszky, Keller, & McKinney, 2002) but to date, no study has addressed the "complete" sexual experience.

The overarching research question for this study is: can attachment representations predict patterns of sexual behaviour (actions during foreplay, sexual intercourse, and afterplay). In contrast to other studies using the three-category model or independent dimensions of anxiety and avoidance to assess attachment, the current study

uses the four-category model of attachment as the theoretical framework. Using the four-category model is advantageous, as it incorporates the fearful attachment style and allows for a more comprehensive assessment of adult attachment.

The study consists of two samples – a sample of individuals and a sample of couples. The purpose of two samples is to attempt to replicate the results of individuals among the sample of couples. Sampling couples allows for factors such as interaction between partners (Muisse, 2013; Shaver & Mikulincer, 2010) and the combination of attachment styles (Stefanou & McCabe, 2012) affecting sexual activities to be taken into account. It is also important to collect data regarding the sexual experiences of both members of a couple (Stefanou & McCabe, 2012) and to gain insight into both partners' perspectives, since most sexual acts occur in a dyadic relationship (Brassard et al., 2007).

Given the lack of empirical data on Bartholomew's model of attachment and the effect of individual attachment styles on sexual behaviours, no specific predictions were made regarding patterns of behaviours during foreplay, intercourse, and afterplay. Statistical analyses were, however, conducted to test for the influence of attachment on specific sexual behaviours. The following were hypothesized:

1. Secure individuals are expected to be confident in being active during a sexual encounter with a partner and are most likely content with the experience. Therefore, secure attachment will be associated with greater occurrences of sexual behaviours and more reports of greater sexual satisfaction.
2. Highly anxious adults typically desire sexual intimacy to fulfill their needs for security and love (e.g., Davis et al., 2004). As preoccupied attachment is characterized by a high level of anxiety, individuals with a preoccupied attachment

are predicted to be sexually attentive and perform various behaviours throughout the exchange to keep their partners' interest. However, as a consequence of their insatiable need for closeness, they will report less satisfaction because they feel that their partners are not adequately reciprocating. It is predicted that preoccupied attachment is associated with greater frequency of sexual behaviours but less sexual satisfaction.

3. Avoidant adults tend to engage in sex for self-enhancing reasons and for other reasons that are irrelevant to increasing intimacy (e.g., Schachner & Shaver, 2004). Dismissing individuals are likely to have sex for self-inflation reasons so it is expected that they may not perform many behaviours or participate in many sexual activities. In addition, as avoidant individuals have been noted in the literature for being displeased with their partners' sexual skills, there is likely a low to moderate level of sexual satisfaction. Dismissing attachment is expected to be associated with fewer sexual behaviours and less sexual satisfaction.
4. Due to both high levels of anxiety and avoidance, it is predicted that fearful individuals might first observe their partners and then decide how to respond during the encounter. Fearful individuals have been reported to be unpredictable in interactions with a partner (Guerrero & Burgoon, 1996) so it might be difficult to quantify whether they engage in more or less behaviours during sex. Moreover while they are worried about how to approach their partners, they may not be able to fully enjoy the experience so they are predicted to be sexually unsatisfied. Fearful attachment is predicted not to be associated with the number of sexual behaviours but will be associated with less sexual satisfaction.

## Study 1

### Method

#### Participants

Four hundred and seventy-eight sexually active undergraduate students at Trent University completed all study questionnaires in exchange for one bonus credit towards their psychology course. Participants included 395 females (83%), 82 males (17%), and 1 intersex individual. The age of the participants ranged from 17 to 53 years ( $M = 20.94$ ,  $SD = 5.30$ ). The ethnic composition of the sample was 86% Caucasian, 5% of other ethnicities such as South American and multiracial backgrounds, 4% African, 4% Asian, and 1% Aboriginal. The majority of the participants were heterosexual (92%) and in a relationship (77%). Relationship length ( $n = 239$ ) ranged from 1 month to 13.5 years, with a mean length of 1.83 years ( $SD = 1.74$  years).<sup>1</sup>

At the time of testing, a majority of the sample (83%) reported that they have engaged in sexual intercourse over the past month. Most participants (90%) engaged in vaginal-penile intercourse and a small group of participants (21%) engaged in anal intercourse in the past six months. Participants reported an average of 1.91 ( $SD = 5.64$ ) sexual partners in the past six months<sup>2</sup> and 6.20 ( $SD = 15.19$ ) sexual partners in their lifetime<sup>3</sup>. A sizable proportion of the sample reported having had sexual relations with

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<sup>1</sup> In Study 1, relationship length was not a questionnaire item; thus, this data was retrieved from the SONA prescreen questionnaire dataset for the original sample ( $N = 738$ ). The SONA prescreen dataset contained Relationship Length responses for only 568 participants as the remaining 170 participants did not complete the prescreen questionnaire. For the final sample of 478 individuals, the reported relationship length among committed individuals was based on responses from 239 participants with 129 cases of missing data.

<sup>2</sup> Three participants were not included in the analysis for the number of sexual partners in the past six months because one participant reported “20+”, another reported “3/week” and a third participant did not answer this question.

<sup>3</sup> Two participants were not included in the analysis for the number of sexual partners in one’s lifetime because one participant reported “multiple” and another did not answer this question.

an acquaintance (60%) or a stranger (24%) on one or several occasions. Participants also reported having had intercourse with an acquaintance (50%) or a stranger (21%) on one or more occasions while under the influence of recreational drugs/alcohol.

### **Procedure**

Participants were recruited from undergraduate students who were enrolled in a psychology course at Trent University. Participants signed-up for the study using the Trent Psychology Research Participant System (SONA Systems). All participants, after having read the consent form, were asked to check a box on an online form indicating their consent to participate in this study (see Appendix A). Participants then proceeded to complete online questionnaires. Participants reported on their own and their romantic partners' attachment representations, behaviours during foreplay, sexual intercourse, and afterplay, and sexual satisfaction based on their last sexual encounter and general sexual experience, as well as their own sexual habits. At the end of the survey, all participants were provided with an online feedback form describing the purpose of the study and background information about attachment and intimate relationships (see Appendix B). All participants were encouraged to print this form for their own personal records.

### **Measures**

**Demographics.** Information was obtained regarding the gender, age, ethnicity, sexual orientation, and relationship status of participants. A question pertaining to the sexual nature of the relationship (having engaged in intercourse at least once within the past month) was included. This question was important as it determined whether participants were providing data based on having had a sexual encounter with another individual. See Appendix C.

**General sexual habits.** Ten questions were included to collect data on whether participants engaged in penile-vaginal and/or anal intercourse (Nguyen et al., 2012; Vannier & O’Sullivan, 2012), the number of sexual partners within the last six months and within one’s lifetime (Bogaert & Sadava, 2002), and the incidences of sexual intercourse with a stranger (Bersamin, Paschall, Saltz, & Zamboanga, 2012) and an acquaintance (Paul & Hayes, 2002; Paul, McManus, & Hayes, 2000). See Appendix D.

**Attachment.** Attachment style was measured with the Trent Relationship Scales Questionnaire for the Self and the Partner (T-RSQ; Scharfe, in press; see Appendix E). The T-RSQ for the self and the partner are both 40-item questionnaires that are based on Bartholomew’s four-category model: secure, dismissing, fearful, and preoccupied. Participants respond to each item regarding their thoughts and feelings in their romantic relationships on a 7-point Likert scale (1 = not at all like me to 7 = very much like me). To compute a score for each of the attachment styles, an average score was calculated for 10 corresponding items. Reliabilities for both the T-RSQ-Self and -Partner scores ranged from moderate to high (see Table 1).

Table 1  
*Means, Standard Deviations, Ranges, and Reliabilities for the Self and Partner T-RSQ Scales*

	<i>M</i>	<i>SD</i>	Range	$\alpha$
T-RSQ – Self				
Secure	5.10	0.93	2.50–7.00	.75
Fearful	3.03	1.11	1.00–6.90	.83
Preoccupied	4.26	0.83	1.50–7.00	.70 <sup>a</sup>
Dismissing	3.22	1.00	1.00–6.90	.80
T-RSQ – Partner				
Secure	4.92	0.82	2.20–6.70	.63
Fearful	2.83	1.00	1.00–6.60	.77
Preoccupied	3.97	0.82	1.00–6.40	.67 <sup>b</sup>
Dismissing	3.14	1.06	1.00–6.60	.80

*Note.*  $n = 478$ . <sup>a</sup>The reported T-RSQ–Self Preoccupied alpha was the average of the two alphas for the 5 items for preoccupied anxiety ( $\alpha = .75$ ) and 5 items for preoccupied approach ( $\alpha = .65$ ). <sup>b</sup>The reported T-RSQ–Partner Preoccupied alpha was the average of the two alphas for the 5 items for preoccupied anxiety ( $\alpha = .73$ ) and 5 items for preoccupied approach ( $\alpha = .61$ ).

**Behaviours during foreplay.** The occurrence of different foreplay behaviours was measured using 21 items. There were 21 items each for the Self and the Partner based on one's last sexual encounter (see Appendix F) and general sexual experience (see Appendix G). Twenty items were adapted from the Sexual Arousal Inventory (SAI; Hoon, Hoon, & Wincze, 1976). Items about undressing the self and caressing one's own body parts other than the genitals were added as these foreplay behaviours can be exhibited in front of a sexual partner. For a detailed description of the adaptation of the SAI, see Appendix H.

To measure other sexual activities during foreplay, a few items were added to both the Self and Partner versions. One item developed by Zurbriggen (2000) pertaining to the use of sexy clothes or lingerie was added. Two items – the stimulation of the genitals with a sex toy and role-playing – were added because the use of sex toys for sexual pleasure is becoming more common (Herbenick et al., 2009; Rosenberger, Schick,

Herbenick, Novak, & Reece, 2012; Rye & Meaney, 2007) and engaging in role-play scenarios has been reported to be highly arousing (Rye & Meaney, 2007). An item about massage was added because massage was demonstrated to be an activity that promoted sexual intimacy (Gilbert, Ussher, & Perz, 2010). Participants indicated the occurrences of foreplay behaviours on a 7-point scale (1 = did not occur to 7 = occurred a great deal). The participant and his/her partner were each given an average score for foreplay behaviours (21 items) based on the last sexual encounter and general sexual experience. Higher scores reflected more frequent occurrences of foreplay behaviours during a sexual encounter. See Table 2 and 3 for the scales' means and standard deviations based on the last sexual encounter and general sexual experience respectively.

Table 2  
*Means, Standard Deviations, and Ranges for the Last Sexual Encounter Behaviours and Satisfaction Overall Scales*

	<i>M</i>	<i>SD</i>	Range
Foreplay Behaviours			
Overall Self	3.33	0.92	1.29–7.00
Overall Partner	3.95	0.88	1.10–6.81
Afterplay Behaviours			
Overall Self	2.61	0.84	1.06–7.00
Overall Partner	2.59	0.79	1.11–7.00
Overall Sexual Intercourse	3.66	0.70	1.50–7.00
Sexual Satisfaction			
Overall	5.55	1.26	1.00–7.00
Foreplay	5.38	1.30	1.00–7.00
Sexual Intercourse	5.67	1.26	1.00–7.00
Afterplay	5.04	1.51	1.00–7.00

*Note.*  $n = 478$ .

Table 3  
*Means, Standard Deviations, and Ranges for the General Sexual Experience Behaviours and Satisfaction Overall Scales*

	<i>M</i>	<i>SD</i>	Range
Foreplay Behaviours			
Overall Self	3.58	0.97	1.00–7.00
Overall Partner	4.09	0.91	1.00–7.00
Afterplay Behaviours			
Overall Self	2.91	0.86	1.06–7.00
Overall Partner	2.83	0.85	1.00–7.00
Overall Sexual Intercourse	3.96	0.80	1.00–7.00
Sexual Satisfaction			
Overall	5.77	1.09	1.00–7.00
Foreplay	5.60	1.14	1.00–7.00
Sexual Intercourse	5.78	1.12	1.00–7.00
Afterplay	5.45	1.31	1.00–7.00

*Note.*  $n = 478$ .

**Behaviours during sexual intercourse.** To measure the occurrences of the behaviours during sexual intercourse, participants indicated how often they and their partners engaged in certain behaviours on a 7-point scale (1 = did not occur to 7 = occurred a great deal) during their last sexual encounter (see Appendix F) and general sexual experience (see Appendix G). This scale contains 18 items and five coital position items were adapted from the Cowart-Pollack Scale of Sexual Experience (Cowart-Steckler & Pollack, 2011). Items were rephrased and added to include the same positions for penile-vaginal and anal intercourse. One item – “sexual intercourse, face to face, side” – from the scale was divided into two separate items to create two distinct positions (penile-vaginal/anal intercourse, face to face with your partner and penile-vaginal/anal intercourse on the side with your partner).

Items were developed to further measure other behaviours during sexual intercourse. Two items measuring eye contact were added since eye contact was found to increase intimacy when one is interacting with others (Suman, 1997). Four items

regarding kissing a partner and being kissed by the partner (with/without tongue) were added because kissing is a common behaviour during intercourse (Smith et al., 2012; Rosenberger et al., 2011; Rye & Meaney, 2007). All 18 items were used to compute two average scores for intercourse behaviours based on one's last sexual encounter and general sexual experience. Higher scores represented greater frequencies of various coital positions and behaviours during sexual intercourse. See Table 2 and 3 for the scales' means and standard deviations based on the last sexual encounter and general sexual experience respectively.

**Behaviours during afterplay.** Eighteen items assessed the occurrences of post-coital behaviours for the Self and Partner during the last sexual encounter (see Appendix F) and general sexual experience (see Appendix G). Items of post-coital activities developed by Hughes and Kruger (2011) and Kruger and Hughes (2011) were combined. Hughes and Kruger's (2011) item "I prefer to immediately go to sleep" was adapted into two separate items to include cuddling or rolling over and then falling asleep. One item was also added to assess thoughts of sexually transmitted infections (STIs) – "my partner/I thought about the likelihood that sexually transmitted infections (STIs) may have resulted." The participant and his/her partner were each given an average score for afterplay behaviours (18 items) based on the last sexual encounter and general sexual experience. Higher scores reflected greater frequencies of afterplay behaviours following a sexual encounter. See Table 2 and 3 for the scales' means and standard deviations based on the last sexual encounter and general sexual experience respectively.

**Sexual Satisfaction.** Participants responded to their satisfaction with each part of their sexual encounter – foreplay, sexual intercourse, and afterplay – as well as with their

overall sexual experience using a 7-point scale (1 = extremely dissatisfied, 4 = neutral, 7 = extremely satisfied). These four items were answered according to their last sexual encounter (see Appendix F) and again regarding their general sexual experience (see Appendix G). The four items were each scored as single items with higher scores indicating greater satisfaction with one specific part of the sexual encounter or with the overall experience. See Table 2 and 3 for the means and standard deviations based on the last sexual encounter and general sexual experience respectively.

### **Data Screening**

There was a total of 738 cases in the dataset, but an assessment of the frequencies of Survey IDs indicated that the dataset contained only 688 unique IDs. This indicated that of the 688 participants, several participants made multiple attempts to complete the online questionnaires. In fact, 44 participants made these multiple attempts possibly due to various reasons such as the online survey session timing out or being interrupted and unable to complete the survey.

To distinguish invalid cases from usable data, a variable named “Completed” was created within the dataset. A case that was invalid was assigned a “0” and was excluded from the data analyses while a case that remained in the dataset and that was planned for analyses was assigned a “1” under the Completed variable. The dataset was then cleaned and participants/cases were identified as invalid cases in six steps.

The dataset was first scanned for participants with a virgin status because being sexually active was an inclusion criterion. Eighty participants were identified as invalid, including five individuals who made multiple attempts (a total of eight attempts). A total of 88 cases were identified as invalid leaving 650 cases in the dataset.

Next, the data was screened for participants with multiple attempts to complete the questionnaire ( $n = 39$ ). If all attempts from the participant were unsuccessful, they were marked as invalid; 10 participants with two attempts were identified (20 cases identified as invalid). Of the remaining 29 participants with multiple attempts, 26 individuals made one additional attempt and three individuals made two additional attempts. Cases/attempts were identified as invalid to ensure that these participants each only provided one complete set of data. Fourteen individuals successfully completed the questionnaire on their first attempts, but each also made one additional attempt and data from the second attempt was excluded (14 cases were identified as invalid). The other 15 individuals (12 individuals with two attempts and three individuals with three attempts) failed to complete the questionnaire on their first attempts, but were successful on their subsequent attempts. The incomplete and complete data from each attempt were merged to create one complete data set. In the event that participants completed the same parts of the questionnaires on multiple attempts, only data from the first attempt was retained. Hence, 12 cases were identified as invalid for the 12 individuals and six invalid cases for the three individuals. From the individuals identified to have made multiple survey attempts, a total of 52 cases were identified as invalid, leaving 598 cases in the dataset.

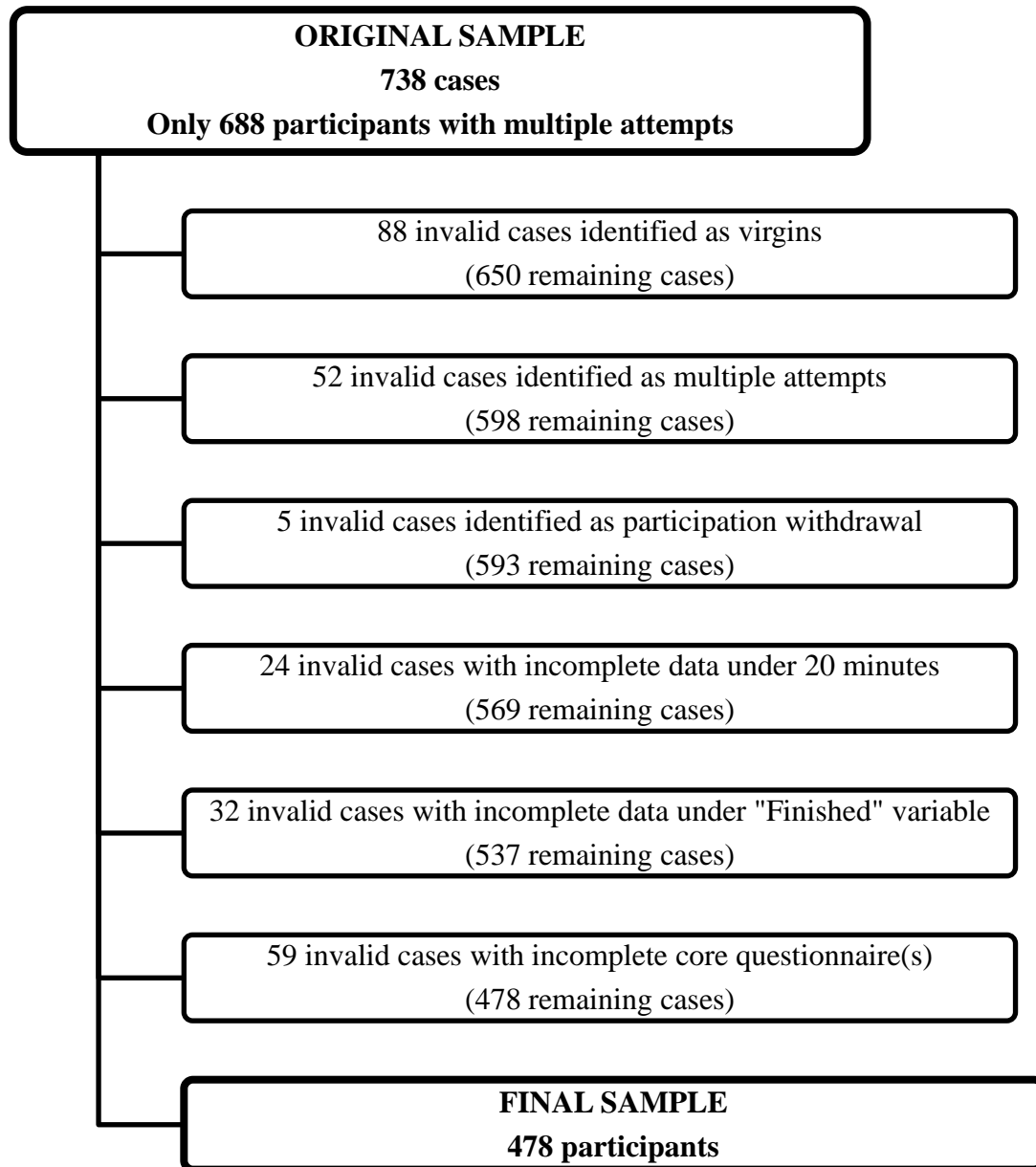
Five participants withdrew their participation after consenting to the study. These five cases were identified as invalid, leaving 593 cases in the dataset. The completion time of the questionnaire was originally estimated to be 50 to 60 minutes. The time required to answer all questionnaire items using only random responses was approximately 20 minutes. In addition, measures of attachment, experiences from one's last sexual encounter and general sexual experience were necessary for analyses and

study participants had to have completed these core scales/questionnaires to be included in the analyses. It was reasoned that informative responses particularly for the core questionnaires were unlikely from individuals taking 20 minutes or less. From screening the dataset, 46 individuals were identified to have completed the survey in 20 minutes or less. Of these 46 participants, 22 individuals were retained for having successfully completed the core questionnaires. Twenty-four participants did not complete one or more of the core questionnaires; hence they were identified as invalid from the dataset (24 cases were identified as invalid, leaving 569 cases in the dataset).

A variable named “Finished” from Qualtrics was used to categorize participants as either having a complete data case (“Finished” = 1) or an incomplete data case (“Finished” = 0). Using this variable, 51 participants were categorized by Qualtrics with an incomplete data case. Nineteen participants completed the core questionnaires but were assigned an incomplete status due to not having clicked the button at the end of the Feedback Form (non-questionnaire item); these participants were retained in the dataset. The remaining 32 participants were identified as invalid for incomplete core questionnaires (leaving 537 cases in the dataset).

Finally, to ensure that all remaining participants ( $n = 537$ ) completed the core questionnaires, each participant was given calculated average scores for all core questionnaires. If a score for any of the core scales was not calculated, then the participant was identified as invalid. After examining the scores for the measures of attachment and sexual behaviours and satisfaction from one’s last sexual encounter and general sexual experience, 59 participants were marked as invalid for this reason, leaving 478 cases in the dataset.

In summary, from the data cleaning process, 210 participants and 260 cases were invalid cases and therefore excluded from data analyses. The remaining sample of 478 participants was retained for further analyses. See Figure 2.



*Figure 2.* Summary of the invalid data identification process.

To test for differences in survey completion between the included and excluded participants, several analyses were conducted. Chi-square analyses were performed for

four demographic variables – gender, ethnicity, sexual orientation, and relationship status – between the 210 participants with invalid data and the 478 participants with valid data. For each variable, there were noticeably small frequencies for certain responses; for the gender variable, as an example, there was one individual for each of the transgender, transsexual, and intersex categories. Due to unequal proportions in a few categories, this could lead to the violation of the assumption that expected frequencies should be greater than five. To avoid the loss of statistical power, each variable was recoded (eliminating or combining categories) so only two categories were analyzed and assessed.<sup>4</sup>

The results indicated that there were no significant associations between two demographic variables – gender and sexual orientation – and whether or not the participant was identified as invalid (both  $p > .05$ ). However, there were significant associations between ethnicity as well as relationship status and whether the case was excluded. The likelihood of finishing the questionnaire was higher for Caucasian participants (73%) compared to non-Caucasian (55%) participants,  $\chi^2 = (1, N = 679) = 16.14, p < .01$ . Most of the participants who completed the survey were in a relationship (76%) compared to participants who were single (56%),  $\chi^2 = (1, N = 685) = 26.73, p < .01$ .

Independent  $t$ -tests were also carried out for two other demographic variables – age and relationship length – between the excluded and included participants in the

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<sup>4</sup> The Gender variable was analyzed only for females and males, while other gender identities (i.e., Transgender, Transsexual, and Intersex) were excluded. For the Ethnicity variable, Caucasian remained as one category and a new category was created for Non-Caucasian backgrounds (i.e., African, Asian, First Nations, and Other). For the Sexual Orientation variable, Heterosexual remained as one category and a new category was created for Non-Heterosexual (i.e., Homosexual, Bisexual, Pansexual, Queer, and Questioning). For the Relationship Status variable, two categories were created and analyzed; (1) Single that included Single (not seeing someone), Separated, and Divorced and (2) In a Relationship that included Single (seeing someone), In a committed relationship, In an open relationship, Engaged, and Married.

dataset. There was no difference in relationship length between participants who were excluded and included ( $p > .05$ ). However, there was a significant difference between age and whether the participant was excluded,  $t(627.89) = -3.77, p < .01$ . Levene's test indicated that there were unequal variances,  $F = 14.31, p < .01$ , so the degrees of freedom was adjusted from 682 to 627.89 for Age. On average, participants who finished the survey were older ( $M = 20.94, SD = 5.30$ ) than participants who failed to do so ( $M = 19.71, SD = 3.08$ ). It was possible that adults who were older and/or in a relationship were more willing to share their sexual experiences. These effects were considered to be characteristics of the sample and not variables that could significantly influence the results of the data analyses.

Next, data was screened for normality and outliers. Z-scores for skewness and kurtosis for the individual questionnaire items and scores for the core scales were calculated by dividing the skewness or kurtosis statistic by its standard error for the final sample ( $n = 478$ ). Skewness and kurtosis z-scores of  $\pm 3.29$  (Tabachnick & Fidell, 2007) were considered to be in the normal range. Most items were positively or negatively skewed as well as containing distributions with positive or negative kurtosis. Histograms were then produced for visual inspection of all items and scores. From inspection, individual items were largely skewed and had platykurtic or tri-modal distributions. For example, some T-RSQ and sexual satisfaction items, participants largely scored at either ends of the scale. In addition, other items such as foreplay, intercourse, and afterplay items were expected to vary because participants could engage in a variety of sexual behaviours. At the item level, it was expected that there was a majority of the

participants who scored specifically at one end of the scale or that there was variability in the responses depending on the item itself.

For the scale scores, distributions of a few scales (e.g., bonding during afterplay) were close to normal while distributions for other scales (e.g., anal intercourse positions) were skewed. Skewed distributions were not concerning because it was expected that participants reported performing certain behaviours due to sexual preferences. For instance, there were greater occurrences of penile-vaginal intercourse positions but fewer occurrences of anal intercourse positions, which suggested that most participants preferred engaging in penile-vaginal intercourse rather than anal intercourse. In closing, item and scale scores were considered to be acceptable and data transformations were not performed.

## **Results**

### **Factor Analyses of the Sexual Behaviour Scales**

Although an overall average score was computed for each of the sexual behaviour scales, the average score only signified that a participant performed multiple behaviours during each part of a sexual encounter. To understand how the scale items could be grouped together to represent a specific type of sexual behaviour with an underlying theme, principal component analyses (PCA) were conducted. PCAs with an orthogonal rotation (varimax) were conducted, in the contexts of the last sexual encounter and general sexual experience, for the self and partner versions of the foreplay and afterplay scales as well as the sexual intercourse scale. An orthogonal rotation was preferred rather than an oblique rotation to account for participants' individual and distinct preferences for various sexual activities. Several factor structures for each scale were calculated to

determine correspondence across the last sexual encounter and general sexual experience. Final structures were mainly chosen based on the number of scale items loading on the same factor across both contexts; extracted factors with the greatest number of same item loadings were examined and then compared. If a scale had multiple competing structures with near identical item loadings, other components of the analysis were examined in choosing a final structure such as the scree plot and the total percentage of variance accounted for. Factors with an eigenvalue  $\geq 1$  were retained and items that loaded  $\geq .40$  for a given factor were included in the interpretation of the final solutions. See Appendix I for the cross factor loadings of all sexual behaviour factor analyses.

**Self foreplay factor analyses.** There was a great overlap in the extracted factors between the structures with minor differences for both the last sexual encounter and general sexual experience. For the self versions of the foreplay scale, three factors – Breast and Thigh Stimulation, Seduction and Genital Stimulation, and Sexual Play and Erotica – were extracted in every structure with nearly identical item loadings. Noticeable differences were seen in the Seduction and Genital Stimulation factor. In the analyses for both the last sexual encounter and general sexual experience, as fewer factors were extracted, this factor was expanded to include more items particularly the genital stimulation and undressing the partner items. After a comparison of the different structures, a three-factor structure was chosen as the final factor structure for the last sexual encounter and general sexual experience. The three factors that were extracted contained the same item loadings, which provided support for the chosen structures. Two scale items – to undress the self and to massage the partner – were not included in the interpretation of both final structures because they did not load greater than .36 on any of

the three factors. Therefore, only 19 of the 21 scale items were included in each final solution.

In summary, three factors were extracted for the last sexual encounter and general sexual experience self foreplay scales. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the last sexual encounter analysis (KMO = .80) and the general sexual experience analysis (KMO = .82). Respective Bartlett's test of sphericity for both analyses ( $\chi^2(210) = 3752.72, p < .001$  and  $\chi^2(210) = 4901.54, p < .001$ ) indicated that correlations between items were sufficiently large for PCA. Three factors had eigenvalues over Kaiser's criterion of 1 and in combination accounted for 48% of the variance for the last sexual encounter and 55% of the variance for the general sexual experience.

In both analyses, a factor reflected Breast and Thigh Stimulation with six items (last sexual encounter: 19% of the variance; general sexual experience: 21% of the variance). These items included fondling of the partner's breasts, and touching and kissing of his/her nipples as well as thighs. Six items loaded on a factor labelled as Seduction and Genital Stimulation (last sexual encounter: 15% of the variance; general sexual experience: 17% of the variance). These items related to an individual's efforts to seduce and arouse the partner by undressing him/her, caressing his/her body parts other than the genitals, kissing, and genital stimulation. The last factor with seven items was named Sexual Play and Erotica (last sexual encounter: 14% of the variance; general sexual experience: 17% of the variance). This factor represented masturbation, playful and partnered activities (e.g., performing a strip show and role-playing), and the use of erotic paraphernalia (e.g., using a sex toy and watching pornography).

For both analyses, some items loaded on two factors but were retained for one factor due to a greater loading. In the last sexual encounter analysis, to touch and kiss the partner's inner thigh(s), and to caress the self (body parts other than the genitals) also loaded .46, .40, and .41 on the Seduction and Genital Stimulation factor respectively. However, to touch and kiss the partner's thigh were retained as Breast and Thigh Stimulation and to caress the self was retained as Sexual Play and Erotica due to greater loadings on these factors. In the general sexual experience analysis, to touch the partner's inner thigh(s) also loaded .48 on the Seduction and Genital Stimulation factor but was retained as Breast and Thigh Stimulation due to a greater loading on this factor.

In addition to a participant's overall average scores for the foreplay behaviour scales, six other average scores were calculated for distinct foreplay behaviours (19 items) based on the three last sexual encounter and general sexual experience factors. Higher scores reflected more frequent occurrences of specific foreplay behaviours for an individual's last sexual encounter or general sexual experience. For the percentage of variance and item loadings per factor as well as the mean and standard deviation for each foreplay subscale, see Table 4 for the last sexual encounter analysis and Table 5 for the general sexual experience analysis.

Table 4  
*Exploratory Factor Analysis with Varimax Rotation of the Last Sexual Encounter Self Foreplay Scale*

	Factor Loadings <sup>a</sup>	<i>M</i> <sup>b</sup>	<i>SD</i>
<b>Breast and Thigh Stimulation (19% of the variance)</b>		2.84	1.82
You touched your partner's nipple(s).	.83		
You kissed your partner's nipple(s).	.90		
You fondled your partner's breast(s) with your mouth and tongue.	.92		
You fondled your partner's breast(s) with your hand(s).	.91		
You touched your partner's inner thigh(s).	.50		
You kissed your partner's inner thigh(s).	.49		
<b>Seduction and Genital Stimulation (15% of the variance)</b>		5.36	1.13
You undressed your partner.	.44		
You caressed your partner (body parts other than the genitals).	.69		
You kissed your partner.	.71		
You kissed your partner with your tongue (French kissing).	.70		
You stimulated your partner's genitals with your mouth and tongue.	.55		
You stimulated your partner's genitals with your finger(s).	.45		
<b>Sexual Play and Erotica (14% of the variance)</b>		1.95	1.06
You caressed yourself (body parts other than the genitals).	.47		
You stimulated your partner's genitals with a sex toy.	.63		
You masturbated.	.58		
You presented yourself in sexy clothes/lingerie.	.53		
You performed a strip show.	.69		
You role-played with your partner.	.67		
You watched pornographic material with your partner.	.65		

*Note.* <sup>a</sup>*n* = 439. Only participants who completed all items of the scale were included in the factor analysis. <sup>b</sup>*n* = 478. Mean and standard deviation were calculated for the entire sample for each factor.

Table 5  
*Exploratory Factor Analysis with Varimax Rotation of the General Sexual Experience Self Foreplay Scale*

	Factor Loadings <sup>a</sup>	<i>M</i> <sup>b</sup>	<i>SD</i>
<b>Breast and Thigh Stimulation (21% of the variance)</b>		3.14	1.85
You touch your partner's nipple(s).	.84		
You kiss your partner's nipple(s).	.91		
You fondle your partner's breast(s) with your mouth and tongue.	.94		
You fondle your partner's breast(s) with your hands.	.93		
You touch your partner's inner thigh(s).	.54		
You kiss your partner's inner thigh(s).	.58		
<b>Seduction and Genital Stimulation (17% of the variance)</b>		5.53	1.19
You undress your partner.	.58		
You caress your partner (body parts other than the genitals).	.74		
You kiss your partner.	.78		
You kiss your partner with your tongue (French kissing).	.72		
You stimulate your partner's genitals with your mouth and tongue.	.68		
You stimulate your partner's genitals with your finger(s).	.54		
<b>Sexual Play and Erotica (17% of the variance)</b>		2.18	1.16
You caress yourself (body parts other than the genitals).	.58		
You stimulate your partner's genitals with a sex toy.	.62		
You masturbate.	.67		
You present yourself in sexy clothes/lingerie.	.61		
You perform a strip show.	.79		
You role-play with your partner.	.74		
You watch pornographic material with your partner.	.71		

*Note.* <sup>a</sup>*n* = 437. Only participants who completed all items of the scale were included in the factor analysis. <sup>b</sup>*n* = 478. Mean and standard deviation were calculated for the entire sample for each factor.

**Partner foreplay factor analyses.** For the partner versions of the foreplay scale, two particular structures – three- and two-factor structures – were under consideration for the final factor structures. There was a near complete overlap for the three-factor structures with the same factors – Breast Stimulation, Seduction and Genital Stimulation, and Sexual Play and Erotica – for both the last sexual encounter and general sexual experience. The only difference between the two contexts was that the item regarding

caressing the self (body parts other than the genitals); this item did not load greater than .39 on any given factor in the last sexual encounter analysis but did load .50 on the Sexual Play and Erotica factor in the general sexual experience analysis. On the contrary, there was a complete overlap with the two-factor structures in the item loadings for the two factors. After examining the scree plots and the cumulative percentages of variance for both structures, it was decided that the three-factor structures were the final solutions. Although the two-factor structures appeared promising, a point of inflexion was observed after the third factor in the scree plots for both analyses. Furthermore the total percentage of variance was approximately 8% greater with the three-factor than with the two-factor structure for the last sexual encounter and approximately 7% greater for the general sexual experience. For both final solutions, the item regarding undressing the self (body parts other than the genitals) was not included in the interpretation because it did not load greater than .20 on any of the three factors. To maintain a conservation interpretation and to have overlap across both contexts, this item along with the item about caressing the self were excluded from the final solutions. Therefore, only 19 out of 21 scale items were included in each final solution.

In summary, three-factor solutions were extracted. The KMO measure verified the sampling adequacy for the last sexual encounter analysis (KMO = .84) and the general sexual experience analysis (KMO = .87). Respective Bartlett's test of sphericity for both analyses ( $\chi^2(210) = 4203.45, p < .001$  and  $\chi^2(210) = 5459.00, p < .001$ ) indicated that correlations between items were sufficiently large for PCA. Three factors had eigenvalues over Kaiser's criterion of 1 and in combination accounted for 52% of the

variance for the last sexual encounter and 57% of the variance for general sexual experience.

In both analyses, four items representing the stimulation of the nipples and breasts by the partner loaded on a factor labelled as Breast Stimulation (last sexual encounter: 17% of the variance; general sexual experience: 18% of the variance). Nine items loaded on a factor named Seduction and Genital Stimulation (last sexual encounter: 17% of the variance; general sexual experience: 21% of the variance). This factor contained activities such as being undressed, massaged, and kissed by the partner as well as thigh and genital stimulation. The remaining six items loaded on a factor identified as Sexual Play and Erotica (last sexual encounter and general sexual experience: 18% of the variance). This factor related to masturbation, playful and partnered activities such as performing a strip show and role-playing as well as the use of a sex toy and/or pornography.

For the last sexual encounter analysis, two items loaded on two factors but were retained for one factor due to a greater loading. The partner kissing also loaded  $-.41$  on the Sexual Play and Erotica factor and the partner touching the inner thigh(s) loaded  $.42$  on the Breast Stimulation factor. However, these two items were retained as Seduction and Genital Stimulation due to greater loadings on this factor.

In addition to a partner's overall average scores for the foreplay behaviour scales, six other average scores were calculated for distinct foreplay behaviours (19 items) based on the three last sexual encounter and general sexual experience factors. Higher scores reflected more frequent occurrences of specific foreplay behaviours for a partner's last sexual encounter or general sexual experience. For the percentage of variance and item

loadings per factor as well as the mean and standard deviation for each foreplay subscale, see Table 6 for the last sexual encounter analysis and Table 7 for the general sexual experience analysis.

Table 6  
*Exploratory Factor Analysis with Varimax Rotation of the Last Sexual Encounter Partner Foreplay Scale*

	Factor Loadings <sup>a</sup>	<i>M</i> <sup>b</sup>	<i>SD</i>
<b>Breast Stimulation (17% of the variance)</b>		5.21	1.89
Your partner touched your nipple(s).	.84		
Your partner kissed your nipple(s).	.87		
Your partner fondled your breast(s) with his/her mouth and tongue.	.90		
You fondled your partner's breast(s) with your hands.	.87		
<b>Seduction and Genital Stimulation (17% of the variance)</b>		5.03	1.19
Your partner undressed you.	.47		
Your partner massaged you.	.44		
Your partner caressed you (body parts other than the genitals).	.68		
Your partner kissed you.	.66		
Your partner kissed you with his/her tongue (French kissing).	.67		
Your partner touched your inner thigh(s).	.60		
Your partner kissed your inner thigh(s).	.56		
Your partner stimulated your genitals with his/her mouth and tongue.	.56		
Your partner stimulated your genitals with his/her finger(s).	.63		
<b>Sexual Play and Erotica (18% of the variance)</b>		1.59	1.03
Your partner stimulated your genitals with a sex toy.	.70		
Your partner masturbated.	.64		
Your partner presented him-/her-self in sexy clothes/lingerie.	.65		
Your partner performed a strip show.	.81		
Your partner role-played with you.	.73		
Your partner watched pornographic material with you.	.74		

*Note.* <sup>a</sup>*n* = 443. Only participants who completed all items of the scale were included in the factor analysis. <sup>b</sup>*n* = 478. Mean and standard deviation were calculated for the entire sample for each factor.

Table 7  
*Exploratory Factor Analysis with Varimax Rotation of the General Sexual Experience  
 Partner Foreplay Scale*

	Factor Loadings <sup>a</sup>	<i>M</i> <sup>b</sup>	<i>SD</i>
<b>Breast Stimulation (18% of the variance)</b>		5.37	1.90
Your partner touches your nipple(s).	.84		
Your partner kisses your nipple(s).	.86		
Your partner fondles your breast(s) with his/her mouth and tongue.	.91		
Your partner fondles your breast(s) with his/her hands.	.89		
<b>Seduction and Genital Stimulation (21% of the variance)</b>		5.18	1.23
Your partner undresses you.	.60		
Your partner massages you.	.48		
Your partner caresses you (body parts other than the genitals).	.72		
Your partner kisses you.	.73		
Your partner kisses you with his/her tongue (French kissing).	.71		
Your partner touches your inner thigh(s).	.69		
Your partner kisses your inner thigh(s).	.59		
Your partner stimulates your genitals with his/her mouth and tongue.	.64		
Your partner stimulates your genitals with his/her finger(s).	.66		
<b>Sexual Play and Erotica (18% of the variance)</b>		1.72	1.07
Your partner stimulates your genitals with a sex toy.	.70		
Your partner masturbates.	.62		
Your partner presents him-/her-self in sexy clothes/lingerie.	.72		
Your partner performs a strip show.	.79		
Your partner role-plays with you.	.76		
Your partner watches pornographic material with you.	.77		

*Note.* <sup>a</sup>*n* = 429. Only participants who completed all items of the scale were included in the factor analysis. <sup>b</sup>*n* = 478. Mean and standard deviation were calculated for the entire sample for each factor.

**Sexual intercourse factor analyses.** Two specific structures – four- and three-factor structures – were under consideration for the final factor solutions. The four-factor structures were suitable solutions since identical factor loadings were observed for all factors across the last sexual encounter and general sexual experience analyses.

However, from the scree plot, the fourth factor in the general sexual experience analysis

had an eigenvalue less than 1. With respect to the three-factor structures, two factors – Anal Intercourse and Penile-Vaginal Intercourse – contained the same item loadings. The third factors – Eye Contact and Kissing – had the same five item loadings with the exception of one item pertaining to the penile-vaginal intercourse, face-to-face. This coital position loaded .45 on the factor in the general sexual experience analysis but did not load greater than .36 on any of the three factors in the last sexual encounter analysis. In conclusion, to implement the eigenvalue-greater-than-one rule, the three-factor structures were selected to be the final factor solutions. Also, to maintain a conservative interpretation and to have overlap across both contexts, the penile-vaginal intercourse, face-to-face item was excluded from both solutions. Therefore, only 17 of the 18 scale items were included in each final solution.

The last sexual encounter and general sexual experience analyses revealed a three-factor solution. The KMO measure verified the sampling adequacy for the last sexual encounter analysis (KMO = .79) and the general sexual experience analysis (KMO = .83). Respective Bartlett's test of sphericity for both analyses ( $\chi^2(153) = 6464.46, p < .001$  and  $\chi^2(153) = 7770.27, p < .001$ ) indicated that correlations between items were sufficiently large for PCA. Using Kaiser's criterion 1 for eigenvalues as a cutoff, three factors were retained which explained a total 63% of the variance for the last sexual encounter and 71% of the variance for general sexual experience.

In both analyses, six items about various positions during anal intercourse loaded on the first factor – Anal Intercourse (last sexual encounter: 26% of the variance; general sexual experience: 28% of the variance). The second factor consisted of six items about eye contact and kissing and was termed as Eye Contact and Kissing (last sexual

encounter: 24% of the variance; general sexual experience: 27% of the variance). The last factor contained five items representing different positions during penile-vaginal intercourse and was labelled as Penile-Vaginal Intercourse (last sexual encounter: 13% of the variance; general sexual experience: 17% of the variance).

In addition to the overall average scores for the intercourse scales, six other average scores were calculated for coital positions and behaviours (17 items) based on the three last sexual encounter and general sexual experience factors. Higher scores reflected more frequent occurrences of coital positions during penile-vaginal and/or anal intercourse and other behaviours during intercourse for an individual's last sexual encounter or general sexual experience. For the percentage of variance and item loadings per factor as well as the mean and standard deviation for each intercourse subscale, see Table 8 for the last sexual encounter analysis and Table 9 for the general sexual experience analysis.

Table 8  
*Exploratory Factor Analysis with Varimax Rotation of the Last Sexual Encounter Sexual Intercourse Scale*

	Factor Loadings <sup>a</sup>	<i>M</i> <sup>b</sup>	<i>SD</i>
<b>Anal Intercourse (26% of the variance)</b>		1.30	0.93
Anal intercourse, you superior (on top) with your partner	.83		
Anal intercourse, face-to-face with your partner	.92		
Anal intercourse, entered from rear with your partner	.84		
Anal intercourse, on the side with your partner	.87		
Anal intercourse, sitting with your partner	.87		
Anal intercourse, standing with your partner	.75		
<b>Eye Contact and Kissing (24% of the variance)</b>		6.04	1.24
Your partner gave you eye contact.	.76		
You gave your partner eye contact.	.77		
Your partner kissed you.	.88		
You kissed your partner.	.89		
Your partner kissed you with his/her tongue.	.84		
You kissed your partner with your tongue.	.83		
<b>Penile-Vaginal Intercourse (13% of the variance)</b>		3.22	1.41
Penile-vaginal intercourse, you superior (on top) with your partner	.57		
Penile-vaginal intercourse, entered from rear with your partner	.67		
Penile-vaginal intercourse, on the side with your partner	.70		
Penile-vaginal intercourse, sitting with your partner	.66		
Penile-vaginal intercourse, standing with your partner	.64		

*Note.* <sup>a</sup>*n* = 450. Only participants who completed all items of the scale were included in the factor analysis. <sup>b</sup>*n* = 478. Mean and standard deviation were calculated for the entire sample for each factor.

Table 9  
*Exploratory Factor Analysis with Varimax Rotation of the General Sexual Experience Sexual Intercourse Scale*

	Factor Loadings <sup>a</sup>	<i>M</i> <sup>b</sup>	<i>SD</i>
<b>Anal Intercourse (28% of the variance)</b>		1.46	1.11
Anal intercourse, you superior (on top) with your partner	.78		
Anal intercourse, face-to-face with your partner	.93		
Anal intercourse, entered from rear with your partner	.86		
Anal intercourse, on the side with your partner	.92		
Anal intercourse, sitting with your partner	.93		
Anal intercourse, standing with your partner	.89		
<b>Eye Contact and Kissing (27% of the variance)</b>		6.02	1.35
Your partner gives you eye contact.	.80		
You give your partner eye contact.	.84		
Your partner kisses you.	.91		
You kiss your partner.	.92		
Your partner kisses you with his/her tongue.	.85		
You kiss your partner with your tongue.	.86		
<b>Penile-Vaginal Intercourse (17% of the variance)</b>		4.09	1.53
Penile-vaginal intercourse, you superior (on top) with your partner	.56		
Penile-vaginal intercourse, entered from rear with your partner	.77		
Penile-vaginal intercourse, on the side with your partner	.80		
Penile-vaginal intercourse, sitting with your partner	.77		
Penile-vaginal intercourse, standing with your partner	.77		

*Note.* <sup>a</sup>*n* = 445. Only participants who completed all items of the scale were included in the factor analysis. <sup>b</sup>*n* = 478. Mean and standard deviation were calculated for the entire sample for each factor.

**Self afterplay factor analyses.** Three structures – four-, three-, and two-factor structures – were examined and compared. The four- and three-factor structures had more differences in item loadings for the factors than similarities. The two-factor structures between the last sexual encounter and general sexual experience had relatively the most similarities in item loadings with the least discrepancy. As a result, these structures were the most logical solutions for both the last sexual encounter and general sexual experience. In both analyses, the two extracted factors were identified with

themes related to extrinsic rewards and body worries as well as bonding. To maintain a conservative interpretation and to have overlap across both contexts, three items were excluded from the final afterplay structure solutions. For both analyses, one item – urination – was not included in the final solution because it did not load greater than .31 on either factor. Another item about remaining in penetration after orgasm did not load greater than .36 on either factor in the last sexual encounter analysis, whereas it loaded .46 on the Bonding factor in the general sexual experience analysis. Finally, an item regarding oral sex loaded on both factors in the two analyses, but this item would be retained for different factors due to greater loadings; this item had a greater loading of .50 on the Extrinsic Rewards and Body Worries factor in the last sexual encounter analysis but had a greater loading of .47 on the Bonding factor in the general sexual experience analysis. Therefore, only 15 of the 18 scale items were included in each final solution.

In summary, two factors were extracted for the last sexual encounter and general sexual experience self afterplay scales. The KMO measure verified the sampling adequacy for the last sexual encounter analysis (KMO = .75) and the general sexual experience analysis (KMO = .80). Respective Bartlett's test of sphericity for both analyses ( $\chi^2(153) = 1919.38, p < .001$  and  $\chi^2(153) = 2467.16, p < .001$ ) indicated that correlations between items were sufficiently large for PCA. Using Kaiser's criterion 1 for eigenvalues as a cutoff, two factors were retained which explained a total 35% of the variance for the last sexual encounter and 40% of the variance for general sexual experience.

In both analyses, the first factor labelled as Extrinsic Rewards and Body Worries consisted of nine items (last sexual encounter: 19% of the variance; general sexual

experience: 23% of the variance). Items such as asking for a favour, smoking, getting a snack related to extrinsic rewards and other items such as taking a shower, covering one's body and thinking about the likelihood of pregnancy related to worries of one's bodily health. The second factor consisted of six items about bonding activities such as conversation and cuddling and was termed as Bonding (last sexual encounter: 16% of the variance; general sexual experience: 17% of the variance).

In addition to a participant's overall average scores for the afterplay behaviour scales, four other average scores were calculated for distinct afterplay behaviours (15 items) based on the two last sexual encounter and general sexual experience factors. Higher scores reflected more frequent occurrences of specific afterplay behaviours for an individual's last sexual encounter or general sexual experience. For the percentage of variance and item loadings per factor as well as the mean and standard deviation for each afterplay subscale, see Table 10 for the last sexual encounter analysis and Table 11 for the general sexual experience analysis.

Table 10  
*Exploratory Factor Analysis with Varimax Rotation of the Last Sexual Encounter Self Afterplay Scale*

	Factor Loadings <sup>a</sup>	<i>M</i> <sup>b</sup>	<i>SD</i>
<b>Extrinsic Rewards and Body Worries (19% of the variance)</b>		1.85	0.94
I requested favours or asked for things from my partner.	.46		
I rolled over and then fell asleep.	.59		
I left or had my partner leave and not sleep next to me.	.61		
I smoked, drank alcohol, or took other chemical substances.	.63		
I ate or snacked on some food.	.48		
I cleaned/showered immediately following intercourse.	.47		
I covered my body and was modest about my body around my partner.	.50		
I thought about the likelihood that pregnancy may have resulted.	.61		
I thought about the likelihood that sexually transmitted infections (STIs) may have resulted.	.69		
<b>Bonding (16% of the variance)</b>		3.73	1.31
I had an intimate talk with my partner.	.72		
I lightened the mood with jokes.	.56		
I continued cuddling/caressing with my partner.	.73		
I cuddled and then fell asleep.	.41		
I remained awake and stayed with my partner.	.61		
I continued to engage in sexual activity so as to increase the likelihood that sex would happen again.	.51		

*Note.* <sup>a</sup>*n* = 455. Only participants who completed all items of the scale were included in the factor analysis. <sup>b</sup>*n* = 478. Mean and standard deviation were calculated for the entire sample for each factor.

Table 11  
*Exploratory Factor Analysis with Varimax Rotation of the General Sexual Experience Self Afterplay Scale*

	Factor Loadings <sup>a</sup>	<i>M</i> <sup>b</sup>	<i>SD</i>
<b>Extrinsic Rewards and Body Worries (23% of the variance)</b>		1.99	1.01
I feel it was a good time to request favours or ask for things from my partner.	.59		
I prefer to roll over and then fall asleep.	.58		
I prefer to leave or have my partner leave and not sleep next to me.	.74		
I prefer to smoke, drink alcohol, or take other chemical substances.	.71		
I like to eat or snack on some food.	.54		
I feel the need to clean/shower immediately following intercourse.	.55		
I have a tendency to cover my body and am modest about my body around my partner.	.52		
I think about the likelihood that pregnancy may have resulted.	.63		
I think about the likelihood that sexually transmitted infections (STIs) may have resulted.	.73		
<b>Bonding (17% of the variance)</b>		4.22	1.22
I prefer to have an intimate talk with my partner.	.69		
I prefer to lighten the mood with jokes.	.42		
I prefer to continue cuddling/caressing with my partner.	.81		
I prefer to cuddle and then fall asleep.	.65		
I prefer to remain awake and stay with my partner.	.60		
I prefer to continue to engage in sexual activity so as to increase the likelihood that sex will happen again.	.48		

*Note.* <sup>a</sup>*n* = 454. Only participants who completed all items of the scale were included in the factor analysis. <sup>b</sup>*n* = 478. Mean and standard deviation were calculated for the entire sample for each factor.

**Partner afterplay factor analysis.** Similar to the self afterplay analysis comparisons, several structures were examined and the two-factor structures between last sexual encounter and general sexual experience had relatively the most similarities in item loadings with the least discrepancy. The two extracted factors were identified with themes related to extrinsic rewards and body worries as well as bonding. In both analyses, the item regarding urination did not load greater than .32 on either factor.

Another item regarding oral sex loaded .56 on the Bonding factor in the last sexual encounter analysis. However, this item had a greater loading of .47 for the Extrinsic Rewards and Body Worries factor and a smaller loading of .44 for the Bonding factor in the general sexual experience analysis. To maintain a conservative interpretation and to have overlap across contexts, these two items were excluded from the final solutions. Thus, only 16 of the 18 scale items were included in each final solution.

In summary, two factors were extracted for the last sexual encounter and general sexual experience partner afterplay scales. The KMO measure verified the sampling adequacy for the last sexual encounter analysis (KMO = .75) and the general sexual experience analysis (KMO = .81). Respective Bartlett's test of sphericity for both analyses ( $\chi^2(153) = 1988.13, p < .001$  and  $\chi^2(153) = 2722.21, p < .001$ ) indicated that correlations between items were sufficiently large for PCA. Using Kaiser's criterion 1 for eigenvalues as a cutoff, two factors were retained which explained a total 35% of the variance for the last sexual encounter and 41% of the variance for general sexual experience.

In both analyses, the first factor labelled as Extrinsic Rewards and Body Worries consisted of nine items (last sexual encounter: 20% of the variance; general sexual experience: 25% of the variance). Items such as asking for a favour, smoking, getting a snack related to extrinsic rewards and other items such as taking a shower, covering one's body and thinking about the likelihood of pregnancy related to worries of one's bodily health. The second factor consisted of seven items about bonding through conversation and cuddling as well as continuing sex and was termed as Bonding (last sexual encounter and general sexual experience: 16% of the variance). In the general sexual experience

analysis, the item about continuing sexual activity also loaded .42 on the Extrinsic Rewards and Body Worries factor but was retained as Bonding due to a greater loading on this factor.

In addition to a partner's overall average scores for the afterplay behaviour scales, four other average scores were calculated for distinct afterplay behaviours (16 items) based on the two last sexual encounter and general sexual experience factors. Higher scores reflected more frequent occurrences of specific afterplay behaviours for a partner's last sexual encounter or general sexual experience. For the percentage of variance and item loadings per factor as well as the mean and standard deviation for each afterplay subscale, see Table 12 for the last sexual encounter analysis and Table 13 for the general sexual experience analysis.

### **Correlations between Attachment, Sexual Behaviours, and Sexual Satisfaction**

To test whether attachment representations were associated with sexual behaviours and satisfaction, Pearson correlations between attachment and sexual behaviours and satisfaction were calculated. Associations between self attachment and last sexual encounter and general sexual experience variables were first examined and between reported partner attachment and the same variables were then examined. As a consequence of conducting many correlational analyses with these variables, there was a possibility for a Type II error. In addition, a small correlation of approximately .08 would yield a  $p$  value of less than .05 due to a large sample size. In interpreting the results, rather than focusing the significance of the correlations, it was important to note the pattern of medium effect sizes of around .30; using Cohen's (1988) guidelines of effect sizes, a  $r$  value of .10 as small, .30 as medium, and .50 as large effect sizes. Most

importantly, the pattern of medium effect sizes should be consistently seen across both the last sexual encounter and general sexual experience.

Table 12

*Exploratory Factor Analysis with Varimax Rotation of the Last Sexual Encounter Partner Afterplay Scale*

	Factor Loadings <sup>a</sup>	<i>M</i> <sup>b</sup>	<i>SD</i>
<b>Extrinsic Rewards and Body Worries (20% of the variance)</b>		1.72	0.86
My partner requested favours or asked for things from me.	.50		
My partner rolled over and then fell asleep.	.54		
My partner left or had me leave and not sleep next to him/her.	.56		
My partner smoked, drank alcohol, or took other chemical substances.	.61		
My partner ate or snacked on some food.	.51		
My partner cleaned/showered immediately following intercourse.	.49		
My partner covered his/her body and was modest about his/her body around me.	.61		
My partner thought about the likelihood that pregnancy may have resulted.	.67		
My partner thought about the likelihood that sexually transmitted infections (STIs) may have resulted.	.72		
<b>Bonding (16% of the variance)</b>		3.66	1.23
My partner had an intimate talk with me.	.71		
My partner lightened the mood with jokes.	.49		
My partner continued cuddling/caressing with me.	.72		
My partner cuddled and then fell asleep.	.49		
My partner remained awake and stayed with me.	.45		
My partner continued to remain in penetration with me after orgasm.	.42		
My partner continued to engage in sexual activity so as to increase the likelihood that sex would happen again.	.57		

*Note.* <sup>a</sup>*n* = 449. Only participants who completed all items of the scale were included in the factor analysis. <sup>b</sup>*n* = 478. Mean and standard deviation were calculated for the entire sample for each factor.

Table 13  
*Exploratory Factor Analysis with Varimax Rotation of the General Sexual Experience  
 Partner Afterplay Scale*

	Factor Loadings <sup>a</sup>	<i>M</i> <sup>b</sup>	<i>SD</i>
<b>Extrinsic Rewards and Body Worries (25% of the variance)</b>		1.93	0.98
My partner feels it was a good time to request favours or ask things from me.	.59		
My partner prefers to roll over and then fall asleep.	.61		
My partner prefers to leave or have me leave and not sleep next to him/her.	.70		
My partner prefers to smoke, drink alcohol, or take other chemical substances.	.62		
My partner likes to eat or snack on some food.	.54		
My partner feels the need to clean/shower immediately following intercourse.	.58		
My partner has the tendency to cover his/her body and be modest about his/her body around me.	.66		
My partner thinks about the likelihood that pregnancy may have resulted.	.72		
My partner thinks about the likelihood that sexually transmitted infections (STIs) may have resulted.	.77		
<b>Bonding (16% of the variance)</b>		3.94	1.18
My partner prefers to have an intimate talk with me.	.68		
My partner prefers to lighten the mood with jokes.	.50		
My partner prefers to continue cuddling/caressing with me.	.80		
My partner prefers to cuddle and then fall asleep.	.58		
My partner prefers to remain awake and stay with me.	.68		
My partner prefers to continue to remain in penetration with me after orgasm.	.44		
My partner continues to engage in sexual activity so as to increase the likelihood that sex will happen again.	.48		

*Note.* <sup>a</sup>*n* = 455. Only participants who completed all items of the scale were included in the factor analysis. <sup>b</sup>*n* = 478. Mean and standard deviation were calculated for the entire sample for each factor.

For self attachment, a pattern of associations could be seen for both contexts between three types of attachment styles and behaviours and satisfaction. See Table 14 and 15 for the last sexual encounter and general sexual experience respectively. Secure attachment was associated with participants and their sexual partners to engage in more foreplay activities to seduce one another and to stimulate each other's genitals. This

attachment style was also associated with the partners to stimulate the participants' breasts during foreplay and to make a greater effort to bond with the participants after sexual intercourse through talking and cuddling. Fearful attachment was associated with the participants and the partners to engage in more extrinsically rewarding behaviours such as asking for a favour and eating as well as to have more body-conscious worries such as bathing and thinking about pregnancy during afterplay. Dismissing attachment was also associated with this type of afterplay behaviour, but it was only associated with the participants to engage in them. The most interesting results across both contexts were that opposite patterns could be seen for secure attachment and both fearful and dismissing attachment specifically for the maintenance of eye contact and kissing during intercourse and sexual satisfaction. Secure attachment was associated with more maintenance of eye contact and kissing and greater participant satisfaction with each part of the sexual encounter (i.e., foreplay, intercourse, and afterplay) and the overall sexual experience, whereas fearful and dismissing attachment were associated with less of these behaviours and lower levels of satisfaction with each part and the overall experience.

To ensure that these associations were not influenced by the skewed distributions of the sexual variables, Spearman's correlations were also calculated. In comparing the Pearson to Spearman's correlation analyses, the pattern of associations mentioned above remained as medium effect sizes for the three attachment styles across the last sexual encounter and general sexual experience.

Table 14  
*Pearson Correlations for Self T-RSQ and Last Sexual Encounter Behaviours and Satisfaction*

	Secure	Fearful	Preocc	Dismiss
<b>Self Foreplay Behaviours</b>				
Overall	.11*	-.03	.05	.02
Breast and Thigh Stimulation	.00	.01	-.04	.07
Seduction and Genital Stimulation	<b>.27***</b>	-.19***	.12**	-.18***
Sexual Play and Erotica	.02	.07	.05	.09
<b>Partner Foreplay Behaviours</b>				
Overall	.21***	-.08	.11*	-.09*
Breast Stimulation	<b>.25***</b>	-.13**	.20***	-.17***
Seduction and Genital Stimulation	<b>.26***</b>	-.17***	.06	-.17***
Sexual Play and Erotica	-.13**	.20***	-.02	.20***
<b>Self Afterplay Behaviours</b>				
Overall	.01	.06	.04	.12*
Extrinsic Rewards and Body Worries	-.25***	<b>.33***</b>	-.01	<b>.34***</b>
Bonding	.22***	-.20***	.09*	-.14**
<b>Partner Afterplay Behaviours</b>				
Overall	.01	.07	.05	.09*
Extrinsic Rewards and Body Worries	-.26***	<b>.35***</b>	.03	.33***
Bonding	<b>.25***</b>	-.21***	.05	-.15***
<b>Sexual Intercourse</b>				
Overall	.13**	-.08	.01	-.03
Anal Intercourse	-.15**	.16***	-.06	.19***
Eye Contact and Kissing	<b>.27***</b>	<b>-.25***</b>	.01	<b>-.24***</b>
Penile-Vaginal Intercourse	.04	.02	.05	.07
<b>Sexual Satisfaction</b>				
Overall	<b>.39***</b>	<b>-.37***</b>	-.06	<b>-.30***</b>
Foreplay	<b>.31***</b>	<b>-.32***</b>	-.09	<b>-.25***</b>
Sexual Intercourse	<b>.34***</b>	<b>-.33***</b>	-.05	<b>-.28***</b>
Afterplay	<b>.42***</b>	<b>-.39***</b>	-.02	<b>-.28***</b>

*Note.*  $n = 478$ . Preocc = Preoccupied; Dismiss = Dismissing. Bolded correlations represent associations with similar effect sizes that were also seen in the correlation analyses between Self T-RSQ scores and the general sexual experience behaviours and satisfaction.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 15  
*Pearson Correlations for Self T-RSQ and General Sexual Experience Behaviours and Satisfaction*

	Secure	Fearful	Preocc	Dismiss
<b>Self Foreplay Behaviours</b>				
Overall	.15***	-.07	.08	-.02
Breast and Thigh Stimulation	.01	-.02	-.05	.06
Seduction and Genital Stimulation	<b>.32***</b>	-.23***	.16***	-.23***
Sexual Play and Erotica	.07	.07	.11*	.06
<b>Partner Foreplay Behaviours</b>				
Overall	.27***	-.11*	.15***	-.16***
Breast Stimulation	<b>.26***</b>	-.14**	.21***	-.22***
Seduction and Genital Stimulation	<b>.31***</b>	-.19***	.10*	-.20***
Sexual Play and Erotica	-.06	.13**	-.01	.13**
<b>Self Afterplay Behaviours</b>				
Overall	.05	.07	.12**	.05
Extrinsic Rewards and Body Worries	-.22***	<b>.29***</b>	-.01	<b>.29***</b>
Bonding	.30***	-.19***	.22***	-.23***
<b>Partner Afterplay Behaviours</b>				
Overall	.05	.04	.05	.05
Extrinsic Rewards and Body Worries	-.19***	<b>.26***</b>	.02	.23***
Bonding	<b>.29***</b>	-.21***	.07	-.17***
<b>Sexual Intercourse</b>				
Overall	.28***	-.14**	.12*	-.13**
Anal Intercourse	-.11*	.14**	-.05	.16***
Eye Contact and Kissing	<b>.36***</b>	<b>-.29***</b>	.09*	<b>-.26***</b>
Penile-Vaginal Intercourse	.18***	-.04	.14**	-.06
<b>Sexual Satisfaction</b>				
Overall	<b>.45***</b>	<b>-.44***</b>	-.02	<b>-.38***</b>
Foreplay	<b>.38***</b>	<b>-.37***</b>	-.06	<b>-.29***</b>
Sexual Intercourse	<b>.41***</b>	<b>-.37***</b>	.02	<b>-.33***</b>
Afterplay	<b>.42***</b>	<b>-.41***</b>	-.03	<b>-.30***</b>

*Note.*  $n = 478$ . Preocc = Preoccupied; Dismiss = Dismissing. Bolded correlations represent associations with similar effect sizes that were also seen in the correlation analyses between Self T-RSQ scores and the last sexual encounter behaviours and satisfaction.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

For reported partner attachment, a pattern of associations could be seen between three types of attachment styles and sexual behaviours and satisfaction. See Table 16 and 17 for the last sexual encounter and general sexual experience respectively. Security was associated with the participants to engage in more seduction and stimulation of their partners' genitals during foreplay. Both fearful and dismissing attachment were associated with the participants and the partners to engage in more extrinsically rewarding behaviours and to be more worried about their bodies post-intercourse. Similar to self secure and fearful attachment, partner security and fearfulness produced opposite patterns for eye contact and kissing as well as satisfaction with each part of the sexual encounter and the overall experience. Security was positively associated with maintaining eye contact and kissing during intercourse and participant satisfaction with foreplay, intercourse, afterplay and the overall experience, while fearfulness was negatively associated with these behaviours and satisfaction with these individual parts and overall experience. Surprisingly, dismissing attachment was only associated with less satisfaction with afterplay.

Again, to ensure these associations were not affected by the skewed distributions of the sexual variables, Spearman's correlations were calculated. After comparing these correlations to the Pearson correlations, the pattern of medium-sized associations remained across both contexts. However, there were findings of stronger negative associations between dismissing attachment and eye contact and kissing during intercourse (last sexual encounter:  $r_s = -.27, p < .001$ ; general sexual experience:  $r_s = -.26, p < .001$ ).

Table 16  
*Pearson Correlations for Reported Partner T-RSQ and Last Sexual Encounter Behaviours and Satisfaction*

	Secure	Fearful	Preocc	Dismiss
<b>Self Foreplay Behaviours</b>				
Overall	.11*	.06	.13**	.00
Breast and Thigh Stimulation	.06	.11*	.15***	.00
Seduction and Genital Stimulation	<b>.25***</b>	-.18***	.03	-.16***
Sexual Play and Erotica	-.05	.15***	.07	.13**
<b>Partner Foreplay Behaviours</b>				
Overall	.09	-.03	.04	-.01
Breast Stimulation	.08	-.08	-.06	-.04
Seduction and Genital Stimulation	.20***	-.17***	.05	-.14**
Sexual Play and Erotica	-.17***	.28***	.07	.24***
<b>Self Afterplay Behaviours</b>				
Overall	.01	.13**	.07	.15**
Extrinsic Rewards and Body Worries	-.23***	<b>.34***</b>	.07	<b>.31***</b>
Bonding	.22***	-.11*	.05	-.06
<b>Partner Afterplay Behaviours</b>				
Overall	-.00	.14**	.07	.15***
Extrinsic Rewards and Body Worries	-.25***	<b>.35***</b>	-.00	<b>.36***</b>
Bonding	.22***	-.11*	.11*	-.10*
<b>Sexual Intercourse</b>				
Overall	.13**	-.06	.05	-.03
Anal Intercourse	-.14**	.24***	.10*	.18***
Eye Contact and Kissing	<b>.28***</b>	<b>-.29***</b>	-.02	-.23***
Penile-Vaginal Intercourse	.02	.05	.04	.07
<b>Sexual Satisfaction</b>				
Overall	<b>.35***</b>	<b>-.32***</b>	.00	-.22***
Foreplay	<b>.27***</b>	<b>-.26***</b>	.00	-.18***
Sexual Intercourse	<b>.30***</b>	<b>-.31***</b>	-.03	-.20***
Afterplay	<b>.35***</b>	<b>-.30***</b>	.13**	<b>-.29***</b>

*Note.*  $n = 478$ . Preocc = Preoccupied; Dismiss = Dismissing. Bolded correlations represent associations with similar effect sizes that were also seen in the correlation analyses between Partner T-RSQ scores and the general sexual experience behaviours and satisfaction.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 17  
*Pearson Correlations for Reported Partner T-RSQ and General Sexual Experience Behaviours and Satisfaction*

	Secure	Fearful	Preocc	Dismiss
<b>Self Foreplay Behaviours</b>				
Overall	.14**	.01	.13**	-.01
Breast and Thigh Stimulation	.03	.08	.11*	-.00
Seduction and Genital Stimulation	<b>.29***</b>	-.22***	.02	-.14**
Sexual Play and Erotica	.03	.10*	.12**	.09*
<b>Partner Foreplay Behaviours</b>				
Overall	.18***	-.09	.05	-.05
Breast Stimulation	.14**	-.14**	-.07	-.07
Seduction and Genital Stimulation	.28***	-.19***	.05	-.15***
Sexual Play and Erotica	-.09*	.19***	.12*	.16***
<b>Self Afterplay Behaviours</b>				
Overall	-.01	.16***	.07	.20***
Extrinsic Rewards and Body Worries	-.23***	<b>.34***</b>	.09*	<b>.30***</b>
Bonding	.23***	-.10*	.01	-.02
<b>Partner Afterplay Behaviours</b>				
Overall	.01	.13**	.10*	.15**
Extrinsic Rewards and Body Worries	-.21***	<b>.33***</b>	.02	<b>.33***</b>
Bonding	.24***	-.12**	.14**	-.12*
<b>Sexual Intercourse</b>				
Overall	.22***	-.08	.08	-.06
Anal Intercourse	-.13**	.23***	.07	.15**
Eye Contact and Kissing	<b>.33***</b>	<b>-.26***</b>	.04	-.19***
Penile-Vaginal Intercourse	.15***	-.04	.06	-.02
<b>Sexual Satisfaction</b>				
Overall	<b>.38***</b>	<b>-.35***</b>	-.01	-.27***
Foreplay	<b>.31***</b>	<b>-.29***</b>	.01	-.17***
Sexual Intercourse	<b>.35***</b>	<b>-.31***</b>	-.01	-.19***
Afterplay	<b>.35***</b>	<b>-.28***</b>	.08	<b>-.24***</b>

*Note.*  $n = 478$ . Preocc = Preoccupied; Dismiss = Dismissing. Bolded correlations represent associations with similar effect sizes that were also seen in the correlation analyses between Partner T-RSQ scores and the last sexual encounter behaviours and satisfaction.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

In summary, a participant's own attachment and reported partner attachment were both associated with seduction and genital stimulation during foreplay; extrinsic rewards and body worries during afterplay; eye contact and kissing during intercourse; and sexual satisfaction. Secure attachment was associated with the participant to engage in more

seduction and stimulation of the sexual partner's genitals during foreplay. Fearful and dismissing attachment were associated with the participant and the sexual partner to engage in more behaviours (e.g., asking for a favour) to gain extrinsic rewards as well as to be more body conscious after sexual intercourse. Interestingly, opposite patterns of intercourse behaviours and sexual satisfaction were observed for secure and fearful attachment. More eye contact with a partner and kissing during intercourse and greater sexual satisfaction were associated with security, whereas less of these behaviours and less satisfaction were associated with fearfulness.

### **Regression Analyses for Sexual Behaviours and Sexual Satisfaction**

The correlational analyses only assessed the association between one attachment style and sexual behaviours or satisfaction. An individual does not exhibit one attachment style because an individual can show traits of two or more attachment styles (Bartholomew, 1990). In addition each participant was given a score for each style, the effect of all four attachment styles together on the sexual variables should be examined to address an individual's level of security and insecurity. To account for the simultaneous effect of the four attachment styles on behaviours and satisfaction, two sets of hierarchical regression analyses were conducted to determine the effect of the reported partner attachment on behaviours and satisfaction after controlling for the participant's attachment. The sexual behaviour and satisfaction scores were entered as dependent variables. The attachment styles reported by the participants regarding their own attachment and their partners' attachment were entered as independent variables. To account for the influence of the participants' own attachment, all self attachment scores

were entered in Step 1 and then to take into consideration the influence of the partners' attachment, all partner attachment scores were entered at Step 2.

Analyses for the last sexual encounter and general sexual experience variables were calculated separately, resulting in 22 regression analyses for each context for a total of 44 analyses. Due to conducting many regression analyses, it was important to focus on results that were consistently seen across the last sexual encounter and general sexual experience (like the interpretation of the correlational analyses). When the participants' attachment at Step 1 and/or the partner attachment at Step 2 (after controlling for self attachment) uniquely accounted for a significant amount of variance in the sexual outcome, effect size was calculated using Cohen's  $f^2$  ( $f^2 = \frac{R^2}{1 - R^2}$ ) for each step. Cohen's  $f^2$  is a measure of effect size for multiple regressions by comparing the proportion of the explained variance to the proportion of unexplained variance. Cohen's  $f^2$  values of .02, .15, and .35 were small, medium, and large effect size respectively (Cohen, 1988). A large Cohen's  $f^2$  value indicates that a substantial amount of variance in the outcome was accounted for in the regression compared to the unexplained variance.

The  $R^2$ ,  $\Delta R^2$  and  $\beta$  values for the set of last sexual encounter regressions are presented in Table 18 and for the general sexual experience regressions in Table 19. At Step 1, participants' own attachment scores contributed a significant amount of variance to all sexual measures with the exception of self breast and thigh stimulation, partner overall afterplay, and penile-vaginal intercourse for the last sexual encounter and general sexual experience. After examining the effect sizes, small effects were mostly observed for predicting the measures of sexual behaviour and medium effects were observed for predicting the measures of sexual satisfaction. When participants' own attachment

accounted for approximately 12% or less of the variance ( $R^2 \leq .12$ ) in the outcome, a small effect emerged as observed in the prediction of sexual behaviours (last sexual encounter Cohen's  $f^2$  range: .02–.09; general sexual experience Cohen's  $f^2$  range: .03–.13). For a conservative interpretation of the results, it was important to focus on and discuss the medium effects. For the last sexual encounter and general sexual experience, participants' own attachment scores significantly contributed a moderate amount of variance to predicting measures of sexual satisfaction (last sexual encounter Cohen's  $f^2$  range: .15–.26; general sexual experience Cohen's  $f^2$  range: .21–.32). Participants' secure, fearful, and preoccupied attachment styles were significant predictors of these measures. Secure attachment significantly predicted participants to be more satisfied with foreplay, sexual intercourse, afterplay, and with the overall sexual experience. Fearful attachment significantly predicted participants to be less satisfied with afterplay. Preoccupied attachment significantly predicted participants to be less satisfied with foreplay.

There were a few results with a medium effect in one context but with a small effect in another. There was a medium effect of participants' own attachment significantly predicting eye contact and kissing in the general sexual experience (Cohen's  $f^2 = .16$ ); secure attachment significantly predicted the maintenance of eye contact with a partner and more kissing during intercourse. However, this was a small effect in the last sexual encounter (Cohen's  $f^2 = .09$ ). In the last sexual encounter, there were medium effects of participants' own attachment significantly predicting self and partner extrinsic rewards and body worries (Cohen's  $f^2$ s = .16). Fearful and dismissing attachment significantly predicted participants to engage in more extrinsically rewarding behaviours

(e.g., asking for a favour, snacking, and leaving the partners) and to be more conscious about their bodies (e.g., bathing, covering their bodies, and thinking about the possibility of a pregnancy) after sexual intercourse. Fearfulness also significantly predicted sexual partners to engage in more of these behaviours during afterplay. These two attachment styles remained as significant predictors of these behaviours in the general sexual experience, but there were small effects of participants' attachment in predicting extrinsic rewards and body worries by the participants (Cohen's  $f^2 = .11$ ) and by the partners (Cohen's  $f^2 = .08$ ).

After controlling for participants' own attachment scores, partner attachment scores were significant predictors of self overall foreplay, self breast and thigh stimulation and partner sexual play and erotica during foreplay; all measures of afterplay with the exception of partner bonding; positions during anal intercourse; and satisfaction with sexual intercourse. However, partner attachment uniquely accounted for a small amount of variance in these measures (last sexual encounter  $\Delta R^2$  range: .02–.06; general sexual experience  $\Delta R^2$  range: .02–.08) and all significant results were small effects (last sexual encounter Cohen's  $f^2$  range: .02–.06; general sexual experience Cohen's  $f^2$  range: .02–.08).

In summary, participants' own attachment was associated with specific intercourse and afterplay behaviours as well as sexual satisfaction. As expected, secure attachment was associated with participants and their sexual partners to maintain eye contact and to kiss more during intercourse. Dismissing and fearful attachment were unexpectedly associated with participants to seek extrinsic rewards and to have more body worries after sex. Furthermore fearfulness was associated with partners to engage

in the same behaviours after sex. In terms of sexual satisfaction, secure attachment was associated with greater satisfaction while preoccupied and fearful attachment was associated with less satisfaction as predicted. Security was associated with greater participant satisfaction with the overall sexual experience as well as with each part of the sexual encounter. Preoccupied and fearful attachment were only associated with participants' satisfaction with specific parts of an encounter; preoccupied attachment was associated with less satisfaction with foreplay and fearful attachment was associated with less satisfaction with afterplay.

### **Conclusion**

In this study, associations between attachment and sexual behaviours and satisfaction were examined with correlational analyses. These analyses indicated that only three attachment styles were associated with behavioural patterns during sex. Secure attachment was positively associated with seduction and genital stimulation during foreplay, eye contact and kissing during intercourse, and satisfaction with each part of the sexual encounter and the overall sexual experience. Fearful and dismissing attachment were positively associated with extrinsic rewards and body worries during afterplay but were negatively associated with eye contact and kissing and satisfaction with the individual parts of the encounter and the overall experience. Although significant associations were found for these attachment styles, the correlational analyses mainly demonstrated the association between one attachment style and the sexual measure. The analyses did not test for the effect of all four styles together on each sexual measure.

Table 18

Summary of Hierarchical Regression Analyses for T-RSQ Scores Predicting Last Sexual Encounter Behaviours and Satisfaction

	Step 1					Step 2				
	$R^2$	Self T-RSQ Scores				Partner T-RSQ Scores				
		$\beta_{\text{secure}}$	$\beta_{\text{fearful}}$	$\beta_{\text{preocc}}$	$\beta_{\text{dismiss}}$	$\Delta R^2$	$\beta_{\text{secure}}$	$\beta_{\text{fearful}}$	$\beta_{\text{preocc}}$	$\beta_{\text{dismiss}}$
Self Foreplay Behaviours – Overall	.03*	<b>.21**</b>	.01	.01	<b>.16*</b>	.03*	.13	.17*	.07	.05
Breast and Thigh Stimulation	.01	.10	-.00	-.04	.13	.04***	.16*	<b>.24**</b>	.08	.01
Seduction and Genital Stimulation	.08***	<b>.22**</b>	-.08	.09	.03	.01	.12	-.05	-.02	-.05
Sexual Play and Erotica	.02*	<b>.17*</b>	.10	.01	.14*	.03**	-.01	.14	.07	.13
Partner Foreplay Behaviours – Overall	.05***	<b>.27***</b>	.06	.05	.05	.01	-.05	.00	.05	.08
Breast Stimulation	.08***	<b>.20**</b>	.00	<b>.15**</b>	-.02	.01	-.13	-.06	-.03	-.01
Seduction and Genital Stimulation	.07***	<b>.26***</b>	-.00	-.00	.01	.00	.01	-.08	.04	.01
Sexual Play and Erotica	.05***	.10	<b>.17*</b>	-.05	.14*	.06***	-.03	.21**	.09	<b>.19**</b>
Self Afterplay Behaviours – Overall	.03*	<b>.15*</b>	.02	.03	.21**	.04**	.15	.13	.05	<b>.21**</b>
Extrinsic Rewards and Body Worries	<b>.14***</b>	.06	<b>.22**</b>	-.03	<b>.23***</b>	.04***	.03	<b>.18**</b>	.05	<b>.16*</b>
Bonding	.06***	.13	-.18*	<b>.10*</b>	.09	.02*	<b>.19*</b>	.03	.02	.12
Partner Afterplay Behaviours – Overall	.02*	.15*	.06	.03	.15*	.03**	.10	.12	.07	<b>.21**</b>
Extrinsic Rewards and Body Worries	<b>.14***</b>	.00	<b>.23**</b>	.02	.18**	.05***	.07	<b>.16*</b>	-.01	<b>.22***</b>
Bonding	.07***	<b>.22**</b>	-.11	.03	.07	.02	.09	.04	.10	.09
Sexual Intercourse – Overall	.02*	<b>.18*</b>	-.03	-.01	.11	.01	.11	.01	.01	.08
Anal Intercourse	.04***	.01	.09	-.06	.13	.04***	.00	<b>.19**</b>	.11*	.15*
Eye Contact and Kissing	.08***	<b>.16*</b>	-.09	-.02	-.07	.03**	.12	-.13	-.06	-.06
Penile-Vaginal Intercourse	.02	.13	-.01	.04	.16*	.00	.04	.02	.02	.09
Sexual Satisfaction – Overall	<b>.18***</b>	<b>.32***</b>	-.13	-.12*	-.02	.02*	.14*	-.08	-.01	.14*
Foreplay	<b>.13***</b>	<b>.25***</b>	-.11	<b>-.13**</b>	-.03	.01	.06	-.06	.02	.13
Sexual Intercourse	<b>.14***</b>	<b>.25***</b>	-.11	-.10	-.05	.02*	.09	-.13	-.02	.12
Afterplay	<b>.20***</b>	<b>.35***</b>	<b>-.20**</b>	-.06	.09	.01	.01	-.06	.12*	.01

Note.  $n = 478$ . preocc = Preoccupied; dismiss = Dismissing. Italicized, bolded values represent medium effect sizes of attachment as a significant predictor in the outcome. Bolded values represent individual attachment styles as significant predictors that were also seen in the general sexual experience analyses.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 19

Summary of Hierarchical Regression Analyses for T-RSQ Scores Predicting General Sexual Experience Behaviours and Satisfaction

	Step 1					Step 2				
	$R^2$	Self T-RSQ Scores				Partner T-RSQ Scores				
		$\beta_{\text{secure}}$	$\beta_{\text{fearful}}$	$\beta_{\text{preocc}}$	$\beta_{\text{dismiss}}$	$\Delta R^2$	$\beta_{\text{secure}}$	$\beta_{\text{fearful}}$	$\beta_{\text{preocc}}$	$\beta_{\text{dismiss}}$
Self Foreplay Behaviours – Overall	.04**	<b>.22**</b>	-.03	.05	<b>.15*</b>	.02*	.13	.11	.08	.08
Breast and Thigh Stimulation	.01	.06	-.08	-.03	.15*	.03*	.09	<b>.20**</b>	.06	.00
Seduction and Genital Stimulation	.12***	<b>.23***</b>	-.10	.12*	.01	.02*	.16*	-.11	-.01	.05
Sexual Play and Erotica	.04**	<b>.23**</b>	.12	.05	.13	.02	.03	.06	.11*	.12
Partner Foreplay Behaviours – Overall	.08***	<b>.31***</b>	.09	.06	-.00	.00	.04	-.03	.05	.09
Breast Stimulation	.10***	<b>.19**</b>	.03	<b>.15**</b>	-.10	.01	-.04	-.11	-.06	.00
Seduction and Genital Stimulation	.10***	<b>.32***</b>	.02	.02	-.00	.01	.12	-.07	.02	.03
Sexual Play and Erotica	.03*	.12	<b>.16*</b>	-.05	.10	.04***	-.04	.12	.15**	<b>.19**</b>
Self Afterplay Behaviours – Overall	.03**	<b>.17*</b>	.10	.08	.10	.06***	.09	.13	.10	<b>.28***</b>
Extrinsic Rewards and Body Worries	.10***	.05	<b>.21**</b>	-.03	<b>.17**</b>	.06***	-.03	<b>.20**</b>	.11*	<b>.20**</b>
Bonding	.12***	.20**	-.06	<b>.18***</b>	-.04	.02*	<b>.16*</b>	.03	.02	.18**
Partner Afterplay Behaviours – Overall	.02	.18*	.09	.01	.11	.05***	.07	.13	.12*	<b>.26***</b>
Extrinsic Rewards and Body Worries	.07***	.02	<b>.20**</b>	-.00	.11	.08***	.04	<b>.20**</b>	.05	<b>.28***</b>
Bonding	.09***	<b>.27***</b>	-.08	.03	.07	.02*	.08	.02	.13*	.10
Sexual Intercourse Behaviours – Overall	.09***	<b>.35***</b>	.03	.04	.09	.01	.13	.03	.05	.11
Anal Intercourse	.03**	.06	.13	-.08	.10	.04***	-.03	<b>.22**</b>	.08	.09
Eye Contact and Kissing	<b>.14***</b>	<b>.29***</b>	-.10	.04	.00	.02	.13	-.11	.02	.07
Penile-Vaginal Intercourse	.05***	.26***	.07	.08	.07	.01	.11	-.00	.02	.04
Sexual Satisfaction – Overall	<b>.24***</b>	<b>.32***</b>	-.16*	-.08	-.07	.01	.09	-.05	-.01	.09
Foreplay	<b>.18***</b>	<b>.29***</b>	-.14*	<b>-.11*</b>	-.02	.02**	.06	-.10	.05	.24***
Sexual Intercourse	<b>.18***</b>	<b>.30***</b>	-.12	-.04	-.05	.02*	.13	-.11	-.00	.17**
Afterplay	<b>.21***</b>	<b>.31***</b>	<b>-.21**</b>	-.07	.04	.01	.07	.00	.08	.10

Note.  $n = 478$ . preocc = Preoccupied; dismiss = Dismissing. Italicized, bolded values represent medium effect sizes of attachment as a significant predictor in the outcome. Bolded values represent individual attachment styles as significant predictors that were also seen in the last sexual encounter analyses.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Regression analyses were then carried out to determine how much variance that attachment accounted for by entering the four attachment styles simultaneously. An individual's attachment scores were entered in the first step of the regression model and reported partner attachment scores were entered in the second step. An individual's attachment was a significant predictor of nearly all measures, but attachment specifically accounted for a moderate amount of variance to predicting extrinsic rewards and body worries, eye contact and kissing, and sexual satisfaction. As hypothesized, secure attachment was associated with individuals to maintain eye contact with their sexual partners and to kiss them more during sexual intercourse and to have greater satisfaction with foreplay, sexual intercourse, afterplay, and the overall experience. Preoccupied attachment was associated with individuals to be less satisfied with foreplay, which was also expected. Surprisingly, dismissing attachment was associated with individuals to reap rewards through asking the partner for a favour, having a snack, and leaving the partner as well as to be more concerned with their bodies after intercourse. Fearful attachment was unexpectedly associated with the same post-coital behaviours, but an individual and the partner were both exhibiting these behaviours. However, fearfulness was associated with individuals to have less satisfaction with afterplay, which supported the hypothesized association between fearful attachment and less sexual satisfaction. After controlling for an individual's attachment, partner attachment was a significant predictor of some behavioural measures but only accounted for a small amount of variance in these measures.

Overall, study results suggested that an individual's attachment and partner attachment can influence sexual behaviours and satisfaction. However, an individual's

attachment may have a greater influence (due to accounting for a moderate amount of variance). An individual's attachment – security and avoidance – was associated with the sexual behaviours of both the individual and his/her sexual partner. Security could lead to more physical affection between two individuals during sex and avoidance could influence the individual and/or the partner to seek self-gratification as well as to have more body worries after sex. As for sexual satisfaction, contradictory results of security associating with greater sexual satisfaction and insecurity with less satisfaction were in line with past research. Secure individuals were previously shown to experience more feelings of passion and arousal during sex (Tracy et al., 2003), whereas insecure individuals experienced greater difficulties with sexual excitement and arousal and were also dissatisfied with the bonding experience (e.g., Birnbaum et al., 2006; Birnbaum, 2007; Kruger & Hughes, 2010). Based on these findings, the hypothesis regarding secure attachment was supported and the two hypotheses regarding preoccupied and fearful attachment were partially supported. The next step was to see whether the results can be replicated in Study 2, which attachment could contribute a similar amount of or more variance to predicting measures of intercourse and afterplay behaviours and sexual satisfaction. It was also informative to find further support that an individual's attachment may be a stronger predictor of sexual behaviour and satisfaction within dyads.

## **Study 2**

### **Method**

#### **Participants**

Fifty couples participated in the study. Of these couples, at least one member of a couple was an undergraduate/graduate student at Trent University. Students who were

enrolled in an undergraduate psychology course were rewarded two-percent bonus credits towards their course grade. Students and/or partner-participants who were not enrolled in a psychology course received no compensation.

There were 48 heterosexual couples and two homosexual couples (one female-female couple and one male-male couple). In order to conduct statistical analyses, particularly dyadic analyses, each member of a couple must be assigned to individual groups. If both members of a couple were assigned to one group, it would violate the assumptions of independence. To distinguish each member of the couples, one member was assigned either with the female or male group of heterosexual couples. In the following description and results of Study 2 hereinafter, the 50 female/women participants consisted of 49 females and one male partner from the male homosexual couple and the 50 male/men participants consisted of 49 males and one female partner from the female homosexual couple.

A majority of women (86%) and men (82%) were Caucasian and most women (88%) and men (92%) identified themselves as heterosexual. The mean age was 21.20 years ( $SD = 5.78$ ; range: 18–45 years) for women and 22.96 years ( $SD = 7.48$ ; range: 18–56 years) for men. Of the women, 86% were in a committed relationship, 8% were engaged, 4% were in an open relationship, and 2% were married. Women reported that they were involved in their relationship for an average of 2.29 years ( $SD = 1.53$  years; range: 1–9 years). Of the men, 84% were in a committed relationship, 10% were engaged, 4% were in an open relationship, and 2% were married. The average reported length of men's relationships was 2.27 years ( $SD = 1.59$  years; range: 1–10 years). All couples had at least one sexual encounter with their respective partners over the past

month. Over the past six months, most women (96%) and men (96%) engaged in penile-vaginal intercourse and a group of women (30%) and men (28%) engaged in anal intercourse. The number of sexual partners in one's lifetime reported by women was 5.38 ( $SD = 7.29$ ) and 9.06 ( $SD = 16.66$ ) by men. On average, women reported 1.04 partners ( $SD = 0.35$ ) and men reported 1.16 partners ( $SD = 0.65$ ) in the past six months. Thirty-two percent of women and 24% of men reported that they only had one sexual partner in their lifetime.

Half of the women (50%) reported that they had sexual relations with an acquaintance on one or several occasions and 10% had relations with a stranger. Some women (38%) further reported that they engaged in intercourse with an acquaintance on one or more occasions under the influence of alcohol/drugs and 8% engaged with a stranger under such influence. Men reported that they had sexual encounters with an acquaintance and/or stranger with 64% having had sex with an acquaintance and 30% with a stranger. However, while under the influence of alcohol/drugs, 56% of men engaged in intercourse with an acquaintance and 22% with stranger once or on multiple occasions.

### **Procedure**

Couple-participants were recruited from both the undergraduate and graduate student population at Trent University. A variety of methods were used to advertise the research opportunity online and on campus in Peterborough for participant recruitment. First, study information was posted electronically on the SONA system (see Appendix J). In addition, study invitation e-mails were sent through the system (see Appendix K). Individuals were sent invitations based on their responses to the SONA prescreen

questionnaire (participants who had agreed to receive study-eligibility emails and who were casually dating, in a steady relationship with one partner, living with a partner, or married). Participants from Study 1 who were eligible were also sent the email invitations. On-campus recruitment efforts included posters posted at the Symons and Catharine Parr Traill campuses of Trent University (see Appendix L), in-class presentations, and a listing on the campus newspaper, the *Arthur* (see Appendix M). Individuals who expressed interest in the study contacted the researcher and a telephone-screening interview (see Appendix N) was arranged to determine their eligibility to participate in the study. Eligibility was determined by the following criteria: (1) couples must have been in a relationship for at least one year and (2) have been sexually active (engaging regularly in intercourse). Eligible couples were scheduled for a study session and requested to make a one-time visit to a research laboratory at Trent University.

The study session was approximately 90 minutes in duration. The research investigator met couples arriving at the laboratory after having first turned on the video camera. Couples were informed that approximately 20 minutes of the session were videotaped and then led into a room together (the Couch Room). See Appendix O for the layout of the laboratory. They were instructed to have a seat on the couch and to wait for the investigator to return with the consent forms. While the investigator went to the Back Room to retrieve the forms, he/she checked the monitor to ensure that the couples had seated themselves and, after 5 to 10 seconds, stopped the recording.

The investigator returned to the Couch Room with the consent forms. Couples were informed of the study tasks that were to be completed and asked to sign the consent forms (see Appendix P). After the forms were signed, one member of the couple was

directed to enter a second room (the Table Room). Both members of the couples were individually instructed to complete a series of questionnaires, which took approximately 1 hour. In preparation for a joint drawing task, both members subsequently completed a 5-minute practice drawing task. This joint drawing task served as a distractor task and thus was not included in the data analyses. Following the practice task, the video camera was set to record and the member in the Couch Room was brought into the Table Room. The couples were instructed to carry out a 5-minute joint drawing task together and were asked to not verbally communicate with one another until the task was completed. During this time, the investigator remained in the room to ensure the couples did not verbally communicate. After the task, the couples responded to four questions regarding their drawing experience. At the conclusion of the session, couples were debriefed, given a written feedback form (see Appendix B), and informed that the purpose of the drawing task was to end on a pleasant note in case of any anxiety from the questionnaires.

### **Measures**

All questionnaires from Study 1 were administered in Study 2. Each member of a couple was individually asked to respond to measures of demographics; general sexual habits; attachment; and behaviours during foreplay, sexual intercourse, and afterplay, and sexual satisfaction based on his/her last sexual encounter and general sexual experience (see Appendix C to G). For the sexual measures, the factors from the factor analyses were used to give participants scores to represent distinct types of sexual behaviours.

In addition to using the T-RSQ, the revised version of the Experiences in Close Relationships questionnaire (ECR-R; Fraley, Waller, & Brennan, 2000) was also

administered to measure attachment. The ECR-R is a 36-item self-report scale that assesses attachment anxiety and avoidance (see Appendix Q). Eighteen items measuring the desire to be intimate with one's romantic partner and the fear of abandonment are used to evaluate the anxiety dimension. The avoidance dimension is evaluated using 18 items relating to the feelings of minimizing closeness from a partner. Respondents were asked to rate on a 7-point Likert scale (1 = not at all like me to 7 = very much like me) the extent to which each item accurately describes his/her feelings in close relationships. A score for each dimension was computed by averaging the corresponding items, with higher mean scores indicating greater attachment anxiety or avoidance. As shown in Table 20, the majority of the reliabilities for women's and men's reports of the T-RSQ and the ECR-R ranged from moderate to high.

Table 20  
*Means, Standard Deviations, Ranges, and Reliabilities for Women's and Men's T-RSQ and ECR-R Scales*

	<i>M</i>	<i>SD</i>	Range	$\alpha$
Women's T-RSQ – Self				
Secure	5.56	0.67	4.00–6.80	.61
Fearful	2.71	1.23	1.10–5.90	.86
Preoccupied	4.46	0.69	3.40–6.33	.66 <sup>a</sup>
Dismissing	2.83	0.91	1.50–5.10	.79
Women's T-RSQ – Partner				
Secure	5.20	0.73	3.60–6.50	.57
Fearful	2.75	1.01	1.10–5.30	.76
Preoccupied	4.07	0.75	2.70–5.80	.62 <sup>b</sup>
Dismissing	3.11	0.94	1.20–5.00	.75
Women's ECR-R				
Anxiety	2.97	1.27	1.00–6.39	.93
Avoidance	1.88	0.88	1.00–4.56	.95
Men's T-RSQ – Self				
Secure	5.60	0.69	4.00–6.80	.59
Fearful	2.56	0.93	1.20–5.10	.75
Preoccupied	3.86	0.91	1.20–6.10	.73 <sup>c</sup>
Dismissing	3.13	0.87	1.60–5.20	.72
Men's T-RSQ – Partner				
Secure	5.14	0.70	3.20–6.40	.55
Fearful	2.87	1.15	1.00–5.30	.84
Preoccupied	4.49	0.74	2.90–6.20	.62 <sup>d</sup>
Dismissing	2.85	0.88	1.00–5.10	.72
Men's ECR-R				
Anxiety	2.33	1.15	1.00–5.17	.93
Avoidance	2.27	1.00	1.00–5.00	.94

*Note.*  $n = 50$ . <sup>a</sup>The reported women's T-RSQ – Self Preoccupied alpha was the average of the two alphas for the 5 items for preoccupied anxiety ( $\alpha = .60$ ) and 5 items for preoccupied approach ( $\alpha = .73$ ). <sup>b</sup>The reported women's T-RSQ – Partner Preoccupied alpha was the average of the two alphas for the 5 items for preoccupied anxiety ( $\alpha = .76$ ) and 5 items for preoccupied approach ( $\alpha = .49$ ). <sup>c</sup>The reported men's T-RSQ – Self Preoccupied alpha was the average of the two alphas for the 5 items for preoccupied anxiety ( $\alpha = .78$ ) and 5 items for preoccupied approach ( $\alpha = .68$ ). <sup>d</sup>The reported men's T-RSQ – Partner Preoccupied alpha was the average of the two alphas for the 5 items for preoccupied anxiety ( $\alpha = .70$ ) and 5 items for preoccupied approach ( $\alpha = .55$ ).

## Results

### Correspondence between Romantic Partners' Attachment, Sexual Behaviours, and Sexual Satisfaction

To test for correspondence between attachment scores for both members of the couples, Pearson correlations were conducted between reported self and partner attachment scores (see Table 21). Women's ratings of their own attachment were positively associated with ratings of their attachment by their male partners. Men's ratings of their own attachment were also positively associated with ratings of their attachment by their female partners.

Table 21

*Pearson Intercorrelations for Women's and Men's T-RSQ Scores*

	Partner T-RSQ Scores			
	Secure	Fearful	Preoccupied	Dismissing
<b>Women's Self T-RSQ</b>				
Secure	<b>.55***</b>	-.52***	.13	-.33*
Fearful	-.50***	<b>.56***</b>	.03	.22
Preoccupied	.00	.09	<b>.48***</b>	-.14
Dismissing	-.26	.21	-.06	<b>.31*</b>
<b>Men's Self T-RSQ</b>				
Secure	<b>.12</b>	-.26	.18	-.17
Fearful	-.06	<b>.31*</b>	-.14	.14
Preoccupied	.02	.09	<b>.47**</b>	-.09
Dismissing	-.25	.28*	-.19	<b>.37**</b>

*Note.*  $n = 50$ . Bolded correlations on the diagonals are T-RSQ scores between couple members; for women, their self and men's partner scores and for men, their self and women's partner scores.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Next, correlations were calculated between women's and men's reports of sexual behaviours and satisfaction. Women's report of their foreplay and afterplay behaviours was positively associated with men's report of their female partners' foreplay and afterplay behaviours for the last sexual encounter (see Table 22) and general sexual

experience (see Table 23) with the exception of afterplay bonding activities in general sexual experience. Men's report of their foreplay and afterplay behaviours was also positively associated with women's report of their male partners' foreplay and afterplay behaviours for the last sexual encounter (see Table 24) and general sexual experience (see Table 25) with the exception of breast and thigh stimulation during foreplay in general sexual experience. There were positive associations between partners' reports of various behaviours and positions during sexual intercourse across the last sexual encounter (see Table 26) and general sexual experience (see Table 27). Ratings of sexual satisfaction between partners were positively associated only for the overall sexual experience and afterplay for the last sexual encounter (see Table 28) and for all parts of the encounter and the overall experience for general sexual experience (see Table 29). These results suggested that women and men mostly agreed on what they and their partners did during each part of a sexual encounter.

Independent *t*-tests were calculated to test differences in the means for the reported sexual behaviours and satisfaction for the last sexual encounter and general sexual experience. A total of 28 *t*-tests were calculated for foreplay and afterplay behaviours, with 14 tests to test for differences between women's self-report and men's partner reports of these behaviours and 14 tests to test for difference between men's self-report and women's partner reports of these behaviours. For women, in comparing the reports for the last sexual encounter, a significant difference was found in the reports of seduction and genital stimulation, the mean for women's self-report was greater than men's partner report of this type of behaviour indicating that women reported that they made more effort to seduce and arouse their partners and to stimulate their partners'

genitals than their male partners reported during foreplay (see Table 22). In comparing the reports for the general sexual experience, significant differences were found in women's reports of breast and thigh stimulation, seduction and genital stimulation, and sexual play and erotica during foreplay and reports of overall afterplay behaviours and bonding activities during afterplay. The women's means for these foreplay and afterplay reports were greater than the men's means suggesting that women reported that they were more active or involved by engaging in various behaviours during foreplay and afterplay than men reported (see Table 23).

For men, differences were found in reports of breast and thigh stimulation and seduction and genital stimulation during foreplay. Interestingly, women reported that men engaged in more stimulation of the breast and the thigh than men reported for the general sexual experience (see Table 25). However, men reported that they engaged in more seduction and genital stimulation than women reported for the last sexual encounter and general sexual experience (see Table 24 and 25).

To test for differences in the reports of intercourse behaviours and positions as well as sexual satisfaction, a total of seven *t*-tests were calculated for the intercourse reports (see Table 26 and 27) and a total of eight *t*-tests for the satisfaction reports (see Table 28 and 29). No differences were found from these analyses. From these *t*-tests, women and men may have different accounts of who performed specific foreplay behaviours and who performed the most of these behaviours specifically when asked regarding their last and general sexual experiences. In addition, it appeared that women and men reported that they performed more behaviours during foreplay.

Table 22

*Pearson Intercorrelations and t-tests for Women's Self and Men's Partner Last Sexual Encounter Foreplay and Afterplay Behaviours*

	Men's Partner Scales							Men	
	1	2 <sup>a</sup>	3	4	5	6	7	<i>M</i>	<i>SD</i>
<b>Women's Self Scales</b>									
1. Foreplay – Overall	<b>.57***</b>	.63***	.43**	.20	-.01	-.02	.04	2.75	0.68
2. Breast and Thigh Stimulation	.51***	<b>.71***</b>	.34*	.10	-.08	-.20	-.03	1.75	1.27
3. Seduction and Genital Stimulation	.26	.24	<b>.33*</b>	.06	.07	.13	.11	3.90	0.97
4. Sexual Play and Erotica	.39**	.33*	.24	<b>.32*</b>	.09	.15	.10	1.42	0.55
5. Afterplay – Overall	.16	.24	.03	.11	<b>.35*</b>	.42**	.12	2.34	0.63
6. Extrinsic Rewards and Body Worries	-.12	.07	-.19	-.05	.12	<b>.39**</b>	-.23	1.53	0.58
7. Bonding	.28	.26	.17	.21	.34*	.35*	<b>.28</b>	3.22	1.02
<i>M</i>	2.82	2.07	4.78	1.56	2.27	1.58	3.24		
<i>SD</i>	0.72	1.34	1.16	0.50	0.53	0.46	1.07		
<i>t</i> <sup>b</sup>	0.49	1.20	4.02***	1.27	-0.58	0.47	0.07		

*Note.*  $n = 47$ . Only couples (female and male participants) who reported that their last sexual partners were their romantic partners were included in these correlation analyses and *t*-tests.

<sup>a</sup>The partner scale only included breast stimulation. <sup>b</sup>*t* is the difference between partners' reports and the corresponding type of sexual behaviour.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 23

*Pearson Intercorrelations and t-tests for Women's Self and Men's Partner General Sexual Experience Foreplay and Afterplay Behaviours*

	Men's Partner Scales							Men	
	1	2 <sup>a</sup>	3	4	5	6	7	<i>M</i>	<i>SD</i>
Women's Self Scales									
1. Foreplay – Overall	<b>.35*</b>	.59***	.14	.05	.07	.01	.06	3.22	0.71
2. Breast and Thigh Stimulation	.34*	<b>.64***</b>	.11	.00	-.01	-.14	.06	2.07	1.40
3. Seduction and Genital Stimulation	.16	.27	<b>.24</b>	-.17	-.04	.05	-.12	4.50	0.98
4. Sexual Play and Erotica	.25	.36*	.03	<b>.24</b>	.19	.12	.18	1.88	0.67
5. Afterplay – Overall	-.14	.13	-.17	-.26	<b>.30*</b>	.33*	.06	2.79	0.50
6. Extrinsic Rewards and Body Worries	-.27	-.06	-.26	-.24	.31*	<b>.42**</b>	-.04	1.82	0.59
7. Bonding	.03	.21	.01	-.19	.19	.27	<b>.09</b>	3.93	0.83
<i>M</i>	3.45	2.67	5.55	2.21	3.02	1.92	4.58		
<i>SD</i>	0.79	1.41	0.84	0.90	0.63	0.61	0.98		
<i>t</i> <sup>b</sup>	1.56	2.12*	5.74***	2.09*	2.01*	0.83	3.54***		

*Note.*  $n = 50$ .

<sup>a</sup>The partner scale only included breast stimulation. <sup>b</sup>*t* is the difference between partners' reports and the corresponding type of sexual behaviour.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 24

*Pearson Intercorrelations and t-tests for Men's Self and Women's Partner Last Sexual Encounter Foreplay and Afterplay Behaviours*

	1	2 <sup>a</sup>	Women's Partner Scales					Women	
			3	4	5	6	7	<i>M</i>	<i>SD</i>
Men's Self Scales									
1. Foreplay – Overall	<b>.38**</b>	.13	.39**	.04	.17	.04	.18	3.60	0.66
2. Breast and Thigh Stimulation	.23	<b>.28</b>	.18	-.21	.08	.04	.03	5.09	1.93
3. Seduction and Genital Stimulation	.21	-.08	<b>.35*</b>	-.01	.11	-.08	.17	4.42	0.99
4. Sexual Play and Erotica	.53***	.05	.49***	<b>.54***</b>	.33*	.06	.41**	1.26	0.52
5. Afterplay – Overall	.21	-.12	.41**	-.02	<b>.39**</b>	.15	.35*	2.22	0.62
6. Extrinsic Rewards and Body Worries	.24	-.09	.37*	.11	.32*	<b>.10</b>	.42**	1.49	0.59
7. Bonding	.26	-.09	.42**	.08	.22	-.09	<b>.33*</b>	3.19	1.04
<i>M</i>	3.54	4.70	4.87	1.33	2.33	1.50	3.47		
<i>SD</i>	0.74	1.39	1.12	0.54	0.61	0.57	0.96		
<i>t</i> <sup>b</sup>	-0.43	-1.13	2.06*	0.69	0.86	0.05	1.38		

*Note.*  $n = 47$ . Only couples (female and male participants) who reported that their last sexual partners were their romantic partners were included in these correlation analyses and *t*-tests.

<sup>a</sup>The partner scale only included breast stimulation. <sup>b</sup>*t* is the difference between partners' reports and the corresponding type of sexual behaviour.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 25

*Pearson Intercorrelations and t-tests for Men's Self and Women's Partner General Sexual Experience Foreplay and Afterplay Behaviours*

	Women's Partner Scales							Women	
	1	2 <sup>b</sup> <i>n</i> = 49 <sup>a</sup>	3	4	5	6 <i>n</i> = 50	7	<i>M</i>	<i>SD</i>
<b>Men's Self Scales</b>									
1. Foreplay – Overall	<b>.17</b>	-.19	.17	.30*	-.10	-.11	-.07	4.13	0.74
2. Breast and Thigh Stimulation	-.01	<b>-.22</b>	.02	.13	-.07	-.08	-.07	5.95	1.23
3. Seduction and Genital Stimulation	.21	-.07	<b>.32*</b>	.13	.05	-.08	.12	5.01	1.01
4. Sexual Play and Erotica	.26	-.06	.19	<b>.37*</b>	-.17	-.18	-.11	1.80	0.92
5. Afterplay – Overall	.07	-.09	.12	.02	<b>.16</b>	.08	.16	2.74	0.61
6. Extrinsic Rewards and Body Worries	.11	.03	.12	.10	.18	<b>.24</b>	.08	1.82	0.66
7. Bonding	-.06	-.09	.03	-.14	-.04	-.27	<b>.20</b>	3.95	1.09
<i>M</i>	4.10	5.48	5.54	1.69	2.89	1.83	4.28		
<i>SD</i>	0.61	0.87	0.85	0.68	0.55	0.65	0.90		
<i>t</i> <sup>c</sup>	-0.24	-2.17*	2.80**	0.65	1.27	0.08	1.61		

*Note.* <sup>a</sup>*n* = 49 for the correlation analyses between all men's self foreplay scales and women's partner foreplay scales and for the *t*-tests between men's and women's foreplay scales. One female participant did not complete the general sexual experience partner foreplay scale. <sup>b</sup>The partner scale only included breast stimulation. <sup>c</sup>*t* is the difference between partners' reports and the corresponding type of sexual behaviour.

\* *p* < .05. \*\* *p* < .01. \*\*\* *p* < .001.

Table 26  
*Pearson Intercorrelations and t-tests for Women's and Men's Last Sexual Encounter Intercourse Behaviours*

	1	2 <sup>a</sup>	Men		<i>M</i>	<i>SD</i>
			3	4		
<b>Women</b>						
1. Sexual Intercourse – Overall	<b>.42**</b>	--	.36*	.26	3.31	0.61
2. Anal Intercourse	.09	--	.15	-.11	1.00	--
3. Eye Contact and Kissing	.38**	--	<b>.43**</b>	.04	5.53	1.44
4. Penile-Vaginal Intercourse	.25	--	.01	<b>.55***</b>	2.97	1.02
<i>M</i>	3.28	1.05	5.57	2.76		
<i>SD</i>	0.67	0.36	1.49	1.09		
<i>t</i> <sup>b</sup>	-0.16	--	0.13	-0.95		

*Note.*  $n = 47$ . Only couples (female and male participants) who reported that their last sexual partners were their romantic partners were included in these correlation analyses and *t*-tests.

<sup>a</sup>Correlation analyses were not calculated between women's intercourse scales and men's Anal Intercourse scale because the men's Anal Intercourse variable had no variance. <sup>b</sup>*t* is the difference between partners' reports and the corresponding type of sexual behaviour.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 27  
*Pearson Intercorrelations and t-tests for Women's and Men's General Sexual Experience Intercourse Behaviours*

	1	2	Men		<i>M</i>	<i>SD</i>
			3	4		
<b>Women</b>						
1. Sexual Intercourse – Overall	<b>.27</b>	.05	.21	.29*	3.75	0.82
2. Anal Intercourse	.29*	<b>.47**</b>	.15	.12	1.29	0.81
3. Eye Contact and Kissing	.09	-.21	<b>.28*</b>	.04	5.78	1.21
4. Penile-Vaginal Intercourse	.26	.08	.08	<b>.36**</b>	3.87	1.43
<i>M</i>	3.87	1.19	6.18	3.86		
<i>SD</i>	0.60	0.43	0.97	1.30		
<i>t</i> <sup>a</sup>	0.89	-0.72	1.82	-0.03		

*Note.*  $n = 50$ .

<sup>a</sup>*t* is the difference between partners' reports and the corresponding type of sexual behaviour.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 28  
*Pearson Intercorrelations and t-tests for Women's and Men's Last Sexual Encounter Satisfaction*

	Men				<i>M</i>	<i>SD</i>
	1	2	3	4		
Women						
1. Satisfaction – Overall	<b>.15</b>	.15	.13	.22	5.60	1.26
2. Foreplay	.15	<b>.05</b>	.15	.17	4.94	1.39
3. Sexual Intercourse	.10	.15	<b>.07</b>	.20	5.70	1.28
4. Afterplay	.01	-.01	.01	<b>.12</b>	5.00	1.27
<i>M</i>	5.70	5.43	5.77	5.13		
<i>SD</i>	1.16	1.35	1.18	1.41		
<i>t</i> <sup>a</sup>	0.43	1.73	0.25	0.46		

*Note.*  $n = 47$ . Only couples (female and male participants) who reported that their last sexual partners were their romantic partners were included in these correlation analyses and *t*-tests.

<sup>a</sup>*t* is the difference between partners' reports and the corresponding type of sexual satisfaction.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 29  
*Pearson Intercorrelations and t-tests for Women's and Men's General Sexual Experience Satisfaction*

	Men				<i>M</i>	<i>SD</i>
	1	$n = 50$ 2	3	$n = 49^a$ 4		
Women						
1. Satisfaction – Overall	<b>.17</b>	.22	.22	.13	5.78	1.33
2. Foreplay	.09	<b>.19</b>	.13	.11	5.38	1.28
3. Sexual Intercourse	.22	.20	<b>.27</b>	.13	5.78	1.30
4. Afterplay	.13	.19	.12	<b>.17</b>	5.33	1.16
<i>M</i>	6.08	5.64	6.00	5.73		
<i>SD</i>	1.28	1.22	1.28	1.19		
<i>t</i> <sup>b</sup>	1.15	1.04	0.85	1.72		

*Note.* <sup>a</sup> $n = 49$  for the correlation analyses between women's satisfaction scales and men's afterplay satisfaction and all for the *t*-test between women's and men's afterplay satisfaction. One male participant did not complete the general sexual experience afterplay satisfaction item. <sup>b</sup>*t* is the difference between partners' reports and the corresponding type of sexual satisfaction.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

## **Correlations between Attachment, Sexual Behaviours, and Sexual Satisfaction for Women and Men**

To test whether attachment representations were associated with sexual behaviours and satisfaction, Pearson correlations between attachment and last sexual encounter and general sexual experience sexual behaviours and satisfaction for both the participant (self) and his/her partner were calculated. Similar to Study 1, as a consequence of conducting many correlational analyses with these variables, there was a possibility for a Type II error. In interpreting the results, rather than focusing the significance of the correlations, it was important to note the pattern of medium effect sizes of around .30. Most importantly, the pattern of these effect sizes should be consistently seen across the last sexual encounter and general sexual experience.

For women's self-reported attachment, women's own secure, fearful, and preoccupied attachment were associated with afterplay bonding and sexual satisfaction. See Table 30 and 31 for women's self-reported T-RSQ scores and sexual behaviours and satisfaction for their last sexual encounter and general sexual experience respectively. Security was associated with women to make a greater effort to bond with their male partners after sexual intercourse through talking, cuddling, and falling asleep with them. Fearfulness was associated with women to have less satisfaction with foreplay and afterplay. Preoccupied attachment was associated with the women's partners to engage in less bonding activities after intercourse.

For women's reported partner attachment, partner fearful attachment was associated with extrinsic rewards and body worries during afterplay and women's afterplay satisfaction. See Table 32 and 33 for women's reported partner T-RSQ scores

and sexual behaviours and satisfaction for their last sexual encounter and general sexual experience respectively. Fearful attachment was associated with women and their male partners to engage in more extrinsically rewarding behaviours (e.g., asking for a favour and leaving their partners) and to have more bodily-related worries (e.g., bathing and thoughts of pregnancy/STIs) after intercourse. Fearfulness was also associated with women to be less satisfied with afterplay.

In comparing these patterns of medium-sized associations to those from the Study 1 correlations, the negative associations between individuals' fearfulness and foreplay and afterplay satisfaction were replicated with women's own fearful attachment. There were positive associations between one's security and one's efforts for bonding in Study 1 (last sexual encounter  $r = .22, p < .001$ ; general sexual experience  $r = .30, p < .001$ ), but these associations were stronger effects among women in Study 2. The negative associations between women's preoccupied attachment and the male partners' bonding activities were new findings in Study 2, as there were no correlations observed between this attachment style and this type of behaviour in Study 1 (last sexual encounter  $r = .05, p > .05$ ; general sexual experience  $r = .07, p > .05$ ). In terms of the results of partner attachment, all associations for fearfulness in Study 2 were replicated from Study 1. All in all, most of the findings from the correlational analyses between individuals' attachment and sexual measures as well as reported partner attachment and sexual measures were replicated from Study 1.

Table 30  
*Pearson Correlations for Women's Self T-RSQ and Last Sexual Encounter Behaviours and Satisfaction*

	Secure	Fearful	Preocc	Dismiss
<b>Self Foreplay Behaviours</b>				
Overall	.01	-.12	-.16	.19
Breast and Thigh Stimulation	-.00	-.04	-.07	.20
Seduction and Genital Stimulation	.09	-.19	-.06	.08
Sexual Play and Erotica	.01	-.07	-.15	.12
<b>Partner Foreplay Behaviours</b>				
Overall	-.01	-.12	-.17	-.02
Breast Stimulation	.13	-.14	-.07	-.06
Seduction and Genital Stimulation	-.01	-.06	-.10	-.03
Sexual Play and Erotica	-.09	-.11	-.24	.03
<b>Self Afterplay Behaviours</b>				
Overall	.32*	-.19	-.26	-.01
Extrinsic Rewards and Body Worries	.03	.14	.08	.05
Bonding	<b>.31*</b>	-.42**	-.37*	-.09
<b>Partner Afterplay Behaviours</b>				
Overall	.08	.06	-.28	.13
Extrinsic Rewards and Body Worries	-.09	.29*	-.08	.15
Bonding	.17	-.19	<b>-.32*</b>	-.02
<b>Sexual Intercourse</b>				
Overall	.22	-.27	-.14	-.10
Anal Intercourse	.27	-.15	-.08	-.10
Eye Contact and Kissing	.13	-.23	-.19	-.13
Penile-Vaginal Intercourse	.09	-.13	.02	.03
<b>Sexual Satisfaction</b>				
Overall	-.05	-.14	-.05	-.02
Foreplay	.03	<b>-.28</b>	.04	-.12
Sexual Intercourse	-.13	-.10	.03	-.01
Afterplay	.21	<b>-.35*</b>	-.07	-.08

*Note.*  $n = 47$ . Two women were excluded from these correlation analyses because they reported that their last sexual partners were not their romantic partners. Another woman was excluded because her male partner reported that his last sexual partner was not his romantic partner. To have correspondence between women and men, these female participants were excluded. Preocc = Preoccupied; Dismiss = Dismissing. Bolded correlations represent associations with similar effect sizes that were also seen in the correlation analyses between women's self T-RSQ scores and general sexual experience behaviours and satisfaction.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 31  
*Pearson Correlations for Women's Self T-RSQ and General Sexual Experience Behaviours and Satisfaction*

	Secure	Fearful	Preocc	Dismiss
<b>Self Foreplay Behaviours</b>				
Overall	.18	-.03	-.04	.12
Breast and Thigh Stimulation	.07	.00	-.05	.20
Seduction and Genital Stimulation	.25	-.12	.01	-.10
Sexual Play and Erotica	.21	-.02	.03	.06
<b>Partner Foreplay Behaviours</b>				
Overall	.21	-.05	-.09	.07
Breast Stimulation	.13	-.05	.01	.04
Seduction and Genital Stimulation	.22	-.09	-.10	.01
Sexual Play and Erotica	.14	-.02	-.07	.07
<b>Self Afterplay Behaviours</b>				
Overall	.22	.00	-.00	.13
Extrinsic Rewards and Body Worries	.04	.20	.12	.16
Bonding	<b>.25</b>	-.18	-.13	.01
<b>Partner Afterplay Behaviours</b>				
Overall	.17	-.01	-.20	.06
Extrinsic Rewards and Body Worries	.01	.20	-.04	.13
Bonding	.23	-.20	<b>-.27</b>	-.11
<b>Sexual Intercourse</b>				
Overall	.24	-.16	-.10	-.15
Anal Intercourse	.05	.10	-.05	-.12
Eye Contact and Kissing	.31*	-.29*	-.21	-.17
Penile-Vaginal Intercourse	.09	-.05	.03	-.06
<b>Sexual Satisfaction</b>				
Overall	.16	-.29*	-.03	-.06
Foreplay	.34*	<b>-.43**</b>	-.14	-.16
Sexual Intercourse	.22	-.36*	-.08	-.13
Afterplay	.25	<b>-.35*</b>	.05	-.22

*Note.*  $n = 50$  for all correlations with the exception of correlations between self attachment and all women's partner foreplay scales ( $n = 49$ ). One female participant did not complete the general sexual experience partner foreplay measure. Preocc = Preoccupied; Dismiss = Dismissing. Bolded correlations represent associations with similar effect sizes that were also seen in the correlation analyses between women's self T-RSQ scales and last sexual encounter behaviours and satisfaction.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 32  
*Pearson Correlations for Women's Reported Partner T-RSQ and Last Sexual Encounter Behaviours and Satisfaction*

	Secure	Fearful	Preocc	Dismiss
<b>Self Foreplay Behaviours</b>				
Overall	-.17	.04	-.01	-.05
Breast and Thigh Stimulation	-.11	.08	-.03	.03
Seduction and Genital Stimulation	-.05	-.02	.07	-.10
Sexual Play and Erotica	-.21	-.05	-.07	.01
<b>Partner Foreplay Behaviours</b>				
Overall	.01	-.04	.08	-.24
Breast Stimulation	.10	-.06	.26	-.31*
Seduction and Genital Stimulation	-.04	-.01	.00	-.10
Sexual Play and Erotica	-.08	-.13	-.22	-.08
<b>Self Afterplay Behaviours</b>				
Overall	.04	.01	.05	-.03
Extrinsic Rewards and Body Worries	-.18	<b>.29*</b>	.06	.23
Bonding	.13	-.21	.01	-.24
<b>Partner Afterplay Behaviours</b>				
Overall	-.09	.21	.18	.09
Extrinsic Rewards and Body Worries	-.14	<b>.36*</b>	.18	.19
Bonding	-.00	-.08	.06	-.07
<b>Sexual Intercourse</b>				
Overall	.10	-.19	-.02	-.23
Anal Intercourse	-.01	.02	-.08	-.01
Eye Contact and Kissing	.14	-.11	-.07	-.23
Penile-Vaginal Intercourse	-.09	-.20	.05	-.09
<b>Sexual Satisfaction</b>				
Overall	.07	-.26	-.20	.01
Foreplay	.05	-.24	-.28	-.03
Sexual Intercourse	-.04	-.11	-.21	.07
Afterplay	.17	<b>-.28</b>	-.05	-.05

*Note.*  $n = 47$ . Two women were excluded because they reported that their last sexual partners were not their romantic partners. Another woman was excluded because her male partner reported that his last sexual partner was not his romantic partner. To have correspondence between women and men, these female participants were excluded. Preocc = Preoccupied; Dismiss = Dismissing. Bolded correlations represent associations with similar effect sizes that were also seen in the correlation analyses between women's partner T-RSQ and general sexual experience behaviours and satisfaction.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 33  
*Pearson Correlations for Women's Reported Partner T-RSQ and General Sexual Experience Behaviours and Satisfaction*

	Secure	Fearful	Preocc	Dismiss
<b>Self Foreplay Behaviours</b>				
Overall	.04	.10	.16	-.06
Breast and Thigh Stimulation	-.01	.11	.08	-.01
Seduction and Genital Stimulation	.15	-.02	.17	-.23
Sexual Play and Erotica	.07	.08	.18	.01
<b>Partner Foreplay Behaviours</b>				
Overall	.07	.13	.23	-.08
Breast Stimulation	-.01	.11	.22	-.08
Seduction and Genital Stimulation	.14	.04	.21	-.15
Sexual Play and Erotica	.02	.08	.03	.02
<b>Self Afterplay Behaviours</b>				
Overall	.04	.29*	.20	.20
Extrinsic Rewards and Body Worries	-.10	<b>.37**</b>	.11	.31*
Bonding	.12	.08	.24	-.05
<b>Partner Afterplay Behaviours</b>				
Overall	.00	.19	.26	.11
Extrinsic Rewards and Body Worries	-.07	<b>.34*</b>	.12	.24
Bonding	.08	-.08	.25	-.11
<b>Sexual Intercourse</b>				
Overall	.20	-.07	.21	-.21
Anal Intercourse	.02	.10	.02	.05
Eye Contact and Kissing	.20	-.10	.04	-.27
Penile-Vaginal Intercourse	.12	-.07	.28	-.12
<b>Sexual Satisfaction</b>				
Overall	.22	-.14	-.01	-.13
Foreplay	.30*	-.28	-.01	-.26
Sexual Intercourse	.27	-.24	-.03	-.22
Afterplay	.22	<b>-.28*</b>	-.10	-.13

*Note.*  $n = 50$  for all correlations with the exception for the correlations between reported partner attachment and all women's partner foreplay behaviour scales ( $n = 49$ ). One female participant did not complete the general sexual experience partner foreplay measure. Preocc = Preoccupied; Dismiss = Dismissing. Bolded correlations represent associations with similar effect sizes that were also seen in the correlation analyses between women's partner T-RSQ and last sexual encounter behaviours and satisfaction. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

For men's self-reported attachment, men's own fearful and preoccupied attachment were positively associated with sexual behaviours. See Table 34 and 35 for men's self-reported T-RSQ scores and sexual behaviours and satisfaction for their last

sexual encounter and general sexual experience respectively. Fearful attachment was associated with men to engage in more sexual play (e.g., role-playing and performing a strip show) and to use more erotica (e.g., using a sex toy and watching pornography) during foreplay. Preoccupied attachment was associated with men to engage in various afterplay behaviours, specifically bonding activities with their female partners. This attachment style was also associated with more intercourse positions and behaviours, specifically various penile-vaginal intercourse positions as well as greater maintenance of eye contact and kissing.

For men's reported partner attachment, three partner attachment styles were associated with foreplay behaviours and sexual satisfaction. See Table 36 and 37 for men's reported partner T-RSQ scores and sexual behaviours and satisfaction for their last sexual encounter and general sexual experience respectively. Opposite patterns of associations emerged with security and fearfulness. Security was associated with men to engage in less sexual play and to use less erotica and was associated with men to have more satisfaction with sexual intercourse and the overall sexual experience. Fearfulness was associated with men to engage in more sexual play and to use more erotica and was associated with men to have less intercourse and overall satisfaction. Other results were observed for fearful attachment, which was associated with men's female partners to engage in fewer seductive acts (e.g., undressing, caressing, and kissing the men) and to stimulate the men's genitals less often during foreplay, and was also associated with men to be less satisfied with afterplay. Dismissing attachment was associated with men to be less satisfied with the overall experience.

In comparing these results to the correlational findings from the Study 1, the medium associations observed between men's own attachment and sexual measures were all new findings. In Study 1, there was an absence of an association between individuals' fearfulness and individuals' sexual play and erotica (last sexual encounter and general sexual experience  $r = .07, p > .05$ ). In addition, there were a few small, positive associations between individuals' preoccupied attachment and afterplay and intercourse measures (i.e., individuals' overall afterplay behaviours, individuals' bonding, overall sexual intercourse behaviours, and penile-vaginal intercourse positions) in Study 1, but they were only observed for the general sexual experience ( $r$  range: .12–.22).

In terms of the results of partner attachment, the associations between partner security and sexual satisfaction as well as between partner fearfulness and sexual satisfaction were replicated from Study 1. The negative associations between partner security and men's sexual play and erotica were new findings as there were no associations between these two variables in Study 1 (last sexual encounter  $r = -.05, p > .05$ ; general sexual experience  $r = .03, p > .05$ ). For the positive associations between partner fearfulness and men's sexual play and erotica as well as the negative associations between partner fearfulness and the female partners' seduction and genital stimulation, these associations in Study 1 were small effects so these associations among men in Study 2 were stronger. This was also the case with the negative associations between partner dismissing attachment and overall satisfaction. All in all, most of the findings from the correlational analyses between reported partner attachment and sexual measures were replicated from Study 1 among men's reports of their partners' attachment and their sexual experiences.

Table 34  
*Pearson Correlations for Men's Self T-RSQ and Last Sexual Encounter Behaviours and Satisfaction*

	Secure	Fearful	Preocc	Dismiss
<b>Self Foreplay Behaviours</b>				
Overall	-.20	.28	.23	.20
Breast and Thigh Stimulation	-.25	.21	.14	.14
Seduction and Genital Stimulation	-.03	.12	.19	.14
Sexual Play and Erotica	-.10	<b>.26</b>	.15	.15
<b>Partner Foreplay Behaviours</b>				
Overall	-.17	.09	.02	.20
Breast Stimulation	-.23	.06	-.27	.34*
Seduction and Genital Stimulation	-.13	.07	.07	.10
Sexual Play and Erotica	.04	-.06	.04	-.04
<b>Self Afterplay Behaviours</b>				
Overall	.06	.13	<b>.34*</b>	-.09
Extrinsic Rewards and Body Worries	-.10	.19	.09	.12
Bonding	.12	-.04	<b>.26</b>	-.14
<b>Partner Afterplay Behaviours</b>				
Overall	.01	.12	.13	.03
Extrinsic Rewards and Body Worries	-.01	.15	.14	.08
Bonding	.09	-.00	.18	-.11
<b>Sexual Intercourse</b>				
Overall	.02	.03	<b>.41**</b>	-.19
Anal Intercourse <sup>a</sup>	--	--	--	--
Eye Contact and Kissing	.02	-.00	<b>.25</b>	-.05
Penile-Vaginal Intercourse	-.03	.06	<b>.41**</b>	-.25
<b>Sexual Satisfaction</b>				
Overall	.11	-.17	-.06	-.20
Foreplay	.10	-.36*	-.09	-.37*
Sexual Intercourse	.06	-.14	-.07	-.16
Afterplay	.13	-.18	-.10	-.17

*Note.*  $n = 47$ . Two men were excluded from these correlation analyses because they reported that their last sexual partners were not their romantic partners. Another man was excluded because his female partner reported that her last sexual partner was not her romantic partner. To have correspondence between men and women, these three participants were excluded. Preocc = Preoccupied; Dismiss = Dismissing. <sup>a</sup>Correlations between attachment scores and Anal Intercourse were not calculated because there was no variance for the Anal Intercourse variable. Bolded correlations represent associations with similar effect sizes that were also seen in the correlation analyses between men's self T-RSQ and general sexual experience behaviours and satisfaction.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 35  
*Pearson Correlations for Men's Self T-RSQ and General Sexual Experience Behaviours and Satisfaction*

	Secure	Fearful	Preocc	Dismiss
<b>Self Foreplay Behaviours</b>				
Overall	-.05	.20	.25	.09
Breast and Thigh Stimulation	-.11	.13	.05	.10
Seduction and Genital Stimulation	.08	.03	.29*	-.04
Sexual Play and Erotica	-.04	<b>.27</b>	.18	.11
<b>Partner Foreplay Behaviours</b>				
Overall	-.11	.09	.12	.10
Breast Stimulation	-.27	.08	-.18	.23
Seduction and Genital Stimulation	-.03	.02	.19	.02
Sexual Play and Erotica	.03	.08	.25	-.12
<b>Self Afterplay Behaviours</b>				
Overall	-.07	.24	<b>.34*</b>	.23
Extrinsic Rewards and Body Worries	-.20	.26	.03	.25
Bonding	.19	-.08	<b>.41**</b>	-.04
<b>Partner Afterplay Behaviours</b>				
Overall	-.05	.24	.12	.20
Extrinsic Rewards and Body Worries	-.15	.30*	.18	.23
Bonding	.14	.05	.18	-.11
<b>Sexual Intercourse</b>				
Overall	.16	-.03	<b>.36*</b>	.01
Anal Intercourse	.11	.02	.24	.03
Eye Contact and Kissing	.05	-.02	<b>.31*</b>	.01
Penile-Vaginal Intercourse	.16	-.04	<b>.27</b>	-.06
<b>Sexual Satisfaction</b>				
Overall	.10	-.18	.03	-.17
Foreplay	.07	-.07	-.00	-.18
Sexual Intercourse	.07	-.10	.08	-.14
Afterplay	.08	-.17	-.07	-.04

*Note.*  $n = 50$  for all correlations with the exception of correlations between attachment scores and men's afterplay satisfaction ( $n = 49$ ). One male participant did not complete the general sexual experience afterplay satisfaction measure. Preocc = Preoccupied; Dismiss = Dismissing. Bolded correlations represent associations with similar effect sizes that were also seen in the correlation analyses between men's self T-RSQ and last sexual encounter behaviours and satisfaction.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 36  
*Pearson Correlations for Men's Reported Partner T-RSQ and Last Sexual Encounter Behaviours and Satisfaction*

	Secure	Fearful	Preocc	Dismiss
<b>Self Foreplay Behaviours</b>				
Overall	-.17	.20	-.03	.12
Breast and Thigh Stimulation	-.14	.11	.04	.15
Seduction and Genital Stimulation	-.02	.09	-.04	-.02
Sexual Play and Erotica	<b>-.25</b>	<b>.27</b>	-.15	.19
<b>Partner Foreplay Behaviours</b>				
Overall	.13	-.22	.16	.01
Breast Stimulation	-.03	-.18	.13	.03
Seduction and Genital Stimulation	.18	<b>-.24</b>	.15	-.04
Sexual Play and Erotica	.11	-.10	-.01	.03
<b>Self Afterplay Behaviours</b>				
Overall	.01	.15	-.16	.13
Extrinsic Rewards and Body Worries	-.13	.28	-.17	.24
Bonding	.18	-.06	-.11	-.03
<b>Partner Afterplay Behaviours</b>				
Overall	.12	-.09	.04	-.01
Extrinsic Rewards and Body Worries	-.02	.13	-.14	.23
Bonding	.20	-.19	.05	-.13
<b>Sexual Intercourse</b>				
Overall	.06	-.03	.08	-.18
Anal Intercourse <sup>a</sup>	--	--	--	--
Eye Contact and Kissing	.01	-.00	.12	-.13
Penile-Vaginal Intercourse	.09	.01	-.07	-.02
<b>Sexual Satisfaction</b>				
Overall	<b>.35*</b>	<b>-.44**</b>	.15	<b>-.30*</b>
Foreplay	.21	-.24	-.27	-.04
Sexual Intercourse	<b>.31*</b>	<b>-.38**</b>	.17	-.32*
Afterplay	.22	<b>-.29</b>	.04	-.22

*Note.*  $n = 47$ . Two men were excluded from these correlation analyses because they reported that their last sexual partners were not their romantic partners. Another man was excluded because his female partner reported that her last sexual partner was not her romantic partner. To have correspondence between men and women, these three participants were excluded. Preocc = Preoccupied; Dismiss = Dismissing. <sup>a</sup>Correlations between attachment scores and Anal Intercourse were not calculated because there was no variance for the Anal Intercourse variable. Bolded correlations represent associations with similar effect sizes that were also seen in the correlation analyses between men's partner T-RSQ and general sexual experience behaviours and satisfaction.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 37  
*Pearson Correlations for Men's Reported Partner T-RSQ and General Sexual Experience Behaviours and Satisfaction*

	Secure	Fearful	Preocc	Dismiss
<b>Self Foreplay Behaviours</b>				
Overall	-.16	.07	-.05	.06
Breast and Thigh Stimulation	-.05	-.07	.08	-.01
Seduction and Genital Stimulation	.02	-.03	-.16	-.06
Sexual Play and Erotica	<b>-.36*</b>	<b>.30*</b>	-.08	.14
<b>Partner Foreplay Behaviours</b>				
Overall	.03	-.23	.03	.03
Breast Stimulation	-.07	-.13	.11	.09
Seduction and Genital Stimulation	.13	<b>-.27</b>	-.07	.02
Sexual Play and Erotica	-.04	.04	.02	-.01
<b>Self Afterplay Behaviours</b>				
Overall	-.13	.26	-.03	.27
Extrinsic Rewards and Body Worries	-.17	.20	.01	.20
Bonding	.09	.10	-.21	.21
<b>Partner Afterplay Behaviours</b>				
Overall	.06	.01	.08	.10
Extrinsic Rewards and Body Worries	-.14	.23	-.11	.28*
Bonding	.24	-.19	.06	-.04
<b>Sexual Intercourse</b>				
Overall	-.16	.02	-.13	-.06
Anal Intercourse	<b>-.37**</b>	.27	-.24	.12
Eye Contact and Kissing	-.06	-.03	.02	-.12
Penile-Vaginal Intercourse	.01	-.10	-.15	-.06
<b>Sexual Satisfaction</b>				
Overall	<b>.36**</b>	<b>-.40**</b>	.12	<b>-.26</b>
Foreplay	.19	-.24	.05	-.19
Sexual Intercourse	<b>.29*</b>	<b>-.28*</b>	.12	-.22
Afterplay	.25	<b>-.37**</b>	.02	-.12

*Note.*  $n = 50$  for all correlations with the exception of correlations between attachment scores and men's afterplay satisfaction ( $n = 49$ ). One male participant did not complete the general sexual experience afterplay satisfaction measure. Preocc = Preoccupied; Dismiss = Dismissing. Bolded correlations represent associations with similar effect sizes that were also seen in the correlation analyses between men's partner T-RSQ and last sexual encounter behaviours and satisfaction.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

## **Regression Analyses for Sexual Behaviours and Sexual Satisfaction for Women and Men**

To see whether the regression results from Study 1 were replicated, regression analyses were conducted with attachment as predictors and each sexual measure as the outcome. To account for the simultaneous effect of the four attachment styles on sexual behaviours and satisfaction, four sets of hierarchical regression analyses were conducted to determine the effect of the reported partner attachment on behaviours and satisfaction after controlling for the participants' attachment. Analyses for the last sexual encounter and general sexual experience variables were calculated separately for women and then for men. The sexual behaviour and satisfaction scores were entered as dependent variables. The attachment styles reported by the participants regarding their own attachment and their romantic partners' attachment were entered as independent variables. To account for the influence of the participants' own attachment, all self attachment scores were entered in Step 1 and then to take into consideration of the influence of the partners' attachment, all reported partner attachment scores were entered at Step 2.

Due to a small sample size, there was a lack of significant results. However, the participants' own attachment and/or reported partner attachment did uniquely contribute a moderate amount of variance to predicting some sexual measures ( $\geq 13\%$  of variance). Effect sizes, using Cohen's  $f^2$  as a measure of effect size, were calculated for these results and medium and large effect sizes (Cohen's  $f^2 \geq .15$ ) were reviewed. These results were compared to Study 1 regressions to see whether the effect of the individual attachment style on the outcome was replicated; the significant standardized betas from

Study 1 were compared to the standardized betas in Study 2 regardless of whether the beta in Study 2 was significant. The following results discussed highlight attachment effects that were replicated from Study 1.

For both women's last sexual encounter and general sexual experience, women's own attachment contributed a moderate amount of variance to predicting self overall foreplay and afterplay, partner extrinsic rewards and body worries, partner bonding, and afterplay satisfaction (last sexual encounter Cohen  $f^2$  range: .16–.35; general sexual experience Cohen  $f^2$  range: .15–.29). The  $R^2$ ,  $\Delta R^2$  and  $\beta$  values for the set of last sexual encounter regressions are presented in Table 38 and for the general sexual experience regressions in Table 39. Secure attachment predicted women to engage in various afterplay behaviours or activities and their male partners to engage in more bonding (e.g., talking, cuddling, and falling asleep with the women) after intercourse. Security also predicted women to engage in various foreplay behaviours but only in their general sexual experience. Fearful attachment predicted the partners to engage in more extrinsically rewarding behaviours (e.g., asking for a favour, snacking and leaving the women) and to have more body worries (e.g., bathing, covering the body and thinking of pregnancy) during afterplay and women to be less satisfied with afterplay. Dismissing attachment predicted women to engage in various foreplay behaviours.

There were other replicated results, but they were only replicated in women's general sexual experience. There were medium effects of women's own attachment predicting self sexual play and erotica during foreplay, partner overall foreplay, self extrinsic rewards and body worries, and eye contact and kissing (Cohen's  $f^2$  range: .15–.19). Women's own secure attachment predicted women to engage in more sexual play

(e.g., wearing lingerie, role-playing, and performing a strip-show) and to use more erotica (e.g., using a sex toy and watching pornography) during foreplay and their male partners to engage in various foreplay behaviours. Security also predicted more maintenance of eye contact with the partners and more kissing during sexual intercourse. Fearful and dismissing attachment predicted women to engage in more rewarding behaviours and to be more conscious about their bodies after intercourse.

After controlling for women's own attachment scores, partner attachment scores contributed a moderate amount of variance to predicting self extrinsic rewards and body worries as well as partner overall afterplay for both the last sexual encounter and general sexual experience (last sexual encounter Cohen's  $f^2$  range: .15-.18; general sexual experience Cohen's  $f^2$  range: .17-.33). Fearful and dismissing attachment predicted women to engage in more rewarding behaviours and to have more body worries. Dismissing attachment also predicted the male partners to engage in various afterplay behaviours.

There were additional replicated results, but they were only replicated in the general sexual experience. There were medium effects of the reported partner attachment predicting self overall afterplay, self bonding, and partner extrinsic rewards and body worries (Cohen's  $f^2$  range: .18-.30). Secure attachment predicted women to engage in more bonding activities. Fearful and dismissing attachment predicted women's male partners to engage in more extrinsic rewards and to have more body worries. Dismissing attachment also predicted women to engage in various afterplay behaviours.

In summary, several results were replicated from Study 1, which there were medium and large effects of attachment predicting measures of specific sexual

behaviours and satisfaction. Replicated results were observed in both contexts, but more results were replicated in women's general sexual experience. These results indicated that women's attachment and partner attachment accounted for more variance in the measures of sexual behaviour in Study 2. For instance, in Study 1, participants' own secure attachment predicted participants to engage in more playful activities and to use more erotica during foreplay but this was a small effect; in Study 2, women's own security remained as a predictor of these foreplay behaviours and even emerged as a medium effect. Across women's last sexual encounter and general sexual experience, there was a pattern of attachment predicting specific measures of afterplay behaviours and satisfaction with afterplay. Women's own secure attachment was associated with the male partners to make an effort to bond with the women, providing support for the hypothesis that secure attachment was associated with greater occurrences of sexual behaviours. Women's fearful attachment was associated with the partners to seek more rewards and to be more concerned with their bodies after intercourse, which was again unexpected. On the contrary, as expected, fearfulness was found to be associated with women to have less satisfaction with afterplay. After controlling for women's attachment, partner attachment also predicted extrinsic rewards and body worries; specifically, partner fearful and dismissing attachment was associated with women to engage in more of these behaviours.

Table 38

Summary of Hierarchical Regression Analyses for Women's T-RSQ Predicting Last Sexual Encounter Behaviours and Satisfaction

	Step 1					Step 2				
	$R^2$	Self T-RSQ Scores				$\Delta R^2$	Partner T-RSQ Scores			
		$\beta_{\text{secure}}$	$\beta_{\text{fearful}}$	$\beta_{\text{preocc}}$	$\beta_{\text{dismiss}}$		$\beta_{\text{secure}}$	$\beta_{\text{fearful}}$	$\beta_{\text{preocc}}$	$\beta_{\text{dismiss}}$
Self Foreplay Behaviours – Overall	<b>.13</b>	-.01	-.36	-.07	<b>.42*</b>	.05	-.19	.22	-.04	-.31
Breast and Thigh Stimulation	.09	.06	-.22	-.02	.38	.03	.07	.22	-.15	-.20
Seduction and Genital Stimulation	.10	-.07	-.47	.08	.32	.04	-.17	.16	.06	-.24
Sexual Play and Erotica	.06	.05	-.15	-.11	.26	.07	-.48	-.17	.05	-.14
Partner Foreplay Behaviours – Overall	.05	-.19	-.25	-.09	.02	.09	-.19	.20	.06	-.47
Breast Stimulation	.02	.09	-.09	-.04	.06	.18	-.33	.10	.21	-.61*
Seduction and Genital Stimulation	.02	-.12	-.11	-.07	-.03	.03	-.18	.14	.03	-.21
Sexual Play and Erotica	.10	-.35	-.37	-.13	.04	.03	.04	.00	-.20	-.07
Self Afterplay Behaviours – Overall	<b>.26*</b>	<b>.73**</b>	.34	-.37*	.27	.07	-.01	.34	.04	.21
Extrinsic Rewards and Body Worries	.07	.40	.47	-.07	.01	<b>.15</b>	-.32	<b>.32</b>	.18	<b>.25</b>
Bonding	<b>.28**</b>	.22	-.32	-.26	.28	.02	.09	.24	.01	.06
Partner Afterplay Behaviours – Overall	.26*	.69**	.65*	-.49**	.20	<b>.13</b>	-.06	.40	.23	<b>.28</b>
Extrinsic Rewards and Body Worries	<b>.22*</b>	.54*	<b>.83**</b>	-.35*	-.00	.11	-.08	.42	.19	.16
Bonding	<b>.15</b>	<b>.33</b>	.10	-.36*	.16	.05	-.12	.09	.19	.27
Sexual Intercourse – Overall	.08	.11	-.23	-.06	.12	.02	-.12	.02	-.06	-.27
Anal Intercourse	.10	.50	.25	-.15	.07	.08	-.22	.26	-.07	.01
Eye Contact and Kissing	.06	-.05	-.21	-.11	-.02	.05	.23	.34	-.19	-.21
Penile-Vaginal Intercourse	.05	-.02	-.31	.11	.20	.17	-.64*	-.55*	.20	-.25
Sexual Satisfaction – Overall	.10	-.48	-.57	.13	.02	.14	.38	-.37	-.15	.37
Foreplay	.25*	-.66**	-.92***	.34*	.01	.08	.24	-.15	-.21	.25
Sexual Intercourse	.16	-.67*	-.69*	.24	-.02	.06	.23	-.13	-.11	.34
Afterplay	<b>.16</b>	-.15	<b>-.65*</b>	.14	.21	.09	.36	-.19	.02	.50

Note.  $n = 47$ . Two women were excluded because they did not report their last sexual partners to be their romantic partners. Another woman was excluded because her male partner reported that his last sexual partner was not his romantic partner. To have correspondence between women and men, these female participants were excluded. preocc = Preoccupied; dismiss = Dismissing. Italicized, bolded values represent medium or large effect sizes of attachment as a significant predictor in the outcome. Bolded values represent predictors that were replicated from Study 1.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 39

Summary of Hierarchical Regression Analyses for Women's T-RSQ Predicting General Sexual Experience Behaviours and Satisfaction

	Step 1					Step 2				
	<i>R</i> <sup>2</sup>	Self T-RSQ Scores				Partner T-RSQ Scores				
		$\beta_{\text{secure}}$	$\beta_{\text{fearful}}$	$\beta_{\text{preocc}}$	$\beta_{\text{dismiss}}$	$\Delta R^2$	$\beta_{\text{secure}}$	$\beta_{\text{fearful}}$	$\beta_{\text{preocc}}$	$\beta_{\text{dismiss}}$
Self Foreplay Behaviours – Overall	<b>.15</b>	<b>.59*</b>	.26	-.14	<b>.35</b>	.05	-.02	.29	-.03	-.33
Breast and Thigh Stimulation	.11	.37	.09	-.11	.39*	.04	.09	.24	-.11	-.29
Seduction and Genital Stimulation	.08	.43	.18	-.03	.06	.10	-.17	.22	.01	-.53
Sexual Play and Erotica	<b>.14</b>	<b>.63*</b>	.33	-.07	.26	.01	-.02	.15	.08	-.05
Partner Foreplay Behaviours – Overall	<b>.16</b>	<b>.67**</b>	.38	-.23	.28	.09	-.02	.43	.07	-.26
Breast Stimulation	.04	.30	.07	-.02	.19	.10	-.25	.29	.17	-.32
Seduction and Genital Stimulation	.13	.58*	.29	-.21	.22	.07	.04	.33	.05	-.29
Sexual Play and Erotica	.09	.51	.31	-.19	.22	.02	.07	.26	-.09	-.06
Self Afterplay Behaviours – Overall	<b>.22*</b>	<b>.78**</b>	.43	-.15	.37*	<b>.23**</b>	.31	.65**	.12	<b>.48*</b>
Extrinsic Rewards and Body Worries	<b>.15</b>	.59*	<b>.56*</b>	-.07	<b>.19</b>	<b>.15</b>	.12	<b>.48*</b>	.08	<b>.41</b>
Bonding	.13	.46	.06	-.16	.29	<b>.15</b>	<b>.20</b>	.52*	.21	.24
Partner Afterplay Behaviours – Overall	.19*	.67**	.51*	-.37*	.21	<b>.25**</b>	.13	.50*	.33*	<b>.58*</b>
Extrinsic Rewards and Body Worries	<b>.16</b>	.58*	<b>.68*</b>	-.27	.11	<b>.17*</b>	.20	<b>.55*</b>	.09	<b>.42</b>
Bonding	<b>.13</b>	<b>.39</b>	.17	-.31	.08	.15	-.07	.14	.42*	.42
Sexual Intercourse – Overall	.08	.37	.19	-.14	-.02	.05	.00	.20	.16	-.11
Anal Intercourse	.12	.34	.60*	-.21	-.25	.04	.02	.20	.05	.24
Eye Contact and Kissing	<b>.13</b>	<b>.34</b>	.00	-.19	.07	.07	.14	.44	-.09	-.23
Penile-Vaginal Intercourse	.01	.12	.05	.03	-.01	.09	-.13	-.15	.32	-.05
Sexual Satisfaction – Overall	.12	-.16	-.58*	.15	.18	.07	.45	.18	-.07	.13
Foreplay	.20*	.08	-.50	.03	.20	.05	.38	.13	-.10	.02
Sexual Intercourse	.16	-.18	-.63*	.13	.13	.07	.45	.11	-.11	.05
Afterplay	<b>.18</b>	-.20	<b>-.60*</b>	.26	-.01	.04	.21	-.17	-.04	.25

Note.  $n = 50$  for all regression analyses with the exception of the four analyses for the partner foreplay measures ( $n = 49$ ). preocc = Preoccupied; dismiss = Dismissing. Italicized, bolded values represent medium or large effect sizes of attachment as a significant predictor in the outcome. Bolded values represent predictors that were replicated from Study 1.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

For the men's last sexual encounter and general sexual experience, men's own attachment contributed a moderate amount of variance to predicting self overall foreplay (last sexual encounter Cohen  $f^2 = .16$ ; general sexual experience Cohen  $f^2 = .27$ ). The  $R^2$ ,  $\Delta R^2$  and  $\beta$  values for the set of last sexual encounter regressions are presented in Table 40 and for the general sexual experience regressions in Table 41. Secure attachment predicted men to engage in various afterplay behaviours or activities.

There were a few other replicated results that men's own attachment only contributed a moderate amount of variance to predicting self sexual play and erotica, self bonding, partner extrinsic rewards and body worries, and overall intercourse for their general sexual experience (Cohen  $f^2$  range: .15–.28). Men's own secure attachment predicted men to engage in more sexual play and to use more erotica during foreplay as well as both men and their female partners to engage in more intercourse behaviours (i.e., eye contact and kissing) and to engage in sexual intercourse through various positions. Fearful attachment predicted the partners to engage in more rewarding behaviours and to have more body worries during afterplay. Preoccupied attachment predicted men to engage in more bonding after intercourse.

After controlling for men's own attachment scores, the only replicated result was that partner attachment scores contributed a moderate amount of variance to predicting self extrinsic rewards and body worries for the last sexual encounter (Cohen's  $f^2 = .19$ ). Fearful attachment predicted men to engage in more rewarding behaviours and to have more body worries during afterplay.

In summary, replicated Study 1 findings were not consistent across men's last sexual encounter and general sexual experience, but attachment was observed to

influence sexual play and erotica during foreplay and specific behaviours during afterplay. The medium effects of men's own attachment on these behaviours were observed for men's general sexual experience. The hypothesis regarding secure attachment and greater occurrences of sexual behaviours was supported as men's secure attachment was associated with men to engage in more sexual play and to use erotica during foreplay. Contrary to the hypothesis of fearful attachment being unrelated to the number of sexual behaviours, men's fearful attachment was associated with the female partners to engage in more rewarding behaviours and to have more body worries. As expected, men's preoccupied attachment was associated with men to engage in more bonding during afterplay. After controlling for men's attachment, partner attachment only predicted men's rewarding behaviours and body worries for men's last sexual encounter. The partners' fearful attachment was associated with men to engage in more of these behaviours, which further contradicted the fearful attachment hypothesis.

Table 40

Summary of Hierarchical Regression Analyses for Men's T-RSQ Predicting Last Sexual Encounter Behaviours and Satisfaction

	Step 1					Step 2				
	$R^2$	Self T-RSQ Scores				Partner T-RSQ Scores				
		$\beta_{\text{secure}}$	$\beta_{\text{fearful}}$	$\beta_{\text{preocc}}$	$\beta_{\text{dismiss}}$	$\Delta R^2$	$\beta_{\text{secure}}$	$\beta_{\text{fearful}}$	$\beta_{\text{preocc}}$	$\beta_{\text{dismiss}}$
Self Foreplay Behaviours – Overall	.12	-.05	.12	.24	.12	.04	.13	.07	-.29	-.22
Breast and Thigh Stimulation	.09	-.28	-.02	.17	-.00	.00	.04	-.04	-.02	.03
Seduction and Genital Stimulation	.07	.11	.03	.20	.22	.09	.23	.11	-.35	-.36
Sexual Play and Erotica	.09	.17	.31	.09	.09	.08	.06	.14	-.37	-.13
Partner Foreplay Behaviours – Overall	.06	-.16	-.18	.11	.22	.17	.14	-.48	-.05	.09
Breast Stimulation	.19	-.15	-.24	-.16	.36	.13	-.12	-.56*	-.15	.08
Seduction and Genital Stimulation	.03	-.19	-.14	.13	.08	.17	.20	-.40	-.03	.06
Sexual Play and Erotica	.01	-.05	-.12	.07	.01	.03	.14	-.12	.00	.15
Self Afterplay Behaviours – Overall	<b>.14</b>	<b>.14</b>	.25	.26	-.11	.05	.39	.25	-.25	-.02
Extrinsic Rewards and Body Worries	.04	.08	.20	.06	.06	<b>.16</b>	.53	<b>.43</b>	-.44	.05
Bonding	.08	.03	-.02	.25	-.08	.06	.39	.10	-.21	-.09
Partner Afterplay Behaviours – Overall	.04	.16	.21	.08	.03	.06	.23	-.18	-.13	.01
Extrinsic Rewards and Body Worries	.05	.20	.23	.09	.09	.12	.49	.14	-.36	.20
Bonding	.04	.07	.07	.15	-.09	.08	.06	-.24	.02	-.09
Sexual Intercourse – Overall	.21*	-.20	-.04	.41*	-.23	.15	-.22	-.03	.26	-.37
Anal Intercourse <sup>a</sup>	--	--	--	--	--	--	--	--	--	--
Eye Contact and Kissing	.07	-.10	-.13	.28	.00	.12	-.30	-.06	.29	-.28
Penile-Vaginal Intercourse	.27**	-.34	.01	.38*	-.42*	.03	.22	.15	.03	-.11
Sexual Satisfaction – Overall	.05	-.09	-.10	-.06	-.20	.18	-.07	-.47	.20	-.01
Foreplay	.28**	-.52*	-.47*	-.02	-.42*	.04	.23	.02	-.15	.20
Sexual Intercourse	.04	-.14	-.12	-.06	-.19	.15	-.06	-.34	.19	-.12
Afterplay	.05	-.00	-.07	-.11	-.15	.04	-.08	-.25	.08	-.05

Note.  $n = 47$ . Two men were excluded because they did not report their last sexual partners to be their romantic partners. Another man was excluded because his female partner reported that her last sexual partner was not her romantic partner. To have correspondence between men and women, these male participants were excluded. preocc = Preoccupied; dismiss = Dismissing. <sup>a</sup>The regression analysis was not calculated for the Anal Intercourse variable because there was no variance. Italicized, bolded values represent medium or large effect sizes of attachment as a significant predictor in the outcome. Bolded values represent predictors that were replicated from Study 1.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 41

Summary of Hierarchical Regression Analyses for Men's T-RSQ Predicting General Sexual Experience Behaviours and Satisfaction

	Step 1					Step 2				
	$R^2$	Self T-RSQ Scores				Partner T-RSQ Scores				
		$\beta_{\text{secure}}$	$\beta_{\text{fearful}}$	$\beta_{\text{preocc}}$	$\beta_{\text{dismiss}}$	$\Delta R^2$	$\beta_{\text{secure}}$	$\beta_{\text{fearful}}$	$\beta_{\text{preocc}}$	$\beta_{\text{dismiss}}$
Self Foreplay Behaviours – Overall	.10	.15	.22	.21	.10	.05	-.26	-.26	-.11	-.18
Breast and Thigh Stimulation	.02	-.04	.06	.05	.05	.05	-.22	-.33	.07	-.04
Seduction and Genital Stimulation	.09	.09	.01	.29	.05	.09	.03	-.10	-.34	-.35
Sexual Play and Erotica	<b>.13</b>	<b>.32</b>	.44	.08	.07	.11	-.45	-.02	-.06	-.17
Partner Foreplay Behaviours – Overall	.04	-.14	-.09	.17	.08	.18	-.22	-.67**	.04	.10
Breast Stimulation	.12	-.34	-.23	-.08	.14	.07	-.16	-.41	.09	.20
Seduction and Genital Stimulation	.04	-.11	-.13	.23	.05	.20*	.01	-.58*	-.14	.07
Sexual Play and Erotica	.08	.01	.13	.20	-.15	.03	-.26	-.15	.18	-.03
Self Afterplay Behaviours – Overall	<b>.21*</b>	<b>.21</b>	.14	.35*	.34	.02	.27	.15	-.13	.05
Extrinsic Rewards and Body Worries	.08	.03	.19	.02	.16	.03	.21	.15	-.19	.05
Bonding	<b>.22*</b>	.15	-.18	<b>.46**</b>	.22	.06	.46	.22	-.19	.10
Partner Afterplay Behaviours – Overall	.12	.33	.34	.06	.23	.08	.35	-.08	-.16	.07
Extrinsic Rewards and Body Worries	<b>.13</b>	.16	<b>.27</b>	.15	.20	.11	.45	.20	-.41	.06
Bonding	.08	.30	.29	.08	-.07	.11	.18	-.29	.08	.17
Sexual Intercourse – Overall	<b>.18</b>	<b>.20</b>	-.09	.39*	.24	.19*	-.64*	-.36	.00	-.42*
Anal Intercourse	.09	.23	.04	.24	.18	.22*	-.64*	-.03	-.09	-.29
Eye Contact and Kissing	.12	-.02	-.19	.37*	.16	.16	-.51	-.32	.15	-.38
Penile-Vaginal Intercourse	.10	.19	-.02	.27	.12	.09	-.27	-.34	-.14	-.25
Sexual Satisfaction – Overall	.05	-.15	-.24	.07	-.12	.18	.07	-.38	.17	-.02
Foreplay	.04	-.05	.03	-.04	-.23	.05	-.06	-.25	.08	-.04
Sexual Intercourse	.03	-.12	-.13	.10	-.13	.12	.12	-.23	.11	-.08
Afterplay	.03	-.06	-.24	-.01	.06	.14	-.03	-.51*	.05	.10

Note.  $n = 50$  with the exception of the analysis for the afterplay satisfaction measure ( $n = 49$ ). preocc = Preoccupied; dismiss = Dismissing.

Italicized, bolded values represent medium or large effect sizes of attachment as a predictor in the outcome. Bolded values represent predictors that were replicated from Study 1.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

## **Structural Equation Modelling: Dyadic Analysis for Romantic Partners' Sexual Satisfaction**

From the correlational and regression analyses, the association between attachment representations and sexual behaviours and satisfaction were tested at the individual level; how an individual's attachment influenced his/her own behaviour and satisfaction and his/her partner's behaviour and satisfaction. The dyadic effects of sexual variables were not explored. Past researchers have explored the dyadic effects of attachment on sexual satisfaction (e.g., Brassard et al., 2012) so it was decided that these effects should be examined. To understand how attachment simultaneously influenced satisfaction of both members of a couple, the Actor-Partner Interdependence Model (APIM) was used.

The APIM is a common analysis tool for dyadic data and tests for actor and partner effect(s). The model estimates an actor effect, a person's outcome as a function of his/her characteristics only (the partner has no impact on the outcome). A partner effect is also estimated, a person's outcome as a function of his/her partner's characteristic (the person's own characteristic has no impact on the outcome). In APIM, both types of effects are estimated simultaneously; actor effect(s) can be estimated while controlling for partner effect(s) and vice versa. The advantages of APIM are controlling shared variance (the variance in the outcomes due to members of the couple being similar on the predictor variable) and measurement error (random error) for a more accurate estimation of the association between predictor and outcome variables. There are a few statistical approaches to conduct APIM such as structural equation modelling, multilevel modeling, and pooled regressions. For this dyadic analysis, structural equation modelling

(SEM) was chosen because shared variance and measurement error can be controlled with SEM.

To conduct the dyadic analysis, new attachment scores were calculated. As per standard practice, the self-model and the other-model were used as latent variables in the SEM. Bartholomew (1990; Bartholomew & Horowitz, 1991) used the scores for the four attachment styles and computed scales measuring the self- and other-models:

$$\text{Self-Model/Anxiety} = \text{Secure} + \text{Dismissing} - \text{Fearful} - \text{Preoccupied}$$

$$\text{Other-Model/Avoidance} = \text{Secure} + \text{Preoccupied} - \text{Fearful} - \text{Dismissing}$$

Both women and men were given self- and other-model scores for the Self versions of the T-RSQ. Higher scores for the self-model indicated low anxiety over relationships or positive views of the self. Higher scores for the other-model indicated low avoidance for intimacy or positive views others.

When testing a SEM model, the fit of the model is tested by a chi-square test. However, the  $\chi^2$  test might not be an accurate indicator of a good- or poor-fitting model as it is sensitive to sample size. With a large sample (i.e., greater than 400), the chi-square test will most likely be statistically significant (Kenny, Kashy, & Cook, 2006). Conversely, with a small sample, it is certain that the test will be non-significant regardless of the fit. In addition, this test can be biased with non-normal distributions. Due to the sensitivity of the  $\chi^2$  test, the ratio of chi-square to degrees of freedom can be an indicator of the model fit, which a value of 2.0 or lower indicates a good fit. Additional measures of indices were used for model fit: the root-mean square error of approximation (RMSEA; a value of .06 or lower indicates a good fit), the Comparative Fit Index (CFI; a value greater than .95 indicates a good fit), the standardized root-mean-

square residual (SRMR; a value less than .08 indicates a good fit), and the Bentler and Bonett's non-normed fit index (NNFI; a value of .90 or greater indicates a good fit). See Hu and Bentler (1995) for a discussion of fit indices.

SEM was used to test the associations between attachment and sexual satisfaction for the last sexual encounter. Only couples who indicated that their last sexual partners were their romantic partners ( $n = 47$ ) were included in this SEM analysis (if one member of a couple indicated that his/her last sexual partner was not his/her romantic partner, the couple as a unit was excluded from this analysis). In this model, attachment scores were the exogenous variables (variables that are not caused by other variables). The self- and other- T-RSQ as well as ECR-R scores were used as indicators for four exogenous variables: women's self-model (indicators: women's self-model and ECR-R Self), women's other-model (indicators: women's other-model and ECR-R Other), men's self-model (indicators: men's self-model and ECR-R Self), and men's other-model (indicators: men's other-model and ECR-R Other). The endogenous variables (variables that are caused by the exogenous variables) were sexual satisfaction scores. The scores for satisfaction with foreplay and afterplay were used as indicators for two endogenous variables: women's sexual satisfaction (indicators: women's foreplay and afterplay satisfaction) and men's sexual satisfaction (indicators: men's foreplay and afterplay satisfaction).

Foreplay and afterplay satisfaction scores were selected for the analysis because the interest was in the relationship between attachment and satisfaction with specific parts of a sexual encounter (similar to how attachment influenced specific behaviours). The inclusion of satisfaction with intercourse and with the overall sexual experience may not

be as informative as participants may have been responding to the intercourse or the overall satisfaction items based on how they generally preferred to have sex.

Correlations were calculated and the correlations between satisfaction scores for intercourse and overall experience were large correlations for both women ( $r = .88, p < .001$ ) and men ( $r = .92, p < .001$ ). The correlations between intercourse/overall and foreplay as well as afterplay satisfaction scores were not as comparably large. In addition, the distribution of scores for intercourse and overall experience were similar.

Several steps were taken before the final model was chosen. All paths were examined at every step and if one or more non-significant parameter estimate(s) were detected, the correlation(s) and/or path(s) were systematically removed. First, a complete model included all possible paths and the correlations between women's self- and other-model, men's self- and other-model, women's and men's self-model, and women's and men's other-model. In the complete model, the correlations between women's and men's self-model and women's and men's other-model were not significant and two actor and two partner paths (women's other-model and women's satisfaction, men's self-model and men's satisfaction, men's self-model and women's satisfaction, and men's other-model and women's satisfaction) had the lowest, non-significant estimates. See Figure 3 for the complete model.

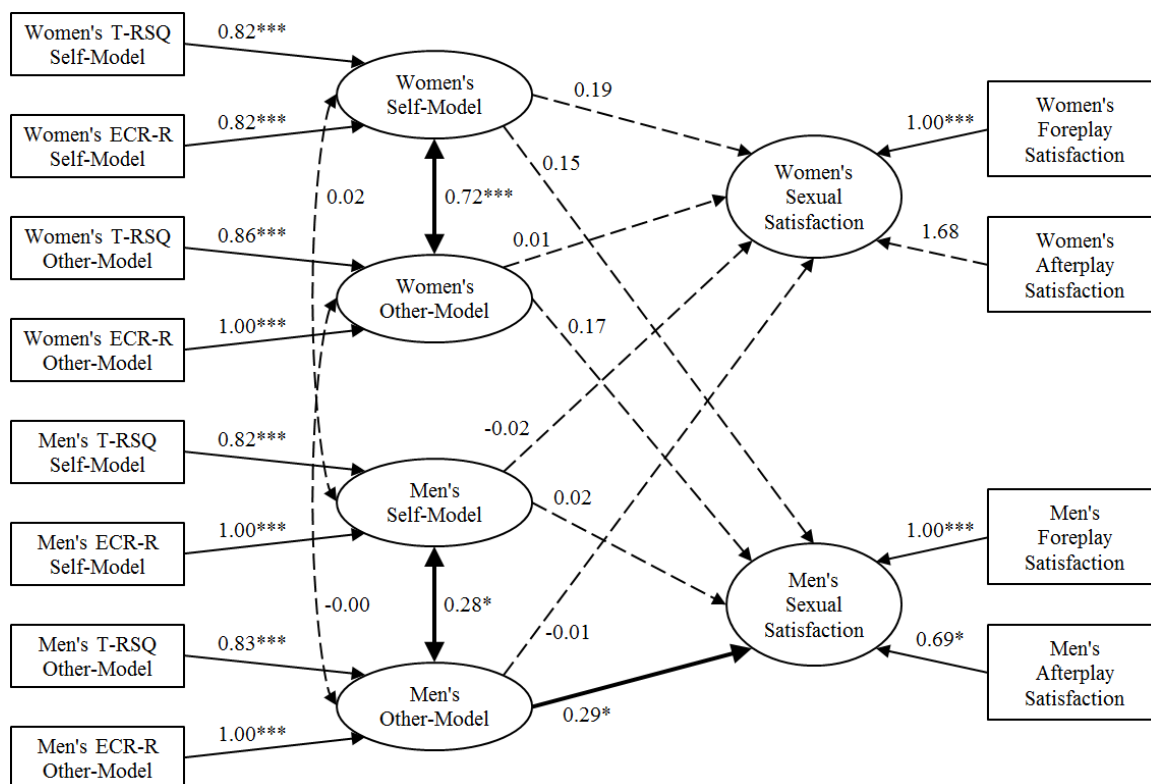
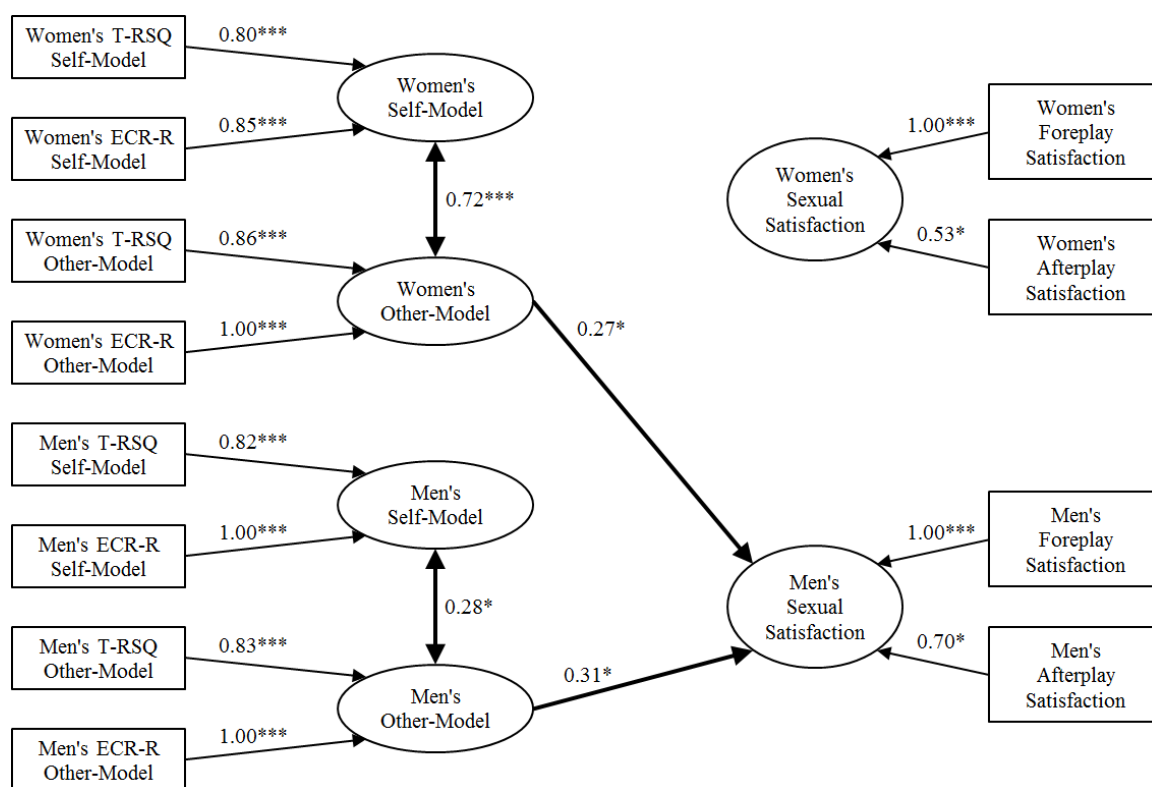


Figure 3. Original model with models of self and other predicting last sexual encounter satisfaction.  $n = 47$ . The ECR-R Self-Model score for women and men were based on the re-scoring of the ECR-R Anxiety score (ECR-R Anxiety rescore =  $8 - \text{ECR-R Anxiety score}$ ; and rounded to the nearest integer). The ECR-R Other-Model score for women and men were based on the re-scoring of the ECR-R Avoidance score (ECR-R Avoidance rescore =  $8 - \text{ECR-R Anxiety score}$ ; and rounded to the nearest integer). Thick, solid arrows represent significant parameter estimates. Dotted arrows represent non-significant parameter estimates. Fit indices indicated that there was a good fit between the model and the data ( $\chi^2_{42} = 50.19, p = .18, \chi^2/df = 1.19$ ; RMSEA = .03, range: .00–.11; CFI = .97; SRMR = .09; NNFI = .94).

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

A new model was calculated with the removal of the two correlations and four paths. After inspecting the new model, one partner path (women's self-model and men's satisfaction) with the lowest, non-significant estimate (path coefficient = .15,  $p = .53$ ) was removed and the model was recalculated. The model was examined and one actor path (women's self-model and women's satisfaction) had the lowest, non-significant estimate (path coefficient = .20,  $p = .20$ ). The path was removed and the final model was calculated. As shown in Figure 4, the final model included the correlations between

women's self- and other-model, and men's self- and other-model as well as one actor path (men's other-model and men's satisfaction) and one partner path (women's other-model and men's satisfaction). Fit indices indicated that there was a good fit between the model and the data ( $\chi^2_{51} = 55.47, p = .31, \chi^2/df = 1.09$ ; RMSEA = .00, range: .00–.09; CFI = .98; SRMR = .12; NNFI = .97). Men's other-model was positively associated with men's satisfaction with foreplay and afterplay for the last sexual encounter (path coefficient = .31,  $p = .02$ ). Women's other-model was also positively associated with men's satisfaction (path coefficient = .27,  $p = .04$ ). See Appendix R for the input matrix and the means and standard deviations of the indicators.



*Figure 4.* Final model with models of self and other predicting last sexual encounter satisfaction.  $n = 47$ . The ECR-R Self-Model score for women and men were based on the re-scoring of the ECR-R Anxiety score (ECR-R Anxiety rescore = 8 – ECR-R Anxiety score; and rounded to the nearest integer). The ECR-R Other-Model score for women and men was based on the re-scoring of the ECR-R Avoidance score (ECR-R Avoidance rescore = 8 – ECR-R Avoidance score; and rounded to the nearest integer). Solid arrows represent significant parameter estimates.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

## Conclusion

One of the goals of Study 2 was to replicate the correlational and regression findings of individuals in the sample of couples. Contrasting Study 1, there were few significant results in both correlational and regression analyses. However, medium and large effects of attachment in the prediction of sexual measures did emerge in the regression analyses. In comparing the regression findings of the two studies, a noteworthy finding was that fearful attachment remained as a significant predictor of less satisfaction with afterplay but only in women; this supported the hypothesis that fearful attachment was associated with less sexual satisfaction. In addition to this replicated finding, an individual's own attachment and/or partner attachment contributed a moderate amount of variance to predicting some measures of sexual behaviours such as the overall measures of sexual behaviours and the specific measures of sexual behaviours. In interpreting Study 2 findings, it was more informative to focus on the prediction of the sexual subscales (e.g., extrinsic rewards and body worries) because they were used to assess specific sexual behaviours. When attachment predicted an overall measure (e.g., self overall afterplay), it was difficult to interpret as the measures assessed different or a variety of behaviours at each part of an encounter.

Between each member of a couple, regression results indicated that attachment styles largely influenced behaviours after sexual intercourse. Among women, women's own attachment was associated with their male partners' afterplay behaviours and the partners' attachment was associated with women's afterplay behaviours. Based on both women's last sexual encounter and general sexual experience, women's extrinsic rewards and body worries were associated with the male partners' dismissing and fearful

attachment. The male partners' extrinsic rewards and body worries were associated with women's dismissing attachment and their bonding activities were associated with women's secure attachment. These findings confirmed that secure attachment was positively associated with sexual behaviours. Similar to Study 1, the findings for dismissing and fearful attachment contradicted the hypotheses for these two attachment styles. There was no support for (1) dismissing attachment to be associated with fewer occurrences of sexual behaviours and (2) fearful attachment to not be associated with the number of sexual behaviours.

Men also engaged in extrinsic rewards and body worries as well as bonding. However, these behaviours were associated with men's own and the female partners' attachment; men's rewards and worries were associated with their partners' fearfulness and men's bonding activities were associated with men's own preoccupied attachment. Men's female partners also engaged in rewards and worries and these behaviours were associated with men's fearful attachment. As predicted, these results suggested that there was a positive association between preoccupied attachment and sexual behaviours. In addition, like the findings for women, the findings for men did not support the fearful hypothesis. Overall, the regressions evidenced that partner effects on afterplay behaviours were more apparent within couples and all four attachment styles can influence the occurrence of distinct afterplay behaviours. Along with these results, the SEM suggested that the attachment styles of both members of a couple were associated with men's level of satisfaction with foreplay and afterplay. Attachment styles involving a positive other-model (i.e., secure and preoccupied attachment) may particularly lead to greater satisfaction for men.

## General Discussion

The objective of the two studies was to examine the associations between attachment security and specific sexual behaviours and satisfaction of individuals in a sexual relationship. Two studies were conducted using the same measures to assess behaviours and satisfaction during foreplay, sexual intercourse, and afterplay for an individual's last sexual encounter and general sexual experience; Study 1 was conducted with a sample of individuals and Study 2 with a sample of couples. Since this study was the first empirical study to examine the "complete" sexual encounter (from foreplay to afterplay), it was important to replicate findings of individuals in the sample of couples. Moreover as the measures assessed partnered sexual activities, to collect data from couples addressed the perspectives of both members of a couple.

The effect of attachment on individuals' sexual behaviours and satisfaction were examined through regression analyses in both studies. The effect of attachment on satisfaction with foreplay and afterplay was also examined through SEM with couples as the unit of analysis in Study 2. Study 1 and 2 indicated that the four attachment styles were associated with certain behaviours during foreplay, sexual intercourse, and afterplay as well as sexual satisfaction, but only a few Study 1 findings were replicated in Study 2. A pattern of results across the last sexual encounter and general sexual experience regression analyses was only observed in Study 1. Individuals' and perceived partner attachment were significant predictors of many sexual measures. Medium effects were noted, which supported that an individual's attachment predicted the occurrence of intercourse kissing and eye contact, afterplay extrinsic rewards and body worries, and sexual satisfaction.

Surprisingly, these results were replicated in Study 2, but the effect of attachment was fairly inconsistent across the last sexual encounter and general sexual experience. Nevertheless some regression results emphasized that an individual's own attachment could influence specific sexual behaviours such as sexual play and erotica during foreplay. In addition, a romantic partner's attachment appeared to have greater influence on specific afterplay behaviours within couples and these results were worth discussing. Lastly, the SEM analysis in Study 2 yielded one significant actor and partner path indicating that women's and men's other-model (i.e., secure and preoccupied attachment) predicted greater satisfaction for men. Since many analyses were carried out, to aid in the interpretation of the regression and SEM analyses, findings were discussed for each part of a sexual encounter and then for sexual satisfaction.

### **Foreplay**

In Study 1, there was a small effect of an individual's own attachment predicting sexual play/playful activities (e.g., masturbation, role-playing, and performing a strip show) and the use of erotica (e.g., a sex toy and pornography) during foreplay. As expected, the individuals' secure attachment was associated with individuals to engage in more sexual play as well as to use more erotica. The effect of self security on these behaviours was replicated in women's and men's general sexual experience in Study 2. There were even medium effects of self attachment in the prediction of sexual play and erotica, indicating that a woman's and a man's own attachment uniquely contributed a larger amount of variance to predicting these behaviours. These findings could be supported by past research, which have shown that individuals with a secure attachment were comfortable with their own sexuality. Secure adults tend to hold positive sexual

self-schemas and view themselves as sexually competent, passionate individuals with a wider range of sexual experiences (Cyranski & Andersen, 1998; Tracy et al., 2003). It may be that security led women and men to be interested in activities that could increase sexual passion and excitement. Women and men may have been more open to experiment with different foreplay activities with their partners.

### **Sexual Intercourse**

Intercourse behaviours were predicted by secure attachment in Study 1 and 2. An individual's secure attachment was associated with more maintenance of eye contact with a sexual partner and more kissing for the general sexual experience and this effect was also seen in women's general sexual experience. The results from both studies supported the hypothesis that secure attachment was associated with greater occurrences of sexual behaviours. Secure individuals have a greater ability to be warm and expressive towards others and a greater comfort with intimacy (e.g., Bartholomew & Horowitz, 1991; Horowitz et al., 1993; Onishi et al., 2001). In social interactions with a romantic partner, secure adults were nonverbally expressive by displaying more constant, steady eye contact (Guerrero, 1996; Guerrero & Jones, 2005) and displayed more physical acts of affection such as kissing (Simon & Baxter, 1993). Secure individuals consider sex as an expression of their love for a partner (Tracy et al., 2003). It seemed that individuals with a secure attachment also exhibited these behaviours during sex. Individuals with a secure attachment, particularly women, may find that gazing and kissing during intercourse to be physical ways to express their affection for their partners and their feelings of closeness to them.

## **Afterplay**

Attachment had an influence on specific behaviours after sexual intercourse in both studies. In Study 1, an individual's own attachment and, after controlling for the individual's attachment, reported partner attachment significantly predicted afterplay bonding. There were small effects of secure and preoccupied attachment on bonding activities (e.g., staying with a partner, cuddling, talking, and falling asleep with a partner). These results were partially replicated in Study 2 but emerged as medium effects. Women's secure attachment predicted the male partners to engage in more bonding for the last sexual encounter and general sexual experience. After controlling for the women's attachment, partner secure attachment predicted the women to make an effort to bond with their partners but only for the general sexual experience. Preoccupied attachment similarly predicted bonding; men's preoccupied attachment predicted men to engage in bonding. However, this effect was only observed for men's general sexual experience. As hypothesized, these findings suggested that secure and preoccupied attachment influenced bonding activities, but the difference in the results between these two attachment styles was with who initiated these activities.

Secure individuals are likely to maintain romantic relationships by using positivity and openness strategies. The aim of these strategies are to connect to a romantic partner by acting cheerful and being nice when communicating with the partner as well as encouraging the partner to openly share his/her feelings and thoughts (Dainton, 2007; Edenfield et al., 2012; Guerrero & Bachman, 2006; Pistole et al., 2010). Secure individuals describe themselves as having a greater ability to elicit disclosure from others (Keelan, Dion, & Dion, 1998). The time after intercourse could be a good opportunity

for a sexual partner to discuss his/her thoughts about the quality of the sex and feelings for the other individual. When women with a secure attachment attempted to make a pleasant social interaction after intercourse, the male partners most likely felt comfortable to stay with the women and spend time bonding with them. It was interesting that the perception of the male partners' security led to greater bonding efforts by the women, which emphasized the role of the sexual partners' secure attachment in the bonding experience.

Like secure individuals, preoccupied individuals crave intimacy, but their behaviours are guided by their constant need for emotional reassurance (Bartholomew & Horowitz, 1991; Onishi et al., 2001). As compared to individuals with other attachment styles, preoccupied individuals were the most emotionally expressive (Bartholomew & Horowitz, 1991). These individuals have a greater tendency to disclose to their romantic partner their feelings about him/her and the relationship and to show their affection by touching and hugging their partner (Guerrero & Bachman, 2006; Simon & Baxter, 1993). For men with a preoccupied attachment, they may want more attention and to continue being close after sex through these behaviours. Bonding activities would be greatly preferred because intimate talks, cuddling, and staying with the partner may enhance intimacy.

Although previous findings can explain this result, it was odd that only men initiated these behaviours. Preoccupied attachment is more prominent among women (Bartholomew & Horowitz, 1991) so it was unexpected that women's preoccupied attachment did not also predict bonding behaviours. Hughes and Kruger (2011) assessed post-coital behaviours and found no significant gender differences in the initiation of

talking and cuddling before and after sex as well as the initiation of bonding among individuals in long- and short-term relationships. However, in another study conducted by Kruger and Hughes (2010), there was a small positive association between men's anxious attachment and a desire for afterplay bonding, albeit this association was non-significant. Anxious men expressed a desire for their partner to talk more after sex and to be more affectionate. This may explain why men with a preoccupied attachment initiated bonding, but this attachment effect should be examined with future studies to confirm this gender difference.

While secure and preoccupied attachment were associated with bonding, dismissing and fearful attachment were unexpectedly associated with extrinsic rewards (e.g., requesting favours, rolling over and sleeping, leaving, and snacking) and body worries (e.g., covering the body, bathing, thinking about the possibility of pregnancy and/or STIs) during afterplay. In Study 1, there were medium effects of an individual's attachment predicting these behaviours for the last sexual encounter. Dismissing and fearful attachment were associated with the individuals to engage in more extrinsically rewarding behaviours and to have more body worries. Moreover fearfulness was associated with the sexual partners to engage in more of the same behaviours. After controlling for an individual's attachment, there were small effects of partner attachment predicting rewards and worries across the last sexual encounter and general sexual experience. Partner dismissing and fearful attachment were associated with both the individuals and the partners to engage in more rewards and worries. Effects of dismissing and fearful attachment on extrinsic rewards and body worries were somewhat

replicated in both women's and men's last sexual encounter and general sexual experience, but all notable results were medium effects.

In Study 2, there were more replicated results among women. For women's last sexual encounter and general sexual experience, women's fearfulness consistently predicted the male partners to engage in more rewards and worries. Reported partner dismissing and fearful attachment, after controlling women's attachment, also consistently predicted women to engage in more of these behaviours. There were two other replicated results, but they were also seen for women's general sexual experience. Women's dismissing and fearful attachment were associated with the women to engage in more rewards and worries. The male partners engaged in the same post-coital behaviours and these behaviours were associated with partner dismissing and fearful attachment. For men, only fearfulness was associated with greater extrinsic rewards and body worries. In particular, men's fearfulness was associated with greater rewards and worries by the female partners for men's general sexual experience. After controlling men's attachment, reported partner fearfulness was associated with greater occurrences of men's extrinsic rewards and body worries, but this effect was only seen for men's last sexual encounter. In short, the hypotheses for dismissing and fearful attachment were not supported. These two attachment styles can impact both members of a couple to pursue more extrinsic rewards and to be more body-conscious after sex. Specifically among men, their own fearfulness and the perception of their partners' fearfulness may distinctly have a greater influence on this type of post-coital behaviour for both partners.

Both dismissing and fearful attachment are characterized by distancing oneself in intimate relationships to avoid closeness with others. Studies supported that avoidant

individuals were persuaded to have sex for superficial reasons and were more willing to have sex to obtain things they desired from a partner or to obtain physical pleasure (Davis et al., 2004; Impett et al., 2008; Schachner & Shaver, 2004; Snapp et al., 2014). These sexual motivations would be relevant to women and men engaging in extrinsically rewarding behaviours. When sex could be a bargaining tool or an exchange for personal benefits, individuals with a dismissing or fearful attachment were likely to ask for things, roll over and sleep, shower, and to engage in other hedonistic behaviours after intercourse.

As for experiencing more body worries, the effect of dismissing attachment was a novel finding. Past findings suggested that dismissing attachment was not associated with body investment, image, and satisfaction (Cash, Thériault, & Annis, 2004; Ledoux, Winterowd, Richardson, & Clark, 2010) so it was difficult to explain more post-coital body worries as there was no existing effect of body issues to draw from. Perhaps dismissing attachment may have a unique influence on concerns with one's own body after sex; this effect should be further examined through replication. On the contrary, the effect of fearful attachment on body worries may be easier to interpret. According to Bogaert and Sadava (2002), anxious individuals often find themselves to have less sexual appeal and to be less physically attractive. Fearful individuals prefer to avoid intimacy yet they also have tendencies of those with a high level of anxiety (Bartholomew, 1990). Similar to preoccupied individuals, they have low self-confidence (Bartholomew, 1990) so it was not surprising that they may also lack of sexual self-esteem. Body modesty and worries of contracting STIs could be common behaviours and thoughts for individuals with a fearful attachment. As the prediction of an individual's body worries by

fearfulness was only replicated in women, women with this attachment style may be more likely to be concerned with their bodies. This assumption can be partially supported as Hughes and Kruger (2011) reported that women were generally more modest about their bodies and were more likely to cover their bodies than men were after sex.

What was interesting was that an individual's dismissing and fearful attachment influenced his/her sexual partner to engage in rewards and worries as well thereby implying a partner effect. In understanding these effects, existing findings can be used to speculate the reasons for extrinsic rewards but not for body worries. Future investigations should focus on the effect of an individual's attachment avoidance on a sexual partner's body worries. Others often perceive dismissing individuals to be cold and non-nurturing (Bartholomew & Horowitz, 1991; Horowitz et al., 1993; Onishi et al., 2001) and this perception could influence others' behaviour. The partner could have felt that it was appropriate to initiate self-indulgent behaviours after sex because the individual may have given the impression of being distant. These behaviours may also be performed because the partner might not have responded or participated in paired activities such as talking and cuddling. Dismissing individuals tend to appear inattentive, uninvolved, and bored in interactions with a romantic partner (Guerrero, 1996). These individuals make little effort to maintain a conversation through listening to others, responding with comments, and encouraging others to talk (Guerrero, 1996; Guerrero & Jones, 2005). It was possible that individuals knew that a partner with a dismissing attachment had little interest in social interactions and would rather engage in self-focused and self-gratifying activities.

Individuals with a fearful attachment may have wanted closeness after sex through talking and spending time with a partner, but they may have been afraid of being rejected by the other person. Within close relationships, they are shy, sensitive to rejection, and easily exploited by others (Bartholomew & Horowitz, 1991; Duggan & Brennan, 1994; Erozkhan, 2009a; Horowitz et al., 1993). If the individual with a fearful attachment often allows a partner to take advantage of him/her, the partner might be accustomed to asking for favours and gaining extrinsic rewards. Fearfulness could be a key factor in a partner's pursuit for rewards, seeing that women's and men's fearfulness consistently predicted these partner behaviours. Hughes and Kruger (2011) found that in a sexual relationship with a long-term partner, women and men did not significantly differ in eating/snacking and engaging in rewarding behaviours – leaving a partner, smoking and taking chemical substances, and asking for a favour. While there are no apparent gender differences, engagement in rewarding behaviours may be more pronounced when being with an individual with a fearful attachment.

### **Sexual Satisfaction**

The association between attachment and sexual satisfaction was explored with regressions and a SEM analysis. Study 1 indicated that medium effects of secure, fearful, and preoccupied attachment in the prediction of satisfaction with foreplay, intercourse, afterplay, and the overall sexual experience. However, the only replicated findings in Study 2 were medium effects of one's own attachment on afterplay satisfaction for women's last sexual encounter and general sexual experience. Women with a fearful attachment were found to be less satisfied with afterplay, which supported the hypothesized association between fearfulness and less sexual satisfaction. This coincides

with the findings of Kruger and Hughes (2010), which highly anxious and avoidant women were more likely to express dissatisfaction with the post-coital bonding experience. Anxious and avoidant women hoped for their partner to be more loving and caring after sex and thought that bonding is an important experience and desired to spend some time with their partner talking (Kruger & Hughes, 2010).

Even though the effects of secure and preoccupied attachment on satisfaction were not replicated in the regression calculations for Study 2, the SEM analysis demonstrated these two attachment styles were predictive of satisfaction with foreplay and afterplay. The SEM analysis was conducted to predict foreplay and afterplay satisfaction from women's and men's attachment for the last sexual encounter. Significant predictions were observed at the individual and at the dyadic level. At the individual level, men with a positive other-model predicted men to be more satisfied. At the dyadic/partner level, women's positive other-model also predicted men being more satisfied. Since secure and preoccupied attachment share a positive other-model and are characterized by comfort with intimacy, satisfaction for men may be influenced by these two attachment styles. Interestingly, these results were both expected and unexpected because it was hypothesized that secure attachment was positively associated with sexual satisfaction and that preoccupied attachment was negatively associated with satisfaction.

Secure individuals tend to experience more positive emotions such as passion and arousal during sex (Tracy et al., 2003) so men with a secure attachment may have felt similarly positive emotions and satisfaction during foreplay and afterplay. For men with a preoccupied attachment, it was unusual that they were more satisfied because men with a high level of anxiety generally report less sexual satisfaction (e.g., Brassard et al., 2012;

Butzer & Campbell, 2008). However, Birnbaum et al. (2006) discovered that anxious individuals experienced a state of “letting go” or ecstasy during their sexual encounters, which may provide a glimpse as to why these men were more satisfied. Also, satisfaction with foreplay and afterplay is multidimensional and it can be argued that the scales used did not comprise of different aspects of satisfaction such as physical and emotional satisfaction. In place of one-item measures, researchers would do well to use a multi-item measure for satisfaction with foreplay and afterplay to confirm this unusual effect.

In terms of why women’s other-model influenced men’s satisfaction, women may have been more concerned with their partners’ satisfaction. Secure individuals are more sensitive and attentive to their sexual partners’ needs (Tracy et al., 2003) so women with a secure attachment may have wanted to satisfy their partners’ sexual needs. Anxious individuals often want sex to please their partners to keep their interest and to comply with their partners’ sexual needs and desires (Davis et al., 2006). Moreover preoccupied individuals were previously shown to gain a sense of personal fulfilment from doing things for their partners’ benefit (Pistole & Vocaturo, 1999). It may be that women with a preoccupied attachment are more likely to prioritize their partners’ satisfaction.

These overall findings suggested that at the individual and dyadic levels, men’s satisfaction with foreplay and afterplay played a role in romantic relationships. Men reported that physical foreplay and the time after climax are especially important parts of a sexual encounter (Mulhall, King, Glina, & Hvidsten, 2008). Also, Guo et al. (2004) revealed that in Shanghai married couples, the greatest proportion of individuals with greater sexual satisfaction were husbands. In comparing levels of sexual satisfaction

based on whether foreplay and afterplay occurred, men were highly satisfied when men and their wives always engaged in foreplay and afterplay.

To see whether greater occurrences of foreplay and afterplay behaviours were associated with greater men satisfaction, correlations were calculated between men's foreplay satisfaction and women's and men's foreplay behaviours. There was a positive association, although not significant, between men's satisfaction and their report of their female partners' seduction and genital stimulation ( $r = .22, p > .05$ ), which men were more satisfied with foreplay when they perceived their partners to engage in more seductive acts and stimulated their genitals. Next, correlations were calculated between men's afterplay satisfaction and women's and men's afterplay behaviours. There were significant positive associations between men's bonding and their satisfaction ( $r = .41, p < .01$ ) and between men's report of their partners' bonding and their satisfaction ( $r = .51, p < .001$ ); when men engaged in more bonding as well as perceiving their partners to engage in more bonding, they reported greater afterplay satisfaction. These associations further call for a more in-depth measure of satisfaction as mentioned earlier. Future studies should focus on gender in the association between attachment and satisfaction as well as how men's satisfaction with foreplay and afterplay could influence other aspects of a sexual relationship.

Taken together, security was predictive of more sexual behaviours during a sexual encounter as well as greater sexual satisfaction. Thus the hypothesis regarding secure attachment was supported. Insecurity influenced specific afterplay behaviours by predicting greater occurrences of bonding and extrinsic rewards and body worries. Preoccupied and fearful attachment specifically predicted satisfaction with individual

parts of an encounter. Greater satisfaction with foreplay and afterplay were predicted by preoccupied attachment while less satisfaction with afterplay was predicted by fearful attachment. Such findings provided partial support for two hypotheses: (1) the positive association between preoccupied attachment and sexual behaviours and (2) the negative association between fearful attachment and sexual satisfaction.

### **Limitations and Future Directions**

Several limitations may limit the generalizability of the study findings. The first limitation was the characteristics of the two samples. Both samples have an overrepresentation of Caucasian and heterosexual individuals. Individuals who are non-Caucasian or non-heterosexual may have different sexual practices during a sexual encounter. For example, among medical students in North America, Breyer et al. (2010) found that homosexual or bisexual individuals were more likely to perform oral sex than heterosexual individuals. In addition to these ethnic and sexual orientation drawbacks, each study had other issues with sample representation. There was a large sample of individuals in Study 1, but the majority of participants were female. Study findings may be mostly applicable to women and their sexual experiences. Future research should focus on recruitment efforts for an equal representation of women and men to participate in attachment and sex studies.

In Study 2, a small number of couples mostly likely contributed to the lack of significant findings between each member of the couple. Other researchers had larger samples of couples; Butzer and Campbell (2008) had a sample of 116 couples and Brassard et al. (2012) had a sample of 242 couples to explore the dyadic effects of insecurity on sexual dissatisfaction. Furthermore researchers recruited from local

communities and from couples who were seeking couples therapy (Brassard et al., 2012; Butzer & Campbell, 2008). Study 2 participants were recruited from one university so it is unclear how well findings can be generalized to individuals and couples from the community. Volunteer recruitment for couples through posters and email invitations might have been an issue. Participants who responded to these recruitment avenues might perceive themselves or their partners to be more secure and sexually satisfied than other couples in the general population. A replication of the couples study would benefit from including a larger and more diverse sample of couples from the community.

The second limitation was the adaptation of the sexual behaviour scales. Since the scales were adapted from past sexual scales (i.e., the SAI, the Cowart-Pollack Scale of Sexual Experience, and the Hughes and Kruger post-coital behaviour scale), some scale items may not be interpreted as intended. For example, in the foreplay scale, one item regarding fondling one's breast with the mouth and tongue may not be the best phrasing or description of the behaviour; perhaps replacing the word "fondle" with "stimulate" may be better for future use. Additionally in the afterplay scale, one item about continuing to remain in penetration with a partner after orgasm was likely to be more applicable for men than women. It is useful to revise the scale items to improve the descriptions of sexual behaviours and to include items about behaviours that are applicable to both men and women.

The third limitation was the exclusion of certain items for the sexual behaviour subscales based on the factors from the Study 1 factor analyses. To exclude some scale items because it did not have a primary loading of .40 in both the last sexual encounter and general sexual experience analyses could be problematic. For instance, the penile-

vaginal intercourse, face-to-face position items were not included in the penile-vaginal intercourse factors/subscales for the item failed to have a loading of .40 or greater on any of the factors in the last sexual encounter analysis. This position was a common coital position given that a majority of participants in Study 1 for their last sexual encounter (84%) and general sexual experience (86%) reported that they frequently engaged in penile-vaginal intercourse face-to-face. Using factor loadings of .40 or greater was helpful in maintaining a conservative interpretation of the factor analyses. However, it may be wise in the future to use additional criteria to rationalize the inclusion of scale items for a factor if they conceptually contribute to the factor, despite not appearing to be statistically meaningful.

The fourth limitation was that the measurements of sexual satisfaction were vague and general. The results from both studies supported notable associations between attachment and satisfaction with specific parts of a sexual encounter. However, the interpretation of the results was limited because a single-item measure was used to assess satisfaction with foreplay, sexual intercourse, afterplay, or the entire sexual experience. It was difficult to pinpoint what an individual was particularly satisfied with during one part of the encounter. Participants might have thought of their overall satisfaction with each part when they were asked to respond to the questionnaire items. In the past, researchers have employed measures that encompass satisfaction with different domains of sex such as emotional closeness, the variety/experimentation of sexual activities, the quality of sex, and the balance of giving and receiving pleasure (Davis et al., 2006; Khoury & Findlay, 2014). Using a more multifaceted measure of satisfaction would be

helpful in understanding whether an individual was satisfied with their own performance or their partner's.

The last limitation was that including measures of sexual behaviours might not have been sufficient in examining individuals' sexual experiences. In comparing the two studies, attachment had a stronger influence in certain sexual behaviours among couples as there were more medium effects of a woman/man's attachment in the prediction of sexual behaviours in Study 2. Variables such as sexual preferences and sexual motivations might be relevant in understanding why, for instance, attachment predicted sexual play and erotica during foreplay and various behaviours during afterplay. Purnine and Carey (1997) noted that for a heterosexual couple, a good understanding of each other's sexual preference (e.g., foreplay and use of erotica) was positively associated with sexual satisfaction and dyadic adjustment. Recently, Dewitte (2014) claimed that when studying the dynamic in a sexual relationship, cognitive, affective, and motivational factors should be closely examined because these factors are correlates of sexual responses within a couple. Attachment security has been shown to influence an individual's sexual motives (e.g., Schachner & Shaver, 2004). Perhaps adding measures of sexual motivations and preferences could provide a context for the occurrences of sexual behaviours. An individual's motivations or preferences may explain their own and their partner's sexual behaviours.

Regardless of these limitations, this study provided initial evidence that attachment representations were related to specific sexual behaviours and satisfaction. The results of the study have theoretical and clinical implications in understanding sexual behaviours in romantic relationships. Theoretically, the predicted sexual behaviours may

serve the purpose of meeting an individual's attachment and sexual needs. Physical contact during sex such as kissing can be governed by the attachment and sexual systems. This is somewhat indicative of the assimilation of attachment and sexual behavioural systems in intimate relationships. In addition, using Bartholomew's four-category model of attachment has its advantages as compared to a three-category model or two independent dimensions of anxiety and avoidance. The inclusion of the fearful attachment style proved to be beneficial as it addressed the combination of anxiety and avoidance. The study results suggested that although fearful individuals experience high levels of anxiety and avoidance, their post-coital behaviours resembled those of the dismissing attachment. Rather than extrapolating findings on attachment anxiety and avoidance (based on the three-category model) for the application to individuals with an insecure attachment, the four-category model more clearly distinguishes between individual attachment styles.

From a clinical perspective, therapists may find it helpful to pay closer attention to how an individual's attachment needs might parallel his/her sexual needs. Considering this, if an individual can come to understand his/her romantic partner's attachment needs, it might increase a couple's ability to acknowledge each other's needs for physical intimacy. Couples can improve their relationship and their sex lives by identifying behavioural patterns of sexual interaction and whether these sexual behaviours may have a specific emotional meaning. An attachment-oriented approach to regular sexual interactions may be useful in the development of healthy attachment relationships.

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*Appendix A*  
Study 1 Online Student Informed Consent Form

**Title:** Kiss and Tell: Exploring the association between attachment representations and sexual encounters

**Student Investigators**

Hay-Yui Veronica Lai, M.A. Candidate, Psychology, [hayyuilai@trentu.ca](mailto:hayyuilai@trentu.ca), OC 136

**Faculty Advisor**

Elaine Scharfe, PhD., Department of Psychology, (705) 748-1011 ext. 7354, LHS C130

**The purpose of this research:**

Most adults in their relationships desire closeness with their partners and they act in ways to increase intimacy with their partners. An individual can be emotionally intimate with a partner by confiding and seeking emotional support and be physically intimate by maintaining close physical contact. For some people, intimacy can be achieved through sex, as sex is often a large part of adult relationships. If someone is sexually involved with a person over time, an emotional and physical connection to that person may develop. The purpose of this study is to examine whether the way individuals behave to gain intimacy relates to behaviours during a sexual encounter (foreplay, intercourse, and afterplay). For instance, we are interested in whether the behaviours during an encounter can increase or decrease sexual intimacy.

**Procedures:**

“If I choose to participate in this study, I will be asked to complete a number of questionnaires including questions about demographic information; my general sexual health/habits and desires; my feelings about my relationship with my partner; and my partner’s behaviours as well as my behaviours during foreplay, sexual intercourse, and afterplay based on personal experience. I understand that there are detailed and personal questions about my sex life. I understand that I may review these questionnaires before I decide to participate. I understand that the questionnaires will take approximately 45-50 minutes.

**Discomfort, Risks, and Benefits:**

I understand that there are no significant risks or discomforts associated with participating in this study. I understand, however, that some questions may trigger feelings and memories of both pleasant and unpleasant sexual experiences, which may be a benefit or a risk depending on the nature of my relationship. I also understand that I can refuse to answer any question(s) and have the right to withdraw from the study at any time. I understand that by signing this consent form and completing the questionnaires that I will be awarded 1 credit towards my course grade.

**Confidentiality:**

I understand that my responses will be completely confidential and that I can skip any question(s) that I am not comfortable answering. I will be given an ID number and that number will be recorded on all data – my name will never be used on the data. All data from the questionnaires will be completely anonymous and will be stored in a computer file form using the ID number for identification purposes. The data will be kept for at least five years after publication of the results. All of the data will be used for research and teaching purposes by H.Y. Veronica Lai and Dr. Elaine Scharfe.

**Other:**

Participation in this study is completely voluntary. I can refuse to answer any question(s) or stop participating at any time and there will be no negative consequences to me whatsoever. If I stop taking part in the study, the information I have given up to the time of my withdrawal will be automatically discarded by the SONA system.

If I have any questions about this study, I can take this opportunity to ask questions now, so that my concerns are addressed to my satisfaction before I agree to participate, by emailing H.Y. Veronica Lai [hayyuilai@trentu.ca](mailto:hayyuilai@trentu.ca), or Dr. Elaine Scharfe ([escharfe@trentu.ca](mailto:escharfe@trentu.ca); (705) 748-1011 ext. 7354). I agree to participate in this study and I understand that by proceeding I am giving informed consent. If I would like a summary of the results, I know that I must email H.Y. Veronica Lai, [hayyuilai@trentu.ca](mailto:hayyuilai@trentu.ca) or Dr. Elaine

Scharfe, [escharfe@trentu.ca](mailto:escharfe@trentu.ca) to let them know that I would like to receive this summary when the study is completed (December 2014). I understand that if I would like clarification regarding any part of this research, I can contact H.Y. Veronica Lai or Dr. Elaine Scharfe, and if I have any questions about the ethics approval or considerations, I may contact the Trent Research Ethics Board by either phoning Karen Mauro at (705) 748 1011 ext. 7896 or e-mailing her at [kmauro@trentu.ca](mailto:kmauro@trentu.ca).

I have had the opportunity to ask questions about this study and they have been answered to my satisfaction. I agree to participate in this study and I understand that at the end of the study (December 2014) a summary of the results will be available to all participants and this will be emailed to me if I contact the researchers by email. I understand that I may print a copy of this form to keep for my own records.”

I have read and given consent to completing the following questionnaire. To confirm that I agree to the consent form, I will click below to proceed.

If you do not wish to participate, do not continue and please close your browser.

Yes, I agree to participate.

*Appendix B*  
Study 1 and 2 Feedback Form

**Title:** Kiss and Tell: Exploring the association between attachment representation and the sexual encounter

**Student Investigators**

Hay-Yui Veronica Lai, M.A. Candidate, Psychology, [hayyuilai@trentu.ca](mailto:hayyuilai@trentu.ca), OC 136

**Faculty Advisor**

Elaine Scharfe, PhD., Department of Psychology, (705) 748-1011 ext. 7354, LHS C130

**Participant Feedback**

The purpose of this research study was to examine how specific behaviours to obtain closeness with a partner could be related to the behaviours during a sexual encounter (foreplay, intercourse, and afterplay). There is an increasing amount of research that suggests that one's predisposition for specific strategies to be intimate with their partner can influence his or her sexual well-being and behaviours. Some individuals have been found to be confident and trusting of others and they tend to have stable, healthy relationships. They have been generally reported to be comfortable with their sexuality and most often reported that they enjoyed sex. They tend to have long-term relationships in which they can satisfy their sexual desires, and are less likely to engage in impulsive sexual relations such as one-night stands. In contrast, other individuals have been found to have issues with self-esteem and the trustworthiness of others. They tend to have unstable relationships and experience more relational conflict. Furthermore, they are likely to experience more sexual problems and less pleasurable intercourse. They tend to have unpleasant sexual experiences due to being worried about being loved by their partner or being too intimate with their partner, as well as physiological problems such as difficulties being stimulated sufficiently and reaching climax during intercourse.

In this study, we asked you to answer questions about your behaviours during a sexual encounter. The responses you have provided in this study will be used to assess if one's behavioural patterns in intimate relationships are indeed related to behaviours during foreplay, intercourse, and afterplay. Thus, we are interested in whether these relationship behavioural patterns are predictive of particular sexual behaviours. The knowledge from this study will provide empirical support to suggest that sexual behaviours can be influenced by individual differences in intimacy-related strategies or behaviours and contribute to a better understanding of sexual intimacy in adult relationships.

**Suggested Readings**

- Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, *61*, 226–244. doi:10.1037/0022-3514.61.2.226
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If you have any questions about this study, the readings, or would like a summary of the findings (available December 2014) please email H.Y. Veronica Lai, [hayyuilai@trentu.ca](mailto:hayyuilai@trentu.ca) or Dr. Elaine Scharfe ([escharfe@trentu.ca](mailto:escharfe@trentu.ca)). If you have any problems or concerns as a result of your participation in this study, please contact Trent Research Ethics Board by either phoning Karen Mauro at (705) 748-1011 ext. 7896 or e-mailing her at [kmauro@trentu.ca](mailto:kmauro@trentu.ca). Thank you for your participation.

If you have experienced any distress while completing the study, personal counselling is available to all students through the Counselling Centre. Many students seek support for specific concerns related to anxiety, depression, grief, and relationship challenges. Other students come to the Centre with less clearly defined difficulties such as low motivation, poor self-image/esteem, stress, loneliness and adjustment issues, all of which can seriously interfere with one's daily functioning and academic performance. Through discussion and goal-setting, counsellors can help students to more fully understand themselves, their concerns and to learn effective coping strategies. A few sessions of individual counselling are often sufficient to find a solution or at least to view the problem from a more manageable perspective. The opportunity to speak freely about one's concerns in a confidential and non-judgemental atmosphere can provide a source of comfort and relief. Relevant referrals within the Trent and Peterborough communities can be arranged as appropriate. Group therapy and workshops on selected topics are offered throughout the year. Limited psychiatric services are also provided. To book an appointment, please call (705) 748-1386 or drop by Blackburn Hall, Suite 113.

Counselling Centre  
Blackburn Hall, Suite 113  
Telephone: (705) 748-1386  
Fax: (705) 748-1137  
E-mail: [counselling@trentu.ca](mailto:counselling@trentu.ca)

Web: [www.trentu.ca/counselling](http://www.trentu.ca/counselling)  
Office Hours: Monday – Friday  
9:00–12:00, 1:00–4:00  
Summer hours vary.  
Please phone ahead for an appointment.

*Appendix C*  
Study 1 and 2 Demographic Form

1. Gender:
  - Female
  - Male
  - Transgender
  - Transsexual
  - Intersex
  
2. Age: \_\_\_\_\_
  
3. Ethnicity:
  - African
  - Asian
  - Caucasian
  - First Nations
  - Other (Please specify.): \_\_\_\_\_
  
4. Sexual Orientation:
  - Heterosexual
  - Homosexual
  - Bisexual
  - Pansexual
  - Queer
  - Questioning
  - Asexual
  
5. Relationship Status:
  - Single, not seeing someone
  - Single, seeing someone
  - In a committed relationship
  - In an open relationship
  - Engaged
  - Married
  - Separated
  - Divorced
  
6. If you are currently in a romantic relationship, how long have you been in this relationship?  
\_\_\_\_\_
  
7. Is this a sexual relationship (have had at least one sexual encounter in the past month)?
  - Yes
  - No

*Appendix D*  
Study 1 and 2 General Sexual Habits

**The following questions are about sexual health/habits. These questions are about your personal experiences. Please try to be as objective as possible.**

1. Have you had penile-vaginal intercourse in the past 6 months?
  - Yes
  - No
  
2. Have you had anal intercourse in the past 6 months?
  - Yes
  - No
  
3. How many people have you had sexual intercourse (penile-vaginal and/or anal intercourse) within the past 6 months? \_\_\_\_\_
  
4. How many people have you had sexual intercourse (penile-vaginal and/or anal intercourse) within your lifetime? \_\_\_\_\_
  
5. How often have you had sexual intercourse (penile-vaginal and/or anal intercourse) with an *acquaintance*?
  - Never
  - Once or twice
  - Several times
  - Often
  
6. How often have you had sexual intercourse (penile-vaginal and/or anal intercourse) with a *stranger*?
  - Never
  - Once or twice
  - Several times
  - Often
  
7. How often have you had sexual intercourse (penile-vaginal and/or anal intercourse) with an *acquaintance while high on alcohol or drugs*?
  - Never
  - Once or twice
  - Several times
  - Often
  
8. How often have you had sexual intercourse (penile-vaginal and/or anal intercourse) with a *stranger while high on alcohol or drugs*?
  - Never
  - Once or twice
  - Several times
  - Often

*Appendix E*

Study 1 and 2 Trent Relationship Scales Questionnaire (Self and Partner Version)

**Researchers who wish to use the following versions of the Trent Relationship Scales Questionnaire must obtain written consent from Dr. Elaine Scharfe ([escharfe@trentu.ca](mailto:escharfe@trentu.ca)).**

**Please read each of the following statements and rate the extent to which it describes your feelings about your relationship with your partner on the 7-point scale.** Please think about your relationship with your partner in the past and present, and respond in terms of how you generally feel in this relationship.

- |     | 1                     | 2 | 3 | 4                   | 5 | 6 | 7                    |
|-----|-----------------------|---|---|---------------------|---|---|----------------------|
|     | Not at all<br>like me |   |   | Somewhat<br>like me |   |   | Very much<br>like me |
| ___ | 1.                    |   |   |                     |   |   |                      |
| ___ | 2.                    |   |   |                     |   |   |                      |
| ___ | 3.                    |   |   |                     |   |   |                      |
| ___ | 4.                    |   |   |                     |   |   |                      |
| ___ | 5.                    |   |   |                     |   |   |                      |
| ___ | 6.                    |   |   |                     |   |   |                      |
| ___ | 7.                    |   |   |                     |   |   |                      |
| ___ | 8.                    |   |   |                     |   |   |                      |
| ___ | 9.                    |   |   |                     |   |   |                      |
| ___ | 10.                   |   |   |                     |   |   |                      |
| ___ | 11.                   |   |   |                     |   |   |                      |
| ___ | 12.                   |   |   |                     |   |   |                      |
| ___ | 13.                   |   |   |                     |   |   |                      |
| ___ | 14.                   |   |   |                     |   |   |                      |
| ___ | 15.                   |   |   |                     |   |   |                      |
| ___ | 16.                   |   |   |                     |   |   |                      |
| ___ | 17.                   |   |   |                     |   |   |                      |
| ___ | 18.                   |   |   |                     |   |   |                      |
| ___ | 19.                   |   |   |                     |   |   |                      |
| ___ | 20.                   |   |   |                     |   |   |                      |
| ___ | 21.                   |   |   |                     |   |   |                      |
| ___ | 22.                   |   |   |                     |   |   |                      |
| ___ | 23.                   |   |   |                     |   |   |                      |
| ___ | 24.                   |   |   |                     |   |   |                      |
| ___ | 25.                   |   |   |                     |   |   |                      |
| ___ | 26.                   |   |   |                     |   |   |                      |
| ___ | 27.                   |   |   |                     |   |   |                      |
| ___ | 28.                   |   |   |                     |   |   |                      |
| ___ | 29.                   |   |   |                     |   |   |                      |
| ___ | 30.                   |   |   |                     |   |   |                      |
| ___ | 31.                   |   |   |                     |   |   |                      |
| ___ | 32.                   |   |   |                     |   |   |                      |
| ___ | 33.                   |   |   |                     |   |   |                      |
| ___ | 34.                   |   |   |                     |   |   |                      |
| ___ | 35.                   |   |   |                     |   |   |                      |
| ___ | 36.                   |   |   |                     |   |   |                      |
| ___ | 37.                   |   |   |                     |   |   |                      |
| ___ | 38.                   |   |   |                     |   |   |                      |
| ___ | 39.                   |   |   |                     |   |   |                      |
| ___ | 40.                   |   |   |                     |   |   |                      |

**Please read each of the following statements and rate the extent to which it describes your partner's feelings about your relationship with you on the 7-point scale.** Please think about your partner's behaviours and actions in your relationship in the past and present, and respond in terms of how you believe your partner generally feels in your relationship.

- | 1                                | 2   | 3  | 4                              | 5 | 6 | 7                               |
|----------------------------------|-----|--|--------------------------------|---|---|---------------------------------|
| Not at all<br>like my<br>partner |     |  | Somewhat<br>like my<br>partner |   |   | Very much<br>like my<br>partner |
| ___                              | 1.  | My partner finds it difficult to depend on me.   |                                |   |   |                                 |
| ___                              | 2.  | It is very important to my partner to feel independent from me.  |                                |   |   |                                 |
| ___                              | 3.  | My partner finds it easy to get emotionally close to me.   |                                |   |   |                                 |
| ___                              | 4.  | My partner worries that he/she will be hurt if he/she allows himself/herself to become too close to me.              |                                |   |   |                                 |
| ___                              | 5.  | My partner is comfortable without a close emotional relationship with me.  |                                |   |   |                                 |
| ___                              | 6.  | My partner wants to be completely emotionally intimate with me.  |                                |   |   |                                 |
| ___                              | 7.  | My partner worries about being alone (away from me).   |                                |   |   |                                 |
| ___                              | 8.  | My partner is comfortable depending on me.   |                                |   |   |                                 |
| ___                              | 9.  | My partner finds it difficult to trust me completely.  |                                |   |   |                                 |
| ___                              | 10. | My partner is comfortable having me depend on him/her.   |                                |   |   |                                 |
| ___                              | 11. | My partner worries that I do not value him/her as much as he/she values me.  |                                |   |   |                                 |
| ___                              | 12. | It is very important to my partner to feel self-sufficient from me.  |                                |   |   |                                 |
| ___                              | 13. | My partner prefers not to have me depend on him/her.   |                                |   |   |                                 |
| ___                              | 14. | My partner is somewhat uncomfortable being close to me.  |                                |   |   |                                 |
| ___                              | 15. | My partner says that I am reluctant to get as close as he/she would like.  |                                |   |   |                                 |
| ___                              | 16. | My partner prefers not to depend on me.  |                                |   |   |                                 |
| ___                              | 17. | My partner worries about having me not accept him/her.   |                                |   |   |                                 |
| ___                              | 18. | My partner tends to let problems build up with me before dealing with them.  |                                |   |   |                                 |
| ___                              | 19. | My partner would like to spend more time with me, but I do not have enough time for him/her.                         |                                |   |   |                                 |
| ___                              | 20. | It took a long time for my partner to become close to me.  |                                |   |   |                                 |
| ___                              | 21. | My partner is affectionate in his/her relationship with me.  |                                |   |   |                                 |
| ___                              | 22. | My partner is too busy to form a close relationship with me.   |                                |   |   |                                 |
| ___                              | 23. | My partner tends to be emotionally expressive in his/her relationship with me.                                       |                                |   |   |                                 |
| ___                              | 24. | My partner is honest and open in his/her relationship with me.   |                                |   |   |                                 |
| ___                              | 25. | My partner is shy in social situations with me.  |                                |   |   |                                 |
| ___                              | 26. | When my partner disagrees with me, he/she says that I am often defensive.  |                                |   |   |                                 |
| ___                              | 27. | My partner does not disclose personal information to me.   |                                |   |   |                                 |
| ___                              | 28. | My partner finds it difficult to accept advice from me because my views are so different from him/her.               |                                |   |   |                                 |
| ___                              | 29. | My partner likes to deal with conflict with me immediately, regardless of how long it takes to resolve the conflict. |                                |   |   |                                 |
| ___                              | 30. | My partner is usually a good judge of how I am feeling.  |                                |   |   |                                 |
| ___                              | 31. | My partner cries easily with me.   |                                |   |   |                                 |
| ___                              | 32. | My partner handles conflicts differently with me (compared to how he/she handles conflict with others).              |                                |   |   |                                 |
| ___                              | 33. | My partner does not express his/her feelings openly for fear that I might disagree with him/her.                     |                                |   |   |                                 |
| ___                              | 34. | My partner believes that it is a waste of time to argue/disagree with me.  |                                |   |   |                                 |
| ___                              | 35. | My partner is comfortable crying in front of me.   |                                |   |   |                                 |
| ___                              | 36. | My partner believes that many of the problems in our relationship are primarily his/her fault.                       |                                |   |   |                                 |
| ___                              | 37. | When my partner is upset, my partner comes to me for comfort or support.   |                                |   |   |                                 |
| ___                              | 38. | My partner does not come to me when he/she is upset because he/she likes to deal with problems on his/her own.       |                                |   |   |                                 |
| ___                              | 39. | Although my partner wants to be accepted, sometimes my partner feels like he/she does not fit in with me.            |                                |   |   |                                 |
| ___                              | 40. | My partner wishes that he/she could be more open in our relationship, but he/she does not know how to change.        |                                |   |   |                                 |

*Appendix F*

Study 1 and 2 The Last Sexual Encounter Behaviours and Satisfaction Scales

The following questions are about the behaviours of your last sexual encounter. **Think of the experience of your last sexual encounter, and please answer the following questions.**

With whom, did you last have sexual intercourse (penile-vaginal intercourse and/or anal intercourse)?

- Current partner
- Ex-partner
- Friend
- Acquaintance
- Stranger
- Other (Please specify.): \_\_\_\_\_

**Which of the following foreplay behaviours did your sexual partner do during your last sexual encounter?**

1	2	3	4	5	6	7
Did not occur		Occurred a little bit		Occurred a moderate amount		Occurred a great deal

**Your Partner's Foreplay Behaviours**

- \_\_\_ 1. Your partner undressed him-/her-self.
- \_\_\_ 2. Your partner undressed you.
- \_\_\_ 3. Your partner massaged you.
- \_\_\_ 4. Your partner caressed him-/her-self (body parts other than the genitals).
- \_\_\_ 5. Your partner caressed you (body parts other than the genitals).
- \_\_\_ 6. Your partner kissed you.
- \_\_\_ 7. Your partner kissed you with his/her tongue (French kissing).
- \_\_\_ 8. Your partner touched your nipple(s).
- \_\_\_ 9. Your partner kissed your nipple(s).
- \_\_\_ 10. Your partner fondled your breast(s) with his/her mouth and tongue.
- \_\_\_ 11. Your partner fondled your breast(s) with his/her hand(s).
- \_\_\_ 12. Your partner touched your inner thigh(s).
- \_\_\_ 13. Your partner kissed your inner thigh(s).
- \_\_\_ 14. Your partner stimulated your genitals with his/her mouth and tongue.
- \_\_\_ 15. Your partner stimulated your genitals with his/her finger(s).
- \_\_\_ 16. Your partner stimulated your genitals with a sex toy.
- \_\_\_ 17. Your partner masturbated.
- \_\_\_ 18. Your partner presented him-/her-self in sexy clothes/lingerie.
- \_\_\_ 19. Your partner performed a strip show.
- \_\_\_ 20. Your partner role-played with you.
- \_\_\_ 21. Your partner watched pornographic material with you.

**Which of the following foreplay behaviours did you do during your last sexual encounter?**

1	2	3	4	5	6	7
Did not occur		Occurred a little bit		Occurred a moderate amount		Occurred a great deal

**Your Foreplay Behaviours**

- \_\_\_ 1. You undressed yourself.
- \_\_\_ 2. You undressed your partner.
- \_\_\_ 3. You massaged your partner.



**How satisfied were you with sexual intercourse during your last sexual encounter?**

- Extremely dissatisfied
- Moderately dissatisfied
- Fairly dissatisfied
- Neutral
- Fairly satisfied
- Very satisfied
- Extremely satisfied

**Which of the following behaviours after sex (afterplay) did your sexual partner do during your last sexual encounter?**

1	2	3	4	5	6	7
Did not occur		Occurred a little bit		Occurred a moderate amount		Occurred a great deal

**Your Partner's Afterplay Behaviours**

- \_\_\_ 1. My partner had an intimate talk with me.
- \_\_\_ 2. My partner lightened the mood with jokes.
- \_\_\_ 3. My partner requested favours or asked for things from me.
- \_\_\_ 4. My partner continued cuddling/caressing with me.
- \_\_\_ 5. My partner cuddled and then fell asleep.
- \_\_\_ 6. My partner rolled over and then fell asleep.
- \_\_\_ 7. My partner remained awake and stayed with me.
- \_\_\_ 8. My partner left or had me leave and not sleep next to him/her.
- \_\_\_ 9. My partner continued to remain in penetration with me after orgasm.
- \_\_\_ 10. My partner engaged in oral sex.
- \_\_\_ 11. My partner continued to engage in sexual activity so as to increase the likelihood that sex would happen again.
- \_\_\_ 12. My partner smoked, drank alcohol, or took other chemical substances.
- \_\_\_ 13. My partner ate or snacked on some food.
- \_\_\_ 14. My partner used the bathroom to urinate shortly after having intercourse.
- \_\_\_ 15. My partner cleaned/showered immediately following intercourse.
- \_\_\_ 16. My partner covered up his/her body and was modest about his/her body around me.
- \_\_\_ 17. My partner thought about the likelihood that pregnancy may have resulted.
- \_\_\_ 18. My partner thought about the likelihood that sexually transmitted infections (STIs) may have resulted.

**Which of the following behaviours after sex (afterplay) did you do during your last sexual encounter?**

1	2	3	4	5	6	7
Did not occur		Occurred a little bit		Occurred a moderate amount		Occurred a great deal

**Your Afterplay Behaviours**

- \_\_\_ 1. I had an intimate talk with my partner.
- \_\_\_ 2. I lightened the mood with jokes.
- \_\_\_ 3. I requested favours or asked for things from my partner.
- \_\_\_ 4. I continued cuddling/caressing with my partner.
- \_\_\_ 5. I cuddled and then fell asleep.
- \_\_\_ 6. I rolled over and then fell asleep.
- \_\_\_ 7. I remained awake and stayed with my partner.
- \_\_\_ 8. I left or had my partner leave and not sleep next to me.
- \_\_\_ 9. I continued to remain in penetration with my partner after orgasm.

- 10. I engaged in oral sex.
- 11. I continued to engage in sexual activity so as to increase the likelihood that sex would happen again.
- 12. I smoked, drank alcohol, or took other chemical substances.
- 13. I ate or snacked on some food.
- 14. I used the bathroom to urinate shortly after having intercourse.
- 15. I cleaned/showered immediately following intercourse.
- 16. I covered up my body and was modest about my body around my partner.
- 17. I thought about the likelihood that pregnancy may have resulted.
- 18. I thought about the likelihood that sexually transmitted infections (STIs) may have resulted.

**How satisfied were you with afterplay during your last sexual encounter?**

- Extremely dissatisfied
- Moderately dissatisfied
- Fairly dissatisfied
- Neutral
- Fairly satisfied
- Very satisfied
- Extremely satisfied

**Overall, how satisfied were you with your last sexual encounter?**

- Extremely dissatisfied
- Moderately dissatisfied
- Fairly dissatisfied
- Neutral
- Fairly satisfied
- Very satisfied
- Extremely satisfied

*Appendix G*

Study 1 and 2 The General Sexual Experience Behaviours and Satisfaction Scales

The following questions are about the behaviours during foreplay, sexual intercourse, and afterplay in general. **Think of your general sexual experience with your current partner, and please answer the following questions.**

**Which of the following foreplay behaviours does your sexual partner usually do during your sexual encounter(s)?**

1	2	3	4	5	6	7
Does not occur		Occurs a little bit		Occurs a moderate amount		Occurs a great deal

**Your Partner's Foreplay Behaviours**

- \_\_\_ 1. Your partner undresses him-/her-self.
- \_\_\_ 2. Your partner undresses you.
- \_\_\_ 3. Your partner massages you.
- \_\_\_ 4. Your partner caresses him-/her-self (body parts other than the genitals).
- \_\_\_ 5. Your partner caresses you (body parts other than the genitals).
- \_\_\_ 6. Your partner kisses you.
- \_\_\_ 7. Your partner kisses you with his/her tongue (French kissing).
- \_\_\_ 8. Your partner touches your nipple(s).
- \_\_\_ 9. Your partner kisses your nipple(s).
- \_\_\_ 10. Your partner fondles your breast(s) with his/her mouth and tongue.
- \_\_\_ 11. Your partner fondles your breast(s) with his/her hand(s).
- \_\_\_ 12. Your partner touches your inner thigh(s).
- \_\_\_ 13. Your partner kisses your inner thigh(s).
- \_\_\_ 14. Your partner stimulates your genitals with his/her mouth and tongue.
- \_\_\_ 15. Your partner stimulates your genitals with his/her finger(s).
- \_\_\_ 16. Your partner stimulates your genitals with a sex toy.
- \_\_\_ 17. Your partner masturbates.
- \_\_\_ 18. Your partner presents him-/her-self in sexy clothes/lingerie.
- \_\_\_ 19. Your partner performs a strip show.
- \_\_\_ 20. Your partner role-plays with you.
- \_\_\_ 21. Your partner watches pornographic material with you.

**Which of the following foreplay behaviours do you usually do during your sexual encounter(s)?**

1	2	3	4	5	6	7
Does not occur		Occurs a little bit		Occurs a moderate amount		Occurs a great deal

**Your Foreplay Behaviours**

- \_\_\_ 1. You undress yourself.
- \_\_\_ 2. You undress your partner.
- \_\_\_ 3. You massage your partner.
- \_\_\_ 4. You caress yourself (body parts other than the genitals).
- \_\_\_ 5. You caress your partner (body parts other than the genitals).
- \_\_\_ 6. You kiss your partner.
- \_\_\_ 7. You kiss your partner with your tongue (French kissing).
- \_\_\_ 8. You touch your partner's nipple(s).
- \_\_\_ 9. You kiss your partner's nipple(s).
- \_\_\_ 10. You fondle your partner's breast(s) with your mouth and tongue.



**In general, how satisfied are you with sexual intercourse in your general sexual experience with your current partner?**

- Extremely dissatisfied
- Moderately dissatisfied
- Fairly dissatisfied
- Neutral
- Fairly satisfied
- Very satisfied
- Extremely satisfied

**Which of the following behaviours after sex (afterplay) does your sexual partner usually do during your sexual encounter(s)?**

1	2	3	4	5	6	7
Does not occur		Occurs a little bit		Occurs a moderate amount		Occurs a great deal

#### **Your Partner's Afterplay Behaviours**

- \_\_\_ 1. My partner prefers to have an intimate talk with me.
- \_\_\_ 2. My partner prefers to lighten the mood with jokes.
- \_\_\_ 3. My partner feels it was a good time to request favours or ask for things from me.
- \_\_\_ 4. My partner prefers to continue cuddling/caressing with me.
- \_\_\_ 5. My partner prefers to cuddle and then fall asleep.
- \_\_\_ 6. My partner prefers to roll over and then fall asleep.
- \_\_\_ 7. My partner prefers to remain awake and stay with me.
- \_\_\_ 8. My partner prefers to leave or have me leave and not sleep next to him/her.
- \_\_\_ 9. My partner prefers to continue to remain in penetration with me after orgasm.
- \_\_\_ 10. My partner prefers to engage in oral sex.
- \_\_\_ 11. My partner prefers to continue to engage in sexual activity so as to increase the likelihood that sex will happen again.
- \_\_\_ 12. My partner prefers to smoke, drink alcohol, or take other chemical substances.
- \_\_\_ 13. My partner likes to eat or snack on some food.
- \_\_\_ 14. My partner feels the need to use the bathroom to urinate shortly after having intercourse.
- \_\_\_ 15. My partner feels the need to clean/shower immediately following intercourse.
- \_\_\_ 16. My partner has the tendency to cover up his/her body and be modest about his/her body around me.
- \_\_\_ 17. My partner thinks about the likelihood that pregnancy may have resulted.
- \_\_\_ 18. My partner thinks about the likelihood that sexually transmitted infections (STIs) may have resulted.

**Which of the following behaviours after sex (afterplay) do you usually do during your sexual encounter(s)?**

1	2	3	4	5	6	7
Does not occur		Occurs a little bit		Occurs a moderate amount		Occurs a great deal

#### **Your Afterplay Behaviours**

- \_\_\_ 1. I prefer to have an intimate talk with my partner.
- \_\_\_ 2. I prefer to lighten the mood with jokes.
- \_\_\_ 3. I feel it was a good time to request favours or ask for things from my partner.
- \_\_\_ 4. I prefer to continue cuddling/caressing with my partner.
- \_\_\_ 5. I prefer to cuddle and then fall asleep.
- \_\_\_ 6. I prefer to roll over and then fall asleep.

- 7. I prefer to remain awake and stay with my partner.
- 8. I prefer to leave or have my partner leave and not sleep next to me.
- 9. I prefer to continue to remain in penetration with my partner after orgasm.
- 10. I prefer to engage in oral sex.
- 11. I prefer to continue to engage in sexual activity so as to increase the likelihood that sex will happen again.
- 12. I prefer to smoke, drink alcohol, or take other chemical substances.
- 13. I like to eat or snack on some food.
- 14. I feel the need to use the bathroom to urinate shortly after having intercourse.
- 15. I feel the need to clean/shower immediately following intercourse.
- 16. I have the tendency to cover up my body and be modest about my body around my partner.
- 17. I think about the likelihood that pregnancy may have resulted.
- 18. I think about the likelihood that sexually transmitted infections (STIs) may have resulted.

**In general, how satisfied are you with afterplay in your general sexual experience with your current partner?**

- Extremely dissatisfied
- Moderately dissatisfied
- Fairly dissatisfied
- Neutral
- Fairly satisfied
- Very satisfied
- Extremely satisfied

**In general, how satisfied are you with your general sexual experience with your current partner?**

- Extremely dissatisfied
- Moderately dissatisfied
- Fairly dissatisfied
- Neutral
- Fairly satisfied
- Very satisfied
- Extremely satisfied

*Appendix H*  
The Adaptation of the Sexual Arousability Inventory

The Sexual Arousability Inventory (SAI) is a 28-item self-report that assesses an individual's arousability to various sexual activities or experiences. Respondents are to rate the level of sexual arousal to the described activities.

-1	0	1	2	3	4	5
Adversely affects arousal; unthinkable, repulsive, distracting	Doesn't affect sexual arousal	Possibly causes sexual arousal	Sometimes causes sexual arousal; slightly arousing	Usually causes sexual arousal; moderately arousing	Almost always sexually arousing; very arousing	Always causes sexual arousal; extremely arousing

1. When a loved one stimulates your genitals with mouth and tongue
2. When a loved one fondles your breasts with his/her hands
3. When you see a loved one nude
4. When a loved one caresses you with his/her eyes
5. When a loved one stimulates your genitals with his/her finger
6. When you are touched or kissed on the inner thighs by a loved one
7. When you caress a loved one's genitals with your fingers
8. When you read a pornographic or "dirty" story
9. When a loved one undresses you
10. When you dance with a loved one
11. When you have intercourse with a loved one
12. When a loved one touches or kisses your nipples
13. When you caress a loved one (other than genitals)
14. When you see pornographic pictures or slides
15. When you lie in bed with a loved on
16. When a loved one kisses you passionately
17. When you hear sounds of pleasure during sex
18. When a loved one kisses you with an exploring tongue
19. When you read suggestive or pornographic poetry
20. When you see a strip show
21. When you stimulate your partner's genitals with your mouth and tongue
22. When a loved one caresses you (other than genitals)
23. When you see a pornographic movie (stag film)
24. When you undress a loved one
25. When a loved one fondles your breasts with mouth and tongue
26. When you make love in new or unusual place
27. When you masturbate
28. When your partner has an orgasm

Eleven SAI "loved one" items regarding sexual actions by a sexual partner were adapted and used for the Partner versions of the foreplay behaviour measure. To differentiate the intensity of kissing, two SAI items – "when a loved one kisses you passionately" and "when a loved one kisses you with an exploring tongue" – were rephrased. Two other SAI items – "when a loved one touches or kisses your nipples" and "when you are touched or kissed on the inner thighs by a loved one" – were divided into four items so kissing and touching body parts were separate items. See Table H1.

Nine SAI "you" items regarding sexual actions by the respondent were adapted and used for the Self versions of the foreplay behaviour measure. Four items about the respondent's use of pornographic story, poetry, pictures, and movie were merged into one item – "You watched pornographic material with your partner." See Table H2.

For both the Partner and Self versions of the foreplay measure to contain identical items, items were added to both versions. After adapting the partner items, nine items were rephrased from “your partner” to “you” and added to the Self version (see Table H1). In addition, after adapting the self items, two items were rephrased from “you” to “your partner” and added to the Partner version (see Table H2).

Table H1

*Adapted Partner Foreplay Items from SAI “Loved One” Items*

Original SAI Loved One Items	Adapted Partner Foreplay Items
1. When a loved one undresses you	1. Your partner undressed you.
2. When a loved one caresses you (other than genitals)	2. Your partner caressed you (body parts other than genitals).
3. When a loved one kisses you passionately	3. Your partner kissed you.*
4. When a loved one kisses you with an exploring tongue	4. Your partner kissed you with his/her tongue (French kissing).*
5. When a loved one touches or kisses your nipples	5. Your partner touched your nipple(s).*
6. When a loved one fondles your breasts with mouth and tongue	6. Your partner kissed your nipple(s).*
7. When a loved one fondles your breasts with his/her hands	7. Your partner fondled your breast(s) with his/her mouth and tongue.*
8. When you are touched or kissed on the inner thighs by a loved one	8. Your partner fondled your breast(s) with his/her hands.*
9. When a loved one stimulates your genitals with mouth and tongue	9. Your partner touched your inner thigh(s).*
10. When a loved one stimulates your genitals with his/her finger	10. Your partner kissed your inner thigh(s).*
11. When you see a strip show	11. Your partner stimulated your genitals with his/her mouth and tongue.
	12. Your partner stimulated your genitals with his/her finger(s).
	13. Your partner performed a strip show.*

*Note.* Asterisks indicate that these items were rephrased and added to the Self versions of the foreplay behaviour measure.

Table H2

*Adapted Self Foreplay Items from SAI “You” Items*

Original SAI Self Items	Adapted Self Foreplay Items
1. When you undress a loved one	1. You undressed your partner.
2. When you caress a loved one (other than genitals)	2. You caressed your partner (body parts other than genitals).
3. When you stimulate your partner’s genitals with your mouth and tongue	3. You stimulated your partner’s genitals with your mouth and tongue.
4. When you caress a loved one’s genitals with your fingers	4. You simulated your partner’s genitals with your finger(s).
5. When you masturbate	5. You masturbated.*
6. When you read a pornographic or “dirty” story	6. You watched pornographic material with your partner.*
7. When you see pornographic pictures or slides	
8. When you read suggestive or pornographic poetry	
9. When you see a pornographic movie (stag film)	

*Note.* Asterisks indicate that these items were rephrased and added to the Partner versions of the foreplay behaviour measure.

*Appendix I*  
Study 1 Factor Analyses of the Sexual Behaviour Scales

Table II  
*Factor Loadings for Exploratory Factor Analysis with Varimax Rotation of the Last Sexual Encounter Self Foreplay Scale*

Scale Items	Breast and Thigh Stimulation	Seduction and Genital Stimulation	Sexual Play and Erotica
You touched your partner's nipple(s).	<b>.835</b>	.179	.047
You kissed your partner's nipple(s).	<b>.897</b>	.112	.116
You fondled your partner's breast(s) with your mouth and tongue.	<b>.920</b>	.023	.125
You fondled your partner's breast(s) with your hand(s).	<b>.910</b>	-.008	.105
You touched your partner's inner thigh(s).	<b>.501</b>	<b>.456</b>	.084
You kissed your partner's inner thigh(s).	<b>.492</b>	<b>.402</b>	.272
You undressed your partner.	.125	<b>.436</b>	.138
You caressed your partner (body parts other than the genitals).	.123	<b>.694</b>	-.064
You kissed your partner.	-.022	<b>.712</b>	-.282
You kissed your partner with your tongue (French kissing).	-.013	<b>.698</b>	-.187
You stimulated your partner's genitals with your mouth and tongue.	-.022	<b>.546</b>	.232
You stimulated your partner's genitals with your finger(s).	.162	<b>.449</b>	.151
You caressed yourself (body parts other than the genitals).	.044	<b>.411</b>	<b>.470</b>
You stimulated your partner's genitals with a sex toy.	.253	-.115	<b>.627</b>
You masturbated.	.154	.139	<b>.577</b>
You presented yourself in sexy clothes/lingerie.	-.207	.378	<b>.528</b>
You performed a strip show.	-.068	.191	<b>.689</b>
You role-played with your partner.	.030	-.040	<b>.670</b>
You watched pornographic material with your partner.	.149	-.070	<b>.646</b>
You undressed yourself.	.104	-.016	.173
You massaged your partner.	.229	.355	.265

*Note.*  $n = 439$ . Factor loadings  $\geq .400$  are in boldface.

Table I2  
*Factor Loadings for Exploratory Factor Analysis with Varimax Rotation of the General Sexual Experience Self Foreplay Scale*

Scale Items	Breast and Thigh Stimulation	Seduction and Genital Stimulation	Sexual Play and Erotica
You touch your partner's nipple(s).	<b>.837</b>	.077	.020
You kiss your partner's nipple(s).	<b>.906</b>	.060	.068
You fondle your partner's breast(s) with your mouth and tongue.	<b>.936</b>	.028	.077
You fondle your partner's breast(s) with your hands.	<b>.926</b>	-.016	.074
You touch your partner's inner thigh(s).	<b>.540</b>	<b>.484</b>	.102
You kiss your partner's inner thigh(s).	<b>.582</b>	.398	.225
You undress your partner.	.131	<b>.579</b>	.187
You caress your partner (body parts other than the genitals).	.147	<b>.739</b>	.074
You kiss your partner.	-.053	<b>.784</b>	-.218
You kiss your partner with your tongue (French kissing).	-.003	<b>.719</b>	-.163
You stimulate your partner's genitals with your mouth and tongue.	-.003	<b>.680</b>	.153
You stimulate your partner's genitals with your finger(s).	.222	<b>.539</b>	.116
You caress yourself (body parts other than the genitals).	.117	.328	<b>.578</b>
You stimulate your partner's genitals with a sex toy.	.314	-.066	<b>.618</b>
You masturbate.	.119	.104	<b>.668</b>
You present yourself in sexy clothes/lingerie.	-.242	.301	<b>.613</b>
You perform a strip show.	-.018	.081	<b>.791</b>
You role-play with your partner.	.097	-.070	<b>.740</b>
You watch pornographic material with your partner.	.152	-.168	<b>.715</b>
You undress yourself.	.174	.118	.123
You massage your partner.	.347	.358	.313

*Note.*  $n = 437$ . Factor loadings  $\geq .400$  are in boldface.

Table I3  
*Factor Loadings for Exploratory Factor Analysis with Varimax Rotation of the Last Sexual Encounter  
 Partner Foreplay Scale*

Scale Items	Breast Stimulation	Seduction and Genital Stimulation	Sexual Play and Erotica
Your partner touched your nipple(s).	<b>.837</b>	.310	-.029
Your partner kissed your nipple(s).	<b>.869</b>	.260	.015
Your partner fondled your breast(s) with his/her mouth and tongue.	<b>.899</b>	.155	.055
Your partner fondled your breast(s) with your hands.	<b>.869</b>	.219	.008
Your partner undressed you.	.223	<b>.472</b>	-.052
Your partner massaged you.	.126	<b>.438</b>	.338
Your partner caressed you (body parts other than the genitals).	.271	<b>.680</b>	-.086
Your partner kissed you.	.081	<b>.656</b>	<b>-.409</b>
Your partner kissed you with his/her tongue (French kissing).	.117	<b>.666</b>	-.186
Your partner touched your inner thigh(s).	<b>.417</b>	<b>.601</b>	.097
Your partner kissed your inner thigh(s).	.310	<b>.556</b>	.358
Your partner stimulated your genitals with his/her mouth and tongue.	.102	<b>.559</b>	.238
Your partner stimulated your genitals with his/her finger(s).	.131	<b>.626</b>	-.027
Your partner stimulated your genitals with a sex toy.	.107	-.025	<b>.703</b>
Your partner masturbated.	.059	.074	<b>.636</b>
Your partner presented him-/her-self in sexy clothes/lingerie.	-.275	.065	<b>.653</b>
Your partner performed a strip show.	-.044	-.091	<b>.806</b>
Your partner role-played with you.	.036	-.059	<b>.730</b>
Your partner watched pornographic material with you.	.014	-.058	<b>.744</b>
You undressed yourself.	.045	.045	-.033
You caressed yourself (body parts other than the genitals).	-.094	.399	.391

*Note.*  $n = 443$ . Factor loadings  $\geq .400$  are in boldface.

Table I4  
*Factor Loadings for Exploratory Factor Analysis with Varimax Rotation of the General Sexual Experience Partner Foreplay Scale*

Scale Items	Breast Stimulation	Seduction and Genital Stimulation	Sexual Play and Erotica
Your partner touches your nipple(s).	<b>.837</b>	.399	-.060
Your partner kisses your nipple(s).	<b>.856</b>	.351	-.015
Your partner fondles your breast(s) with his/her mouth and tongue.	<b>.906</b>	.263	-.007
Your partner fondles your breast(s) with his/her hands.	<b>.886</b>	.308	-.092
Your partner undresses you.	.253	<b>.599</b>	.043
Your partner massages you.	.055	<b>.484</b>	.341
Your partner caresses you (body parts other than the genitals).	.284	<b>.718</b>	-.062
Your partner kisses you.	.116	<b>.735</b>	-.329
Your partner kisses you with his/her tongue (French kissing).	.128	<b>.708</b>	-.197
Your partner touches your inner thigh(s).	.327	<b>.687</b>	.121
Your partner kisses your inner thigh(s).	.337	<b>.593</b>	.267
Your partner stimulates your genitals with his/her mouth and tongue.	.125	<b>.640</b>	.188
Your partner stimulates your genitals with his/her finger(s).	.335	<b>.658</b>	-.046
Your partner stimulates your genitals with a sex toy.	.177	-.052	<b>.696</b>
Your partner masturbates.	.024	.055	<b>.615</b>
Your partner presents him-/her-self in sexy clothes/lingerie.	-.345	.035	<b>.724</b>
Your partner performs a strip show.	-.118	-.029	<b>.788</b>
Your partner role-plays with you.	-.002	-.050	<b>.763</b>
Your partner watches pornographic material with you.	.104	-.075	<b>.774</b>
You undress yourself.	.196	.071	.182
You caress yourself (body parts other than the genitals).	-.066	.340	<b>.504</b>

Note.  $n = 429$ . Factor loadings  $\geq .400$  are in boldface.

Table I5  
*Factor Loadings for Exploratory Factor Analysis with Varimax Rotation of the Last Sexual Encounter Sexual Intercourse Scale*

Scale Items	Anal Intercourse	Eye Contact and Kissing	Penile-Vaginal Intercourse
Anal intercourse, you superior (on top) with your partner	<b>.826</b>	-.004	.013
Anal intercourse, face-to-face with your partner	<b>.922</b>	-.075	-.023
Anal intercourse, entered from rear with your partner	<b>.837</b>	-.093	.073
Anal intercourse, on the side with your partner	<b>.870</b>	-.059	.080
Anal intercourse, sitting with your partner	<b>.869</b>	-.158	.035
Anal intercourse, standing with your partner	<b>.751</b>	-.125	.154
Your partner gave you eye contact.	-.071	<b>.760</b>	.095
You gave your partner eye contact.	-.056	<b>.774</b>	.100
Your partner kissed you.	-.204	<b>.877</b>	-.008
You kissed your partner.	-.136	<b>.892</b>	.004
Your partner kissed you with his/her tongue.	-.009	<b>.835</b>	.063
You kissed your partner with your tongue.	-.013	<b>.835</b>	.062
Penile-vaginal intercourse, you superior (on top) with your partner	-.182	.145	<b>.575</b>
Penile-vaginal intercourse, entered from rear with your partner	-.024	.084	<b>.666</b>
Penile-vaginal intercourse, on the side with your partner	.092	-.017	<b>.696</b>
Penile-vaginal intercourse, sitting with your partner	.173	.096	<b>.664</b>
Penile-vaginal intercourse, standing with your partner	.262	-.055	<b>.641</b>
Penile-vaginal intercourse, face-to-face with your partner	-.317	.361	.319

Note.  $n = 450$ . Factor loadings  $\geq .400$  are in boldface.

Table I6  
*Factor Loadings for Exploratory Factor Analysis with Varimax Rotation of the General Sexual Experience Sexual Intercourse Scale*

Scale Items	Anal Intercourse	Eye Contact and Kissing	Penile-Vaginal Intercourse
Anal intercourse, you superior (on top) with your partner	<b>.779</b>	-.034	.002
Anal intercourse, face-to-face with your partner	<b>.929</b>	-.071	-.063
Anal intercourse, entered from rear with your partner	<b>.857</b>	-.044	.045
Anal intercourse, on the side with your partner	<b>.916</b>	-.089	.080
Anal intercourse, sitting with your partner	<b>.927</b>	-.107	-.008
Anal intercourse, standing with your partner	<b>.889</b>	-.123	.052
Your partner gives you eye contact.	-.063	<b>.801</b>	.158
You give your partner eye contact.	-.038	<b>.837</b>	.149
Your partner kisses you.	-.178	<b>.912</b>	.095
You kiss your partner.	-.142	<b>.917</b>	.104
Your partner kisses you with his/her tongue.	-.024	<b>.851</b>	.097
You kiss your partner with your tongue.	.002	<b>.855</b>	.102
Penile-vaginal intercourse, you superior (on top) with your partner	-.210	.280	<b>.565</b>
Penile-vaginal intercourse, entered from rear with your partner	-.081	.164	<b>.767</b>
Penile-vaginal intercourse, on the side with your partner	.072	.038	<b>.801</b>
Penile-vaginal intercourse, sitting with your partner	.105	.110	<b>.774</b>
Penile-vaginal intercourse, standing with your partner	.211	.045	<b>.769</b>
Penile-vaginal intercourse, face-to-face with your partner	-.356	<b>.447</b>	<b>.439</b>

Note.  $n = 445$ . Factor loadings  $\geq .400$  are in boldface.

Table I7  
*Factor Loadings for Exploratory Factor Analysis with Varimax Rotation of the Last Sexual Encounter Self Afterplay Scale*

Scale Items	Extrinsic Rewards and Body Worries	Bonding
I requested favours or asked for things from my partner.	<b>.462</b>	.363
I rolled over and then fell asleep.	<b>.587</b>	.034
I left or had my partner leave and not sleep next to me.	<b>.607</b>	-.209
I smoked, drank alcohol, or took other chemical substances.	<b>.627</b>	.005
I ate or snacked on some food.	<b>.483</b>	.192
I cleaned/showered immediately following intercourse.	<b>.471</b>	.118
I covered my body and was modest about my body around my partner.	<b>.496</b>	.046
I thought about the likelihood that pregnancy may have resulted.	<b>.615</b>	.085
I thought about the likelihood that sexually transmitted infections (STIs) may have resulted.	<b>.691</b>	-.061
I had an intimate talk with my partner.	-.003	<b>.720</b>
I lightened the mood with jokes.	.124	<b>.562</b>
I continued cuddling/caressing with my partner.	-.264	<b>.734</b>
I cuddled and then fell asleep.	.025	<b>.410</b>
I remained awake and stayed with my partner.	-.086	<b>.606</b>
I continued to engage in sexual activity so as to increase the likelihood that sex would happen again.	<b>.409</b>	<b>.508</b>
I continued to remain in penetration with my partner after orgasm.	.302	.361
I engaged in oral sex.	<b>.496</b>	<b>.423</b>
I used the bathroom to urinate shortly after having intercourse.	.153	.314

*Note.*  $n = 455$ . Factor loadings  $\geq .400$  are in boldface.

Table I8  
*Factor Loadings for Exploratory Factor Analysis with Varimax Rotation of the General Sexual Experience Self Afterplay Scale*

Scale Items	Extrinsic Rewards and Body Worries	Bonding
I feel it was a good time to request favours or ask for things from my partner.	<b>.592</b>	.299
I prefer to roll over and then fall asleep.	<b>.577</b>	.015
I prefer to leave or have my partner leave and not sleep next to me.	<b>.743</b>	-.185
I prefer to smoke, drink alcohol, or take other chemical substances.	<b>.713</b>	-.025
I like to eat or snack on some food.	<b>.543</b>	.184
I feel the need to clean/shower immediately following intercourse.	<b>.554</b>	.095
I have a tendency to cover my body and am modest about my body around my partner.	<b>.516</b>	.084
I think about the likelihood that pregnancy may have resulted.	<b>.628</b>	.104
I think about the likelihood that sexually transmitted infections (STIs) may have resulted.	<b>.727</b>	.035
I prefer to have an intimate talk with my partner.	.013	<b>.695</b>
I prefer to lighten the mood with jokes.	.221	<b>.421</b>
I prefer to continue cuddling/caressing with my partner.	-.265	<b>.812</b>
I prefer to cuddle and then fall asleep.	-.111	<b>.651</b>
I prefer to remain awake and stay with my partner.	.005	<b>.599</b>
I prefer to continue to engage in sexual activity so as to increase the likelihood that sex will happen again.	.360	<b>.479</b>
I prefer to continue to remain in penetration with my partner after orgasm.	.342	<b>.457</b>
I prefer to engage in oral sex.	<b>.424</b>	<b>.475</b>
I feel the need to use the bathroom to urinate shortly after having intercourse.	.204	.259

*Note.*  $n = 454$ . Factor loadings  $\geq .400$  are in boldface.

Table I9  
*Factor Loadings for Exploratory Factor Analysis with Varimax Rotation of the Last Sexual Encounter  
 Partner Afterplay Scale*

Scale Items	Extrinsic Rewards and Body Worries	Bonding
My partner requested favours or asked for things from me.	<b>.503</b>	.347
My partner rolled over and then fell asleep.	<b>.539</b>	.052
My partner left or had me leave and not sleep next to him/her.	<b>.562</b>	-.202
My partner smoked, drank alcohol, or took other chemical substances.	<b>.615</b>	.041
My partner ate or snacked on some food.	<b>.514</b>	.053
My partner cleaned/showered immediately following intercourse.	<b>.487</b>	.086
My partner covered his/her body and was modest about his/her body around me.	<b>.612</b>	-.069
My partner thought about the likelihood that pregnancy may have resulted.	<b>.675</b>	.206
My partner thought about the likelihood that sexually transmitted infections (STIs) may have resulted.	<b>.723</b>	.111
My partner had an intimate talk with me.	-.039	<b>.712</b>
My partner lightened the mood with jokes.	.117	<b>.492</b>
My partner continued cuddling/caressing with me.	-.327	<b>.722</b>
My partner cuddled and then fell asleep.	-.024	<b>.486</b>
My partner remained awake and stayed with me.	-.072	<b>.449</b>
My partner continued to remain in penetration with me after orgasm.	.234	<b>.424</b>
My partner continued to engage in sexual activity so as to increase the likelihood that sex would happen again.	.320	<b>.574</b>
My partner engaged in oral sex.	.341	<b>.560</b>
My partner used the bathroom to urinate shortly after having intercourse.	.229	.247

*Note.*  $n = 449$ . Factor loadings  $\geq .400$  are in boldface.

Table I10  
*Factor Loadings for Exploratory Factor Analysis with Varimax Rotation of the General Sexual Experience Partner Afterplay Scale*

Scale Items	Extrinsic Rewards and Body Worries	Bonding
My partner feels it was a good time to request favours or ask things from me.	<b>.593</b>	.286
My partner prefers to roll over and then fall asleep.	<b>.609</b>	-.022
My partner prefers to leave or have me leave and not sleep next to him/her.	<b>.696</b>	-.144
My partner prefers to smoke, drink alcohol, or take other chemical substances.	<b>.620</b>	.014
My partner likes to eat or snack on some food.	<b>.544</b>	.049
My partner feels the need to clean/shower immediately following intercourse.	<b>.581</b>	.063
My partner has the tendency to cover his/her body and be modest about his/her body around me.	<b>.658</b>	-.004
My partner thinks about the likelihood that pregnancy may have resulted.	<b>.718</b>	.136
My partner thinks about the likelihood that sexually transmitted infections (STIs) may have resulted.	<b>.772</b>	.057
My partner prefers to have an intimate talk with me.	.040	<b>.678</b>
My partner prefers to lighten the mood with jokes.	.181	<b>.505</b>
My partner prefers to continue cuddling/caressing with me.	-.211	<b>.796</b>
My partner prefers to cuddle and then fall asleep.	-.021	<b>.581</b>
My partner prefers to remain awake and stay with me.	-.039	<b>.682</b>
My partner prefers to continue to remain in penetration with me after orgasm.	.362	<b>.443</b>
My partner continues to engage in sexual activity so as to increase the likelihood that sex will happen again.	<b>.425</b>	<b>.483</b>
My partner prefers to engage in oral sex.	<b>.474</b>	<b>.445</b>
My partner feels the need to use the bathroom to urinate shortly after having intercourse.	.318	.172

*Note.*  $n = 455$ . Factor loadings  $\geq .400$  are in boldface.

*Appendix J*

## Study 2 Recruitment SONA Advertisement

<b>Study Name</b>	(COUPLES Only In-Lab Study) Kiss and Tell: Associations between attachment and sex
<b>Abstract</b>	This lab study is for couples only in Peterborough. It is okay, if your partner is not a Trent student. Email Veronica Lai at <a href="mailto:hayyuilai@trentu.ca">hayyuilai@trentu.ca</a> to set up an appointment or sign up on your own for a time slot.
<b>Description</b>	The purpose of this research: Most adults in their relationships desire closeness with their partners and they act in ways to increase intimacy with their partners. An individual can be emotionally intimate with a partner by confiding and seeking emotional support and be physically intimate by maintaining close physical contact. For some people, intimacy can be achieved through sex, as sex is often a large part of adult relationships. If someone is sexually involved with a person over time, an emotional and physical connection to that person may develop. The purpose of this study is to examine whether the way individuals behave to gain intimacy relates to behaviours during a sexual encounter (foreplay, intercourse, and afterplay). For instance, we are interested in whether the behaviours during an encounter can increase or decrease sexual intimacy. You can sign up for a time slot on your own. If you do, you will be contacted for a telephone screening process. Or you can email Veronica Lai at <a href="mailto:hayyuilai@trentu.ca">hayyuilai@trentu.ca</a> to set up an appointment.
<b>Eligibility Requirements</b>	You must be in a romantic relationship for at least one year and sexually active (engaging in regular sexual intercourse) to participate. Your partner does not need to be a Trent student.
<b>Duration</b>	120 minutes
<b>Preparation</b>	Please email Veronica Lai at <a href="mailto:hayyuilai@trentu.ca">hayyuilai@trentu.ca</a> if you would like to set up an appointment. OR you can sign up for a time slot on your own. If you do, you will be contacted for a telephone screening process.
<b>Credits</b>	2 Credits
<b>Researcher</b>	Hay-Yui Veronica Lai Email: <a href="mailto:hayyuilai@trentu.ca">hayyuilai@trentu.ca</a>
<b>Principal Investigator</b>	Elaine Scharfe
<b>Deadlines</b>	Sign-Up: 36 hour(s) before the appointment Cancellation: 24 hour(s) before the appointment (deadlines that occur on a Saturday or Sunday will be moved back to Friday)

*Appendix K*  
Study 2 Recruitment Invitation E-mail

**Version A – Email to Study 1 Participants**

Dear student,

Last semester you completed an online study called "Kiss and Tell: Exploring the association between attachment representations and sexual encounters". At that time you reported that you were in a romantic relationship of 12 months or longer. This semester, I am running a lab based study for couples and I wanted to let you know that you and your partner can participate in this study. Below I have pasted a copy of the consent form – you will see that couples will come to the lab and complete the surveys – you will both be in separate rooms when you complete the surveys. When you have completed the surveys you and your partner will participate in a joint drawing task. The session takes about 2 hours and approximately 20 minutes of the 2 hour session and is videotaped – this includes a few minutes at the beginning of the lab session and the joint drawing task. There are sessions all week including evenings and weekends and we can accommodate your schedules. Let me know if you would like more information.

Veronica

**Version B – Email to Potential Study 2 Participants (Non-Study 1 Participants)**

Dear student,

You have complete the SONA prescreen and given permission for researchers to contact you about other research studies. When you completed the prescreen, you reported that you were in a romantic relationship of 12 months or longer. This semester, I am running a lab based study for couples and I wanted to let you know that you and your partner can participate in this study. Below I have pasted a copy of the consent form – you will see that couples will come to the lab and in separate rooms you will each complete a survey which includes questions your general sexual health/habits and desires, your feelings about your relationship with your partner; and your partner's behaviours as well as your behaviours during foreplay, sexual intercourse, and afterplay based on personal experience. The questions are quite detailed and personal about your sex life. When you have completed the surveys you and your partner will participate in a joint drawing task. The session takes about 2 hours and approximately 20 minutes of the 2 hour session and is videotaped – this includes a few minutes at the beginning of the lab session and the joint drawing task. There are sessions all week including evenings and weekends and we can accommodate your schedules. Let me know if you would like more information.

Veronica

Appendix L  
Study 2 Recruitment Poster



## Kiss & Tell A Study For Couples

We are actively recruiting couples to better understand how our view of relationships influences sexual behaviours.

### Eligibility to Participate:

- ♦ **Be in a sexually active relationship with your partner**

Your participation is voluntary. You will complete questionnaires and a drawing task with your partner during a 2-hour session. This study takes place in a psychology research lab.

**For more information or to refer someone, please contact Veronica Lai at [hayyulai@trentu.ca](mailto:hayyulai@trentu.ca).**



This project is being conducted by Veronica Lai (Student Principal Investigator) and Dr. Elaine Scharfe (Faculty Advisor) at Trent University and has been approved by the Trent University Research Ethics Board (REB).

Veronica Lai  
[hayyulai@trentu.ca](mailto:hayyulai@trentu.ca)

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[hayyulai@trentu.ca](mailto:hayyulai@trentu.ca)

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[hayyulai@trentu.ca](mailto:hayyulai@trentu.ca)

*Appendix M*  
Study 2 Recruitment Arthur Listing

Kiss & Tell: A Study for Couples

We are recruiting sexually active couples for a study to understand how our view of relationships influences sexual behaviours.

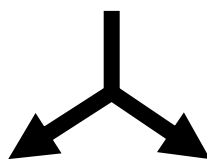
Your participation is voluntary. You will complete questionnaires and a drawing task with your partner during a 2-hour session held in a psychology research lab.

For more information, please contact Veronica at [hayyuilai@trentu.ca](mailto:hayyuilai@trentu.ca).

*Appendix N*  
Study 2 Telephone Screening Process

“Before you and your partner can come in for the study at the lab, I will need to ask you a few quick questions to determine your eligibility to participate. Is that okay?”

1. Are you currently in a romantic relationship?
2. How long have you been in a relationship?
3. Are you sexually active with your partner?
4. Where does your partner live?
5. Do you take any courses on the Symons campus at Trent University?
6. Are you currently taking a psychology course?
7. How did you learn of the study?



If the respondent answered:

- “yes” to Question #1,
  - “one year or more” to Question #2 and
  - “yes” to Question #3,
- Then he/she is eligible to participate.



“Thank you for answering these questions. Based on your answers, you qualify to participate in the study.”

A study session was scheduled.

If the respondent answered:

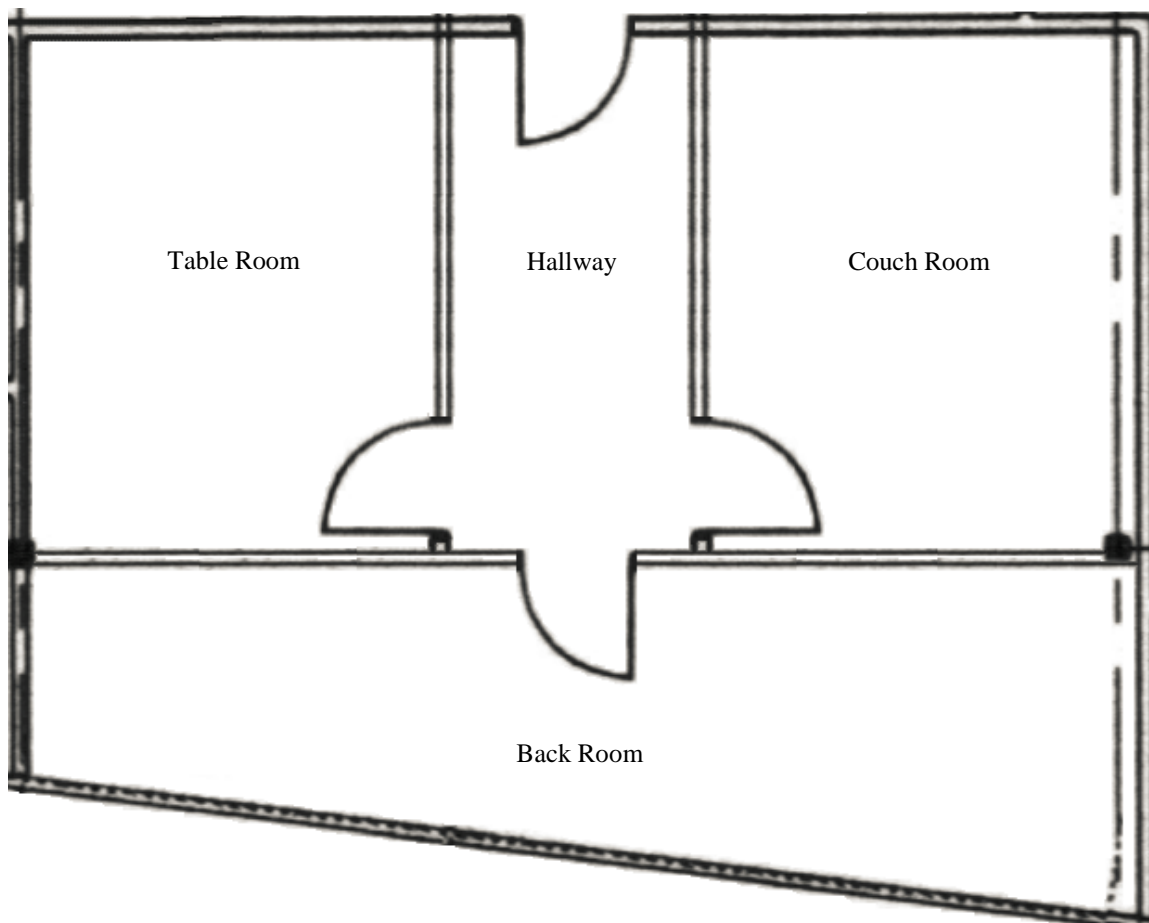
- “no” to Question #1 and/or
  - “less than one year” to Question #2 and/or
  - “no” to Question #3,
- Then he/she is not eligible to participate.



“Thank you for answering these questions. Based on your answers, unfortunately you do not qualify for the study. I am sorry but you and your partner cannot participate in the study. You do not meet certain criteria to participate.”

*Note.* Respondents were not informed of the specific reason(s) why he/she was not eligible for the study.

*Appendix O*  
Study 2 Laboratory Layout



*Appendix P*  
Study 2 Informed Consent Form

**Title:** Kiss and Tell: Exploring the association between attachment representation and the sexual encounter in couples

**Student Investigator**

Hay-Yui Veronica Lai, M.A. Candidate, Psychology, [hayyuilai@trentu.ca](mailto:hayyuilai@trentu.ca), OC 136

**Faculty Advisor**

Elaine Scharfe, PhD., Department of Psychology, 705-748-1011 ext. 7354, LHS C130

**The purpose of this research:**

Most adults in their relationships desire closeness with their partners and they act in ways to increase intimacy with their partners. An individual can be emotionally intimate with a partner by confiding and seeking emotional support and be physically intimate by maintaining close physical contact. For some people, intimacy can be achieved through sex, as sex is often a large part of adult relationships. If someone is sexually involved with a person over time, an emotional and physical connection to that person may develop. The purpose of this study is to examine whether the way individuals behave to gain intimacy relates to behaviours during a sexual encounter (foreplay, intercourse, and afterplay). For instance, we are interested in whether the behaviours during an encounter can increase or decrease sexual intimacy.

**Procedures:**

“If I choose to participate in this study, I will be asked to complete a number of questionnaires including questions about demographic information; my general sexual health/habits and desires; my feelings about my relationship with my partner; and my partner’s behaviours as well as my behaviours during foreplay, sexual intercourse, and afterplay based on personal experience. I understand that I may review these questionnaires before I decide to participate. I will also be asked to complete a joint drawing task with my partner. I understand that approximately 20 minutes of the 2 hour session and will be videotaped – this includes a few minutes at the beginning of the lab session and the joint drawing task. I understand that it will take approximately 2 hours to complete the questionnaires and drawing task.

**Discomfort, Risks, and Benefits:**

I understand that there are no significant risks or discomforts associated with participating in this study. I understand, however, that some questions may trigger feelings and memories of both pleasant and unpleasant sexual experiences, which may be a benefit or a risk depending on the nature of my relationship. I understand that there are detailed and personal questions about my sex life. I also understand that I can refuse to answer any question(s) and have the right to withdraw from the study at any time. I understand that by signing this consent form and completing the questionnaires, drawing task and lab session that I will be awarded 2 credits towards my course grade.

**Confidentiality:**

I understand that my responses will be completely confidential and that I can skip any question(s) that I am not comfortable answering. I will be given an ID number and that number will be recorded on all data – my name will never be used on the data. A computer file containing participant names and corresponding ID numbers will be used and will be password-protected. All data from the questionnaires will also be stored in a computer file form using the ID number for identification purposes. The written consent form, paper questionnaires, and drawing will be stored in a locked file cabinet in a locked research lab. The data will be kept for at least five years after publication of the results. All of the data will be used for research and teaching purposes by H.Y. Veronica Lai and Dr. Elaine Scharfe.

**Other:**

Participation in this study is completely voluntary. I can refuse to answer any question(s) or stop participating at any time and there will be no negative consequences to me whatsoever. If I stop taking part in the study, the information I have given up to the time will be kept unless I ask that it be discarded. If I decide not to participate and I do not want the information collected to be used, I will tell the researcher and my study responses will be discarded.

If I have any questions about this study, I can take this opportunity to ask questions now, so that my concerns are addressed to my satisfaction before I agree to participate. I agree to participate in this study and I understand that by signing below I am giving informed consent. If I would like a summary of the results, I know that I must email H.Y. Veronica Lai, [hayyuilai@trentu.ca](mailto:hayyuilai@trentu.ca) or Dr. Elaine Scharfe, [escharfe@trentu.ca](mailto:escharfe@trentu.ca) to let them know that I would like to receive this summary when the study is completed (December 2014). I understand that if I would like clarification regarding any part of this research, I can contact H.Y. Veronica Lai or Dr. Elaine Scharfe, and if I have any questions about the ethics approval or considerations, I may contact the Trent Research Ethics Board by either phoning Karen Mauro at (705) 748-1011 ext. 7896 or e-mailing her at [kmauro@trentu.ca](mailto:kmauro@trentu.ca).

I have had the opportunity to ask questions about this study and they have been answered to my satisfaction. I agree to participate in this study and I understand that at the end of the study (December 2014) a summary of the results will be available to all participants and this will be emailed to me if I provide my email address below or contact the researchers by email at a later date. I agree that by signing this form, I am giving my written permission for the researchers to display the drawings that I have created during this laboratory session. Participants' name will not be written anywhere on the drawings in order to maintain confidentiality. After I sign this consent form, I understand that I will receive an unsigned copy of the consent form for my records."

**Participant**

\_\_\_\_\_  
Name (Please print.)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**Email Address:** \_\_\_\_\_

**Investigator**

\_\_\_\_\_  
Name (Please print.)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

*Appendix Q*  
Study 2 Experiences in Close Relationships Scale – Revised

Please read each of the following statements and rate the extent to which it describes your feelings about your current romantic relationship on the 7-point scale.

- | 1                     | 2 | 3 | 4                   | 5 | 6 | 7   |
|-----------------------|---|---|---------------------|---|---|---|
| Not at all<br>like me |   |   | Somewhat<br>like me |   |   | Very much<br>like me  |
| ___                   |   |   |                     |   |   | 1. I'm afraid that I will lose my partner's love.   |
| ___                   |   |   |                     |   |   | 2. I often worry that my partner will not want to stay with me.                                     |
| ___                   |   |   |                     |   |   | 3. I often worry that my partner doesn't really love me.  |
| ___                   |   |   |                     |   |   | 4. I worry that romantic partners won't care about me as much as I care about them.                 |
| ___                   |   |   |                     |   |   | 5. I often wish that my partner's feelings for me were as strong as my feelings for him or her.     |
| ___                   |   |   |                     |   |   | 6. I worry a lot about my relationships.  |
| ___                   |   |   |                     |   |   | 7. When my partner is out of sight, I worry that he or she might become interested in someone else. |
| ___                   |   |   |                     |   |   | 8. When I show my feelings for romantic partners, I'm afraid they will not feel the same about me.  |
| ___                   |   |   |                     |   |   | 9. I rarely worry about my partner leaving me.  |
| ___                   |   |   |                     |   |   | 10. My romantic partner makes me doubt myself.  |
| ___                   |   |   |                     |   |   | 11. I do not often worry about being abandoned.   |
| ___                   |   |   |                     |   |   | 12. I find that my partner(s) don't want to get as close as I would like.                           |
| ___                   |   |   |                     |   |   | 13. Sometimes romantic partners change their feelings about me for no apparent reason.              |
| ___                   |   |   |                     |   |   | 14. My desire to be very close sometimes scares people away.  |
| ___                   |   |   |                     |   |   | 15. I'm afraid that once a romantic partner gets to know me, he or she won't like who I really am.  |
| ___                   |   |   |                     |   |   | 16. It makes me mad that I don't get the affection and support I need from my partner.              |
| ___                   |   |   |                     |   |   | 17. I worry that I won't measure up to other people.  |
| ___                   |   |   |                     |   |   | 18. My partner only seems to notice me when I'm angry.  |
| ___                   |   |   |                     |   |   | 19. I prefer not to show a partner how I feel deep down.  |
| ___                   |   |   |                     |   |   | 20. I feel comfortable sharing my private thoughts and feelings with my partner.                    |
| ___                   |   |   |                     |   |   | 21. I find it difficult to allow myself to depend on my romantic partner.                           |
| ___                   |   |   |                     |   |   | 22. I am very comfortable being close to my romantic partner.                                       |
| ___                   |   |   |                     |   |   | 23. I don't feel comfortable opening up to my romantic partner.                                     |
| ___                   |   |   |                     |   |   | 24. I prefer not to be too close to my romantic partner.  |
| ___                   |   |   |                     |   |   | 25. I get uncomfortable when a romantic partner wants to be very close.                             |
| ___                   |   |   |                     |   |   | 26. I find it relatively easy to get close to my partner.   |
| ___                   |   |   |                     |   |   | 27. It's not difficult for me to get close to my partner.   |
| ___                   |   |   |                     |   |   | 28. I usually discuss my problems and concerns with my partner.                                     |
| ___                   |   |   |                     |   |   | 29. It helps to turn to my romantic partner in times of need.                                       |
| ___                   |   |   |                     |   |   | 30. I tell my partner just about everything.  |
| ___                   |   |   |                     |   |   | 31. I talk things over with my partner.   |
| ___                   |   |   |                     |   |   | 32. I am nervous when partners get too close to me.   |
| ___                   |   |   |                     |   |   | 33. I feel comfortable depending on my romantic partner.  |
| ___                   |   |   |                     |   |   | 34. I find it easy to depend on my romantic partner.  |
| ___                   |   |   |                     |   |   | 35. It's easy for me to be affectionate with my partner.  |
| ___                   |   |   |                     |   |   | 36. My partner really understands me and my needs.  |

*Appendix R*  
Study 2 Structural Equation Modelling Model Input Matrix

	FSelfMod	FOthrMod	FECRSelf	FECROthr	FLFoSatis	FLAfSatis	MSelfMod	MOthrMod	MECRSelf	MECROthr	MLFoSatis	MLAfSatis
FSelfMod	1.000	0.503	0.674	0.569	0.134	0.315	0.058	0.179	0.149	0.234	0.383	0.140
FOthrMod	0.503	1.000	0.470	0.856	0.204	0.244	0.202	-0.007	0.268	0.149	0.192	0.170
FECRSelf	0.674	0.470	1.000	0.606	0.151	0.242	0.020	0.329	0.102	0.311	0.220	0.267
FECROthr	0.569	0.856	0.606	1.000	0.216	0.223	0.010	0.041	0.115	0.199	0.311	0.305
FLFoSatis	0.134	0.204	0.151	0.216	1.000	0.326	0.081	-0.070	0.054	0.067	0.050	0.165
FLAfSatis	0.315	0.244	0.242	0.223	0.326	1.000	-0.014	0.105	-0.016	0.055	-0.007	0.122
MSelfMod	0.058	0.202	0.020	0.010	0.081	-0.014	1.000	0.119	0.823	0.173	0.110	0.126
MOthrMod	0.179	-0.007	0.329	0.041	-0.070	0.105	0.119	1.000	0.210	0.828	0.269	0.130
MECRSelf	0.149	0.268	0.102	0.115	0.054	-0.016	0.823	0.210	1.000	0.285	0.127	0.160
MECROthr	0.234	0.149	0.311	0.199	0.067	0.055	0.173	0.828	0.285	1.000	0.370	0.189
MLFoSatis	0.383	0.192	0.220	0.311	0.050	-0.007	0.110	0.269	0.127	0.370	1.000	0.580
MLAfSatis	0.140	0.170	0.267	0.305	0.165	0.122	0.126	0.130	0.160	0.189	0.580	1.000
<i>M</i>	1.174	4.431	5.008	6.110	5.426	5.128	2.249	3.776	5.630	5.699	4.936	5.000
<i>SD</i>	1.731	2.472	1.273	0.905	1.347	1.408	1.618	2.435	1.173	1.027	1.389	1.268

*Note.*  $n = 47$ . Variable names starting with “F” are scores of women and names with “M” are scores of men. SelfMod = T-RSQ Self-Model; OthrMod = T-RSQ Other-Model; ECRSelf = ECR-R Self-Model; ECROthr = ECR-R Other-Model; LFoSatis = Last Sexual Encounter Foreplay Satisfaction; LAfSatis = Last Sexual Encounter Afterplay Satisfaction.