

The associations between attachment, sexual motives, and sexual desire

by

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B.A., Zhejiang University of Finance & Economics, 2009
M.MFT, Abilene Christian University, 2014

AN ABSTRACT OF A DISSERTATION

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Abstract

Studying sex is relatively new in Chinese culture and little is known about Chinese couples' sexuality (Cheung et al., 2008). There is insufficient sex education in China and people with sexual dysfunctions are hesitated to seek help for sexual issues due to cultural norms (So & Cheung, 2005). Additionally, many people attribute their sexual dysfunction or problems to somatopsychic origins and use folk medicines to treat problems (So & Cheung, 2005) and few studies have focused on the mechanisms related to sexual desire for Chinese men and women (Woo et al., 2012). Our goal, therefore, is to understand psychological and relational mechanisms associated with sexual desire for Chinese adults and offer some culturally sensitive clinical suggestions to improve sexual desire treatment for Chinese couples.

We utilized 398 individuals with 166 women (age 18-50) and 232 men (age 18-70). The current study tested the direct relationships between attachment style (i.e., anxious and avoidant) and sexual desire (i.e., partner-focused and general sexual desire) and the indirect relationships via approach and avoidance sexual motivation for women and men. We also tested whether women and men are different in these associations. We found the following findings. First, attachment anxiety was negatively linked with approach sexual motivation for both groups. However, the negative link between attachment anxiety and approach sexual motivation was stronger for men ($b = -.405, p < .001, \beta = -.353$) than woman ($b = -.312, p = .020, \beta = -.280$). Second, attachment anxiety was directly and negatively linked with partner-focused sexual desire for both groups. However, the link between attachment anxiety and partner-focused sexual desire was stronger for women ($b = -.272, < .001, \beta = -.367$) than for men ($b = -.175, p < .001, \beta = -.302$). Third, approach sexual motivation had significant and positive links with partner-focused sexual desire ($b=.196, p < .001$) and general sexual desire ($b=.111, p < .001$) for both groups

equally. Fourth, attachment avoidance was positively linked with avoidance sexual motivation for both men and women ($b=.292, p < .001$), indicating that higher levels of attachment avoidance are related to higher levels of avoidance sexual motivation. Fifth, avoidance sexual motivation was related to partner-focused sexual desire ($b = -.138, p = .005, \beta = -.193$) and general sexual desire ($b = -.088, p = .058, \beta = -.158$) for women, but not men.

These results point to the importance of coping with attachment anxiety. Second, these results provide important initial evidence that approach sexual motivation is an important pathway or mediator through which attachment anxiety is associated with partner-focused and general sexual desire. Third, even though avoidance behaviors and motivations are more acceptable and common in Chinese populations, it was negatively associated with women's sexual desire. Avoidance behaviors and avoidance sexual motivations, therefore, are maladaptive at least for Chinese women in this context.

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Dedication

I dedicate this manuscript to my family, special friends and my clients. I thank my father who taught me work ethics and persistence necessary to do the Ph.D work. I thank my mother who gave me a soft heart that I use to connect with my clients and students and inspires me to love. I thank them both for supporting me unconditionally and I knew even if I failed my Ph.D, they would be there for me. I thank my sister who always supported my decisions even though my decisions meant more work and a more difficult time for her. I thank her for her big heart and love for me. I needed all of them.

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Chapter 1 - Introduction

To enjoy sex is a sexual right according to the World Health Organization (2010). However, two thirds of individuals in a Chinese study (Renaud, Byers, & Pan, 1997) reported that they had at least one sexual problem, and women reported more sexual concerns than men. For women, the most frequently experienced sexual problems were difficulties getting sexually aroused and inhibited orgasm, while for men, the most frequently experienced problems were premature orgasm and maintaining sexual excitement (Renaud et al., 1997). Wen (1995) found that one third of a sample from Taiwan reported having sex-related anxieties. Furthermore, in Mainland China, 4.5% of women and 11% of men engaged in infidelity among a sample of 3,567 people in committed relationships and sexual dissatisfaction with one's primary partner was linked with infidelity (Zhang, Parish, Huang, & Pan, 2012). Sexual dysfunction may contribute to relationship conflicts (Hassebrauck & Fehr, 2002) and unhappy partners attributed 50-70% of their relationship distress to sexual issues (McCarthy & McCarthy, 2003). On the other hand, good sex is associated with relationship stability (Sprecher & Cater, 2004) and marital satisfaction (Cao, Zhou, Fine, Xi, & Fang, 2018; Schwartz & Young, 2009); good sex is also beneficial for decreasing anxiety and depression, and improving life satisfaction (Keesling, 1999). Therefore, understanding sexual relationships is important for addressing relationship issues for Chinese couples.

Sexuality in China

Cultural values and beliefs can be important factors that influence sexuality (Haavio-Mannila & Kontula, 1997). Chinese people's views on sexuality and sexual relationship are strongly rooted in Chinese culture (So & Cheung, 2005). Ruan (1991) stated that sex for pleasure in Chinese traditional cultures (Confucian and Taoist) is viewed as detrimental to personal health

and social order. After establishing the People's Republic of China in 1949, there was repression of sexual expression in China and sex was promoted for reproduction only (Pan, 1993). Evans (1995) stated that "attention to matters of love and sex was for decades treated either as shamefully illicit or as a manifestation of bourgeois individualism and thus detrimental to collective welfare" (p. 358). Sex was not mentioned in public in the 1950s due to political and social sanctions (So & Cheung, 2005).

There were great gender differences in people's sexuality due to Chinese cultural values and norms (Parish et al., 2007). In addition to the repression of sexuality in Chinese history, Chinese culture values men's sexual pleasure more than women's (Zhou, 1993). Based on Taoist view of sexuality, sex is more male-oriented, while women are to take a passive role focused on pleasing their partner (Bullough, 1976). Women and men also have different values and knowledge about sex in China. For example, women were less likely to believe women and men should be equal in enjoying sex because women viewed their sexuality as being primarily for their partners or to bear children (Parish et al., 2007). Woo et al. (2012) found that sexual guilt is highly and negatively associated with Chinese women's sexual desire. Moreover, even in Western culture, women and men had significant differences on partner focused sex, solitary sex, sexual desire, and sexual motivation (Favez & Tissot, 2017). Therefore, we conclude that Chinese men may have higher levels of general sexual desire than women.

Sexual Desire

Sexual desire is a subjective experience of sexuality with or without sexual activity and can include sexual fantasies, feeling sexy, wanting sexual stimulation, or sexual behavioral expression such as seeking sexual stimuli (Bitzer, Giraldi, & Pfanus, 2013). When people have higher levels of sexual desire, they are more satisfied with their relationship (Brezsnyak &

Whisman, 2004) and tend to have fewer thoughts of leaving their current relationship (Regan, 2000).

Low sexual desire disorder (LSDD) is defined as the distress experienced by individuals because of deficient or absent sexual desire (Bitzer et al., 2013). LSDD is the most common sexual dysfunction affecting both women and men in the U.S. (Simons & Carey, 2001) and is also the most common sexual difficulty experienced by women in Western countries, affecting 10-20% of all adult women. Low sexual desire was associated with sexual dissatisfaction for half the women in one study and these women also perceived low sexual desire to be a problem (Fugl-Meyer & Sjogren, 1999). And yet, 70-90% of Americans who experience sexual dysfunction do not seek treatment (Shifren et al., 2009). Additionally, Chinese women report lower levels of sexual desire compared with Euro-Canadian women (Brotto, Chik, Ryder, Gorzalka, & Seal, 2005; Woo, Brotto, & Corzalka, 2012). Even though there are limited studies on sexual desire with Chinese populations, sexual desire issues may be an even bigger issue in Chinese culture due to more conservative sexual attitudes and higher levels of sexual guilt (Woo et al., 2012).

Sexual desire, or interest in sexual activity, can be focused on a specific person, such as a partner, or it can be a general desire or interest in sexual activity that is not connected to a specific person. Such a distinction has rarely been tested in the literature (for an exception, see Moyano, Vallejo-Medina, & Sierra, 2017). The importance of this distinction will be described later, but, in short, relationship dynamics could lead to a diminishment in partner focused sexual desire while the person's general level of interest in sexual activity could remain stable. However, few studies have tested the factors related with partner focused sexual desire and general sexual desire.

Many scholars have recognized that only treating the biological components of sexual problems are not effective for long term success (Johnson & Zuccarini, 2010; Leiblum, 2007). Specifically, psychological factors contribute an estimated 85% to diminished arousability (Basson, 2001). For example, negative emotions during sex can turn off sexual arousal (Basson, 2001) and there are many psychological factors that may block an individual's sexual stimuli and impact sexual desire, such as feeling inadequate as a sexual partner.

Studying psychological factors that are associated with partner focused sexual desire and general sexual desire, especially in a Chinese population, is an important step in developing useful and valuable treatments for low sexual desire issues. Studying sex is relatively new in Chinese culture and little is known about Chinese couples' sexuality (Cheung et al., 2008). There is insufficient sex education in China and people with sexual dysfunctions are hesitant to seek help for sexual issues due to cultural norms (So & Cheung, 2005). Additionally, many people attribute their sexual dysfunction or problems to somatopsychic origins and use folk medicines to treat problems (So & Cheung, 2005) and few studies have focused on the mechanisms related to sexual desire for Chinese men and women (Woo et al., 2012). Our goal, therefore, is to understand psychological and relational mechanisms associated with sexual desire for Chinese adults and offer some culturally sensitive clinical suggestions to improve sexual desire treatment for Chinese couples.

Chapter 2 - Attachment Theory Framework

Attachment theory

Attachment theory, developed by Bowlby (1969, 1973, 1980), explains the development of affectional bonds/attachment between infants and their caregivers. Bowlby (1973) stated that caregivers' responsiveness and accessibility to children's needs influences children's confidence and ability to explore the world, their emotional regulation, and their internal views of themselves and others.

Specifically, Ainsworth, Blehar, Waters, and Wall (1978) tested Bowlby's ideas and concepts empirically and found three types of attachment styles between infants/children and their caregivers that they labeled secure, anxious/ambivalent, and avoidant attachment.

Ainsworth et al.'s (1978) famous strange situation study showed that when a child is securely attached to their caregivers, the caregiver gives attention, support, and comfort that the child can depend on and the child is more likely to explore the outside world. Securely attached babies preferred their caregivers over strangers when they felt stressed. Avoidantly attached infants often avoided caregivers because caregivers had rejected infants' attempts at physical contact, or were not responsive when children needed attention. Avoidantly attached infants also tended to suppress their feelings by ignoring their caregivers or not crying when they faced stressful situations. Anxiously attached infants had no preference between strangers or caregivers when they needed help. They also displayed higher intensity of crying and needed more time to soothe their stressful feelings when caregivers offered help. Ainsworth et al. (1978) stated that infants' expectations of caregivers' accessibility and responsiveness constructed their attachment styles. Ainsworth et al. (1978) contributed the term secure attachment figure as the base for infants and children to explore the world and express themselves freely. Many studies supported Bowlby's

theory and Ainsworth's work (Cumming & Davies, 1994; Furman, Simon, Shaffer, & Bouchey, 2002).

Adult Attachment Theory. In 1973, Bowlby also proposed that the attachment styles to caregivers developed slowly during infancy, childhood, and adolescence and the attachment styles developed during childhood tended to remain the same throughout the rest of their life. Based on Bowlby's proposal, Hazan and Shaver (1987) are the first researchers who suggested that individuals' attachment styles from childhood may continue to influence their adult romantic love relationships. They proposed that attachment bonds are formed between adult lovers, similar as attachment bonds between human infants and their caregivers (i.e., secure, anxious/ambivalent, and avoidant attachment styles). They found that adult attachment styles are based on an individual's perceptions of their relationship with parents and parents' relationship with each other. Secure adults reported having warm relationships with parents, avoidant adults described parents as cold and rejecting, and anxious adults described their parents as unreliable (Hazan & Shaver, 1987).

Additionally, many researchers suggested that in early adulthood and adulthood, adults started transferring the needs for attachment bonds from parents to romantic partners (Fraley & Davis, 1997; Pitman & Scharfe, 2010). Even though Bowlby (1973) emphasized the stability of attachment styles and the continuity of an attachment style throughout life, recent research suggests that attachment styles are more fluid (Fraley, 2002). Specifically, major life transitions such as being a parent, breakups, trauma, and relationship conflicts may cause individuals stress which may alter their attachment styles (Gillath, Karantzas, & Fraley, 2016). Therapy can also change attachment styles from insecure to become more secure (Taylor, Rietzschel, Danquah, & Berry, 2015).

Different styles of attachment have different internal mental models of romantic relationships—how individuals view themselves and their partners are different based on their attachment styles (Bradshaw, Hazen, & Shaver, 1988; Creasey & Jarvis, 2009; Hazen & Shaver, 1987). For example, anxiously attached individuals tend to fall in love easily, but their relationships are characterized by obsession, desire for union and need for emotional reciprocation, extreme sexual attraction, and jealousy. They are sensitive to signs that reassure them that they are loved and to threats of rejection (Eastwick & Finkel, 2008). When coping with relationship threats, anxiously attached people experience higher levels of distress (Mikulincer, Gillath, & Shaver, 2002) because they are unsure of their worthiness and do not believe that their partners really love them. Avoidant individuals believe it is rare to find a person they can really fall in love with and they tend to be uncomfortable with emotional closeness/connection with romantic partners. They tend to depend on themselves and are more likely to suppress their emotions and feelings when in romantic relationships (Mikulincer & Shaver, 2007) because they do not believe others can be trusted or relied on (Gillath et al., 2016). On the other hand, individuals with a secure attachment tend to have romantic partnerships characterized as happy and trusting, with support for their partner despite their partner's faults. They believe in their own worthiness and trust their partners will be there for them. Relationships that are based on a secure attachment tend to endure longer than relationships based on anxious and avoidant attachments. Therefore, secure, anxious, and avoidantly attached people in romantic relationships communicate with their partners differently (Feeney, 1994) and people's attachment styles can shape relationship conflicts in couple relationships (Domingue & Mollen, 2009).

There are, however, clear differences between mother-child attachment and adult attachment. For mother-child attachment, children are attached to their adult caregivers

unidirectionally, while for adults, attachment partners serve as each other's secure attachment figure. In addition, adult romantic relationships typically involve sexuality, which has been identified as a critical difference from child-parent relationships (Gillath et al., 2016).

Attachment Theory Applied to Sexuality

Many scholars argue that attachment theory is relevant to the study of sexuality (Fraley & Shaver, 2000; Feeney & Noller, 2004).

Internal Working Models in Sexuality. Attachment theory proposes that parental or caregiver responsiveness forms certain attachment styles in children, and these attachment styles form models of how we think about ourselves and others. Internal working models are a representation of our competence and self-efficacy and whether we can depend on others. The internal working model shapes self-regulation of emotions, interpretation of others' behavior, and guides interactional behaviors in close relationships (Bretherton & Munholland, 2008; Shomaker & Furman, 2009). When applied to sexual relationships, a person's internal working model influences how individuals think of their own sexuality (their own competence) and whether they trust their partners in sexual relationships.

Anxiously attached individuals hold negative models of self but positive models of others, viewing themselves as not worthy of love and others as better than them (Gillath et al., 2016). They may view themselves as not deserving sexual pleasure, or view their partner's sexual pleasure as more important. Additionally, anxious attachment is negatively linked with self-esteem and self-efficacy (Strodl & Noller, 2003). Anxiously attached individuals may evaluate themselves as not competent in sex and they may be afraid to engage in sex freely because of fears of being judged inadequate or fears of failure. On the other hand, anxiously attached individuals often fear that their partner will leave them and they tend to be preoccupied

with relationship concerns, resulting in frequent reassurance seeking. As a result, they may pursue sex as a way to calm their fears and to obtain validation that they are wanted, thus promoting emotional security. Therefore, they are often conflicted regarding sex—fearing that it will be another avenue of failure but needing sex to reassure them that they are wanted and worthy.

Avoidantly attached individuals have positive models of self and negative models of others, viewing themselves as better than others and viewing others as untrustworthy and not dependable (Gillath et al., 2016). Additionally, individuals with avoidant attachment styles have higher levels of self-esteem and self-efficacy than anxiously attached individuals (McCarthy, 1999). Avoidantly attached individuals tend to be self-reliant as a defense mechanism because they do not trust that others will be there for them and, therefore, they do not express their feelings and emotions with their partners (Mikulincer & Shaver, 2007). Avoidant individuals may think they are competent in sex but they may tend to avoid sex or closeness and connection during sex with their partner. People with avoidant attachment styles are likely to engage in sex for self-serving purposes such as stress reduction or for non-relationship focused reasons because they want to avoid emotional connection (Birnbbaum & Reis, 2018). Avoidant individuals may rely on themselves for solitary sexual activities such as masturbation instead of sex with partners or on impersonal sexual encounters.

Securely attached individuals hold the positive model of self and others, viewing themselves as valuable and worthy and viewing others as trustful and dependable (Gillath et al., 2016). They tend to enjoy sex for themselves and for their partners and trust their partners will care for them during sex. Additionally, because secure attachment is positively linked with self-esteem and self-efficacy (Strodl & Noller, 2003), securely attached individuals may have higher

levels of competence in sex and more confidence in engaging in sex with their partners. In conclusion, adult attachment theory addresses couples' interactions and relationship behaviors that may influence partners' sexual behaviors and thoughts.

Adult Attachment and Sexual Desire

Attachment Anxiety and Sexual Desire. Based on adult attachment theory, anxious individuals are likely to desire sex as a way to reduce emotional insecurity. Anxiously attached individuals need frequent reassurance that they are wanted and loved and sex with their partner is often an indication of being wanted—whether or not sex is pleasurable or enjoyable for them. This purpose of sex as communicating value has been largely supported in the research. For example, anxiously attached individuals desire sex to reduce emotional insecurity when they are worried their partners might leave them (Birnbaum, 2007; Davis, Shaver, & Vernon, 2004) rather than for the purpose of enjoying sex. At the same time, they are fearful of sexual rejection from their partners (Birnbaum, 2007). On the other hand, attachment anxiety has been found to be positively related with sexual passion and to the maintenance of passion over time (Davis et al., 2004), so there is at least some evidence that there are some potential positive links between anxious attachment and sexual desire.

There are gender differences in how attachment anxiety is linked with sexual desire. Specifically, a study from Switzerland found that in women, attachment anxiety was positively linked with the frequency of dyadic sex and desire for sex; but for men, attachment anxiety is not linked with sexual desire (Favez & Tissot, 2017). Additionally, Tracy, Shaver, Albino, and Cooper (2003) stated that there are gender differences regarding how attachment relates with sexuality. Attachment anxiety may lower men's sexual confidence, but it may cause women to engage in more sex to gain a partner's approval. Given the current literature, it would suggest at

least for women, there is a positive relationship between attachment anxiety and partner focused sexual desire. But for men, there is less connection between attachment anxiety and partner focused sexual desire and general sexual desire.

Attachment Avoidance and Sexual Desire. Research has shown that attachment avoidance has a negative relationship with sexual desire (Davis et al., 2004; Feeney & Noller, 2004). Individuals higher in attachment avoidance were more emotionally detached during sex and less likely to desire their partners sexually because they wanted to keep their partners at an emotional distance (Davis et al., 2004). There are also gender differences between attachment avoidance and sexual desire (Favez & Tissot, 2017). For men and women, avoidance predicted lower sexual desire, but for men only, attachment avoidance was also linked with lower frequency of dyadic sex and higher frequency of solitary sexual activity (Favez & Tissot, 2017). Therefore, we propose that attachment avoidance will be negatively linked with partner focused sexual desire for women and men, and positively linked with general sexual desire for men.

Sexual Motivation as a Mediator linking Attachment and Sexual Desire

Approach-avoidance Motivation Framework. Based on attachment theory, internal working models impact people's motivation for sex and motivations for sex are directly linked with sexual desire (Basson, 2001). When talking about sexual motivation, previous literature has heavily emphasized biological motivation (Masters & Johnson, 1966; Heckhausen, 1991). Basson (2001) emphasized psychological and relational motivations for sex. There are various motivations for sex other than just pursuing physical or sexual pleasure, such as enhancing relationships and pleasing partners (Impett & Peplau, 2003). Specially, approach-avoidance motivation framework has been widely used to understand individuals' motivations to engage in sexual activities with their partners (Cooper, Shapiro, & Powers, 1998; Cooper et al., 2006;

Impett, Peplau, & Gable, 2005). The approach-avoidance motivations framework is based on several motivational process theories, which all identified approach and avoidance motivational systems (Elliot & Covington, 2001). Approach motivations and avoidance motivations are managed by two different neural systems and are independent from each other (Davidson, Ekman, Saron, Senulis, & Friesen, 1990). Elliot and Covington (2001) claimed that the approach-avoidance distinction should be viewed as fundamental to human behaviors. In approach motivation, people do things to achieve positive outcomes, while in avoidance motivation, people do things to avoid negative consequences (Elliot, 1999). The framework has been used in many fields to understand people's behaviors (e.g., education).

The approach - avoidance motivations framework has been applied to couple's sexual relationships (Cooper et al., 2006; Impett et al., 2005). Approach motivations emphasize positive motives for engaging in sex such as physical pleasure and promoting relationship intimacy; while avoidance motivations emphasize attempts to prevent negative outcomes such as upsetting the partner, relationship conflict, or partner's loss of interest (Impett et al., 2005).

Approach - avoidance motivations are highly linked with an individual's sexual experience and their partners' sexual experience. For example, approach sexual motivations enhanced positive emotions and relationship satisfaction with a sample of college students while avoidance sexual motivations were linked to more negative emotions and relationship conflict (Impett et al., 2005). In heterosexual relationships, male partners who had higher avoidance sexual motivations were more likely to pressure their partners to have sex and have less affectionate experiences in sex (Cooper, Talley, Sheldon, Levitt, & Barber, 2008). Muise, Impett, Kogan, and Desmarais (2013) conducted a 14-day dyadic daily experience study with college students and found that when a person engaged in sex for approach motives, they and their

partner both experienced higher sexual desires, but when individuals used avoidance sexual motivations, it decreased their own sexual desire but not their partner's sexual desire. With long-term couples, when couples pursued sex more for approach goals, it increased their daily sexual desire (Muise et al., 2013). Additionally, in their longitudinal study with long-term committed couples, individuals who engaged in sex for approach motivations reported higher sexual desire at the 4-month follow up; people who engaged in sex with their partner for avoidance motivation had lower sexual desire and felt less committed to their romantic partners at the 4-month follow-up. Moreover, avoidance sexual motivations had more negative influence on women's daily relationship satisfaction than men (Muise et al., 2013). Therefore, existing literature supports the idea that approach sexual motivations are linked with greater sexual desire while avoidance sexual motivations are linked with lower sexual desire (Cooper, Barber, Zhaoyang, & Talley, 2011; Impett et al., 2010). Given these theoretical and empirical justifications, we chose approach-avoidance motivations framework (Impett et al., 2005) to study sexual desire among Chinese individuals.

Attachment Styles and Sexual Motivations.

Based on the internal working model of attachment theory in sexuality and research, anxiously and avoidantly attached individuals would be expected to use avoidance motivations for engaging in sexual activities. For example, Cooper et al. (2006) used longitudinal data to examine the association between attachment styles and sexual motivations. They found that anxiously attached individuals use avoidance motivations such as having sex to cope with emotional threats or to decrease negative feelings, which is the definition of avoidant sexual motives. Similarly, based on attachment theory, avoidantly attached individuals keep their partners at a distance and are more likely to avoid dyadic sex. Additionally, attachment

avoidance was negatively related to sex goals of emotional closeness but positively related to manipulative use of sex (Davis et al., 2004). Therefore, we propose anxiously and avoidantly attached individuals use avoidance sexual motivations in couple sexual relationships to prevent self-perceived negative outcomes. We propose that attachment anxiety and avoidance are positively linked with avoidance sexual motives and negatively linked with approach sexual motives.

Sexual motives may mediate the relationship between attachment and sexual desire. A study from Switzerland showed that for women, sexual motivation mediated the relationship between attachment avoidance/anxiety and sexual desire (Favez & Tissot, 2017). But for men sexual motivation only mediated the relationship between attachment avoidance and sexual desire; sexual motivation did not mediate between attachment anxiety and sexual desire because attachment anxiety is not linked with sexual desire for men (Favez & Tissot, 2017). This study from Switzerland did not, however, specifically look at avoidance/approach motives and partner focused/general sexual desire. Therefore, based on attachment theory, approach-avoidance motives framework, and extant research, we propose that for women, avoidance sexual motives will mediate the relationship between attachment anxiety and partner focused sexual desire; for women and men, avoidance sexual motives will mediate the relationship between attachment avoidance and partner focused sexual desire.

Chinese Cultures on Attachment

Attachment in Chinese Culture. Adult Attachment styles have been studied in Chinese culture (Mastrotheodoros, Chen, & Motti-Stefanidi, 2015; van IJzendoorn & Sagi-Schwartz, 2008), but attachment classifications and presentations in adult relationships look differently in Chinese culture than Western culture (Cassidy & Shaver, 2008). For example, Wei, Russell,

Mallinckrodt, and Zakalik (2004) compared four ethnic groups' attachment styles and reported that Asian Americans demonstrated greater attachment avoidance than their Caucasian peers. Additionally, anxious attachment had stronger links with negative mood in Asian American groups than Caucasian groups. Similarly, Wang and Mallinckrodt (2006) compared a sample in Taiwan and the US and found that Taiwanese were more accepting of avoidance behaviors as secure attachment compared to the U.S. group. DiTommaso, Brannen, and Burgess (2005) compared native Canadian college students with Chinese visiting students on romantic attachment and found that more Canadian college students had secure attachment than Chinese students. However, there are no studies investigating attachment and sexuality in Chinese individuals.

Chapter 3 - Current Study

There is a growing interest in understanding sexual health, however, most studies have focused on U.S., European, and Australian samples (Sanchez-Fuentes, Santos-Iglesias, & Sierra, 2014). Even within the Western literature on sexuality, earlier studies focused on documenting sexual frequency and sexual activities. Not until the last two decades have researchers focused on the relationship context such as the emotional connection in understanding sexual relationships among couples (Feeney & Noller, 2004). For the marriage and family therapy field, it is important that we examine clinically relevant variables such as relationship attachment and sexual motivations to have more clinical applications to assist our therapeutic work.

The purpose of this study is to examine the direct and indirect link between attachment styles (i.e., anxious and avoidant) and sexual desire (i.e., partner focused and general sexual desire) among Chinese individuals, using sexual motivations (i.e., approach and avoidance) as a mediator. This study makes three main contributions. First, it is the first study using attachment theory to understand sexual desire in Chinese culture. Second, this study provides a potential mechanism, approach-avoidance sexual motivations, linking attachment and sexual desire that could point to a specific target for clinical interventions to increase sexual desire. Third, this study aims to find possible distinctions between partner focused sexual desire and general sexual desire.

In accordance with the attachment theory and literature, we propose the following specific hypothesis: (1) for Chinese women and men, attachment anxiety will be positively associated with partner focused sexual desire; but this association will be stronger for women than for men; (2) for Chinese women and men, higher levels of attachment avoidance will be negatively associated with partner focused sexual desire; attachment avoidance will have

positive link with general sexual desire; (3) for Chinese women and men attachment anxiety and avoidance will be positively linked with avoidance sexual motivations and negatively linked with approach sexual motivations; (4) for Chinese women and men approach sexual motivations will be positively linked with partner focused sexual desire and general sexual desire while avoidance sexual motivations will be negatively linked with partner focused sexual desire and general sexual desire; (5) for Chinese women and men, approach and avoidance sexual motivations will mediate the relationship between attachment anxiety and partner focused sexual desire; for men, avoidance sexual motivations will mediate the relationship between attachment avoidance and general sexual desire; for women and men, avoidance sexual motivations will mediate the relationship between attachment avoidance and partner focused sexual desire. Therefore, we will use a group comparison mediation model to see the different paths between Chinese women and men.

We also include several control variables including age, relationship duration, psychological distress, relationship satisfaction, adult sexual victimization, sexual guilt, antidepressant medication use, current or previous therapy utilization, and social desirability to strengthen the design of this study. First, when age increases, sexual desire decreases and sexual problems increase (Laumann et al., 2005). Second, relationship duration is negatively linked with sexual desire (Rainer & Smith, 2012). Third, anxiety and depression for men and women is positively linked with inhibited sexual desire (Johnson, Phelps, & Cottler, 2004; Lourenco, Azevedo, & Gouveia, 2011). Therefore, psychological distress including depression and anxiety is directly and negatively linked with sexual desire and will be controlled for in this study. Fourth, low sexual desire is linked with decreased levels of relationship satisfaction for both partners in a relationship (Brezsnyak & Whisman, 2004). Therefore, we controlled for

relationship satisfaction. Fifth, sexual abuse history is highly linked with increased risk for couple relationship problems. In addition, high percentages of individuals seeking sex therapy (56% of women and 37% of men) have experienced sexual abuse in childhood (Berthelot, Godbout, Hébert, Goulet, & Bergeron, 2014). Therefore, adult victimization experiences are often related to sexual dysfunction and will be controlled in this study. Sixth, Chinese culture places shame and guilt on people's sexuality and Woo et al. (2012) found that these feelings are negatively linked with sexual desire. Seventh, anti-depressants have been found to be negatively linked with sexual desire (La Torre, Giupponi, Duffy, & Conca, 2013). Eighth, we controlled therapy utilization because our sample is recruited from a counseling website and counseling services may change individuals' sexual motivations or sexual desires (Brotto, Chivers, Millman, & Alber, 2016). Last, we also include social desirability as a control variable, because questions on sexuality and sexual relationship may not be comfortable for participants, especially in Chinese culture. People may answer questions based on social approval.

Based on current research, these variables may be directly correlated with sexual motivations and sexual desires and, thus, controlling for them in our model will increase confidence that model variables are associated with sexual desire above and beyond these other important variables. Each of these control variables were regressed on approach and avoidance sexual motivations, partner focused sexual desire, and general sexual desire.

Chapter 4 - Method

Sample and Procedures

This study was approved by the Institutional Review Board of Kansas State University. Data were collected at one time point from Jiandan Xinli website, a Chinese online counseling company. Jiandan Xinli is the top online counseling service company in China and has more than 700 therapists who provide counseling services. It has 1.5 million followers through their media presence (e.g., wechat, a multi-purpose messaging, social media, and mobile payment app like facebook). We collected data from Chinese individuals currently living in China through a qualtrics survey. Participants were 18-years-old or older and in a committed relationship. Specifically, Jiandan Xinli created a webpage by listing and promoting the study on their website. If people were interested in taking the survey, they joined online male and female groups developed specifically for this study via Wechat. The Qualtrics survey link was shared in the online groups. Anyone who finished the survey and did not miss any attention checks received 10 RMB (\$1.50 USD) as an incentive. Men were encouraged to post this survey link on their Wechat to share with their male friends in order to increase more male participants in this study.

Five hundred and forty-seven individuals agreed to participate in the study. Participants were excluded from the final sample for a number of reasons: Six people agreed to take the survey but did not fill out any information on the survey; 12 people failed one of the attention checks; 33 people were not in a romantic relationship; 33 people were not currently in a committed relationship; 13 people were currently living outside of China; 45 people only completed the demographic portion of the survey (i.e., less than 13 out of 164 questions); one person evidenced fraudulent responses (i.e., relationship length of 431 years), and six people

completed the survey in a time deemed incompatible with authentic response (i.e., less than 5 minutes). The final sample was composed of 398 individuals (See Table 1 for sample demographics).

Measures

Attachment. Attachment was assessed through the Chinese version of the Experiences in Close Relationships Scale (ECRS; Brennan, Clark, & Shaver, 1998). ECRS is designed to assess attachment-related anxiety and avoidance. Brennan and colleagues (1998) developed attachment theory into anxious and avoidant dimensions, instead of the traditional three categories. They argued that individuals' attachment styles can vary due to context. The two dimensions have been widely used in studying adult attachment (Gillath et al., 2016). ECRS demonstrated good reliability and validity (Brennan et al., 1998) and has been translated into Chinese and tested in a Chinese sample with good reliability and validity (Mallinckrodt & Wang, 2004). The Chinese version of ECRS consists of 36 items with the mean of 18 items assessing attachment related anxiety and the mean of 18 items assessing attachment related avoidance. Participants rated each item from 1 = *strongly disagree* to 7 = *strongly agree*. Some items used were, "I prefer not to show a partner how I feel deep down," "I worry about being abandoned," and "I turn to my partner for many things, including comfort and reassurance." Higher scores reflect higher levels of attachment anxiety and attachment avoidance. Cronbach's alpha was used to test reliability coefficient for all the scales. Reliability coefficients of attachment anxiety were .86 for men and .87 for women and .89 for attachment avoidance for both men and women. Missing data for attachment anxiety were 7.1% for men and 4.8% for women and missing data for attachment avoidance were 6.5% for men and 4.8% for women.

Sexual Motivation. Sexual motivations were measured using Muise, Impett, and Desmarais' (2013) 12-item approach/avoidance scale. It demonstrated good reliability (Muise, Impett, & Desmarais, 2013). In this study, we used the mean of six items to measure approach sexual motivations and the mean of six items to measure avoidance sexual motivations. Participants rated each item from 1 = *not at all*, 2 = *a little true*, 3 = *somewhat true*, 4 = *mostly true*, 5 = *almost completely true*, to 6 = *completely true*. Example approach items includes, "because it allows us to grow closer and more intimate," and "to experience pleasure with my partner," and example avoidance items include, "to avoid conflict in my relationship," and "to prevent my partner from becoming upset." Higher scores reflected higher levels of approach sexual motivation or avoidance sexual motivation. High reliability of approach sexual motivation for men .90 and for women .86 was found in this study; the missing data for approach sexual motivation were 6.5% for men and 6.8% for women. Reliability coefficients of avoidance sexual motivation were .91 for men and .85 for women; the missing data for avoidance sexual motivation were 6.8% for both men and women.

Sexual Desire. Sexual desire was assessed with the 25-item Hurlbert Index of Sexual Desire (HISD; Apt & Hurlbert, 1992). Thirteen items measure dyadic sexual desire or partner focused desire and 12-items measure general sexual desire. The scale has demonstrated good construct validity and reliability (Apt & Hurlbert, 1992; Hurlbert, 1993). Participants rated each item from 1 = *never*, 2 = *rarely*, 3 = *some of the time*, 4 = *most of the time*, to 5 = *all of the time*. Example partner-focused sexual desire items include, "I enjoy using sexual fantasy during sex with my partner," and "I try to avoid situations that will encourage my partner to want sex," and example general focused sexual desire items include, "I desire sex," and "I day dream about sex." The mean of the 13 items was used to assess partner focused sexual desire and the mean of

12 items was used to assess general sexual desire, with higher scores reflecting higher levels of sexual desire. Reliability coefficients of partner focused sexual desire were .80 for men and .90 for women. The missing data for partner focused sexual desire were 7% for men and 6.1% for women. Reliability coefficients of general sexual desire were .70 for men and .83 for women; the missing data for general sexual desire were 7.5% for men and 6.1% for women.

Control Variables. We included age, relationship length, relationship satisfaction, psychological distress, adult sexual victimization, sexual guilt, whether they were currently in therapy or have previously been in therapy, antidepressant medication use, and social desirability as control variables.

Relationship length was reported in months and years. We used the sum of the four-item version of the couple satisfaction index (CSI-4; Funk & Rogge, 2007) to assess relationship satisfaction. Example items included, “I have a warm and comfortable relationship with my partner” and “In general, how satisfied are you with your relationship?” Responses were measured based on Likert Scales ranged from 0 = *not at all true* to 5 = *completely true*. The higher score indicates higher levels of couple satisfaction. Reliability coefficients for couple satisfaction were .91 for men and .92 for women. We used the sum of the four-items of the Patient Health Questionnaire (PHQ-4) to assess psychological distress (Kroenke, Spitzer, Williams, & Lowe, 2009). Sample items included “not being able to stop or control worrying” and “little interest or pleasure in doing things.” Higher score indicate higher levels of psychological distress. Participants rated each item from 1 = *not at all* to 4 = *nearly every day*. Reliability coefficients for psychological distress were .84 for men and .87 for women. Additionally, we included the categorical variable whether participants were currently in therapy or had ever been in therapy as control variable because this sample was drawn, in part, from a

website offering counseling services. Participants rated 0 = *Yes* and 1 = *No*. To measure adult sexual victimization, we used three items from Chan (2011)'s study of Chinese adults in Hong Kong. The three items were unwanted touch: if you had ever been forced to touch someone in a sexual way, or someone had touched you in a sexual way? Forced sex: if you had ever been forced to have anal or oral sex with someone? Sexual Coercion: if someone had carried out other behaviors with you that you considered or interpreted as sexual coercion? Participants rated 0 = *No* and 1 = *Yes*. Higher scores indicate participants experienced higher levels of sexual victimization. Sexual guilt was assessed by averaging the 10-item brief Mosher Sex-Guilt Scale (Janda & Bazemore, 2011). Some items were "masturbation helps me feel eased and relaxed" (reverse coded), "when I have sexual dreams, I try to forget them," and "unusual sex practices are dangerous to one's health and mental condition." Responses were measured on Likert Scales ranging from 0 = *not at all true* to 7 = *extremely true*. Higher scores indicate participants have higher levels of sexual guilt. Whether participants were currently taking antidepressant medication was measured by 0 = *No* and 1 = *Yes*. Finally, the short form (Trost, 2009) of the Marlowe-Crowne Social Desirability scale (Crown & Marlowe, 1960) was used to measure social desirability. This 10-item version has been used and found to have acceptable reliability (Loo & Loewen, 2004). Example items included, "I would never think of letting someone else be punished for my wrong doings. (T)," and "I can remember 'playing sick' to get out of something. (F)." Each item has an assigned value of "T" or "F." Scores were recorded where discordant responses were assigned a value of 0 and accordant responses were assigned a value of 1, then summing the recorded scores (Trost, 2009). Higher scores mean that participants are more concerned about social approval and may answer the survey based on societal conventions.

Some measurement scales including approach/avoidance scale, the 25-item Hurlbert Index of Sexual Desire, the 10-item brief Mosher Sex-Guilt Scale, and the short form of the Marlowe-Crowne Social Desirability scale have not been used in a Chinese population. The measures were translated and then back translated by two marriage and family therapists who are both Ph.D. students to ensure conceptual equivalence (Brislin, Lonner, & Thorndike, 1973).

Analytic Plan

The research questions were tested with a mediation and group comparison model (See Figure 1), in the context of a path analysis, where direct and indirect effects were tested simultaneously and comparisons between men and women were tested using model constraints in Mplus 7 (Muthén & Muthén, 2012).

First, we computed the descriptives and correlations on the variables individually for men and women. Then we used an independent-samples *t*-test in SPSS to compare men and women, with significant differences between groups suggesting the need to conduct a multiple group analysis. To do this, we tested the unconstrained model first to see the model fit and then constrained certain paths to see if this improves model fit to determine the final model. Finally, the direct and indirect effects for men and women were tested simultaneously in Mplus 7 with maximum likelihood estimation (Muthén & Muthén, 2012). The indirect paths were tested with 2,000 bootstraps and a 95% confidence interval (Preacher & Hayes, 2008). The 95% bootstrapped confidence intervals not including zero indicates a significant indirect effect. Moreover, the indirect effect or total effect between men and women were compared by constraining them to be the same to see whether model fit is reduced. If fit is reduced, this indicates that the indirect effect or total effect was different between men and women. If it did not reduce the fit, the effect between men and women is not significantly different.

Chapter 5 - Results

Preliminary Analyses

The data were first explored with descriptive statistics to examine the data distribution and missing data. The amount of missing data ranged from no missing data (gender and couple satisfaction) to 15.6% (adult sexual victimization). Data normality values assessed in SPSS (IBM corporation, 2014) were within acceptable ranges of skewness $<|3.0|$ and kurtosis $<|10.0|$ (Kline, 2011). The absolute value of skewness ranged from .014 (When romantic partners disapprove of me, I feel really bad about myself; an item from ECR-R) to 2.988 (whether taking antidepressants) and the absolute value of kurtosis ranged from .005 (It is hard for me to fantasize about sexual things; an item from HISD) to 6.971 (whether taking antidepressants). The data were approximately normally distributed. As a result, we used individual raw data in *Mplus* 7.0 (Muthén & Muthén, 1998-2017) with full information maximum likelihood (FIML) under the analysis function to handle missing data (Acock, 2005) while modeling the proposed associations between our variables of interest.

We then conducted independent-sample t-tests in SPSS to compare means of the variables of interest between women and men. There were no significant differences between men and women on attachment anxiety; however attachment avoidance behaviors were approaching significance (Men, $M = 3.80$, $SD = 1.08$; Women ($M = 3.58$, $SD = 1.05$; $t(351) = 1.89$, $p = .059$). Additionally, men reported having higher approach sexual motivations ($M = 4.23$, $SD = .95$) than women ($M = 3.58$, $SD = .99$; $t(342) = 6.22$, $p < .001$) and higher avoidant sexual motivations ($M = 2.89$, $SD = 1.2$) compared to women ($M = 2.18$, $SD = .91$; $t(338.51) =$

6.14, $p < .001$). As expected, men reported higher sexual desire including partner-focused sexual desire (Men, $M = 3.51$, $SD = .50$; Women $M = 3.17$, $SD = .67$; $t(242.84) = 5.17$, $p < .001$) and general sexual desire (Men, $M = 3.32$, $SD = .40$; Women, $M = 3.03$, $SD = .52$; $t(253.31) = 5.66$, $p < .001$). See table 2 for t-test results for men and women.

Additionally, bivariate correlation analyses (Pearson correlation coefficient) for men and women, conducted in SPSS (IBM corporation, 2014), indicated that the variables in our model were associated with each other in the expected directions and did not provide evidence for multicollinearity (see table 3 for correlations). A number of the correlations were very different between men and women, which suggest the need to run a group comparison model. However, we found that the item on therapy utilization was not correlated with partner-focused sexual desire, general sexual desire, approach sexual motives, or avoidance sexual motives for women ($r = .09$, $p = .27$; $r = .01$, $p = .90$; $r = .00$, $p = .97$; $r = .06$, $p = .51$) and men ($r = .08$, $p = .28$; $r = .05$, $p = .52$; $r = .07$, $p = .34$; $r = -.08$, $p = .28$). Therefore, we did not include this control variable in our model. Additionally, based on the bivariate correlation analyses, the following variables were not significantly correlated: attachment avoidance and approach sexual motivation, attachment avoidance and general sexual desire, social desirability and partner focused/general sexual desire, and adult sexual victimization and approach/avoidance sexual motivations for men and women. Therefore, we did not include these paths in the final path analysis model.

Multiple Group Mediation Structural Equation Modeling

We next assessed the associations between attachment style (i.e., anxiety and avoidance), sexual motivations (i.e., approach and avoidant), sexual desire (i.e., partner focused and general sexual desire) with the aforementioned controls for both men and women. First, we tested the unconstrained path model. The unconstrained model fit was poor: $\chi^2(8) = 40.72$, $p = .00$, CFI =

.95, TLI = .47, RMSEA = .16 (90% CI: .113 to .211), and SRMR = .03. Further, to test whether gender moderated these associations, we constrained all the paths between men and women to be the same. The model fit for the fully constrained model was fair: $\chi^2(49) = 102.91, p = .000$, CFI = .93, TLI = .86, RMSEA = .08 (90% CI: .060 to .106), and SRMR = .06. The fully constrained model improved fit significantly, but still did not fit the data adequately. Therefore, the structural paths between variables were consecutively constrained to be equivalent for men and women and chi-square tests were conducted. As a result, certain structural paths were freely estimated between men and women while other paths were constrained.

For the final model, we freely estimated the following paths because these paths were significantly different between men and women: attachment anxiety and avoidance motivation on partner-focused sexual desire, avoidance motivation on general sexual desire, and anxiety attachment on approach sexual motivations. The final model fit for the multiple group comparison structural equation model after constraining the paths was acceptable: $\chi^2(45) = 67.00, p = .02$, CFI = .97, TLI = .94, RMSEA = .06 (90% CI: .023 to .082), and SRMR = .04 (Kline, 2011). See figure 2 for the partially constrained path analysis between men and women. The paths that have the same effect size means (unstandardized b) are constrained to be the same and the paths that have different effect size means are freely estimated between the two groups. β is standardized effect size or coefficient while b is unstandardized effect size or coefficient.

First, attachment anxiety was negatively linked with approach sexual motivation for both groups. However, the negative link between attachment anxiety and approach sexual motivation was stronger for men ($b = -.405, p < .001, \beta = -.353$) than woman ($b = -.312, p = .020, \beta = -.280$). This suggests that men are less likely to have approach sexual motivations when women and

men have same amount of attachment anxiety. Attachment anxiety had no link with avoidance sexual motivation for men or women.

Second, attachment anxiety was directly and negatively linked with partner focused sexual desire for both groups. However, the link between attachment anxiety and partner focused sexual desire was stronger for women ($b = -.272, < .001, \beta = -.367$) than for men ($b = -.175, p < .001, \beta = -.302$). This indicates that when women and men have more attachment anxiety, they exhibited less partner focused sexual desire, but that this relationship is stronger for women than for men. Additionally, attachment anxiety was negatively linked with general sexual desire for both men and women and there were no differences between groups ($b = -.097, p = .002$). This suggests that higher levels of anxiety were associated with lower levels of general sexual desire for both groups similarly.

Third, approach sexual motivation had significant and positive links with partner focused sexual desire ($b = .196, p < .001$) and general sexual desire ($b = .111, p < .001$) for both groups equally. This suggests that when men and women have higher levels of approach sexual motivation, they are likely to have higher levels of partner focused sexual desire and general sexual desire. However, approach sexual motivation was more highly related to partner focused sexual desire than general sexual desire based on the beta difference.

Fourth, attachment avoidance was positively linked with avoidance sexual motivation for both men and women ($b = .292, p < .001$), indicating that higher levels of attachment avoidance are related to higher levels of avoidance sexual motivation. However, attachment avoidance was not linked with approach sexual motivation. Additionally, attachment avoidance was not linked with partner focused sexual desire and general sexual desire for either men or women.

Fifth, avoidance sexual motivation was related to partner focused sexual desire ($b = -.138, p = .005, \beta = -.193$) and general sexual desire ($b = -.088, p = .058, \beta = -.158$) for women, but not men. This suggests that higher level of avoidance sexual motivation is related to less partner focused sexual desire and general sexual desire for women. Moreover, for women, the association between avoidance sexual motivation and partner focused sexual desire was stronger than the association between avoidance sexual motivation and general sexual desire based on the beta difference.

Surprisingly, we found that among all the control variables, only sexual guilt played a significant role in partner focused sexual desire and general sexual desire for women and men equally ($b = .199, p < .001; b = -.204, p < .001$). In this model, sexual guilt played most important role for men's partner focused sexual desire and general sexual desire. Sexual guilt is the second important factor for women's partner focused sexual desire in this model, which is after attachment anxiety and the most important factor for women's general sexual desire. Moreover, sexual guilt was not linked with approach sexual motivation ($b = .10, p = .097$) but strongly linked with avoidance motivations ($b = .238, p < .001$) for men and women.

Test of Indirect Paths

We then assessed the indirect paths from attachment anxiety and avoidance to partner focused sexual desire and general sexual desire via approach sexual motivation and avoidance sexual motivation for both men and women. We used bootstrap analysis with 2000 bootstraps and a 95% confidence interval not including zero indicating a significant indirect effect (Preacher & Hayes, 2008).

We wanted to know whether indirect effects and total effects between men and women are significantly different. We did this by consecutively constraining the indirect effects and total effects to be equivalent for men and women through the model constraint command in Mplus.

First, the total effect from attachment anxiety to partner focused sexual desire via approach sexual motivation and avoidance sexual motivation was significantly different between men ($b = -.254, p < .001, \beta = -.437$) and women ($b = -.345, p < .001, \beta = -.466$). However, the indirect path from attachment anxiety to partner focused sexual desire via approach sexual motivation was significant for both groups but not significantly different between men ($b = -.079, p = .000, \beta = -.137, CI = [-.215, -.076]$) and women ($b = -.061, p = .026, \beta = -.082, CI = [-.168, -.025]$). The indirect path from attachment anxiety to partner focused sexual desire via avoidance sexual motivation was not significant for men or women. These results suggest that the path of attachment anxiety to partner focused sexual desire was partially mediated by approach motivation for both groups and that attachment anxiety had more total negative effect on partner focused sexual desire for women than for men.

Second, the total effect from attachment anxiety to general sexual desire via approach sexual motivation and avoidance sexual motivation was significant for men ($b = -.140, p < .001, \beta = -.299$) and women ($b = -.139, p < .001, \beta = -.242$) with a stronger association for men. The indirect path from attachment anxiety to general sexual desire via approach sexual motivation was significant for men ($b = -.045, p = .002, \beta = -.096, CI = [-.164, -.045]$) and women ($b = -.035, p = .046, \beta = -.060, CI = [-.141, -.016]$) and they were not significantly different between the two groups. Moreover, the indirect path from attachment anxiety to general sexual desire via avoidance sexual motivation was not significant for men ($b = .002, p = .595, \beta = .003, CI = [-.004, .024]$) or women ($b = -.008, p = .364, \beta = -.013, CI = [-.055, .005]$). These results indicate

that the path of attachment anxiety to general sexual desire was partially mediated by approach motivations for both groups and that anxiety had a more negative link with general sexual desire for men than women.

Third, the total effect from attachment avoidance to partner focused sexual desire via avoidance sexual motivation was significant for women ($b = -.061, p = .015, \beta = -.097$) but not significant for men ($b = -.018, p = .37, \beta = -.040$) and the total effect was significantly different between men and women. The indirect path from attachment avoidance to partner focused sexual desire via avoidance sexual motivation was significant for women ($b = -.040, p = .019, \beta = -.063, CI = [-.126, -.016]$), but not for men ($b = .003, p = .736, \beta = .006, CI = [-.032, .043]$). Finally, attachment avoidance had no significant direct and indirect effect on general sexual desire for both groups.

The model explained 41.5% of the variance in partner focused sexual desire, 30.3% of the variance in general sexual desire, 33.4% of the variance in approach sexual motivation, and 12.9% of the variance in avoidance sexual motivation for men, whereas it explained 50.7% of the variance in partner focused sexual desire, 35.2% of the variance in general sexual desire, 12.3% of the variance in approach sexual motivation, and 22% of the variance in avoidance sexual motivation for women.

Chapter 6 - Discussion

The purpose of this study was to determine the direct relationships between attachment style (i.e., anxious and avoidant) and sexual desire (i.e., partner focused and general sexual desire) and the indirect relationships via approach and avoidance sexual motivation. The analyses revealed several important findings, some of which conform to expectations based on Western culture and research, along with a few that seem to contradict hypotheses based on Western literature. Overall, our results partially supported an important theoretical premise of attachment theory: attachment styles, especially attachment anxiety, is negatively associated with sexual desire directly, but also indirectly through lower approach sexual motivations, thus also partially supporting the approach-avoidance sexual motivation framework.

There are several key findings from this study. First, this study provides further evidence for the cross-cultural application of attachment theory and highlight the important role of attachment anxiety in Chinese people's sexuality—at least in this sample. Specifically, when women and men have more attachment anxiety, they exhibited less partner focused and general sexual desire. Therefore, hypothesis one that attachment anxiety would be positively associated with partner focused sexual desire was not supported. Previous Western research suggests that individuals higher in anxious attachment might use sex as a way to soothe their abandonment fears and to seek validation from their partner that they are wanted (Birnbaum, 2007; Davis, Shaver, & Vernon, 2004), which may increase sexual desire for their partners (Davis et al., 2004). Our results showed that attachment anxiety was negatively associated with partner focused and general sexual desire for this Chinese population. Why might this be? Given that attachment anxiety is negatively linked with self-esteem and self-efficacy in sexuality (Strodl & Noller, 2003), individuals may be afraid to pursue sex with a partner because of fears of being

judged inadequate or fears of failure based on their internal working model that tells them that they do not measure up (Gillath et al., 2016). Therefore, their fear of (sexual) rejection may result in lower desire (Birnbaum, 2007). This would also explain why the link between attachment anxiety and partner-focused sexual desire is stronger than the link between attachment anxiety and general sexual desire. This pulling away from a partner might be due to the Chinese cultural influence on sexuality. Chinese people may place less value on sex than Western people, as sex for pleasure in Chinese traditional culture is viewed as detrimental to personal health and social order (Ruan, 1991) and sex is traditionally seen solely as a means for reproduction (Pan, 1993). In addition, the strong link between Chinese sexuality and shame and guilt (Woo et al., 2012) might also increase the likelihood that attachment anxiety drives Chinese individuals away from rather than towards their partner.

Furthermore, our study found that attachment anxiety had a stronger negative association on partner focused sexual desire for women than men. These results fit traditional Chinese cultural values and norms. Specifically, in a Taoist view of sexuality, sex is more male-oriented, while women take a passive role focused on pleasing their partner (Parish et al., 2007). In fact, in our data, Chinese women had significantly lower partner focused sexual desire compared with Chinese men. This difference seems to heighten with anxious attachment.

Second, we found that attachment avoidance does not seem to have as strong a negative association with sexual desire in this sample of Chinese individuals as found in previous (Western-based) samples (Favez & Tissot, 2017; Muise et al., 2013). For example, a study conducted in Switzerland found that for men and women, attachment avoidance was associated with lower sexual desire, and for men, attachment avoidance was linked with lower frequency of dyadic sex and higher frequency of solitary sexual activity (Favez & Tissot, 2017). On the other

hand, in the current study, we found that there was no association between attachment avoidance and sexual desire (partner focused and general) directly and indirectly for men. Higher levels of attachment avoidance was only negatively associated with partner focused sexual desire for women indirectly.

Women's attachment avoidance was negatively associated with partner focused sexual desire indirectly through avoidant sexual motivations. As previous research has found, individuals higher in avoidant attachment are less likely to engage in partner focused sexual activity because they are afraid of emotional engagement during sex (Davis et al., 2004; Feeney & Noller, 2004). Given this, it is interesting that Chinese men's attachment avoidance was not linked with partner focused sexual desire. Similar to findings based on Western samples, in this study men had higher levels of attachment avoidance than women (Gillath et al., 2016). In addition, previous research has found that Chinese individuals have higher levels of avoidant attachment (Mak, Bond, Simpson, & Rholes, 2010; Wei et al., 2004) and endorsed more avoidance behaviors when asked about ideal adult attachment styles (Wang & Mallinckrodt, 2016) than their U.S. counterparts. Additionally, Del Giudice (2011) found that men are more likely to have avoidant attachment behaviors while women are more likely to be anxiously attached in harsh and unpredictable environments. It is true that in our study Chinese men had higher levels of attachment avoidance than Chinese women. Therefore, it might be that avoidance behavior of Chinese men are viewed as normal and acceptable in Chinese culture, therefore it has less linkages with partner focused sexual desire, compared with Western populations and Chinese women. Additionally, our finding contradicts our hypothesis that attachment avoidance would be positively linked with general sexual desire. We found that there is no connection between avoidance and general sexual desire for either group. Again, this could

be explained by the greater cultural acceptance of avoidant attachment behaviors in relationships in Chinese culture and that certain avoidant behaviors are part of being securely attached in Chinese culture (Wang & Wallinckrodt, 2006).

Third, we found attachment anxiety was negatively linked with approach sexual motivation and attachment avoidance was positively linked with avoidant sexual motivation and there was no connection between attachment anxiety and avoidant sexual motivation or attachment avoidance and approach sexual motivation. These results partially supported hypothesis three that attachment anxiety and avoidance would be positively linked with avoidance sexual motivations and negatively linked with approach sexual motivations. Attachment anxiety was negatively linked with approach sexual motivations for both groups but the link was stronger for men. It may be that attachment anxiety lowers men's sexual confidence to the point that they are less likely to pursue sex (Tracy et al., 2003), especially when sex is part of men's masculine identity. But, why is there no link between attachment anxiety and avoidant sexual motivations and avoidant attachment and approach sexual motivations? It seems that avoidance, whether attachment (Wang & Wallinckrodt, 2006) or motivation related (Elliot, Chirkov, Kim, & Sheldon, 2001), is more normative and less problematic among Chinese than Western samples. Avoidant sexual motivations or attachment avoidance may be culturally normative behavioral strategies used to maintain face and harmony and thus are less problematic interpersonally.

Furthermore, our results provide partial evidence for the cross-cultural application of the approach-avoidance framework, highlighting the positive role of approach motivations on Chinese people's sexuality. These results also provide important initial evidence that approach sexual motivations are an important pathway or mediator through which attachment anxiety is

associated with partner-focused and general sexual desire. Therefore, understanding the mechanisms of action provide specific points to potential interventions. In Western studies, avoidant sexual motives were linked with lower sexual desire for women and men (Cooper et al., 2011; Impett et al., 2010). However, in this study we found that there was a negative association between avoidant sexual motivations and partner sexual desire for women, but no link for Chinese men. Again, these results show the seemingly relative lack of negative effects for avoidance, especially in Chinese men. Therefore, the Chinese sample partially supported the approach/avoidance sexual motivation framework, but suggests that the avoidance aspect of the framework may not be as applicable in a Chinese context, especially for men.

We also want to put an emphasis on the role of sexual guilt in sexual desire (partner focused and general) for men and women. In Chinese culture, there are often strong feelings of shame about sex, and these feelings can be detrimental to sexual desire (Woo et al., 2012; Woo, Brotto, & Gorzalka, 2011). Our study supports these previous findings, and, therefore, sexual guilt may be an important area to address when therapists help individuals or couples' struggling with low sexual desire issues.

Implications for Sex Therapy

Based on the findings, understanding clients' attachment styles, specifically anxious attachment, may be a useful step for treating sexual desire problems in Chinese couples. For example, therapists can help individual clients understand their attachment styles through mapping out their internal working model (Creasey & Jarvis, 2009). This can be done through examining thoughts ("I am not worthy"), emotions such as fears of sexual rejection, and behaviors (not initiating sex with my partner, avoiding partner). It will help clients to be more aware of the interactions between their thoughts, feelings and behaviors, increasing their ability

to understand themselves and to choose different behaviors. It modifies the internal working model (Johnson, 2019).

When helping couples, Emotionally Focused Couple Therapy (EFT, Johnson & Zuccarini, 2010; Johnson, 2012), an attachment theory-based therapy model, can be used to treat couples' issues including couple's sexual difficulties. This therapy model acknowledges the internal working models of couples during the first stage of EFT through mapping out couples' negative interactions or fights around sex, and what is their emotions and thoughts behind their sexual behaviors. This can help couples to understand each other's perspectives and struggles, which anecdotally has been found to be useful for deescalating couples' fights and allows them to have more engaging conversations around sex.

Second, increasing approach sexual motivations can help men and women to have more partner focused sexual desire. Interest in sex is a strong predictor for marital sexual satisfaction (Cheung et al., 2008). Therefore, helping couples and individuals develop internal motives for sex and partner focused sex is an important step. For anxiously attached individuals, therapists can help them to understand their fear of sexual rejection and their fear of their partners leaving them and how these fears can decrease their approach sexual motivations. Based on the Emotionally Focused Sex Therapy (Johnson & Zuccarini, 2010), after mapping out couples' negative interaction during the first stage, individuals who have anxious attachment styles learn to express their vulnerability of being rejected sexually and not being liked by their partners during the second stage of EFT. The goal of EFT is to allow each other express vulnerability as a way to build a secure attachment over time. However, the process of achieving this goal requires therapists' ability to comfort both partners' attacks and help couples to go deep with their feelings. In return, their partners will comfort their fear of being rejected and give them a sense

of security by understanding their fear. By disclosing fears and worries in the relationship it may increase approach sexual motivations. Instead of being afraid of engaging in sex or engaging sex for the purpose of pleasing their partner, clients may develop approach sexual motivations by doing sex for the purpose of enjoying sex for themselves and also for their relationships.

Even though avoidance behaviors have less impact on sexual desire compared to anxiety, it is still significant for female's sexuality via avoidance sexual motivation. For treating avoidantly attached women, therapists can help them to understand why they are avoidant in their romantic relationship and map out the internal working model between thoughts, emotions, and behaviors based on attachment theory. They will have more understanding that they are afraid of being emotionally close to their partners and hesitate to trust their partners. Therapists can help them to express their fears on depending on others including their partners. This is an important step during the second stage of EFT; however, it is hard to achieve since avoidant individuals are not used to talking about their feelings or fears. Therefore, the therapists' job is to go slowly with avoidant individuals' feelings and earn their trust first. Therapists may need to help avoidant individuals to disclose their feelings by reflecting their emotions or heightening emotions. It is risky to disclose vulnerable feelings for couples. Therefore, it only can happen after deescalating their conflicts. During the second stage, their partners are better able to comfort their partners' fear with the help of a therapist. Their partners' comfort will help them develop more secure attachment and have less avoidant sexual motivations.

Sharing feelings of fears and rejections among couples are an important marker in EFT therapy during the second stage and is an important step in forming a secure attachment among couples. By doing that, it increases individuals' security in the relationship and allows partners to feel more secure to approach their partners. Secure attachment in sexual relationships promote

pleasurable engagement in sex and promotes sexual activities, and foster relationship quality (Birnbaum & Reis, 2018).

Additionally, sex therapists can help clients to reduce attachment anxiety through mindfulness. Individuals who have attachment anxiety are often worrying whether they are worthy enough or good enough in relationships. Mindfulness exercises are used to reduce anxious thoughts and daily worries or worries during sex (Brotto & Basson, 2014; Brotto et al., 2016). Mindfulness-based sex therapy is found to increase sexual functioning and sexual desire by managing anxious thoughts and also helping individuals to be more present (Brotto et al., 2016). For example, body-scan meditation is often used to increase present focus and attention to each other's body in order to reduce worry and improve sexual pleasure (Kimmes, Mallory, Cameron, & Köse, 2015). Learning how to cope with attachment anxiety will be an important step for both Chinese men and women because attachment anxiety not only links with their motivations for sexual desire but also their desires for sex.

Furthermore, given significant differences between women and men in some aspects of our results and previous research that finds that men are generally more sexually satisfied than women (Cheung et al., 2008) and that cultural values and norms had a greater influence on women's sexual interest, desire, and responses than men's it is important to specifically and directly address women's struggles in their sexuality. For example, therapists can ask questions to female partners such as "what are some reasons for engaging in sex with your partner" to assess whether the women have approach sexual motivations or avoidance sexual motivations. Second, therapists can help women understand how culture influences her sexuality. Therapists can ask questions such as "where do you learn about sex, what do you think of sex in general, what is your sexual history, what do you do to enjoy sex" to assess her emotional struggles

related to her sexuality including shameful feelings. Specifically, helping Chinese women process their provider roles in sex based on Chinese culture, helping them to have ownership of their sexuality in order to reduce shameful feelings, and helping them understand that it is okay for them to enjoy sex and to pursue their partners are potentially important areas to address in therapy. Our study found that Chinese men had higher levels of attachment avoidance and avoidant sexual motivations, but they were not linked with sexual desire. Avoidant behaviors are problematic in the West, but are normative in Chinese culture, especially for men. As clinicians, we need to be sensitive to cultural difference and to not automatically treat avoidant behaviors as a problem. Instead, clinicians can ask questions to understand why individuals choose avoidant behaviors and to understand the intention behind their avoidant behaviors, which can be to avoid fights or to save face.

Limitations

Our results should be considered within the following limitations. First, the sample was collected through a counseling website and 10% of the sample were currently in therapy during the time when we were collecting the data. Even though the majority of the sample (90%) was not currently in therapy, given their association with the website they are likely more interested in mental health than the general population. Additionally, this group is more highly educated compared to the Chinese population as a whole (Peng et al., 2018). The average age of the sample is 28, thus these results only provide some evidence for how generally younger and educated adults may experience the associations of attachment, sexual motivations, and sexual desire and the findings may not be generalized to older or less educated generations. Third, we cannot rule out that both partners in some married or dating relationships participated in this study. Although we did not recruit couples, it is possible that some intimate pairs participated.

Fourth, all of the measures were obtained through self-report, which has the potential to inflate the associations in the model through shared method variance.

Future research needs to better understand the pathways that lead to approach sexual motivations for young adult Chinese women since our study only explained 12.3% of the variance of approach sexual motivations for women but 33.9% for men and approach motivations played an important role in sexual desire for women. It may be that other factors serve as the pathway linking attachment anxiety to approach sexual motivations (e.g., self-efficacy, self-esteem, couple communication). On the other hand, more research on the role of sexual guilt among Chinese populations is needed as well. Our research shows that Chinese women and men reported high levels of sexual guilt and that sexual guilt was negatively linked with sexual desire and sexual motivations. Future research on factors mediating the relationship between sexual guilt and sexual desire or moderating sexual guilt and sexual desire is warranted.

Chapter 7 - Conclusion

This study found that attachment anxiety had more negative effects on partner focused sexual desire compared with attachment avoidance. Moreover, attachment anxiety and avoidance had stronger negative associations with both partner-focused sexual desire and general sexual desire for Chinese women than men. These findings provide initial insight into how attachment anxiety and avoidance contribute to partner focused sexual desire and general sexual desire in a Chinese population. Second, these results provide important initial evidence that approach sexual motivation is an important pathway or mediator through which attachment anxiety is associated with partner-focused and general sexual desire. Third, even though avoidance behaviors and motivations are more acceptable and common in Chinese populations, it was negatively associated with women's sexual desire. Avoidance behaviors and avoidance sexual motivations, therefore, are maladaptive at least for Chinese women in this context. Moreover, sexual shame has strong associations with sexual desire, especially for women. Although these findings merit further testing, this study provides evidence that attachment anxiety, approach sexual motives, and sexual shame are important mechanisms for sexual desire for men and women.

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Figure 1: The Theoretical Model of Attachment, Sexual Motives, and Sexual Desire: the Group Comparison Mediation Model.

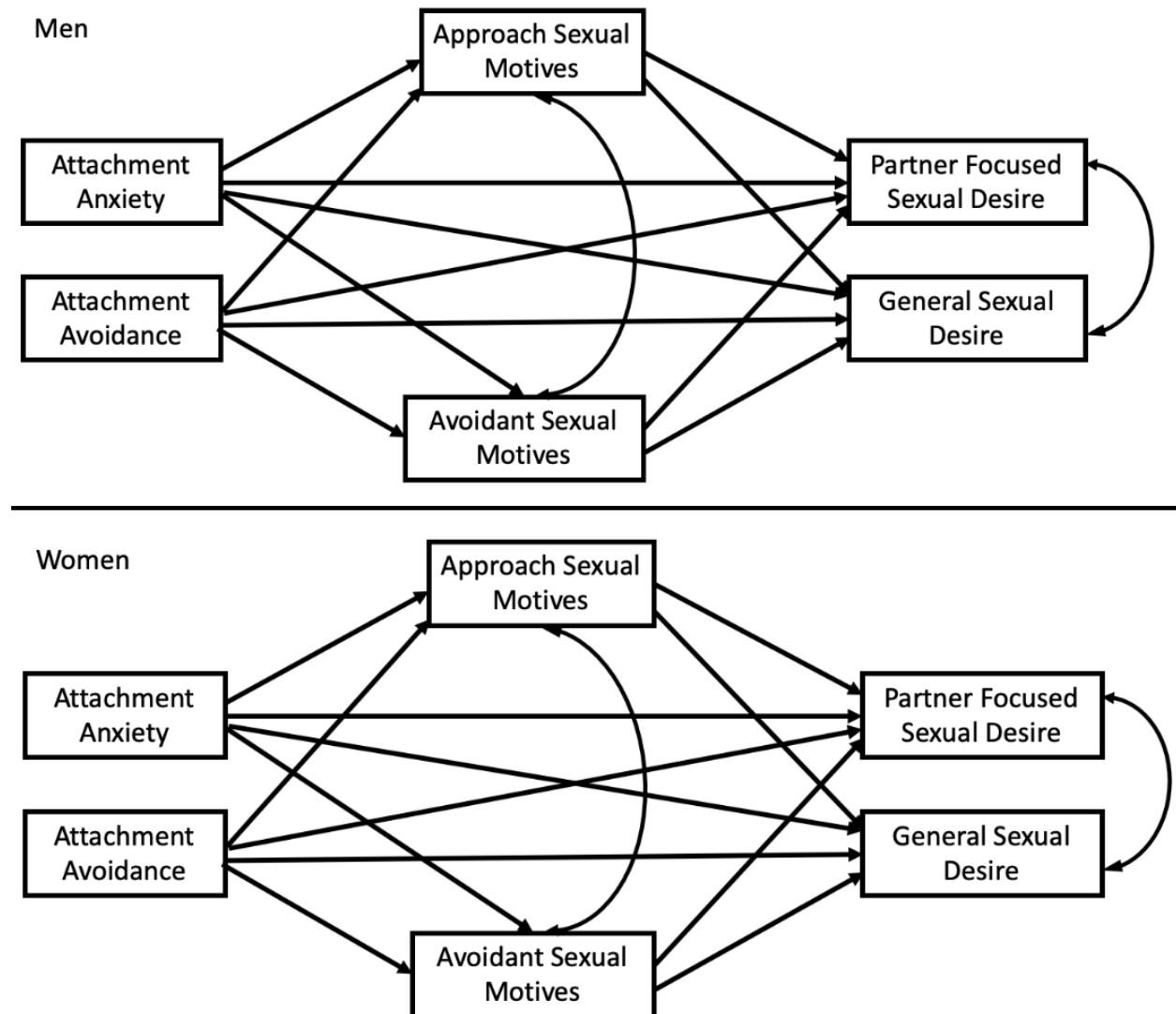
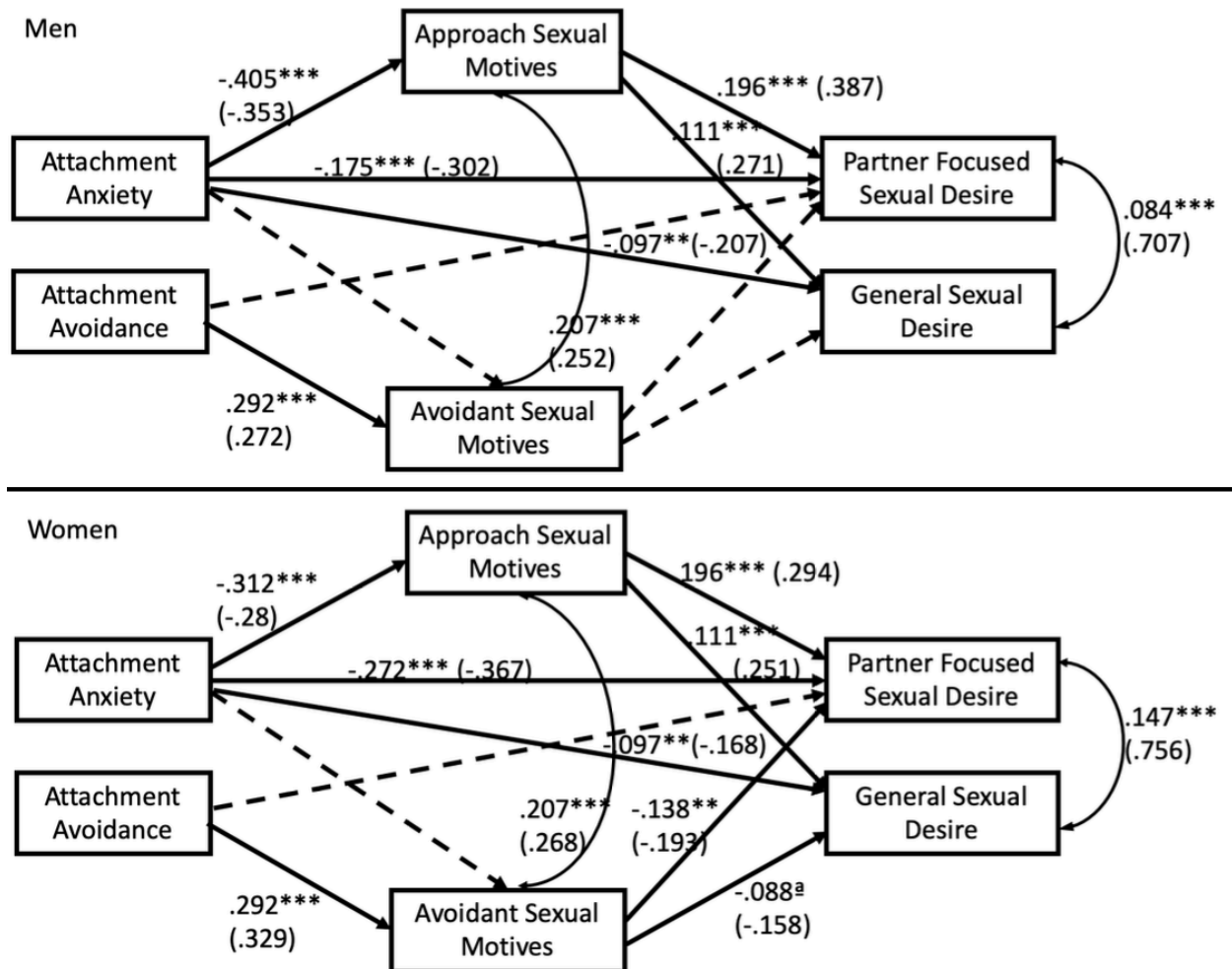


Figure 2: Multiple Group Mediation Structural Equation Model.



Multiple group mediation structural equation model and results of the paths (N = 166 women and 232 men). Note: control variables are not included in the figure for clarity. Standardized results are in parentheses. ^ap < 0.10, * p < .05, ** p < .01, *** p < .001 (two-tailed).

Table 1. Demographic characteristics of the study population: Descriptive Statistics (N=398)

Variables	Women (n =166)			Men (n =232)		
	M or %	SD	Range	M or %	SD	Range
Age (years)	27.4	6.85	18-50	28.5	7.32	18-70
Education						
High School or lower	7.8%			15.1%		
2-year technical college	15.7%			24.6%		
4-year college degree	59.6%			52.6%		
Master's degree or above	16.9%			7.8%		
Income (RMB)						
0 -19,999	32.5%			20.3%		
20,000 -39,999	10.8%			9.9%		
40,000 – 59,999	17.5%			15.1%		
60,000 – 79,999	12.0%			13.4%		
80,000 – 99,999	6.0%			14.2%		
100,000 – 111,999	10.2%			16.8%		
120,000 Above	9.6%			9.9%		
No. of Children						
0	69.9%			51.7%		
1	25.3%			37.9%		
2	4.8%			9.9%		
3	0.0%			0.4%		
Relationship Status						
Serious dating	37.3%			24.1%		
Committed relationship	23.5%			21.6%		
Formally engaged	1.8%			3.9%		
Married	37.3%			50.0%		
Relationship Length	4.40	5.54	.08 -30.0	5.28	5.23	0-31.4
Living with your partner						
Yes	47.0%			74.1%		
No	53.0%			25.9%		
Location						
Urban	56.0%			42.2%		
Suburb	23.5%			42.7%		
Rural	19.9%			14.7%		
Therapy treatment						
Yes	11.5%			8.6%		
No	72.3%			77.6%		

Table 2. Independent-sample t-test Results for Men and Women (N = 398)

Variables	Men (n = 238)		Women (n = 166)		t	df	p
	M	SD	M	SD			
Attachment Anxiety	3.26	0.84	3.16	0.89	1.08	349	.281
Attachment Avoidance	3.80	1.08	3.58	1.05	1.89	351	.059
Partner Focused Sexual Desire	3.51	.50	3.17	.67	5.17*	242.84	.000
General Sexual Desire	3.32	.40	3.03	.52	5.66*	253.31	.000
Approach Motives	4.24	.95	3.58	.99	6.22	342	.000
Avoidant Motives	2.88	1.21	2.18	.91	6.14*	338.51	.000
Relationship Satisfaction	18.94	3.91	16.76	4.14	5.35	396	.000
Sexual Guilt	3.71	.71	3.64	.97	.73*	237.07	.466
Adult Sexual Victimization	.30	.66	.78	.94	-5.12*	229.25	.000
PHQ4	2.55	2.29	3.41	2.84	-3.00*	266.62	.003
Couple Rel-Length	5.28	5.23	4.40	5.54	1.57	380	.116

Note. * means equal variances are not assumed by Levene's Test with using $p < .05$.

Table 3. Correlations

Individual Reports of Perceived Social Competence, Depression, Marital Satisfaction, and Control Variables: Correlations for Study Variables (N = 166 women and 232 men).

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Couple Satisfaction		-.23**	-.35***	-.10	.08	.19**	.43***	.15*	.07	.26***	-.10
2. PHQ-4	-.30***		.35***	.41***	-.08	-.15*	-.19**	.11	.04	-.32***	.11
3. ECR-Anxiety	-.67***	.31***		.41***	-.33***	-.50***	-.47***	.13	.05	-.31***	.23**
4. ECR-Avoidance	-.24**	.42***	.17*		.08	.03	.03	.41***	.01	-.34***	.14*
5. General Sexual Desire	.25**	-.00	-.28**	.08		.78***	.37***	.05	-.40***	.02	-.02
6. Partner-Focused Sexual Desire	.36***	-.02	-.49***	.00	.82***		.47***	.05	-.32***	.07	.10*
7. Approach Sexual Motive	.23**	-.03	-.34***	.12	.28**	.45***		.29***	-.08	.27***	-.09
8. Avoidance Sexual Motive	-.27**	.15	.22*	.29**	-.26**	-.30***	.12		.05	.03	-.05
9. Sexual Guilt	-.17*	-.05	.21*	-.11	-.51***	-.49***	-.18*	.23**		.04	-.00
10. Social Desirability	.19*	-.22**	-.20*	-.32***	-.08	.05	.11	-.17*	.05		-.12
11. Adult Sexual Victimization	-.09	.29**	.05	.11	.17*	.16*	.09	.05	-.16	-.27**	
12. Antidepressant	-.21*	.24**	.23**	.08	-.06	-.19*	-.15	.09	.04	-.03	.07

Table 3

Continued

Variables	Antidepressant
1. Couple Satisfaction	-.109
2. PHQ-4	.27***
3. ECR-Anxiety	.23**
4. ECR-Avoidance	.18**
5. General Sexual Desire	-.10
6. Partner-Focused Sexual Desire	-.17*
7. Approach Sexual Motive	-.18*
8. Avoidance Sexual Motive	.03
9. Sexual Guilt	.07
10. Social Desirability	-.14*
11. Adult Sexual Victimization	.20**
12. Antidepressant	

Note: Men above diagonal, women below diagonal, and between men and women along the diagonal. *** $p < .001$, ** $p < .01$, * $p < .05$ (two-tailed)

Appendix A - The Full Questionnaire

Background Information

- 1. How old are you?** _____
- 2. What is your gender?**
 - 1 = Male
 - 2 = Female
 - 3 = Trans
 - 4 = Other
- 3. Your family is located in:**
 - 1= a rural area
 - 2=a suburb (Village and Town/ County/ County-level city)
 - 3=an urban area (City/ Capital city/ Municipality)
- 4. What is your current yearly gross income**
 - 1= 0-19,999 RMB
 - 2=20,000 – 39,999 RMB
 - 3=40,000 – 59,999 RMB
 - 4=60,000 – 79,999 RMB
 - 5=80,000 – 99,999 RMB
 - 6=100,000 – 111,999 RMB
 - 7 = 120,000 or above
- 5. How many of children do you have?**
- 6. Please select the number of children you have living at home between the ages of 0 and 3.**
- 7. Are you or your partner currently pregnant?**
 - 1= Yes
 - 2= NO
- 8. Are you and your partner currently trying to get pregnant?**
 - 1=Yes
 - 2=NO
- 9. Your level of education: (single choice)**
 - 1=Illiterate
 - 2=Primary school (did not graduate)
 - 3=Primary school
 - 4=Junior high school (did not graduate)
 - 5=Junior high school
 - 6=Senior high school (did not graduate)

7=Senior high school
 8=Technical secondary school
 9=Junior college
 10=Bachelor's degree
 11=Master's degree

10. What is your current relationship status?

- 1 = I am not currently in a relationship.
 2 = Casual dating: We are somewhat interested in each other romantically, and occasionally do dating kinds of things (either in a group or alone), but we are not really a couple.
 3 = Serious dating: We are definitely interested in each other romantically, we both agree that we are a couple, other people see us as a couple, and we often do dating kinds of things, but we haven't committed to staying together in the future.
 4 = Committed relationship: We are a couple and are committed to staying together in the future.
 5 = Formally engaged to be married: We are currently engaged to be married.
 6 = Married: We are legally married.

11. Are you in a

- 1=Heterosexual Relationship
 2=Same-Sex Relationship

12. How long have you been in this relationship ?

Years _____
 Months _____

13. Are you currently living with your partner?

1. Yes
 2. No

Couple Satisfaction Index-4 (CSI)-4

14. Please indicate the degree of happiness, all things considered, of your relationship.

Extremely Unhappy	Fairly Unhappy	A Little Unhappy	Happy	Very Happy	Extremely Happy	Perfect
0	1	2	3	4	5	6

Rate your level of agreement with the following statements.

Not at All True	A little True	Somewhat True	Mostly True	Almost Completely True	Completely
True					
0	1	2	3	4	5

15	I have a warm and comfortable relationship with my partner.	0	1	2	3	4	5
-----------	---	---	---	---	---	---	---

Please answer each question.

Not at All A little Somewhat Mostly Almost Completely Completely

0 1 2 3 4 5

16	How rewarding is your relationship with your partner?	0	1	2	3	4	5
17	In general, how satisfied are you with your relationship?	0	1	2	3	4	5

[PHQ-4]

Over the *last 2 weeks*, how often have you been bothered by any of the following problems?
1 = Not at all, 2 = Several days, 3 = More than half the days, 4 = Nearly every day

18	Feeling nervous, anxious, or on edge	1	2	3	4
19	Not being able to stop or control worrying	1	2	3	4
20	Feeling down, depressed, or hopeless	1	2	3	4
21	Little interest or pleasure in doing things	1	3	2	4

ECR (the experiences in close relationships inventory)

The statements below concern how you feel in emotionally intimate relationships. We are interested in how you generally experience relationships, not just in what is happening in a current relationship. Respond to each statement by circling a number to indicate how much you agree or disagree with the statement.

	Question	1=Strongly Disagree....7=Strong Agree						
22	I prefer not to show a partner how I feel deep down.	1	2	3	4	5	6	7
23	I worry about being abandoned.	1	2	3	4	5	6	7
24	I am very comfortable being close to romantic partners.	1	2	3	4	5	6	7
25	I worry a lot about my relationships.	1	2	3	4	5	6	7
26	Just when my partner starts to get close to me I find myself pulling away.	1	2	3	4	5	6	7
27	I worry that romantic partners wont care about me as much as I care about them.	1	2	3	4	5	6	7
28	I get uncomfortable when a romantic partner wants to be very close.	1	2	3	4	5	6	7
29	I worry a fair amount about losing my partner.	1	2	3	4	5	6	7
30	I don't feel comfortable opening up to romantic partners.	1	2	3	4	5	6	7
31	I often wish that my partner's feelings for me were as strong as my feelings for him/her.	1	2	3	4	5	6	7

32	I want to get close to my partner, but I keep pulling back.	1	2	3	4	5	6	7
33	I often want to merge completely with romantic partners, and this sometimes scares them away.	1	2	3	4	5	6	7
34	I am nervous when partners get too close to me.	1	2	3	4	5	6	7
35	I worry about being alone.	1	2	3	4	5	6	7
36	I feel comfortable sharing my private thoughts and feelings with my partner.	1	2	3	4	5	6	7
37	My desire to be very close sometimes scares people away.	1	2	3	4	5	6	7
38	I try to avoid getting too close to my partner.	1	2	3	4	5	6	7
39	I need a lot of reassurance that I am loved by my partner.	1	2	3	4	5	6	7
40	I find it relatively easy to get close to my partner.	1	2	3	4	5	6	7
41	Sometimes I feel that I force my partners to show more feeling, more commitment.	1	2	3	4	5	6	7
42	I find it difficult to allow myself to depend on romantic partners.	1	2	3	4	5	6	7
43	I do not often worry about being abandoned.	1	2	3	4	5	6	7
44	I prefer not to be too close to romantic partners.	1	2	3	4	5	6	7
45	If I can't get my partner to show interest in me, I get upset or angry.	1	2	3	4	5	6	7
46	I tell my partner just about everything.	1	2	3	4	5	6	7
47	I find that my partner(s) don't want to get as close as I would like.	1	2	3	4	5	6	7
48	I usually discuss my problems and concerns with my partner.	1	2	3	4	5	6	7
49	When I'm not involved in a relationship, I feel somewhat anxious and insecure.	1	2	3	4	5	6	7
50	I feel comfortable depending on romantic partners.	1	2	3	4	5	6	7
51	I get frustrated when my partner is not around as much as I would like.	1	2	3	4	5	6	7
52	I don't mind asking romantic partners for comfort, advice, or help.	1	2	3	4	5	6	7
53	I get frustrated if romantic partners are not available when I need them.	1	2	3	4	5	6	7
54	It helps to turn to my romantic partner in times of need.	1	2	3	4	5	6	7
55	When romantic partners disapprove of me, I feel really bad about myself.	1	2	3	4	5	6	7
56	I turn to my partner for many things, including comfort and reassurance.	1	2	3	4	5	6	7
57	I resent it when my partner spends time away from me.	1	2	3	4	5	6	7

Hurlbert Index of Sexual Desire

The following items ask about your level of sexual desire. By desire, we mean interest in or wish for sexual activity. For each item, please choose how often you have the following thoughts or behaviors

1 = all of the time

2 = most of the time

3 = some of the time

4 = rarely

5 = Never

58	Just thinking about having sex with my partner excites me.	1	2	3	4	5
59	I try to avoid situations that will encourage my partner to want sex.	1	2	3	4	5
60	I daydream about sex.	1	2	3	4	5
61	It is difficult for me to get in a sexual mood.	1	2	3	4	5
62	I desire more sex than my partner does.	1	2	3	4	5
63	It is hard for me to fantasize about sexual things.	1	2	3	4	5
64	I look forward to having sex with my partner.	1	2	3	4	5
65	I have a huge appetite for sex.	1	2	3	4	5
66	I enjoy using sexual fantasy during sex with my partner.	1	2	3	4	5
67	It is easy for me to get in the mood for sex.	1	2	3	4	5
68	My desire for sex should be stronger.	1	2	3	4	5
69	I enjoy thinking about sex.	1	2	3	4	5
70	I desire sex.	1	2	3	4	5
71	It is easy for me to go weeks without having sex with my partner.	1	2	3	4	5
72	My motivation to engage in sex with my partner is low.	1	2	3	4	5
73	I feel I want sex less than most people.	1	2	3	4	5
74	It is easy for me to create sexual fantasies in my mind.	1	2	3	4	5
75	I have a strong sex drive.	1	2	3	4	5
76	I enjoy thinking about having sex with my partner.	1	2	3	4	5
77	My desire for sex with my partner is strong.	1	2	3	4	5
78	I feel that sex is not an important aspect of the relationship I share with my partner.	1	2	3	4	5
79	I think my energy level for sex with my partner is too low.	1	2	3	4	5
80	It is hard for me to get in the mood for sex.	1	2	3	4	5
81	I lack the desire necessary to pursue sex with my partner.	1	2	3	4	5
82	I try to avoid having sex with my partner.	1	2	3	4	5

83. Overall, how satisfied are you with the sexual relationship with your partner?

1 = Extremely Unsatisfied

2 = Fairly unsatisfied

3 = A little unsatisfied

4 = Satisfied

5 = Very Satisfied

6 = Extremely satisfied

7 = Perfect

Sexual Frequency

84. How often have you had sexual intercourse on average during the past three months?

1=I have never had sex

2=Not in the past 3 month

3=once per month or less

4=2-3 times per month

5=once per week

6=2-3 times per week

7=more than 3 times per week

8=Daily

85. What is your ideal frequency of sexual intercourse for your relationship?

1=I have never had sex

2=Not in the past 3 month

3=once per month or less

4=2-3 times per month

5=once per week

6=2-3 times per week

7=more than 3 times per week

8=Daily

Brief Mosher Sex-Guilt Scale (BMSGs)

	Question	1=not at all true7=extremely true						
86	Masturbation helps me feel eased and relaxed.	1	2	3	4	5	6	7
87	Sex relations before marriage are good, in my opinion.	1	2	3	4	5	6	7
88	Unusual sex practices don't interest me.	1	2	3	4	5	6	7
89	When I have sexual dreams I try to forget them.	1	2	3	4	5	6	7
90	"Dirty" Jokes in mixed company are in bad taste.	1	2	3	4	5	6	7
91	When I have sexual desires I enjoy them like all healthy human beings.	1	2	3	4	5	6	7
92	Unusual sex practices are dangerous to one's health and mental condition.	1	2	3	4	5	6	7
93	Sex relations before marriage help people adjust.	1	2	3	4	5	6	7
94	Sex relations before marriage should not be recommended.	1	2	3	4	5	6	7
95	Unusual sex practices are all right if both partners agree.	1	2	3	4	5	6	7

Differentiation of Self Inventory (DSV)

These are questions concerning your thoughts and feelings about yourself and relationships with others. Please read each statement carefully and decide how much the statement is generally true

of you on a 1 (nor at all) to 6 (very) scale. If you believe that an item does not pertain to you (e.g., you are not currently married or in a committed relationship, or one or both of your parents are deceased), please answer the item according to your best guess about what your thoughts and feelings would be in that situation. Be sure to answer every item and try to be as honest and accurate as possible in your responses.

- 1 = Not at all true of me
- 2 = A little True of me
- 3 = Somewhat True of me
- 4 = Mostly True of me
- 5 = Almost Completely True of me
- 6 = Completely True of me

96	People have marked that I'm overly emotional.	1	2	3	4	5	6
97	I tend to remain pretty calm even under stress.	1	2	3	4	5	6
98	When starting an important job or task, I usually need a lot of encouragement from others.	1	2	3	4	5	6
99	When a close person disappoints me, I will stay away from him/her for a while.	1	2	3	4	5	6
100	No matter what happens, I know that I will never lose myself.	1	2	3	4	5	6
101	When others are too close to me, I tend to keep a distance from him/her.	1	2	3	4	5	6
102	I want to meet my parents' expectations of me.	1	2	3	4	5	6
103	I hope that I am not so emotional.	1	2	3	4	5	6
104	I usually don't change my behavior to please others.	1	2	3	4	5	6
105	If I express my true feelings about certain things to my spouse/partner, he/she may not be able to accept it.	1	2	3	4	5	6
106	When my spouse/partner criticizes me, I will be bothered for a few days.	1	2	3	4	5	6
107	Sometimes I will be surrounded by emotions and have difficulty thinking clearly.	1	2	3	4	5	6
108	When I argue with people, I can separate the thoughts of things from the feelings of the person.	1	2	3	4	5	6
109	When people are too close to me, I often feel uncomfortable.	1	2	3	4	5	6
110	I feel the need to get the approval of almost everyone in my life.	1	2	3	4	5	6
111	Sometimes I feel my mood is like a roller coaster ride.	1	2	3	4	5	6
112	It doesn't make sense to worry about things that I can't change.	1	2	3	4	5	6
113	I am worried about losing my independence in intimate relationships.	1	2	3	4	5	6
114	I am overly sensitive to criticism from others.	1	2	3	4	5	6
115	I try to reach my parents' expectations	1	2	3	4	5	6
116	I quite accept myself.	1	2	3	4	5	6
117	I often feel that my spouse/partner asks me too much.	1	2	3	4	5	6
118	I often agree with others to please them.	1	2	3	4	5	6
119	If I argue with my spouse/partner, I tend to think about it all day.	1	2	3	4	5	6

120	Even if I feel that others are putting pressure on me, I can say "No!" to them.	1	2	3	4	5	6
121	When one of the relationships progressed very closely, I felt that there was an evasive tendency.	1	2	3	4	5	6
122	It is still terrible to argue with my parents or brothers and sisters.	1	2	3	4	5	6
123	If someone is angry with me, I can't seem to let it go.	1	2	3	4	5	6
124	I care about doing what I think is right, more than getting approval from others.	1	2	3	4	5	6
125	When no one is around to help me make a decision, I often feel unsure.	1	2	3	4	5	6
126	I am very sensitive to being hurt by others.	1	2	3	4	5	6
127	My sense of self-esteem is actually based on what others think of me.	1	2	3	4	5	6
128	When I am with my spouse/partner, I often feel overwhelmed.	1	2	3	4	5	6
129	I often wonder if I give the impression of others.	1	2	3	4	5	6
130	When things don't go well, talking about this problem will only make things even more bad.	1	2	3	4	5	6
131	No matter what others say, I often do what I believe is the right thing.	1	2	3	4	5	6
132	I can feel quite safe under pressure.	1	2	3	4	5	6
133	I sometimes feel uncomfortable after I have a dispute with my spouse/partner.	1	2	3	4	5	6
134	I think it is important to listen to your parents before making a decision.	1	2	3	4	5	6
135	I am worried that my close people are sick, injured or angry.	1	2	3	4	5	6

136. Are you currently in therapy?

1=YES, if so, for what reason _____

2=NO

137. How did you find this study?

1. Through Jiandan Xinli Webpage

2. Through friends' recommendation

The Marlow-Cowne Social Desirability Scale – 10 items (MCSD)

138. I would never think of letting someone else be punished for my wrong doings.

0=True

1=False

139. I have never intensely disliked anyone.

0=True

1=False

140. I am always courteous, even to people who are disagreeable.

0=True

1=False

141. I sometimes feel resentful when I don't get my way.

0=True

1=False

142. When I don't know something I don't at all mind admitting it.

0=True

1=False

143. I never hesitate to go out of my way to help someone in trouble.

0=True

1=False

144. There have been times when I was quite jealous of the good fortune of others.

0=True

1=False

145. I can remember 'playing sick' to get out of something.

0=True

1=False

146. I am sometimes irritated by people who ask favors of me.

0=True

1=False

147. There have been times when I felt like rebelling against people in authority even though I knew they were right.

0=True

1=False

148. Do you take any medication for depression or anxiety such as citalopram, escitalopram, fluoxetine, fluvoxamine, paroxetine, sertraline, venlafaxine, duloxetine, imipramine, phenelzine, and mirtazapine.

0=NO

1=Yes

149. Do you take any anti-psychotic drugs such as amisulpride, clozapine, haloperidol, olanzapine, quetiapine, risperidone, paliperidone, and ziprasidone.

0=NO

1=Yes

Adult Sexual Victimization

150. Unwanted touch: if you had ever been forced to touch someone in a sexual way, or someone had touched you in a sexual way?

0=NO

1=Yes

151. Forced sex: if you had ever been forced to have anal or oral sex with someone?

0=NO

1=Yes

152. Sexual Coercion: if someone had carried out other behaviors with you that you considered or interpreted as sexual coercion?

0=NO

1=Yes

Approach/Avoidance Sexual Motivation

Why do you choose to engage in sexual activity (petting, oral sex, intercourse, etc) with your partner?

1 = Not at all True

2 = A little True

3 = Somewhat True

4 = Mostly True

5 = Almost Completely True

6 = Completely True

153	1. To please my partner.	1	2	3	4	5	6
154	2. To promote intimacy in my relationship.	1	2	3	4	5	6
155	3. To express love for my partner.	1	2	3	4	5	6
156	4. To feel emotionally closer to my partner.	1	2	3	4	5	6
157	5. To experience pleasure with my partner.	1	2	3	4	5	6
158	6. To add excitement to my relationship.	1	2	3	4	5	6
159	7. To prevent my partner from falling out of love with me.	1	2	3	4	5	6
160	8. To prevent my partner from losing interest in me.	1	2	3	4	5	6
161	9. To avoid having to decline a partner's request.	1	2	3	4	5	6
162	10. To prevent my partner from becoming upset.	1	2	3	4	5	6
163	11. To avoid conflict in my relationship.	1	2	3	4	5	6
164	12. To prevent my partner from getting angry at me.	1	2	3	4	5	6